Enclosures . . .

. . . for Industry

ROSE+BOPLA®

A Phoenix Mecano Company

We are Dedicated to Achieving Customer Satisfaction Through Continuous Improvement.

Rose+Bopla, the enclosure companies of Phoenix Mecano AG, an international corporation based in Switzerland, has developed a broad range of products for industrial applications. The North American operation is located in Frederick, Maryland.

The Rose division manufactures an extensive line of off-the-shelf and custom enclosures, machine control enclosures and suspension arm systems suited for industrial applications and harsh environments in a variety of materials including: cast and extruded aluminum; stainless steel; compression molded fiberglass and polyamide; and injection molded polycarbonate and ABS plastic.

Bopla produces a diverse line of modular tabletop, instrumentation, hand-held and wall-mountable plastic enclosures designed to meet today's demands for aesthetic electronic packaging.

Rose+Bopla adheres to DIN Standards in the manufacture of high quality components, and we offer a wide variety of added value services for customizing our products. At our Maryland facility in the US we operate a machine shop for modifying and building product, complete with CNC Machining Centers, powder coat and wet painting operations, as well as silk screening, engraving, and assembly services. In addition, our engineering personnel are available to assist in the design or customization of your product. We employ advanced manufacturing techniques and strict quality control methods. Meticulous internal controls built into our Quality system ensure that every Rose+Bopla enclosure meets critical quality standards. Our workmanship is unsurpassed in the industry.

Let Rose+Bopla be your partner for standard or customized enclosures.

We have attempted to present the information about our enclosures in this catalog in a straight-forward manner. We offer this information as accurate at the time of publication. Specifications are subject to change without notice. Rose+Bopla is not responsible for inadvertent errors.

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Choosing an Enclosure

GENERAL CONSIDERATIONS

Generally, enclosures are intended to protect their contents from outside risks. These risks can be varied in nature and are of extreme importance when choosing an enclosure. In judging whether a particular housing meets the protection requirements of your application, a clear analysis of the environment where the enclosure is to be used should be made.

The following conditions need to be taken into account:

1. Protection against contact with and penetration by foreign bodies;
2. Protection against water ingress;
3. Protection against external or internal radiated noise (RFI Shielding);
4. Chemical resistance;
5. Temperature resistance;
6. Impact resistance;
7. Corrosion resistance.

In electronics/electrical engineering, the functions of enclosures are two-fold:

1. To protect the contents from mechanical risks and radiated noise from the outside.
2. To protect the environment from mechanical and electrical risks, as well as from radiated noise caused by installed components.

With the ever-increasing development of electronic components, the increased packing densities on printed circuit boards, and the increased "contamination" of the environment by electromagnetic interference, electromagnetic compatibility is becoming an issue of growing importance in the choice of an enclosure.

MATERIAL CONSIDERATIONS

In most applications, material is a major factor in your choice of an enclosure. In general, aluminum is ideal for EMI/RFI applications; fiberglass is ideal for caustic environments and salt-water applications; polycarbonate is good for all indoor and light outdoor applications; and ABS is well suited for indoor instrumentation designs.

PROTECTION CLASSIFICATIONS

Rose+Bopla enclosures are classified under the generally applicable European protection guidelines of EN 60529 and IEC 144. These protection classifications are indicated by a designation consisting of two unchanging letters, IP, plus two digits for the protection grade. Many of the enclosures in this catalog bear the IP 66 or IP 65 protection classification.

IP 65: Protection against ingress by dust and water jets
IP 66: Protection against ingress by dust and powerful water jets

Specific product lines are classified according to UL 50 and UL 508. These include aluminum, fiberglass, and plastic. Also noted in this catalog are recommended classification types like NEMA and UL, which are commonly used in the USA. Please contact the appropriate association or agency for complete infor-mation regarding test requirements and qualifications. Refer to the Technical Information Chapter in this catalog for more information on Protection Classifications.

TEMPERATURE RESISTANCE

The temperature resistance of enclosures is defined as the maximum permanent temperature at which the stability of the shape and the protection classification are maintained. Permissible short-term peak temperatures are often considerably higher.

CORROSION RESISTANCE OF ALUMINUM ENCLOSURES

Aluminum enclosures are resistant to corrosion even without a special surface treatment. The use of aluminum alloys with a low copper content increases corrosion resistance. Additional treatments such as irriditing, painting, powder-coating, or a combination of irriditing and painting provide increased corrosion resistance.

IMPACT RESISTANCE

Impact resistance is a measurement of the maximum impact that will not affect the protection classification. The breaking strength is often far greater. Impact resistance for Rose+Bopla enclosures is determined in an impact test to EN 50014.

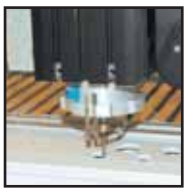
Enclosure Comparison Chart

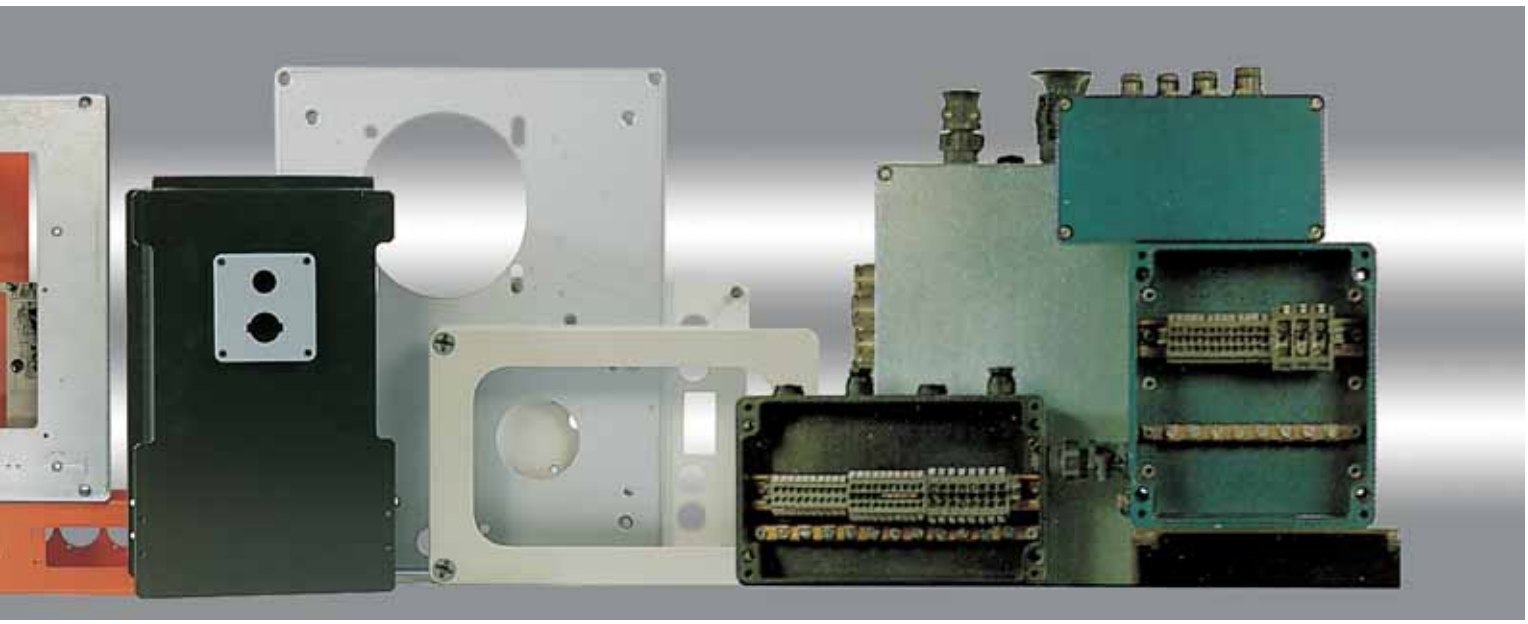
	Metal	Plastic	Watertight	Indoor	Outdoor	Industrial	Hazardous Areas	Operator Interface	Wall Mount	Display	Control Panel	Membrane	Terminal	Cabinet	Handheld	Desktop	Console
Aluminum Watertight 01	•		•	•	•	•			•				•				
Aluform	•		•	•	•	•			•			•	•				
Stainless Steel Watertight 37	•		•	•	•	•			•				•				
Fiberglass Watertight 02		•	•	•	•	•			•				•				
Polymas Watertight PK		•	•	•	•	•			•				•				
Polycarbonate 03		•	•	•	•	•			•				•				
Polycarbonate 33		•	•	•	•	•			•				•				
Polycarbonate EM		•	•	•	•	•			•	•		•	•				
ABS Watertight 09		•	•	•		•			•				•				
ABS Watertight ET		•	•	•		•			•	•		•	•				
Aluminum Ex	•		•	•	•	•	•		•				•				
Polyglas® Ex		•	•	•	•	•	•		•				•				
Okta-Box Ex		•	•	•	•	•	•		•				•				
Stainless Steel Ex	•		•	•	•	•	•		•				•				
Fiberglass Modular Flange		•	•	•	•	•			•				•				
Polycarbonate Modular Flange		•	•	•	•	•			•				•				
Element		•		•					•					•	•		
Executive		•		•					•	•		•		•	•	•	
ECO/PCI Compact		•	•	•		•			•				•				
Build-A-Box	•		•	•	•	•			•						•		
ANG Panel Meter Housings	•	•	•	•	•	•			•	•	•	•					
Alubos	•		•	•	•	•			•	•		•		•		•	
TG Handheld Series		•		•						•		•		•			
BG Handheld Series		•	•	•	•	•		•		•		•		•			
Tastomat		•	•	•	•	•		•	•	•		•		•	•		
Pilot 250		•	•	•	•	•		•	•	•		•		•			
Mobile Control Units		•	•	•	•	•		•	•	•		•		•			
Arteb		•	•	•				•		•		•		•			
Databoss		•		•						•		•		•			
Limanda		•	•	•	•	•		•		•		•		•			
CombiCard		•	•	•		•			•	•	•	•	•		•		
CombiSet		•	•	•		•			•	•	•		•				
Intercard		•	•	•					•				•				
RCP Housings		•	•	•		•			•			•	•				
CombiBac	•	•	•	•		•			•	•			•				
Ultramas		•		•					•						•	•	
1300 Machine Control Enclosures	•		•	•		•		•	•	•	•	•	•				
5400 Machine Control Enclosures	•		•	•		•		•		•	•						
Slim Line 2000	•		•	•		•		•	•	•	•	•				•	
Rose Suspension Arm System	•		•	•		•			•								
4925 Support System	•			•		•			•								
8850 Support System	•			•		•			•								
NGS Panel Meter Housings		•		•					•	•	•	•					
Fiberglass Watertight Cabinets		•	•	•	•	•			•				•	•			
ABS Watertight Mini Cabinets		•	•	•		•			•				•	•			
Mini Console Housings		•		•					•			•			•	•	
BP 810 & BP 900 F Housings		•		•								•			•	•	
Futura Sloped Housings		•		•						•		•		•	•	•	
Profitronic 19	•		•	•	•	•			•	•			•		•		
Profitronic 19 Universal	•		•	•	•	•			•	•			•		•		

Secondary Services

IRRIDITING/ CHROMATING/ ANODIZING	For greater chemical resistance to corrosion in aluminum housings, consider using a chemical treatment process like irriditing, chromating, or anodizing. Subsequent priming and painting give lasting protection from corrosive attacks. Anodizing is available in black, or clear as standard.	
RFI/EMC SHIELDING	RFI spray on plastic and fiberglass housings offers protection for your design against adverse interference or radiation. We can also install RFI gaskets, on request.	
PAINTING POWDER/COATING	We routinely paint to customer requirements in smooth or textured finishes, using Federal Standard 595A colors, RAL colors, or other special colors.	
SCREEN PRINTING	Using the screen print process, we are able to print your data on all housings and front plates. Silk-screen inks are available in several colors and are resistant to most solvents. Rose+Bopla creates screens in-house and can provide artwork services, if required.	
ENGRAVING	Rose+Bopla offers engraving services using any alphabet or outline. Engraving is performed in-house by computer controlled machines.	

Secondary Services

DRILLING	We can drill holes through all housings in tolerances to 0.002 of an inch.	
TAPPING	Using NPT, Metric, or PG taps, we can thread holes in your housings to your specifications, on request.	
MILLING	Our CNC processing center enables us to carry out difficult machining work to tight tolerances. The program for your job will be stored ensuring that future orders can be repeated with the same accuracy and quality.	
ASSEMBLY	On request, we install accessories such as cable grips, conduit hubs, terminal blocks, DIN Rail assemblies, wiring, hinges, optional gaskets, and customer components into your housings.	
PANEL WORK	Rose+Bopla fabricates panels using various thicknesses of plate aluminum and plastic material, as well as screen printing information on panels..all to your specifications.	



Terms and Conditions

This is an overview of our Terms and Conditions. A full written version is available on request. Terms and Conditions are subject to change without notice

CATALOG LISTINGS

Most products listed in this catalog are available, at our stocking location in Frederick, Maryland. On occasion slow moving items may have to be brought in from our sister company in Germany. All specifications and descriptions are current, as of the time of publication. Product listings, specifications, availability, and pricing are subject to change without notice. Detailed drawings are available on the internet and directly from the company on request.

PRODUCT WARRANTY

Phoenix Mecano Inc. warrants all its products to be free from defects in materials and workmanship. Phoenix Mecano's liability under this warranty shall be limited to ninety days after delivery of the product to the original purchaser. Disputed product must be returned to Phoenix Mecano with prepaid transportation charges. After examination by Phoenix Mecano, should the product be found to be defective we will repair or replace it from our factory. Any defect is to be determined by accepted testing methods at Phoenix Mecano Inc. Any returned product found to be defective would become the property of Phoenix Mecano, Inc.

Phoenix Mecano Inc. shall not be liable to the purchaser for the cost of repairs, alterations, replacement, or any other expenses (including loss of profits, additional labor costs, or injury to persons or property caused by defective material or parts) incurred by the purchaser, their employees, or agents. One exception would be where Phoenix Mecano had previously authorized such repairs, alterations, or consequential damages.

This warranty shall not apply to products, which have been altered or repaired, except by Phoenix Mecano, Inc., or which have been subjected to misuse, negligence, or accident, including the use or operation of the products while parts are loose, broken, out of order, or damaged by the elements.

This warranty supersedes all other warranties, expressed or implied, including any implied warranty of merchantability, and of all other obligations or liability on the part of Phoenix Mecano, Inc.

PRICING

Rose+Bopla offers standard OEM pricing based on quantity price breaks. For pricing information please contact the Rose+Bopla sales staff or your local distributor. Prices are subject to change without notice.

RETURNS

Submit your drawings for pricing information on our secondary services, such as, CNC machining, painting, EMC/RFI spray shielding, silk-screening, chemical coating, and engraving...just to mention a few of the customizing services we offer.

1. All returns must be accompanied by an RMA (return merchandise authorization). Please call your inside salesperson for an RMA number. Invoice or Packing Slip number must accompany return.
2. All returns due to customer error must be made within 30 days from the date of the invoice.
3. Warranty returns must be made within 90 days from the date of the invoice.
4. All returned product must be in resalable condition and in the original carton.
5. Off-the-shelf parts, returned due to customer error, are subject to a minimum 15% restocking charge.
6. Defective merchandise returns are evaluated on an individual basis.
7. Parts that have been modified and special order items are not returnable.

METHODS OF PAYMENT

Rose+Bopla has four methods of payment; Net 30 day credit, C.O.D, credit card and pre-payment.

Terms and Conditions

NET 30 ACCOUNTS	Net 30-account status is generally granted to qualified customers with appropriate credit and banking references. Terms of payment are net 30 days. Past due accounts are subject to late payment charge of 1½% per month.
C.O.D. ACCOUNTS	C.O.D. orders for product that has value added operations performed by Rose+Bopla require 50% down payment at time of order. The balance will be collected at time of shipment.
CREDIT CARD ACCOUNTS	Rose+Bopla accepts American Express, Discover, Master Card, Visa, or electronic funds transfers.
PREPAYMENTS	Payments can be made electronically directly to our bank account. Please contact an Accounts Receivable representative for our banking information.
TO OPEN A NEW ACCOUNT	To open a new account, please complete the credit application form in the back of this catalog. Fill out all references for credit contact. Names, addresses and telephone numbers will speed processing of your application. Rose+Bopla must have the credit application filled out in writing and signed BY CUSTOMER ONLY. Applications may be mailed or faxed (301-696-9493) to our Accounting Department in order to process a credit request. Please allow sufficient processing time.
SALES TAX	We are required by law to charge and collect Maryland sales tax. If you wish to avoid being charged state sales tax, you must submit a state sales tax exemption certificate annually to Rose+Bopla. Sales tax will always be charged unless otherwise indicated.
MINIMUM ORDER	All orders are subject to a minimum order value of $100.00
SHIPMENT DAMAGE	Our products are inspected and carefully packed for shipment. In the event an item is damaged in shipment, you must submit a claim to the carrier within 15 days of delivery. We advise that you unpack and inspect all merchandise immediately upon receiving it. If damage does not become apparent until the shipment is unpacked, keep the shipping carton and make a request within 72 hours for inspection by the carrier's agent and file a claim with the carrier. Any external evidence of loss or damage must be noted on the freight bill. Failure to do this will result in the carrier refusing to honor the claim. Rose+Bopla will not be responsible for shipment damage or lost parts due to such damage.
DELIVERY	Items are shipped F.O.B. Frederick, Maryland. All orders are shipped UPS unless the weight prohibits shipment by this method. On heavier shipments we will attempt to ship by the carrier of your choice.
SAME DAY SHIPMENT	All orders to be shipped Air and received by 4 p.m. EST are shipped the same day. All UPS shipments are prepaid and charges added to the invoice, unless otherwise requested.
LARGE ITEMS AND SPECIAL HANDLING	For heavy shipments, common carrier truck is the most economical. Charges are F.O.B. shipping point and the product is shipped freight prepaid and charges are added to your invoice, unless otherwise requested.
BLANKET ORDERS	1. A "Blanket Purchase Order" is an agreement between two parties, "Seller/Buyer" to purchase a specific quantity of products over a specified period of time "Not to Exceed 12 Months". 2. Blanket Orders cannot be changed or canceled without 90-day advance written notice. Customer will be responsible for all parts manufactured for shipment within this 90-day period. 3. Blanket Orders canceled for standard enclosures will result in customer being billed back for the difference between the price break of quantity received, versus total quantity ordered. 4. Blanket Orders for modified or special order products must state Non-cancelable/Non-returnable on the Purchase Order. 5. All Blanket Orders must have firm ship dates stated on the Purchase Order for every release.

Drawings & Design Information

DESIGNING WITH ROSE+BOPLA

Rose+Bopla offers the engineer faced with packaging requirements an enormous advantage in finding a solution. Electronic products need enclosures. Our ability to deliver off-the-shelf enclosures makes Rose+Bopla one of the most important partners an engineer could ask for when bringing a product to market. We offer both electrical and electronic enclosures and have one of the widest ranges of standard off-the-shelf enclosures in the industry. Rose+Bopla also offers years of expertise in machining and other value added services, as well as technical support from an experienced technical sales force. Rose+Bopla also guarantees all secondary services and machining 100%, thereby eliminating scrap and additional costs.

The benefits of designing with Rose+Bopla enclosures are: cost savings, elimination of custom tool/ molding expense, a large off-the-shelf inventory, no scrap, machining expertise and over 30 years experience in enclosure manufacturing. Take advantage of our experience and reduce your frustrations from dealing with multiple vendors. Rose+Bopla can offer you a turnkey solution that is 100% guaranteed.

DRAWINGS

Rose+Bopla recognizes that dimensional information is very important to our customers. Therefore, we have taken advantage of other media channels to provide more comprehensive drawing information. For more detailed dimensional information, or for CAD drawings:

1. Contact our inside Rose+Bopla sales staff by telephone at 301-696-9800.
2. Download drawing(s) from our website at www.rose-bopla.com. All product drawings are not available on the website. Our internal sales staff has access to a larger library of drawings. Please feel free to call us if you do not find the product drawing you need.
3. Request that the drawing(s) be sent to you via e-mail, by contacting us by phone, 301-696-9800, or fax us at 301-696-9494.

CUSTOM DESIGNS

Rose+Bopla not only supplies empty standard enclosures, but can also provide and deliver custom designs. We have skilled technical support personnel in-house that will work with your engineering staff on a custom enclosure design for your next product. By means of direct communications with you, the customer, we can create an individual solution to fit your precise requirements.

SPECIAL MATERIALS

Rose+Bopla can injection-mold most plastic enclosures in special colors and/or special materials. Minimum quantities for special injection runs range from 500 to 1,000 units depending on the enclosure. For special colors, please send us a sample of the color you would like to match. Rose+Bopla cannot guarantee an exact color match. If you need a special material for improved flame retardancy, impact resistance, chemical resistance, etc., let us know specifically what specifications you need to meet. We will suggest a material suitable for use in our molds that meets your requirements.

The universal design of ROSE industrial enclosures made from Aluminum, Fiberglass, Stainless Steel, Polycarbonate, ABS, and Polystyrene is the basis of their versatility.

They are designed to accommodate mechanical parts as well as electrical and electronic components. Apart from standard versions, flange enclosures are also available in Aluminum, Fiberglass, and Polycarbonate.

Aluform Aluminum Enclosure
- 14 enclosure sizes from 80 x 80 x 80 mm to 200 x 280 x 70mm
- Application area: its elegant design makes it ideal for use in areas where the visual impression is important.

Standard Aluminum Enclosures / Aluminum Flange Enclosures
- 48 enclosure sizes from 45 x 50 x 30 mm to 600 x 600 x 200 mm
- Application area: standard industrial enclosures

Standard Fiberglass Enclosures
- 26 enclosure sizes from 55 x 55 x 37 mm to 405 x 400 x 120 mm
- Application area: standard industrial enclosures

Fiberglass Flange Enclosures
- 6 enclosure sizes from 170 x 270 x 135 mm to 270 x 540 x 150 mm with two flange openings
- Application area: fieldbus and installation enclosures

Standard Polycarbonate/ABS Enclosures
- 25 enclosure sizes from 50 x 52 x 35 mm to 360 x 400 x 150 mm
- Application area: standard installation enclosures

Polycarbonate Flange Enclosures
- 6 enclosure sizes from 134 x 170 x 130 mm to 369 x 440 x 130 mm with 2 to 6 flange openings
- Application area: standard installation enclosures

ECO/PCI Compact Enclosures
- 47 enclosure sizes from 65 x 65 x 57 mm to 254 x 355 x 165 mm

GRP 3040/4060 Fiberglass Cabinets
- 5 enclosure sizes from 300 x 400 x 200 mm to 400 x 600 x 250 mm
- Application area: robust universal cabinet with hinged lid

GFK Fiberglass/ABS Mini Cabinets
- 4 enclosure sizes from 199 x 248.5 x 149 mm to 250 x 300 x 170 mm
- Application area: universal cabinet with hinged lid for measurement/ control technology

GRP Fiberglass Mini Cabinets
- 6 enclosure sizes from 120 x 200 x 100 mm to 200 x 300 x 170 mm
- Application area: robust mini-cabinets with hinged lid for measurement/ control technology

Aluform, Painted

- Aluminum enclosure system for automation engineering
- Lid designed for membrane keypads and overlays
- Rectangular dome sequence in cover and base

UL 50

Included in delivery

Aluminum enclosure consisting of lid, base, captive stainless steel lid screws, and removable polyurethane gasket

Technical Data

Material	Al Si 12, DIN 1725
Ingress Protection	IP 66 to EN 60529
Impact Resistance	>7 Nm, EN 50014
Temperature Resistance	Polyurethane seal: -40°F to +194°F Neoprene seal: -40°F to +212°F Silicone seal: -76°F to +266°F RFI gasket: -40°F to +392°F
Painting	Powdercoating
Color	Agate gray, similar to RAL 7038, special colors on request

Part Number	Dimensions mm	Dimensions Inches	TS DIN rails for terminals		Mounting Plate[1]	External brackets pair	External aluminum hinges, pair[3]	EMC screening	Corrosion resistant	Allen lid screws[2]
	W x L x H	W x L x H	TS 15	TS 35						
04080808 00	80 x 80 x 80	3.15 x 3.15 x 3.15	•	•	•	•	•	•	•	•
04081208 00	80 x 120 x 80	4.72 x 3.15 x 3.19	•	•	•	•	•	•	•	•
04101006 00	100 x 100 x 60	3.94 x 3.94 x 2.40	•	•	•	•	•	•	•	•
04101606 00	100 x 160 x 60	3.94 x 6.30 x 2.40	•	•	•	•	•	•	•	•
04102006 00	100 x 200 x 60	3.94 x 7.87 x 2.40	•	•	•	•	•	•	•	•
04121208 00	120 x 120 x 80	4.72 x 4.72 x 3.19	•	•	•	•	•	•	•	•
04121608 00	120 x 160 x 80	6.30 x 4.72 x 3.19	•	•	•	•	•	•	•	•
04141407 00	140 x 140 x 70	5.51 x 5.51 x 2.80	•	•	•	•	•	•	•	•
04141807 00	140 x 180 x 70	5.51 x 7.09 x 2.80	•	•	•	•	•	•	•	•
04142207 00	140 x 220 x 70	5.51 x 8.66 x 2.80	•	•	•	•	•	•	•	•
04161608 00	160 x 160 x 80	6.30 x 6.30 x 3.19	•	•	•	•	•	•	•	•
04162408 00	160 x 240 x 80	9.45 x 6.30 x 3.19	•	•	•	•	•	•	•	•
04202007 00	200 x 200 x 70	7.87 x 7.87 x 2.80	•	•	•	•	•	•	•	•
04202807 00	200 x 280 x 70	7.87 x 11.02 x 2.80	•	•	•	•	•	•	•	•

[1] Phenolic [2] Stainless steel [3] Cast aluminum

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

External brackets, pair for 0408	**04000080 00**
External brackets, pair for 0410	**04000001 00**
External brackets, pair for 0412	**04002001 00**
External brackets, pair for 0414	**04004001 00**
External brackets, pair for 0416	**04006001 00**
External brackets, pair for 0420	**04000002 00**
Console holder for wall or table mounting 98 mm wide, for type 0410	**04300009 00**
Console holder for wall ot table mounting 138 mm wide, for type 0414	**04300014 00**
External hinges, pair, painted	**04000010 00**

Aluform, Unpainted

- Aluminum enclosure system for automation engineering
- Lid designed for membrane keypads and overlays
- Rectangular dome sequence in cover and base

UL 50

Included in delivery

Aluminum enclosure consisting of lid, base, captive stainless steel lid screws, and removable polyurethane gasket

Technical Data

Material	Al Si 12, DIN 1725
Ingress Protection	IP 66 to EN 60529
Impact Resistance	>7 Nm, EN 50014
Temperature Resistance	Polyurethane seal: -40°F to +194°F Neoprene seal: -40°F to +212°F Silicone seal: -76°F to +266°F RFI gasket: -40°F to +392°F
Painting	Powdercoating
Color	Agate gray, similar to RAL 7038, special colors on request

Part Number	Dimensions mm	Dimensions Inches	TS DIN rails for terminals		Mounting Plate[1]	External brackets pair	External aluminum hinges, pair[3]	EMC screening	Corrosion resistant	Allen lid screws[2]
	W x L x H	W x L x H	TS 15	TS 35						
04080808 85	80 x 80 x 80	3.15 x 3.15 x 3.15	•	•	•	•	•	•	•	•
04081208 85	80 x 120 x 80	4.72 x 3.15 x 3.19	•	•	•	•	•	•	•	•
04101006 85	100 x 100 x 60	3.94 x 3.94 x 2.40	•	•	•	•	•	•	•	•
04101606 85	100 x 160 x 60	3.94 x 6.30 x 2.40	•	•	•	•	•	•	•	•
04102006 85	100 x 200 x 60	3.94 x 7.87 x 2.40	•	•	•	•	•	•	•	•
04121208 85	120 x 120 x 80	4.72 x 4.72 x 3.19	•	•	•	•	•	•	•	•
04121608 85	120 x 160 x 80	6.30 x 4.72 x 3.19	•	•	•	•	•	•	•	•
04141407 85	140 x 140 x 70	5.51 x 5.51 x 2.80	•	•	•	•	•	•	•	•
04141807 85	140 x 180 x 70	5.51 x 7.09 x 2.80	•	•	•	•	•	•	•	•
04142207 85	140 x 220 x 70	5.51 x 8.66 x 2.80	•	•	•	•	•	•	•	•
04161608 85	160 x 160 x 80	6.30 x 6.30 x 3.19	•	•	•	•	•	•	•	•
04162408 85	160 x 240 x 80	9.45 x 6.30 x 3.19	•	•	•	•	•	•	•	•
04202007 85	200 x 200 x 70	7.87 x 7.87 x 2.80	•	•	•	•	•	•	•	•
04202807 85	200 x 280 x 70	7.87 x 11.02 x 2.80	•	•	•	•	•	•	•	•

[1] Phenolic [2] Stainless steel [3] Cast aluminum

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories (Painted)	
External brackets, pair for 0408	**04000080 00**
External brackets, pair for 0410	**04000001 00**
External brackets, pair for 0412	**04002001 00**
External brackets, pair for 0414	**04004001 00**
External brackets, pair for 0416	**04006001 00**
External brackets, pair for 0420	**04000002 00**
Console holder for wall or table mounting 98 mm wide, for type 0410	**04300009 00**
Console holder for wall ot table mounting 138 mm wide, for type 0414	**04300014 00**
External hinges, pair, unpainted	**04000010 85**

Standard & Flange Aluminum Enclosures, Painted

- Robust aluminum enclosure for mechanical and automation engineering
- Standard enclosures prepared for acceptance of DIN rail and mounting plates
- Flange enclosures with 4, 6, or 8 flange openings

UL 508 UL 50

Included in delivery

Aluminum diecast enclosure consisting of lid with seal and captive stainless steel screws; base with 2 or 4 ground screws; flange enclosures with flange openings (please order flange plates separately).

Technical Data

Material	Al Si 12, DIN 1725
Ingress Protection	IP 66 to EN 60529. Flange: IP 65 EN 60526
Impact Resistance	>7 Nm, EN 50014
Temperature Resistance	Neoprene gasket: -40°F to +212°F Silicone gasket: -76°F to +266°F RFI gasket: -40°F to +392°F Polyurethane -40°F to +194°F
Painting	Powdercoating
Color	Silver gray, similar to RAL 7001, special colors on request

Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H
Standard enclosures								
01050503 00	45 x 50 x 30	1.77 x .97 x 45	**01122208 00**	120 x 220 x 80	4.72 x 8.66 x 3.19	**01232018 00**	230 x 200 x 180	9.13 x 7.95 x 7.09
01060603 00	64 x 58 x 34	2.52 x 2.28 x 1.34	**01122209 00**	120 x 220 x 90	4.72 x 8.66 x 3.58	**01232811 00**	230 x 280 x 110	9.06 x 11.02 x 4.37
01061003 00	64 x 98 x 34	3.86 x 2.52 x 1.34	**01122212 00**	120 x 220 x 120	4.72 x 14.17 x 3.19	**01233311 00**	230 x 330 x 110	9.06 x 12.99 x 4.37
01061503 00	64 x 150 x 34	2.52 x 5.91 x 1.34	**01123608 00**	120 x 360 x 80	5.51 x 5.51 x 3.58	**01233318 00**	230 x 330 x 180	9.06 x 12.99 x 7.13
01061903 00	64 x 185 x 34	2.52 x 7.28 x 1.34	**01141409 00**	140 x 140 x 90	5.51 x 7.87 x 3.58	**01234011 00**	230 x 400 x 110	9.06 x 15.75 x 4.37
01080806 00	80 x 75 x 57	3.15 x 2.95 x 2.24	**01142009 00**	140 x 200 x 90	5.51 x 7.87 x 3.58	**01234023 00**	230 x 400 x 224	9.06 x 15.75 x 8.86
01081306 00	80 x 125 x 57	3.15 x 4.92 x 2.24	**01161609 00**	160 x 160 x 90	6.30 x 6.30 x 3.58	**01236011 00**	230 x 600 x 110	9.06 x 23.62 x 4.37
01081806 00	80 x 175 x 57	3.15 x 6.89 x 2.24	**01162609 00**	160 x 260 x 90	6.30 x 10.24 x 3.58	**01314011 00**	310 x 400 x 110	12.32 x 15.91 x 4.37
01082505 00	80 x 250 x 52	3.15 x 9.84 x 2.05	**01163609 00**	160 x 360 x 90	6.30 x 14.17 x 3.58	**01314014 00**	310 x 400 x 140	12.32 x 15.91 x 5.55
01101008 00	100 x 100 x 80	3.94 x 3.94 x 3.19	**01165609 00**	160 x 560 x 90	6.30 x 22.05 x 3.58	**01314018 00**	310 x 400 x 180	12.32 x 15.91 x 7.13
01101608 00	100 x 160 x 80	3.94 x 6.30 x 3.19	**01181810 00**	180 x 180 x 100	7.09 x 7.09 x 3.98	**01314023 00**	310 x 400 x 226	12.32 x 15.91 x 8.94
01102008 00	100 x 200 x 80	3.94 x 7.87 x 3.19	**01182810 00**	180 x 280 x 100	11.02 x 7.09 x 3.98	**01316011 00**	310 x 600 x 110	12.20 x 23.62 x 4.37
01121208 00	120 x 122 x 80	4.72 x 4.80 x 3.19	**01231011 00**	100 x 230 x 110	3.94 x 9.06 x 4.33	**01316018 00**	310 x 600 x 180	12.20 x 23.62 x 7.13
01121209 00	120 x 122 x 90	4.72 x 4.80 x 3.58	**01232011 00**	230 x 200 x 110	9.13 x 7.95 x 4.37	**01606020 00**	600 x 600 x 200	23.62 x 23.62 x 7.95
Flange Enclosures			**Flange openings**					
11232011 00	230 x 200 x 110	9.05 x 7.78 x 4.33	4					
11232811 00	230 x 280 x 110	9.05 x 11.02 x 4.33	4					
11234011 00	230 x 400 x 110	9.05 x 15.75 x 4.33	6					
11236011 00	230 x 600 x 110	9.05 x 23.62 x 4.33	8					
Aluminum Watertight Enclosures With External Mounting Flange								
01061200 00	64 x 115 x 34.5	2.52 x 4.53 x 1.36						
01061900 00	64 x 186 x 34.5	2.52 x 7.32 x 1.36						

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Part Number	TS DIN rails for terminals		Mounting plate thickness in mm	External brackets pair set[1]	External aluminum hinges, pair[3]	Hinges inside pair [2]	Corrosion resistant	Allen lid screws[2]	Silicon lid seal up to +266° F	Lead-sealable steel lid screws
	TS 15	TS 35[5]								
Standard Enclosures										
01050503 00						•	•	•		
01060603 00						•	•	•	•	
01061003 00						•	•	•	•	
01061503 00						•	•	•	•	
01061903 00						•	•	•	•	
01080806 00	•		1.5			•	•	•	•	
01081306 00	•		1.5			•	•	•	•	
01081806 00	•		1.5			•	•	•	•	
01082505 00	•		1.5			•	•	•	•	•
01101008 00	•		1.5	•	•	•	•	•	•	•
01101608 00	•		1.5	•	•	•	•	•	•	•
01102008 00	•		1.5	•	•	•	•	•	•	•
01121208 00		•	1.5	•	•	•	•	•	•	•
01121209 00		•	1.5	•	•	•	•	•	•	•
01122208 00		•	1.5	•	•	•	•	•	•	•
01122209 00		•	1.5	•	•	•	•	•	•	•
0112221200		•	1.5	•	•	•	•	•	•	•
01123608 00		•	1.5	•	•	•	•	•	•	•
01141409 00		•	1.5	•	•	•	•	•	•	•
01142009 00		•	1.5	•	•	•	•	•	•	•
01161609 00		•	1.5	•	•	•	•	•	•	•
01162609 00		•	1.5	•	•	•	•	•	•	•
01163609 00		•	1.5	•	•	•	•	•	•	•
01165609 00		•	2.0	•	•	•	•	•	•	•
01181810 00		•	1.5	•	•	•	•	•	•	•
01182810 00		•	1.5	•	•	•	•	•	•	•
01231011 00		•	1.5	•	•	•	•	•	•	•
01232011 00		•	1.5	•	•	•	•	•	•	•
01232018 00		•	1.5	•	•	•	•	•	•	•
01232811 00		•	1.5	•	•	•	•	•	•	•
01233311 00		•	1.5	•	•	•	•	•	•	•
01233318 00		•	1.5	•	•	•	•	•	•	•
01234011 00		•	2.0	•	•	•	•	•	•	•
01234023 00		•	2.0	•	•	•	•	•	•	•
01236011 00		•	2.0	•	•	•	•	•	•	•
01314011 00		•	2.0	•	•	•	•	•	•	•
01314014 00		•	2.0	•	•	•	•	•	•	•
01314018 00		•	2.0	•	•	•	•	•	•	•
01314023 00		•	2.0	•	•	•	•	•	•	•
01316011 00		•	2.0	•	•	•	•	•	•	•
01316018 00		•	2.0	•	•	•	•	•	•	•
01606020 00		•	2.5				•		•	
Flange Enclosures										
11232011 00		•		•			•	•	•	•
11232811 00		•		•			•	•	•	•
11234011 00		•		•			•	•	•	•
11236011 00		•		•			•	•	•	•
Aluminum Watertight Enclosures With External Mounting Flange										
01061200 00							•	•	•	•
01061900 00							•	•	•	•

[1] Galvanized Steel [2] Stainless Steel [3] Die Cast Aluminum [5] TS 32 on Request

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories for Flange Enclosures

Blank flange	**10006001**

Standard & Flange Aluminum Enclosures, Unpainted

- Robust aluminum enclosure for mechanical and automation engineering
- Standard enclosures prepared for acceptance of DIN rail and mounting plates
- Flange enclosures with 4, 6 or 8 flange openings

UL 508 UL 50

Included in delivery

Aluminum diecast enclosure consisting of lid with seal and captive stainless steel screws; base with 2 or 4 ground screws; flange enclosures with flange openings (please order flange plates separately).

Technical Data

Material	Al Si 12, DIN 1725
Ingress Protection	IP 66 to EN 60529. Flange: IP 65 EN 60526
Impact Resistance	>7 Nm, EN 50014
Temperature Resistance	Neoprene gasket: -40°F to +212°F Silicone gasket: -76°F to +266°F RFI gasket: -40°F to +392°F Polyurethane -40°F to +194°F
Painting	Powdercoating
Color	Silver gray, similar to RAL 7001, special colors on request

Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H
Standard enclosures								
01050503 85	45 x 50 x 30	1.77 x .97 x 45	**01122208 85**	120 x 220 x 80	4.72 x 8.66 x 3.19	**01232018 85**	230 x 200 x 180	9.13 x 7.95 x 7.09
01060603 85	64 x 58 x 34	2.52 x 2.28 x 1.34	**01122209 85**	120 x 220 x 90	4.72 x 8.66 x 3.58	**01232811 85**	230 x 280 x 110	9.06 x 11.02 x 4.37
01061003 85	64 x 98 x 34	3.86 x 2.52 x 1.34	**01122212 85**	120 x 220 x 120	4.72 x 14.17 x 3.19	**01233311 85**	230 x 330 x 110	9.06 x 12.99 x 4.37
01061503 85	64 x 150 x 34	2.52 x 5.91 x 1.34	**01123608 85**	120 x 360 x 80	5.51 x 5.51 x 3.58	**01233318 85**	230 x 330 x 180	9.06 x 12.99 x 7.13
01061903 85	64 x 185 x 34	2.52 x 7.28 x 1.34	**01141409 85**	140 x 140 x 90	5.51 x 7.87 x 3.58	**01234011 85**	230 x 400 x 110	9.06 x 15.75 x 4.37
01080806 85	80 x 75 x 57	3.15 x 2.95 x 2.24	**01142009 85**	140 x 200 x 90	5.51 x 7.87 x 3.58	**01234023 85**	230 x 400 x 224	9.06 x 15.75 x 8.86
01081306 85	80 x 125 x 57	3.15 x 4.92 x 2.24	**01161609 85**	160 x 160 x 90	6.30 x 6.30 x 3.58	**01236011 85**	230 x 600 x 110	9.06 x 23.62 x 4.37
01081806 85	80 x 175 x 57	3.15 x 6.89 x 2.24	**01162609 85**	160 x 260 x 90	6.30 x 10.24 x 3.58	**01314011 85**	310 x 400 x 110	12.32 x 15.91 x 4.37
01082505 85	80 x 250 x 52	3.15 x 9.84 x 2.05	**01163609 85**	160 x 360 x 90	6.30 x 14.17 x 3.58	**01314014 85**	310 x 400 x 140	12.32 x 15.91 x 5.55
01101008 85	100 x 100 x 80	3.94 x 3.94 x 3.19	**01165609 85**	160 x 560 x 90	6.30 x 22.05 x 3.58	**01314018 85**	310 x 400 x 180	12.32 x 15.91 x 7.13
01101608 85	100 x 160 x 80	3.94 x 6.30 x 3.19	**01181810 85**	180 x 180 x 100	7.09 x 7.09 x 3.98	**01314023 85**	310 x 400 x 226	12.32 x 15.91 x 8.94
01102008 85	100 x 200 x 80	3.94 x 7.87 x 3.19	**01182810 85**	180 x 280 x 100	11.02 x 7.09 x 3.98	**01316011 85**	310 x 600 x 110	12.20 x 23.62 x 4.37
01121208 85	120 x 122 x 80	4.72 x 4.80 x 3.19	**01231011 85**	100 x 230 x 110	3.94 x 9.06 x 4.33	**01316018 85**	310 x 600 x 180	12.20 x 23.62 x 7.13
01121209 85	120 x 122 x 90	4.72 x 4.80 x 3.58	**01232011 85**	230 x 200 x 110	9.13 x 7.95 x 4.37	**01606020 85**	600 x 600 x 200	23.62 x 23.62 x 7.95
Flange Enclosures			**Flange openings**					
11232011 85	230 x 200 x 110	9.05 x 7.78 x 4.33	4					
11232811 85	230 x 280 x 110	9.05 x 11.02 x 4.33	4					
11234011 85	230 x 400 x 110	9.05 x 15.75 x 4.33	6					
11236011 85	230 x 600 x 110	9.05 x 23.62 x 4.33	8					
Aluminum Watertight Enclosures with External Mounting Flange								
01061200 85	64 x 115 x 34.5	2.52 x 4.53 x 1.36						
01061900 85	64 x 186 x 34.5	2.52 x 7.32 x 1.36						

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Part Number	TS DIN rails for terminals		Mounting plate thickness in mm	External brackets pair set[1]	External aluminum hinges, pair[3]	Hinges inside pair[2]	Corrosion resistant	Allen lid screws[2]	Silicon lid seal up to +266° F	Lead-sealable steel lid screws
	TS 15	TS 35[3]								
Standard Enclosures										
01050503 85						•	•	•		
01060603 85						•	•	•	•	
01061003 85						•	•	•	•	
01061503 85						•	•	•	•	
01061903 85						•	•	•	•	
01080806 85	•		1.5			•	•	•	•	
01081306 85	•		1.5			•	•	•	•	
01081806 85	•		1.5			•	•	•	•	
01082505 85	•		1.5			•	•	•	•	•
01101008 85	•		1.5	•	•	•	•	•	•	•
01101608 85	•		1.5	•	•	•	•	•	•	•
01102008 85	•		1.5	•	•	•	•	•	•	•
01121208 85		•	1.5	•	•	•	•	•	•	•
01121209 85		•	1.5	•	•	•	•	•	•	•
01122208 85		•	1.5	•	•	•	•	•	•	•
01122209 85		•	1.5	•	•	•	•	•	•	•
01122212 85		•	1.5	•	•	•	•	•	•	•
01123608 85		•	1.5	•	•	•	•	•	•	•
01141409 85		•	1.5	•	•	•	•	•	•	•
01142009 85		•	1.5	•	•	•	•	•	•	•
01161609 85		•	1.5	•	•	•	•	•	•	•
01162609 85		•	1.5	•	•	•	•	•	•	•
01163609 85		•	1.5	•	•	•	•	•	•	•
01165609 85		•	2.0	•	•	•	•	•	•	•
01181810 85		•	1.5	•	•	•	•	•	•	•
01182810 85		•	1.5	•	•	•	•	•	•	•
01231011 85		•	1.5	•	•	•	•	•	•	•
01232011 85		•	1.5	•	•	•	•	•	•	•
01232018 85		•	1.5	•	•	•	•	•	•	•
01232811 85		•	1.5	•	•	•	•	•	•	•
01233311 85		•	1.5	•	•	•	•	•	•	•
01233318 85		•	1.5	•	•	•	•	•	•	•
01234011 85		•	2.0	•	•	•	•	•	•	•
01234023 85		•	2.0	•	•	•	•	•	•	•
01236011 85		•	2.0	•	•	•	•	•	•	•
01314011 85		•	2.0	•	•	•	•	•	•	•
01314014 85		•	2.0	•	•	•	•	•	•	•
01314018 85		•	2.0	•	•	•	•	•	•	•
01314023 85		•	2.0	•	•	•	•	•	•	•
01316011 85		•	2.0	•	•	•	•	•	•	•
01316018 85		•	2.0	•	•	•	•	•	•	•
01606020 85		•	2.5				•		•	
Flange Enclosures										
11232011 85		•		•			•	•	•	•
11232811 85		•		•			•	•	•	•
11234011 85		•		•			•	•	•	•
11236011 85		•		•			•	•	•	•
Aluminum Watertight Enclosures With External Mounting Flange										
01061200 85							•	•	•	•
01061900 85							•	•	•	•

[1] Galvanized Steel [2] Stainless Steel [3] Die Cast Aluminum [5] TS 32 on Request

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories for Flange Enclosures

Blank flange	**10006001 85**

Fiberglass Watertight 02

- Robust enclosure for automation engineering
- Universal construction

UL 508 UL 50

Included in delivery

Fiberglass enclosure consisting of lid, base, seal, and captive stainless steel lid screws.

Technical Data

Material	Glassfiber-reinforced, duroplastic Polyester
Ingress Protection	IP 66 to EN 60529
Impact Resistance	>7 Nm, EN 50014
Flammability	UL 94 V0
Insulation	Fully insulated to VDE 100
Temperature Resistance	Neoprene gasket: -40°F to +212°F Silicone gasket: -76°F to +266°F Polyurethane gasket: -40°F to +194°F
Disruptive Strength	18 KV/mm
Toxicity	Halogen-free
Surface Resistance	$>10^{12}$ Ohm VDE 0303 DIN 53482
Color	Gray, similar to RAL 7000, special colors on request

Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	TS DIN rails for terminals TS 15	 TS 35 [6]	Mounting Plate Thickness in mm	External brackets pair[2]	External aluminum hinges, pair[3]	Allen lid screws[2]	Silicone lid seal up to 257°F
02060603 00	55 x 55 x 37	2.17 x 2.17 x 1.46							
02060606 00	55 x 55 x 59	2.17 x 2.17 x 2.32							
02080806 00	75 x 80 x 55	2.95 x 3.15 x 2.20	•		2[5]	•		•	•
02080808 00	75 x 80 x 75	2.95 x 3.15 x 2.95	•			•		•	•
02081106 00	75 x 110 x 55	2.95 x 4.33 x 2.20	•		2[5]	•		•	•
02081108 00	75 x 110 x 75	2.95 x 4.33 x 2.95	•			•		•	•
02081606 00	75 x 160 x 55	2.95 x 6.30 x 2.20	•		2[5]	•		•	•
02081608 00	75 x 160 x 75	2.95 x 6.30 x 2.95	•			•		•	•
02081906 00	75 x 190 x 55	2.95 x 7.48 x 2.20	•		2[5]	•		•	•
02081908 00	75 x 190 x 75	2.95 x 7.48 x 2.95	•			•		•	•
02082306 00	75 x 230 x 55	2.95 x 9.06 x 2.20	•			•		•	•
02082308 00	75 x 230 x 75	2.95 x 9.06 x 2.95	•			•		•	•
02103208 00	100 x 320 x 80	2.95 x 12.60 x 3.19	•		1.5[1]	•	•	•	•
02121209 00	120 x 122 x 90	4.72 x 4.80 x 3.58		•	1.5[1]	•	•	•	•
02122209 00	120 x 220 x 90	4.72 x 8.66 x 3.58		•	1.5[1]	•	•	•	•
02161609 00	160 x 160 x 90	6.30 x 6.30 x 3.58		•	2.5[1]	•	•	•	•
02162609 00	160 x 260 x 90	6.30 x 10.24 x 3.58		•	2.5[1]	•	•	•	•
02163609 00	160 x 360 x 90	6.30 x 14.17 x 3.58		•	2.5[1]	•	•	•	•
02165609 00	160 x 560 x 90	6.30 x 22.05 x 3.58		•	2.5[1]	•	•	•	•
02252612 00	250 x 255 x 120	9.84 x 10.04 x 4.76		•	2.0[1]	•	•	•	•
02252616 00	250 x 255 x 160	9.84 x 10.04 x 6.34		•	2.0[1]	•	•	•	•
02254012 00	250 x 400 x 120	9.84 x 15.75 x 4.76		•	2.0[1]	•	•	•	•
02254016 00	250 x 400 x 160	9.84 x 15.75 x 6.34		•	2.0[1]	•	•	•	•
02256012 00	250 x 600 x 120	9.84 x 23.62 x 4.76		•	2.0[1]	•	•	•	•
02363609 00	360 x 360 x 90	14.17 x 14.17 x 3.58		•	2.0[1]	•	•	•	•
02414012 00	405 x 400 x 120	15.94 x 15.94 x 4.76		•	2.0[1]	•	•	•	•

[1] Galvanized steel [2] Stainless steel [3] Plastic cover insulated [5] Laminated paper [6] TS 32 on request

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Polyester Flange Enclosures

- Enclosures with flange openings for automation engineering
- Multiple configurations possible by combining with other Fiberglass Flange enclosures.

Included in delivery

Enclosure in Fiberglass consisting of lid with seal, and plastic quick-release lock screws; base with flange openings, threaded insert set (4 pcs.). Please order flange plates separately.

Technical Data

	Standard Version	With Polycarbonate Transparent Lid
Material	Glassfiber-reinforced, duroplastic Polyester	
Ingress Protection	IP 65 to EN 60529	IP 65 to EN 60529
Impact Resistance	>7 Nm, EN 50014	
Flammability	UL 94 V0	V2 / UL 94
Insulation	Fully insulated to VDE 010	Fully insulated to VDE 0100
Temperature Resistance	Neoprene gasket: -40°F to +212°F Silicone gasket: -76°F to +266°F Polyurethane gasket: -40°F to +194°F RFI gasket: -40°F to + 392°F	Polyurethane gasket: -40°F to +194°F
Water Absorption	max. 0.7% downstream of ASTM D 570	max 0.2% DIN 53405 ISO/R62
Disruptive Strength	18 KV/mm	>30 Kv/mm VDE 0303 DIN 53481
Toxicity	Halogen-free	Halogen-free
Surface Resistance	$>10^{12}$ Ohm VDE 0303 DIN 53482	$>10^{15}$ Ohm VDE 0303 DIN 53482
Color	Gray, similar to RAL 7032, special colors on request	Gray, similar to RAL 7000, special colors on request

Part Number	Dimensions mm	Dimensions Inches	Flange Openings	Mounting Plate	Front Plate	* DIN Rail TS 35	Silicone Seal for Lid
	W x L x H	W x L x H					
14010000 00	170 x 270 x 135	6.69 x 10.63 x 5.31	2	**14000011 00**	**14000027 00**	**10061721 00**	**10051501 00**
14020000 00	270 x 270 x 135	10.63 x 10.63 x 5.91	4	**14000012 00**	**14000028 00**	**10061722 00**	**10051502 00**
14030000 00	270 x 540 x 135	10.63 x 21.26 x 5.31	6	**14000013 00**	**14000029 00**	**10061723 00**	**10051503 00**
Version with Polycarbonate Transparent Lid							
14010001 00	270 x 270 x 150	6.69 x 10.63 x 5.91	2	**14000011 00**	**14000027 00**	**10061721 00**	**10051501 00**
14020001 00	270 x 270 x 150	10.63 x 10.63 x 5.91	4	**14000012 00**	**14000028 00**	**10061722 00**	**10051502 00**
14030001 00	270 x 540 x 150	10.63 x 21.26 x 5.91	6	**14000013 00**	**14000029 00**	**10061723 00**	**10051503 00**

*TS 32 on request Note: Standard delivery is without flanges, please order flange plates separately.

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Flanges and Accessories

Blind Flange	**14000020 00**
Threaded flange (17 x PG 11)	**14000030 00**
Threaded flange (14 x PG 13.5)	**14000022 00**
Threaded flange (11 x PG 16)	**14000021 00**
Threaded flange (4 x PG 16, 2 x PG 21.1 x PG 29	**14000023 00**
Connecting flange (11 x PG 16)	**14000025 00**
Lid hinges (2 pcs.) for all types	**14000026 00**
External brackets (4 pcs.)	**10031102 00**
Threaded insert, additional (10 pcs.)	**10035002 00**
Silicone seal for flanges	**10051402 00**
Silicone seal for connecting flange	**10051403 00**

Standard Polycarbonate / ABS Enclosures

- Light-weight plastic enclosures for industrial applications
- Polycarbonate enclosure with standard or transparent lid
- Optional RFI version with coating

UL 508 UL 50

Included in delivery

Plastic enclosure consisting of lid with seal and captive stainless steel lid screws; base with 2 self-tapping screws for fastening internal components.

Technical Data

	Polycarbonate	ABS
Material	Polycarbonate	
Ingress Protection	IP 66 EN 60529	IP 66 to EN 60529
Surface Resistance	$>10^{12}$ OHm, DIN 53481	$4x10^{14}$ Ohm, VDE 0303 DIN 53486
Disruptive Strength	> 18 KV/mm, DIN 53481	24 Kv/mm VDE 03032 DIN 53481
Insulation	Fully insulated, VDE 0100	Fully insulated VDE 0100
Flammability	UL 94 V0	UL 94 HB
Impact Resistance	>7Nm to EN 50014	
Temperature Range	-40°F to + 212°F (neoprene gasket)	-40°F to +212°F (neoprene gasket)
Color	Light gray, similar to RAL 7035. Special colors on request.	Light gray, similar to RAL 7035. Special colors on request.
Toxicity	Halogen-free	Halogen-free

Polycarbonate Enclosure Part Number	Polycarbonate Enclosure with Transparent Lid Part Number	ABS Enclosure Part Number	Dimensions mm	Dimensions Inches	External Brackets	Mounting Plate	Silicone Lid Seal	Rubber Feet	PC External Hinge approx. 150°
			W x L x H	W x L x H					
03050504 00	**33050504 00**	**09050504 00**	50 x 52 x 35	1.97 x 2.05 x 1.38		1.5			
03050704 00	**33050704 00**	**09050704 00**	50 x 65 x 35	1.97 x 2.56 x 1.38		1.5	•		
03080806 00	**33080806 00**	**09080806 00**	80 x 82 x 55	3.18 x 3.23 x 2.17	•	1.5	•	•	
03080809 00	**33080809 00**	**09080809 00**	80 x 82 x 85	3.15 x 3.23 x 3.35	•	1.5	•	•	
03081206 00	**33081206 00**	**09081206 00**	80 x 120 x 55	3.15 x 4.72 x 2.17	•	1.5	•	•	•
03081209 00	**33081209 00**	**09081209 00**	80 x 120 x 85	3.15 x 4.72 x 3.35	•	1.5	•	•	•
03081606 00	**33081606 00**	**09081606 00**	80 x 160 x 55	3.15 x 6.30 x 2.17	•	1.5	•	•	•
03081609 00	**33081609 00**	**09081609 00**	80 x 160 x 85	3.15 x 6.30 x 3.35	•	1.5	•	•	•
03082309 00	**-**	**09082309 00**	80 x 230 x 85	3.15 x 9.06 x 3.35	•	1.5	•	•	•
03121206 00	**33121206 00**	**09121206 00**	120 x 122 x 55	4.72 x 4.80 x 2.17	•	2	•	•	•
03121209 00	**33121209 00**	**09121209 00**	120 x 122 x 90	4.72 x 4.80 x 3.35	•	2	•	•	•
03121211 00	**33121211 00**	**09121211 00**	120 x 122 x 105	4.72 x 4.80 x 3.35	•	2	•	•	•
03121609 00	**33121609 00**	**09121609 00**	120 x 160 x 90	4.72 x 4.80 x 4.13	•	2	•	•	•
03121614 00	**33121614 00**	**09121614 00**	120 x 160 x 140	4.72 x 6.30 x 3.54	•	2	•	•	•
03122008 00	**33122008 00**	**09122008 00**	120 x 200 x 75	4.72 x 6.30 x 5.51	•	2	•	•	•
03122009 00	**33122008 00**	**09122009 00**	120 x 200 x 90	4.72 x 7.87 x 2.95	•	2	•	•	•
03122410 00	**33122410 00**	**09122410 00**	120 x 240 x 100	4.72 x 7.87 x 3.54	•	2	•	•	•
03152008 00	**33152008 00**	**09152008 00**	150 x 200 x 75	4.72 x 9.45 x 3.94	•	2.5	•	•	•
03162409 00	**33162409 00**	**09162409 00**	160 x 240 x 90	5.91 x 7.87 x 2.95	•	2.5[3)]	•	•	•
03162412 00	**33162412 00**	**09162412 00**	160 x 240 x 120	6.30 x 9.45 x 3.54	•	2.5	•	•	•
03163610 00	**-**	**09163610 00**	160 x 360 x 100	6.30 x 9.45 x 4.72	•	2.5	•	•	•
03203615 00	**33203615 00**	**09203615 00**	200 x 360 x 150	6.30 x 14.17 x 3.98		2.5	•		•
03233009 00	**33233009 00**	**09233009 00**	230 x 300 x 85	7.87 x 14.17 x 5.87	•	2	•	•	•
03233011 00	**33233011 00**	**09233011 00**	230 x 300 x 110	9.06 x 11.81 x 3.35	•	2	•	•	•
-	**-**	**09403615 00**	360 x 400 x 150	9.06 x 11.81 x 4.33		2[3)]	•		

[3)] Galvanized sheet steel

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Polycarbonate Flange Enclosures

- Light plastic enclosure for industrial applications with flange pre-embossing
- Multiple configurations possible by combining with other Polycarbonate Flange Enclosures
- Snap lock technology and flange quick-fixing system

Included in delivery

Completely closed enclosure body with flange break-out points; lid with plastic quick-release lock; 4 threaded inserts for internal mounting.

Technical Data

	Enclosure base, flanges, opaque enclosure lids	Transparent Lids
Impact Resistance	> 7 Nm, EN 50014	>7 Nm, EN 50014
Flammability	UL 94 V0/ self-extinguising	UL 94 V2
Disruptive Strength	> 18 kV / mm, DIN 53482	> 30 KV / mm, DIN 53481
Surface Resistance	$>10^{15}$ Ohm, DIN 53482	$>10^{15}$ ohm, DIN 53482
Temperature Range	-40°F up to +212°F	-40°F to + 212°F
Ingress Protection	IP 65 to #N 60529	IP 65 to EN 60529
Sealing	Neoprene	Neoprene
Toxicity	Low-halogen	Low-halogen
Weather Resistance	UV stabilized	-
Insulation	Fully insulated VDE 0100	Fully insulated VDE 0100
Color	Gray, similar to RAL 7032	Transparent

Enclosure with Lid Part Number	Enclosure with Transparent Lid Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Flange Opening	TS 35*	DIN Rail	Mounting Plate
17011000 00	**17011010 00**	134 x 170 x 130	5.12 x 6.69 x 5.12	2	•	•	•
17021000 00	**17021010 00**	170 x 170 x 130	6.69 x 6.69 x 5.12	4	•	•	•
17031000 00	**17031010 00**	170 x 269 x 130	6.69 x 10.59 x 5.12	4	•	•	•
17041000 00	**17041010 00**	269 x 269 x 130	10.59 x 10.59 x 5.12	4	•	•	•
17051000 00	**17051100 00**	269 x 540 x 130	10.59 x 21.26 x 5.12	6	•	•	•
17061000 00	-	369 x 440 x 130	10.59 x 17.32 x 5.12	4	•	•	•

*TS 32 on request

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Flanges and Accessories	Part Number
Blind flange I	**17003100 00**
Blind flange II	**17003200 00**
Flange 11 PG, 19 x PG9/PG 13.5	**17003400 00**
Flange 11 PG, 16 x PG11/PG 16	**17003500 00**
Flange 11 PG , 10 x PG9/PG 13.5; 4 x PG 11/PG16; 2 x PG21/PG29	**17003300 00**
Connecting flange I	**17003600 00**
Connecting flange II	**17003700 00**
Internal Mounting Bracket (set of 4), for type 1705 2 sets required	**17004200 00**
Additional threaded insterts (set of 10)	**10035003 00**
External brackets (set of 4)	**10031104 00**
Spare fixing wedges (set of 10)	**17004100 00**
Internal hinges (set of 2)	**17005500 00**

ECO/PCI Compact Enclosures

- Light-weight thermoplastic enclosure for industrial applications
- ECO version: base with smooth side walls, lid version standard or transparent
- PCI version: base with knock-outs for cable connections

Included in delivery
Enclosure consisting of lid, base, seal, captive lid screws, and screws for fastening including spacer inserts.

Technical Data

Material	Flame-resistant Polystyrene
Ingress Protection	IP 65 to EN 60529
Impact Resistance	2 Nm, EN 60068-2-75
Insulation	Fully insulated to VDE 0100
Temperature Range	+14°F to + 158°F
Flammability	UL 94 HB
Toxicity	Low-halogen
Weather Resistance	Do not expose to direct sunlight
Chemical Resistance	Not resistant to benzine, diesel, oils, and fats as well as strong acids.
Color	Gray, similar to RAL 7035. Special colors on request

ECO Series

Enclosure Type	Part Number	Dimensions mm	Dimensions Inches	TS Din Rails for Terminals		Mounting Plate	External Bracket	External Hinges	Knurled Screw
		W x L x H	W x L x H	TS 15	TS 35*				
ECO 01-6	60070711 00	65 x 65 x 57	2.56 x 2.56 x 2.24	•		•	•	•	•
ECO 01-8	60070721 00	65 x 65 x 81	2.56 x 2.56 x 3.49	•		•	•	•	•
ECO 02-6	60070911 00	65 x 94 x 57	2.56 x 3.70 x 2.24	•		•	•	•	•
ECO 02-8	60070921 00	65 x 94 x 81	2.56 x 3.70 x 3.19	•		•	•	•	•
ECO 03-6	60090911 00	94 x 94 x 57	3.70 x 3.70 x 2.24	•		•	•	•	•
ECO 03-8	60090921 00	94 x 94 x 81	3.70 x 3.70 x 3.19	•		•	•	•	•
ECO 03-6t	60090912 00	94 x 94 x 57	3.70 x 3.70 x 2.24	•		•	•	•	•
ECO 03-8t	60090922 00	94 x 94 x 81	3.70 x 3.70 x 3.19	•		•	•	•	•
ECO 04-6	60091311 00	94 x 130 x 57	3.58 x 5.12 x 2.24	•	•	•	•	•	•
ECO 04-8	60091321 00	94 x 130 x 81	3.70 x 5.12 x 3.19	•	•	•	•	•	•
ECO 04-6t	60091312 00	94 x 130 x 57	3.58 x 5.12 x 2.24	•	•	•	•	•	•
ECO 04-8t	60091322 00	94 x 130 x 81	3.70 x 5.12 x 3.19	•	•	•	•	•	•
ECO 05-7	60111111 00	110 x 110 x 66	4.33 x 4.33 x 2.60	•	•	•	•	•	•
ECO 05-9	60111121 00	110 x 110 x 90	4.33 x 4.33 x 3.54	•	•	•	•	•	•
ECO 05-7t	60111112 00	110 x 110 x 66	4.33 x 4.33 x 2.60	•	•	•	•	•	•
ECO 05-9t	60111122 00	110 x 110 x 90	4.33 x 4.33 x 3.54	•	•	•	•	•	•
ECO 06-7	60131311 00	130 x 130 x 75	4.33 x 4.33 x 2.95	•	•	•	•	•	•
ECO 06-10	60131321 00	130 x 130 x 99	4.33 x 4.33 x 3.90	•	•	•	•	•	•
ECO 06-7t	60131312 00	130 x 130 x 75	4.33 x 4.33 x 2.95	•	•	•	•	•	•
ECO 06-10t	60131322 00	130 x 130 x 99	4.33 x 4.33 x 3.90	•	•	•	•	•	•
ECO 07-6	60091811 00	94 x 180 x 57	3.70 x 7.09 x 2.24	•	•	•	•	•	•
ECO 07-8	60091821 00	94 x 180 x 81	3.70 x 7.09 x 3.19	•	•	•	•	•	•
ECO 07-6t	60091812 00	94 x 180 x 57	3.70 x 7.09 x 2.24	•	•	•	•	•	•
ECO 07-8t	60091822 00	94 x 180 x 81	3.70 x 7.09 x 3.19	•	•	•	•	•	•
ECO 08-9	60111811 00	110 x 180 x 90	4.33 x 7.09 x 3.54		•	•	•	•	•
ECO 08-11	60111821 00	110 x 180 x 111	4.33 x 7.09 x 4.37		•	•	•	•	•
ECO 08-9t	60111812 00	110 x 180 x 90	4.33 x 7.09 x 3.54		•	•	•	•	•
ECO 08-11t	60111822 00	110 x 180 x 111	7.33 x 7.09 x 4.37		•	•	•	•	•
ECO 09-9	60181811 00	180 x 182 x 90	7.09 x 7.16 x 3.54		•	•	•	•	•
ECO 09-11	60181821 00	180 x 182 x 111	7.09 x 7.16 x 4.37		•	•	•	•	•
ECO 09-16	60181831 00	180 x 182 x 165	7.09 x 7.19 x 6.50		•	•	•	•	•
ECO 09-9t	60181812 00	180 x 182 x 90	7.09 x 7.16 x 3.54		•	•	•	•	•
ECO 09-11t	60181822 00	180 x 182 x 111	7.09 x 7.16 x 4.37		•	•	•	•	•
ECO 09-16t	60181832 00	180 x 182 x 165	7.09 x 7.16 x 6.50		•	•	•	•	•
ECO 10-6t	60182509 00	180 x 254 x 63	7.09 x 10.00 x 2.48		•	•	•	•	•
ECO 10-6	60182510 00	180 x 254 x 63	7.09 x 10.00 x 2.48		•	•	•	•	•
ECO 10-9	60182511 00	180 x 254 x 90	7.09 x 10.00 x 3.54		•	•	•	•	•
ECO 10-11	60182521 00	180 x 254 x 111	7.09 x 10.00 x 4.37		•	•	•	•	•
ECO 10-16	60182531 00	180 x 254 x 165	7.09 x 10.00 x 6.50		•	•	•	•	•
ECO 10-9t	60182512 00	180 x 254 x 90	7.09 x 10.00 x 3.15		•	•	•	•	•
ECO 10-11t	60182522 00	180 x 254 x 111	7.09 x 10.00 x 4.37		•	•	•	•	•
ECO 10-16t	60182532 00	180 x 254 x 165	7.09 x 10.00 x 6.50		•	•	•	•	•
ECO 11-11	60253611 00	254 x 355 x 111	10.00 x 13.98 x 4.37		•	•	•	•	•
ECO 11-16	60253621 00	254 x 355 x 165	10.00 x 13.98 x 6.50		•	•	•	•	•
ECO 11-11t	60253612 00	254 x 355 x 111	10.00 x 13.98 x 4.37		•	•	•	•	•
ECO 11-16t	60253622 00	254 x 355 x 165	10.00 x 13.98 x 6.50		•	•	•	•	•
PCI Series									
PCI 06-1M	60070715 00	65 x 65 x 57	2.56 x 2.56 x 2.24	•		•	•	•	•
PCI 02-6M	60070915 00	65 x 95 x 57	2.56 x 3.74 x 2.24	•		•	•	•	•
PCI 03-6M	60090915 00	94 x 94 x 57	3.70 x 3.70 x 2.24	•		•	•	•	•
PCI 04-6M	60091315 00	94 x 130 x 57	3.70 x 5.12 x 2.24	•	•	•	•	•	•
PCI 05-9M	60111115 00	110 x 110 x 90	4.33 x 4.33 x 3.54	•	•	•	•	•	•
PCI 06-7M	60131315 00	130 x 130 x 75	5.12 x 5.12 x 2.95	•	•	•	•	•	•
PCI 07-6M	60091815 00	94 x 180 x 57	3.70 x 7.09 x 2.24	•	•	•	•	•	•
PCI 08-9M	60111815 00	110 x 180 x 90	4.33 x 7.09 x 3.54		•	•	•	•	•
PCI 08-11M	60111825 00	110 x 180 x 111	4.33 x 7.09 x 4.37		•	•	•	•	•
PCI 09-9M	60181815 00	180 x 182 x 90	7.09 x 7.16 x 3.54		•	•	•	•	•
PCI 09-11M	60181825 00	180 x 182 x 111	7.09 x 7.16 x 4.37		•	•	•	•	•
PCI 10-6M	60182505 00	180 x 254 x 63	7.09 x 10.00 x 2.48		•	•	•	•	•
PCI 10-9M	60182515 00	180 x 254 x 90	7.09 x 10.00 x 3.54		•	•	•	•	•
PCI 10-11M	60182525 00	180 x 254 x 111	7.09 x 10.00 x 4.37		•	•	•	•	•
PCI 11-11M	60253615 00	254 x 355 x 111	10.00 x 13.98 x 4.37		•	•	•	•	•

t = Transparent lid

* TS 32 available on request

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Polymas Watertight Enclosures

- Especially suitable for fitting small electronic components and terminal blocks
- Available with or without molded-on cable glands and with or without quick-release lid screws
- Mounting bosses for self-tapping screws provided for the assembly of terminal blocks, DIN rails or PCBs

Included in delivery

Enclosure consisting of lid and base; lid screws, or quick-release lid screws; depending on design with molded-on cable glands PG 11 including clamping cage, pressure screw, and closed sealing ring.

Technical Data

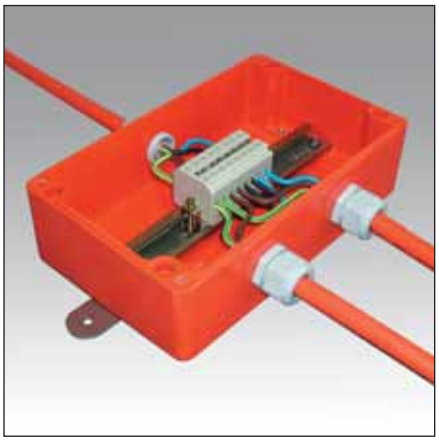
Material	Polyamide 6, 30% glassbead-reinforced. UV stabilized
Ingress Protection	IP 65 DIN EN 60529. Increased protection up to IP x7 on request.
Color	Gray, similar to RAL 7001
Lid Seal	Neoprene

Enclosure Type	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H
PK 101*	**38101000 00**	58 x 64 x 34	2.28 x 2.52 x 1.34
PK 101-111*	**38101100 00**	58 x 64 x 34	2.28 x 2.52 x 1.34
PK 101-211*	**38101200 00**	58 x 64 x 34	2.28 x 2.52 x 1.34
PK 101 SV	**38101500 00**	58 x 64 x 34	2.28 x 2.25 x 1.34
PK 101 SV-111	**38101600 00**	58 x 64 x 34	2.28 x 2.25 x 1.34
PK 101 SV-211	**38101700 00**	58 x 64 x 34	2.28 x 2.25 x 1.34
PK 102*	**38102000 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 102-211*	**38102200 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 102-411*	**38102400 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 102 SV	**38102500 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 102 SV-211	**38102700 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 102 SV-411	**38102900 00**	98 x 64 x 34	3.86 x 2.52 x 1.34
PK 105*	**38105000 00**	75 x 80 x 57	2.95 x 2.52 x 2.24
PK 105 SV	**38105500 00**	75 x 80 x 57	2.95 x 2.52 x 2.24
PK 110*	**38110000 00**	125 x 80 x 57	4.91 x 2.52 x 2.24
PK 110 SV	**38110500 00**	125 x 80 x 57	4.91 x 2.52 x 2.24
PK 115*	**38115000 00**	175 x 80 x 57	6.89 x 2.52 x 2.24
PK 115 SV	**38115500 00**	175 x 80 x 57	6.89 x 2.52 x 2.24

*Available with transparent polycarbonate lid for quantities exceeding 500 pieces.
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

E30 Fire Protection Enclosures

- Fire protection enclosures from special halogen-free fiberglass material
- Individually fitted with ceramic terminals and cable glands to customer specifications



Included in delivery
Enclosure system with DIN rail and external brackets.
Optional, approved terminals and cable glands

Technical Data

Material	Glassfiber-reinforced polyester
Ingress Protection	IP 66, EN 60529
Seal/Temperature Stability	CR round seal -40° to +90°F
Test Certificate	DIN 4102 Part 12. General building test certification.
EMC	Optional EMC version

Part Number	Dimensions mm	Dimensions Inches	Ceramic Terminal Blocks	
	W x L x H	W x L x H	SAKK4	SAKK10
E30121209 00	120 x 120 x 90	4.72 x 4.72 x 3.54	7 pieces	4 pieces
E30122209 00	120 x 220 x 90	4.72 x 8.66 x 3.54	18 pieces	12 pieces
E30161609 00	160 x 160 x 90	6.30 x 6.30 x 3.54	11 pieces	8 pieces
E30162609 00	160 x 260 x 90	6.30 x 10.24 x 3.54	23 pieces	16 pieces
E30252612 00	250 x 260 x 120	9.84 x 10.24 x 4.72	2 x 23 pieces	2 x 16 pieces

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Terminals			
E30000104 00	SAKK4	ceramic terminal block	0.5 to 6 mm^2 (single strip) 0.5 to 4 mm^2 (multi strip)
E30000116 00	SAKK 10	ceramic terminal block	2.5 to 16mm^2 (single strip) 2.5 to 10mm^2 (multi strip)
E30000191 00	AP/SAKK4/10	lid	
E30000192 00	QL2/SAKK4	bridge, 2 pole to SAKK 4	
E30000193 00	QL3/SAKK4	bridge, 3 pole to SAKK 4	
E30000194 00	QL 4/SAKK4	bridge, 4 pole to SAKK 4	
E30000196 00	QL 2/SAKK10	bridge, 2 pole to SAKK 10	
E30000197 00	QL 3/SAKK10	bridge, 3 pole to SAKK 10	
E30000198 00	QL 4/SAKK10	bridge, 4 pole to SAKK 10	
E30000201 00	EW 1	end clamp TS 32	
Cable Glands			
08080512 00	M 12 x 1.5	range 3 - 7 mm	
08080516 00	M 16 x 1.5	range 5 - 10 mm	
08080520 00	M 20 x 1.5	range 8 - 13 mm	
08080525 00	M 25 x 1.5	range 11 - 17 mm	
08080532 00	M 32 x 1.5	range 15 - 21 mm	
08080540 00	M 40 x 1.5	range 19 - 28 mm	

Polycarbonate Watertight EM/ABS Watertight ET

- Four new flat versions round off this innovative and successful IP 65 enclosure line.
- Made from either high-quality polycarbonate or cost-effective ABS, this enclosure line offers a wide range of benefits due to its easy-to-use screw-mounting system and additional mounting bosses in the base.
- Versions with a recessed membrane keypad area (F) and/or PCB plug-in-slots (LP/FLP) are ideal for use as electronic enclosures.
- This enclosure is especially easy to recycle because there are no molded-in metal parts, and in each case only one type of plastic is used.

Included in delivery

Enclosure base with lid; self-tapping coarse thread lid screws made of V2A; max. screwing force 45 Ncm.

Technical Data

Material	Polycarbonate	ABS
Ingress Protection	IP 65 DIN EN 60529	IP 65 DIN EN 60529
Color	Light gray, similar to RAL 7035. Special colors on request	Light gray, similar to RAL 7035. Special colors on request
Flammability	UL V2/1.14	UL 94 HB/1.6
Temperature Range	Neoprene Gasket -40°F to +212°F Silicone Gasket -76°F to +266°F RFI Gasket -40°F to +392°F	Neoprene Gasket -40°F to +212°F Silicone Gasket -76°F to +266°F RFI Gasket -40°F to +392°F
Surface Resistance	$>10^{15}$ Ohm to DIN 53482	$>10^{14}$ Ohm DIN 53482
Disruptive Strength	28 KV/mm DIN 53481	-

Polycarbonate

Model	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
EM 205	**62205000 00**	52 x 50 x 37	2.05 x 1.97 x 1.46
EM 250 F	**62205200 00**	52 x 50 x 37	2.05 x 1.97 x 1.46
EM 206	**62206000 00**	65 x 50 x 37	2.56 x 1.97 x 1.46
EM 206 F	**62206200 00**	65 x 50 x 37	2.56 x 1.97 x 1.46
EM 207 LP	**62207300 00**	82 x 60 x 57	3.23 x 2.36 x 2.24
EM 207 F-LP	**62207400 00**	82 x 60 x 57	3.23 x 2.36 x 2.24
EM 208	**62208000 00**	98 x 64 x 38	3.86 x 2.52 x 1.50
EM 208 F	**62208200 00**	98 x 64 x 38	3.86 x 2.52 x 1.50
EM 210	**62210000 00**	82 x 80 x 57	3.23 x 3.15 x 2.24
EM 210 F	**62210200 00**	82 x 80 x 57	3.23 x 3.15 x 2.24
EM 212	**62212000 00**	100 x 100 x 57	3.94 x 3.94 x 2.24
EM 212 F	**62212200 00**	100 x 100 x 57	3.94 x 3.94 x 2.24
EM 213*	**62213000 00**	122 x 120 x 37	4.80 x 4.72 x 1.46
EM 213 F*	**62213200 00**	122 x 120 x 37	4.80 x 4.72 x 1.46
EM 214 LP	**62214300 00**	200 x 120 x 57	7.87 x 4.72 x 2.24
EM 214 F-LP	**62214400 00**	200 x 120 x 57	7.87 x 4.72 x 2.24
EM 215	**62215000 00**	120 x 80 x 57	4.72 x 3.15 x 2.24
EM 215 F	**62215200 00**	120 x 80 x 57	4.72 x 3.15 x 2.24
EM 217	**62217000 00**	122 x 120 x 57	4.80 x 4.72 x 2.24
EM 217 F	**62217200 00**	122 x 120 x 57	4.80 x 4.72 x 2.24
EM 218 LP	**62218300 00**	150 x 150 x 57	5.90 x 5.90 x 2.24
EM 218 F-LP	**62218400 00**	150 x 150 x 57	5.90 x 5.90 x 2.24
EM 220	**62220000 00**	160 x 80 x 57	6.30 x 3.15 x 2.24
EM 220 F	**62220200 00**	160 x 80 x 57	6.30 x 3.15 x 2.24
EM 221	**62221000 00**	200 x 120 x 77	7.87 x 4.72 x 3.03
EM 221 F	**62221200 00**	200 x 120 x 77	7.87 x 4.72 x 3.03
EM 223	**62223000 00**	200 x 150 x 77	7.87 x 5.90 x 3.03
EM 223 F	**62223200 00**	200 x 150 x 77	7.87 x 5.90 x 3.03
EM 224 LP	**62224300 00**	240 x 80 x 60	9.45 x 3.15 x 2.36
EM 224 F-LP	**62224400 00**	240 x 80 x 60	9.45 x 3.15 x 2.36
EM 225	**62225000 00**	82 x 80 x 87	3.23 x 3.15 x 3.42
EM 225 F	**62225200 00**	82 x 80 x 87	3.23 x 3.15 x 3.42
EM 227	**62227000 00**	122 x 120 x 87	4.80 x 4.72 x 3.42
EM 227 F	**62227200 00**	122 x 120 x 87	4.80 x 4.72 x 3.42
EM 229*	**62229000 00**	160 x 80 x 37	6.30 x 3.15 x 1.46
EM 229 F*	**62229200 00**	160 x 80 x 37	6.30 x 3.15 x 1.46
EM 231	**62231000 00**	160 x 80 x 87	6.30 x 3.15 x 3.42
EM 231 F*	**62231200 00**	160 x 80 x 87	6.30 x 3.15 x 3.42
EM 232*	**62232000 00**	200 x 150 x 37	7.87 x 5.90 x 1.46
EM 232 F*	**62232200 00**	200 x 150 x 37	7.87 x 5.90 x 1.46
EM 233*	**62233000 00**	250 x 160 x 37	9.84 x 6.30 x 1.46
EM 233 F*	**62233200 00**	250 x 160 x 37	9.84 x 6.30 x 1.46
EM 236 LP	**62236300 00**	240 x 80 x 80	9.45 x 3.15 x 3.15
EM 236 F-LP	**62236400 00**	240 x 80 x 80	9.45 x 3.15 x 3.15
EM 237	**62237000 00**	200 x 120 x 92	7.87 x 4.72 x 3.62
EM 237 F	**62237200 00**	200 x 120 x 92	7.87 x 4.72 x 3.62
EM 238	**62238000 00**	160 x 120 x 92	6.30 x 4.72 x 3.62
EM 238 F	**62238200 00**	160 x 120 x 92	6.30 x 4.72 x 3.62
EM 239	**62239000 00**	250 x 160 x 57	9.84 x 6.30 x 2.24
EM 239 F	**62239200 00**	250 x 160 x 57	9.84 x 6.30 x 2.24
EM 240	**62240000 00**	250 x 160 x 92	9.84 x 6.30 x 3.62
EM 240 F	**62240200 00**	250 x 160 x 92	9.84 x 6.30 x 3.62
EM 241	**62241000 00**	250 x 160 x 122	9.84 x 6.30 x 4.80
FM 241 F	**62241200 00**	250 x 160 x 122	9.84 x 6.30 x 4.80
EM 242	**62242000 00**	240 x 120 x 102	9.45 x 4.72 x 4.01
EM 242 F	**62242200 00**	240 x 120 x 102	9.45 x 4.72 x 4.01
FM 247 LP	**62247300 00**	300 x 160 x 120	11.81 x 6.30 x 4.72
EM 247 F-LP	**62247400 00**	360 x 160 x 120	11.81 x 6.30 x 4.72

ABS

Model	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
ET 205	**63205000 00**	52 x 50 x 37	2.05 x 1.97 x 1.46
ET 205 F	**63205200 00**	52 x 50 x 37	2.05 x 1.97 x 1.46
ET 206	**63206000 00**	65 x 50 x 37	2.56 x 1.97 x 1.46
ET 206 F	**63206200 00**	65 x 50 x 37	2.56 x 1.97 x 1.46
ET 207 LP	**63207300 00**	82 x 60 x 57	3.23 x 2.36 x 2.24
ET 207 F-LP	**63207400 00**	82 x 60 x 57	3.23 x 2.36 x 2.24
ET 208	**63208000 00**	98 x 64 x 38	3.86 x 2.52 x 1.50
ET 208 F	**63208200 00**	98 x 64 x 38	3.86 x 2.52 x 1.50
ET 210	**63210000 00**	82 x 80 x 57	3.23 x 3.15 x 2.24
ET 210 F	**63210200 00**	82 x 80 x 57	3.23 x 3.15 x 2.24
ET 212	**63212000 00**	100 x 100 x 57	3.94 x 3.94 x 2.24
ET 212 F	**63212200 00**	100 x 100 x 57	3.94 x 3.94 x 2.24
ET 213	**63213000 00**	122 x 120 x 37	4.80 x 4.72 x 1.46
ET 213 F	**63213200 00**	122 x 120 x 37	4.80 x 4.72 x 1.46
ET 214 LP	**63214300 00**	200 x 120 x 57	7.87 x 4.72 x 2.24
ET 214 F-LP	**63214400 00**	200 x 120 x 57	7.87 x 4.72 x 2.24
ET 215	**63215000 00**	120 x 80 x 57	4.72 x 3.15 x 2.24
ET 215 F	**63215200 00**	120 x 80 x 57	4.72 x 3.15 x 2.24
ET 217	**63217000 00**	122 x 120 x 57	4.80 x 4.72 x 2.24
ET 217 F	**63217200 00**	122 x 120 x 57	4.80 x 4.72 x 2.24
ET 218 LP	**63218300 00**	150 x 150 x 57	5.90 x 5.90 x 2.24
ET 218 F-LP	**63218400 00**	150 x 150 x 57	5.90 x 5.90 x 2.24
ET 220	**63220000 00**	160 x 80 x 57	6.30 x 3.15 x 2.24
ET 220 F	**63220200 00**	160 x 80 x 57	6.30 x 3.15 x 2.24
ET 221	**63221000 00**	200 x 120 x 77	7.87 x 4.72 x 3.03
ET 221 F	**63221200 00**	200 x 120 x 77	7.87 x 4.72 x 3.03
ET 223	**63223000 00**	200 x 150 x 77	7.87 x 5.90 x 3.03
ET 223 F	**63223200 00**	200 x 150 x 77	7.87 x 5.90 x 3.03
ET 224 LP	**63224300 00**	240 x 80 x 60	9.45 x 3.15 x 2.36
ET 224 F-LP	**63224400 00**	240 x 80 x 60	9.45 x 3.15 x 2.36
ET 225	**63225000 00**	82 x 80 x 87	3.23 x 3.15 x 3.42
ET 225 F	**63225200 00**	82 x 80 x 87	3.23 x 3.15 x 3.42
ET 227	**63227000 00**	122 x 120 x 87	4.80 x 4.72 x 3.42
ET 227 F	**63227200 00**	122 x 120 x 87	4.80 x 4.72 x 3.42
ET 229	**63229000 00**	160 x 80 x 37	6.30 x 3.15 x 1.46
ET 229 F	**63229200 00**	160 x 80 x 37	6.30 x 3.15 x 1.46
ET 231	**63231000 00**	160 x 80 x 87	6.30 x 3.15 x 3.42
ET 231 F	**63231200 00**	160 x 80 x 87	6.30 x 3.15 x 3.42
ET 232	**63232000 00**	200 x 150 x 37	7.87 x 5.90 x 1.46
ET 232 F	**63232200 00**	200 x 150 x 37	7.87 x 5.90 x 1.46
ET 233*	**63233000 00**	250 x 160 x 37	9.84 x 6.30 x 1.46
ET 233 F	**63233200 00**	250 x 160 x 37	9.84 x 6.30 x 1.46
ET 236 LP	**63236300 00**	240 x 80 x 80	9.45 x 3.15 x 3.15
ET 236 F-LP	**63236400 00**	240 x 80 x 80	9.45 x 3.15 x 3.15
ET 237	**63237000 00**	200 x 120 x 92	7.87 x 4.72 x 3.62
ET 237 F	**63237200 00**	200 x 120 x 92	7.87 x 4.72 x 3.62
ET 238	**63238000 00**	160 x 120 x 92	6.30 x 4.72 x 3.62
ET 238 F	**63238200 00**	160 x 120 x 92	6.30 x 4.72 x 3.62
ET 239	**63239000 00**	250 x 160 x 57	9.84 x 6.30 x 2.24
ET 239 F	**63239200 00**	250 x 160 x 57	9.84 x 6.30 x 2.24
ET 240	**63240000 00**	250 x 160 x 92	9.84 x 6.30 x 3.62
ET 240 F	**63240200 00**	250 x 160 x 92	9.84 x 6.30 x 3.62
ET 241	**63241000 00**	250 x 160 x 122	9.84 x 6.30 x 4.80
ET 241 F	**63241200 00**	250 x 160 x 122	9.84 x 6.30 x 4.80
ET 242	**63242000 00**	240 x 120 x 102	9.45 x 4.72 x 4.01
ET 242 F	**63242200 00**	240 x 120 x 102	9.45 x 4.72 x 4.01
ET 247 LP	**63247300 00**	300 x 160 x 120	11.81 x 6.30 x 4.72
ET 247 F-LP	**63247400 00**	300 x 160 x 120	11.81 x 6.30 x 4.72

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

*An additional model with PCB slots EM/ET...LP is available on request.

F = with recessed area in upper section for flush-fitting of membrane keypads

LP/F=LP = with slots for PCBs

Accessories

Model	Mounting Plate Part Number	Terminal Rail TS 15 Part Number	Terminal Rail TS 32 Part Number	Terminal Rail TS 35 Part Number	Screw Covers EM-SA Part Number	Rubber Feet EM-GF Part Number	Wall Bracket EM-WL Part Number
EM/ET 205	22000100 00	-	-	-	22080000 00	22009000 00	22010000 00
EM/ ET 250 F	22000100 00	-	-	-	22080000 00	22009000 00	22010000 00
EM / ET 206	22000200 00	22150501 00	-	-	22080000 00	22009000 00	22010000 00
EM/ET 206 F	22000200 00	22150501 00	-	-	22080000 00	22009000 00	22010000 00
EM/ET 207 LP	22207001 00*	22150701 00	-	-	22080000 00	22009000 00	22010000 00
EM/ET 207 F-LP	22207001 00*	22150701 00	-	-	22080000 00	22009000 00	22010000 00
EM/ET 208	-	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 208 F	-	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 210	22000300 00	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 210 F	22000300 00	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 212	22212000 00*	22150901 00	22320901 00	22350901 00	22080000 00	22009000 00	22010000 00
EM/ET 212 F	22212000 00*	22150901 00	22320901 00	22350901 00	22080000 00	22009000 00	22010000 00
EM/ET 213	-	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 213 F	-	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 214 LP	22214001 00*	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 214 F-LP	22214001 00*	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 215	22000400 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 215 F	22000400 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 217	22000500 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 217 F	22000500 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 218 LP	22218001 00*	22151401 00	22321401 00	22351401 00	22080000 00	22009000 00	22010000 00
EM/ET 218 F-LP	22218001 00*	22151401 00	22321401 00	22351401 00	22080000 00	22009000 00	22010000 00
EM/ET 220	22000600 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 220 F	22000600 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 221	22000700 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 221 F	22000700 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 223	22000800 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 223 F	22000800 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 224 LP	22224001 00*	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 224 F-LP	22224001 00*	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 225	22000300 00	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 225 F	22000300 00	22150701 00	22320701 00	22350701 00	22080000 00	22009000 00	22010000 00
EM/ET 227	22000500 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 227 F	22000500 00	22151101 00	22321101 00	22351101 00	22080000 00	22009000 00	22010000 00
EM/ET 229	-	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 229 F	-	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 231	22000600 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 231 F	22000600 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 232	-	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 232 F	-	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 233	-	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 233 F	-	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 236 LP	22224001 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 236 F-LP	22224001 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 237	22000700 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 237 F	22000700 00	22151901 00	22321901 00	22351901 00	22080000 00	22009000 00	22010000 00
EM/ET 238	22001100 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 238 F	22001100 00	22151501 00	22321501 00	22351501 00	22080000 00	22009000 00	22010000 00
EM/ET 239	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 239 F	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 240	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 240 F	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 241	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 241 F	22000900 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 242	22001200 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 242 F	22001200 00	22152301 00	22322301 00	22352301 00	22080000 00	22009000 00	22010000 00
EM/ET 247 LP	22247001 00*	22152901 00	22322901 00	22352901 00	22080000 00	22009000 00	22010000 00
EM/ET 247 F-LP	22247001 00*	22152901 00	22322901 00	22352901 00	22080000 00	22009000 00	22010000 00

*Can also be fitted in lids

Fiberglass 3040/4060 Cabinets

- Enclosure system with hidden external hinge
- Standard version or with window
- Version with handle

Included in delivery

Enclosure consisting of lower section and door; **please order door lock separately**, press-in inserts in base for internal and external fitting.

Technical Data

Material	Glassfiber-reinforced, duroplastic Polyester
Ingress Protection	IP 66 to EN 60529
Door Opening Angle	135°
Temperature Range	-40°F to +212°F window version -40°F to +176°F
Impact Resistance	>7 Nm, EN 50014
Surface Resistance	$>10^{12}$ Ohm, DIN 53482
Disruptive Strength	18 kV/mm, VDE 0303 / DIN 53481
Insulation	fully insulated, VDE 0100
Flammability	UL 94 V0, self-extinguishing
Water Absorption	max. 0.6%
Toxicity	halogen free
Color	Agate gray, similar to RAL 7038. Special colors on request.

Polyglass/Polycase	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number Polyglas	Part Number Polyglas with Window	Part Number with Carrying Handle	Part Number with Window and Carring Handle
Size 1	300 x 400 x 200	11.81 x 15.75 x 7.87	**21304000 00**	**22304000 00**	**23304000 00**	**24304000 00**
Size 2	400 x 600 x 250	15.75 x 23.62 x 9.84	**21406000 00**	**22406000 00**	**23406000 00**	**24406000 00**

Note: Standard delivery enclosure without lock, please order separately.
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Optional lock types (loose)	Part Number
Square lock 8 mm (2 pieces)	**21610004 00**
Square lock 7 mm (2 pieces)	**21610014 00**
Double ward lock 3 mm (2 pieces)	**21610007 00**
Knob (2 pieces)	**21610001 00**
Knob, to lock with keys (2 pieces)	**21610002 00**

Accessories	Part Number
Mounting plate for size 1 (galvanized sheet steel)	**10011203 00**
Mounting plate for size 2 (glavanized sheet steel)	**10011204 00**
External brackets (4 pieces)	**10031009 00**
Hole covers for mounting through the cabinet base (4 pieces)	**10039001 00**
Key, triangular 8 mm	**10047003 00**
Key, square 8mm	**10047004 00**
Key, square 7mm	**10047014 00**
Key double ward 3 mm	**10047007 00**

GFK Fiberglass/ABS Mini Cabinets

- Enclosure system with hinged lid
- Standard version or with window panel or transparent door (ABS)

Included in delivery

Enclosure consisting of base and door; **please order door lock and keys separately**, press-in inserts in base for internal and external fitting. Door locks and keys sold separately.

Technical Data

Material	Glassfiber-reinforced, duroplastic Polyester	ABS
Ingress Protection	IP 65 to EN 60529	IP 65 to EN 60529
Door Opening Angle	135°	135°
Temperature Range	-67°F to +194°F window version -67°F to +176°F	-40°F to +158°F
Impact Resistance	>7 Nm, EN 50014	>7 Nm, EN 50014
Surface Resistance	$>10^{12}$ Ohm, DIN 53482	$>10^{12}$ Ohm VDE 0303 / DIN 53482
Disruptive Strength	18 kV/mm, VDE 0303 / DIN 53481	18 kV/mm, VDE 0303 / DIN 53481
Insulation	fully insulated, VDE 0100	fully insulated, VDE 0100
Flammability	UL 94 V0, self-extinguishing	UL 94 HB
Water Absorption	max. 0.2% DIN 53495 / ISO R 62	max. 0.2% DIN 53495 / ISO R62
Toxicity	halogen free	halogen free
Color	Agate gray, similar to RAL 7038. Special colors on request.	Light gray, similar to RAL 7035. Special colors on request.

Polyglass/Polycase	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number ABS	Part Number ABS with Transparent Door	Part Number GFK	Part Number GFK with Window
Size 1	200 x 250 x 150	7.87 x 9.84 x 5.90	**21202590 00**	**22202590 00**	-	-
Size 2	250 x 300 x 170	9.84 x 11.81 x 6.69	**21253090 00**	**22253090 00**	-	-
Size 1	199 x 248.5 x 149	7.83 x 9.78 x 5.87	-	-	**21202500 00**	**22202500 00**
Size 2	248.5 x 298.0 x 166	9.78 x 11.73 x 6.53	-	-	**21253000 00**	**22253000 00**

Note: Standard delivery enclosure without lock, please order separately.
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Locking screws optional (loose)	Part Number
Triangular lock 8 mm (1 piece)	**21620003 00**
Square lock 8 mm (1 piece)	**21620004 00**
Door handle	**21620001 00**
Locking door handle with key	**21620002 00**

Accessories	Part Number
Mounting plate for size 1 (2025) galvanized steel	**10089040 00**
Mounting plate for size 2 (2035) galvanized steel	**10089041 00**
Internal aluminum front panel with stud bolts for size 1 (2025)	**10095320 00**
Internal aluminum front panel with stud bolts for size 2 (2035)	**10095321 00**
Wall mount brackets (4 pieces)	**10052010 00**
Triangular metal key	**10094325 00**
Square metal key	**10094326 00**
Mounting plate screws with washers (set of 4)	**10051059 00**

Fiberglass Mini Cabinets

- Mini enclosure system with hidden external hinge for MCR technology
- Standard version or with window panel

UL 508

Included in delivery

Enclosure consisting of base and door; **please order door locks and keys separately**, press-in inserts in the base for internal fitting.

Technical Data

Material	Glassfiber-reinforced, duroplastic Polyester
Ingress Protection	IP 66 to EN 60529
Door Opening Angle	120°
Temperature Range	-40°F to +212°F window version -40°F to +176°F
Impact Resistance	>7 Nm, EN 50014
Surface Resistance	$>10^{12}$ Ohm, DIN 53482
Disruptive Strength	18 kV/mm, VDE 0303 / DIN 53481
Insulation	fully insulated, VDE 0100
Flammability	UL 94 V0, self-extinguishing
Water Absorption	max. 0.6%
Toxicity	halogen free
Color	Agate gray, similar to RAL 7038. Special colors on request.

Polyglass/Polycase	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number Mini-Polyglas	Part Number Mini-Polyglas with window	Part Number Mounting Plate
Size 1	120 x 200 x 100	4.72 x 7.87 x 3.94	**21122000 00**	**22122000 00**	**10011207 00**
Size 2	160 x 260 x 100	6.30 x 10.24 x 3.94	**21162600 00**	**22162600 00**	**10011208 00**
Size 3	160 x 340 x 100	6.30 x 13.38 x 3.94	**21163400 00**	**22163400 00**	**10011209 00**
Size 4	200 x 150 x 100	7.87 x 5.90 x 3.94	**21201500 00**	**22201500 00**	**10011210 00**
Size 5	200 x 200 x 170	7.87 x 7.87 x 6.69	**21202000 00**	**22202000 00**	**10011201 00**
Size 6	200 x 300 x 170	7.87 x 11.81 x 6.69	**21203000 00**	**22203000 00**	**10011202 00**

Note: Standard delivery enclosure without locking screws, please order separately.
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	Part Number
Philips lock (set of 2 with key)	**10093312 00**
Triangular lock (set of 2). Key must be order separately	**10093313 00**
Square lock (set of 2). Key must be order separately	**10093314 00**
Extra Philips lock key	**10094320 00**
Triangular metal key	**10094325 00**
Square metal key	**10094326 00**
Internal galvanized steel mounting plate for 2020	**10089202 00**
Internal galvanized steel mounting plate for 1220	**10011207 00**
Internal galvanized steel mounting plate for 1626	**10011208 00**
Internal galvanized steel mounting plate for 1634	**10011209 00**
Internal galvanized steel mounting plate for 2015	**10011210 00**
Internal galvanized steel mounting plate for 2030	**10089204 00**
Wall mount brackets for 2020 & 2030 (set of 4)	**10052008 00**
Wall mount brackets for 1220, 1626, 1634 and 2015 (set of 4)	**10031008 00**
Mounting plate screws and washers (set of 4)	**10051051 00**

Element

- Components can be mounted quickly and easily through side-opening of the base.
- Easy access to electronic components for servicing
- Enclosure with air vents E...L available to ensure optimal heat dissipation

Included in delivery

Lid and base, 4 mounting screws, (E 434 S without screws-with molded-on snap lock). E 430 A: includes aluminum panel in lid.

Technical Data

Color	Upper section, light gray, similar to RAL 7035. Lower section, graphite gray, similar to RAL 7024
Material	Polystyrene
Ingress Protection	IP 40, DIN EN 60529 Dustight. With air vents: IP 30 DIN EN 60529
Flammability	UL 94 HB/1.47
Surface Resistance	$>10^{13}$ Ohm to DIN 53482

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
E 406	**05406000 00**	65 x 50 x 30	2.56 x 1.97 x 1.18	**E 434 S**	**05434000 00**	188 x 110 x 40	7.40 x 4.33 x 1.57
E 406 F	**05406700 00**	65 x 50 x 31	2.56 x 1.97 x 1.22	**E 435**	**05435000 00**	120 x 65 x 65	4.72 x 2.56 x 2.56
E 406 VL	**05406900 00**	65 x 50 x 30	2.56 x 1.97 x 1.18	**E 440**	**05440002 00**	150 x 80 x 55	5.90 x 3.15 x 2.16
E 408	**05408000 00**	65 x 50 x 45	2.56 x 1.97 x 1.77	**E 440 F**	**05440700 00**	150 x 80 x 56	5.90 x 3.15 x 2.20
E 410	**05410002 00**	100 x 50 x 25	3.94 x 1.97 x 0.98	**E 440 FVL**	**05440800 00**	150 x 80 x 56	5.90 x 3.15 x 2.20
E 410 F	**05410700 00**	100 x 50 x 26	3.94 x 1.97 x 1.02	**E 440 VL**	**05440200 00**	150 x 80 x 55	5.90 x 3.15 x 2.16
E 410 FVL	**05410800 00**	100 x 50 x 26	3.94 x 1.97 x1.02	**E 445**	**05445000 00**	150 x 80 x 80	7.40 x 4.33 x 3.15
E 420	**05420002 00**	100 x 50 x 40	3.94 x 1.97 x 1.57	**E 450**	**05450002 00**	188 x 110 x 70	7.40 x 4.33 x 2.75
E 420 F	**05420700 00**	100 x 50 x 41	3.94 x 1.97 x 1.61	**E 450 F**	**05450700 00**	188 x 110 x 71	7.40 x 4.33 x 2.79
E 420 FVL	**05420800 00**	100 x 50 x 41	3.94 x 1.97 x 1.61	**E 450 FVL**	**05450800 00**	188 x 110 x 71	7.40 x 4.33 x 2.75
E 430	**05430002 00**	120 x 65 x 40	4.72 x 2.56 x 1.57	**E 450 VL**	**05450200 00**	188 x 110 x 70	7.40 x 4.33 x 2.75
E 430 A	**05430500 00**	120 x 65 x 40	4.72 x 2.56 x 1.57	**E 460**	**05460000 00**	188 x 110 x 100	7.40 x 4.33 x 3.94
E 430 F	**05430700 00**	120 x 65 x 41	4.72 x 2.56 x 1.61	**E 470**	**05470000 00**	188 x 100 x 120	7.40 x 4.33 x 4.72
E 430 FVL	**05430800 00**	120 x 65 x 41	4.72 x 2.56 x 1.61				

F = Recessed for membrane keypad
VL = Ventilation slots
FVL = With membrane area for membrane keypads or front membranes and with vertically molded-in air vents
A = Recessed aluminum top plate
S = Snap fitting lid
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Part Number	Description
SMP 1230 G	Mounting boss screws. Self-tapping
TF 1230	Rubber table feet (set of 4)
MP430E	Mounting plate for E430, E435
DO430E	Lid access screws for E430 (set of 4)
DO435E	Lid access screws for E435 (set of 4)
HS440E	Carry handle for E440
MP440E	Mounting plate for E440, E445
DO440E	Lid access screws for E440 (set of 4)
DO445E	Lid access screws for E445E
HS450E	Carry handle for E450
MP450E	Mounting plate for E450, 460, 470
DO450E	Lid access screws for E450 (set of 4)
DO460E	Lid access screws for E460 (set of 4)
DO470E	Lid access screws for E470 (set of 4)

Executive Enclosures

- Provides optimal protection for your electronic products
- Versions available with or without ventilation
- Design covers and front panels made of aluminum or plastic also available

Included in delivery

Lid and base, screws and cover or front panel depending on model.

Technical Data

Color	Upper section, light gray, similar to RAL 7035. Lower section, agate gray, similar to RAL 7038.
Material	Impact resistant polystyrene
Ingress Protection	IP 40 DIN EN 60529, dusttight
Flammability	UL 94 HB/1.47
Surface Resistance	$>10^{13}$ Ohm to DIN 53482

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
EG 1030	**32103000 00**	100 x 54 x 30	3.94 x 2.12 x 1.18	**EG 1530**	**32153002 00**	150 x 82 x 30	5.90 x 3.23 x 1.18	**EG 2030**	**32203002 00**	200 x 112 x 30	7.87 x 4.41 x 1.18
EG 1030 L	**32103010 00**	100 x 54 x 30	3.94 x 2.12 x 1.18	**EG 1530 L**	**32153012 00**	150 x 82 x 30	5.90 x 3.23 x 1.18	**EG 2030 L**	**32203012 00**	200 x 112 x 30	7.87 x 4.41 x 1.18
EG 1040	**32104000 00**	100 x 54 x 40	3.94 x 2.12 x 1.54	**EG 1530 B***	**32153032 00**	150 x 82 x 30	5.90 x 3.13 x 1.18	**EG 2030 B***	**32203032 00**	200 x 112 x 30	7.87 x 4.41 x 1.18
EG 1040 L	**32104010 00**	100 x 54 x 40	3.94 x 2.12 x 1.54	**EG 1530 L-BL***	**32153022 00**	150 x 82 x 30	5.90 x 3.13 x 1.18	**EG 2030 L-BL***	**32203022 00**	200 x 112 x 30	7.87 x 4.41 x 1.18
EG 1230	**32123002 00**	125 x 67 x 30	4.92 x 2.64 x 1.18	**EG 1530 F**	**32153062 00**	150 x 82 x 31	5.90 x 3.23 x 1.22	**EG 2030 F**	**32203062 00**	200 x 112 x 31	7.87 x 4.41 x 1.22
EG-AL 1230	**32123090 00**	129 x 71 x 30	5.08 x 2.79 x 1.18	**EG 1530 FL***	**32153067 00**	150 x 82 x 31	5.90 x 3.23 x 1.22	**EG 2030 FL***	**32203067 00**	200 x 112 x 31	7.87 x 4.41 x 1.22
EG 1230 L	**32123012 00**	125 x 67 x 30	4.92 x 2.67 x 1.18	**EG 1545**	**32154502 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050**	**32205002 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1230 B*	**32123032 00**	125 x 67 x 30	4.92 x 2.64 x 1.18	**EG 1545 L**	**32154512 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 L**	**32205012 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1230 L-BL*	**32123022 00**	125 x 67 x 30	4.92 x 2.64 x 1.18	**EG 1545 B***	**32154532 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 B***	**32205032 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1230 F	**32123062 00**	125 x 67 x 31	4.92 x 2.64 x 1.22	**EG 1545 L-BL***	**32154522 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 L-BL***	**32205022 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1230 FL*	**32123067 00**	125 x 67 x 31	4.92 x 2.64 x 1.22	**EG 1545 FK**	**32154542 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 FK**	**32205042 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1240	**32124002 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1545 L-BL-FK***	**32154557 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 L-BL-FK***	**32205055 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG-AL 1240	**32124090 00**	129 x 71 x 40	5.08 x 2.79 x 1.57	**EG 1545 B-FK***	**32154552 00**	150 x 82 x 45	5.90 x 3.23 x 1.77	**EG 2050 B-FK***	**32205052 00**	200 x 112 x 50	7.87 x 4.41 x 1.97
EG 1240 L	**32124012 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1545 F**	**32154563 00**	150 x 82 x 46	5.90 x 3.23 x 1.81	**EG 2050 F**	**32205062 00**	200 x 112 x 51	7.87 x 4.41 x 2.01
EG 1240 B*	**32124032 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1545 FL***	**32154567 00**	150 x 82 x 46	5.90 x 3.23 x 1.81	**EG 2050 FL***	**32205067 00**	200 x 112 x 51	7.87 x 4.41 x 2.01
EG 1240 L-BL*	**32124022 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1560**	**32156002 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070**	**32207002 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1240 FK	**32124042 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1560 L**	**32156012 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 L**	**32207012 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1240 F-BL-FK*	**32124057 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1560 B***	**32156032 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 B***	**32207032 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1240 B-FK*	**32124052 00**	125 x 67 x 40	4.92 x 2.64 x 1.57	**EG 1560 L-BL***	**32156022 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 L-BL***	**32207022 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1240 F	**32124062 00**	125 x 67 x 40	4.92 x 2.64 x 1.61	**EG 1560 FK**	**32156042 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 FK**	**32207042 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1240 F-L*	**32124067 00**	125 x 67 x 41	4.92 x 2.64 x 1.61	**EG 1560 L-BL-FK***	**32156057 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 L-BL-FK***	**32207057 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG 1250	**32125002 00**	125 x 67 x 50	4.92 x 2.64 x 1.97	**EG 1560 B-FK***	**32156052 00**	150 x 82 x 60	5.90 x 3.23 x 2.36	**EG 2070 B-FK***	**32207052 00**	200 x 112 x 70	7.87 x 4.41 x 2.75
EG-AL 1250	**32125090 00**	129 x 71 x 50	5.08 x 2.79 x 1.97	**EG 1560 F**	**32156062 00**	150 x 82 x 61	5.90 x 3.23 x 2.40	**EG 2070 F**	**32207062 00**	200 x 112 x 71	7.87 x 4.41 x 2.79
EG 1250 L	**32125012 00**	125 x 67 x 50	4.92 x 2.64 x 1.97	**EG 1560 FL***	**32156067 00**	150 x 82 x 61	5.90 x 3.23 x 2.40	**EG 2070 FL***	**32207067 00**	200 x 112 x 71	7.87 x 4.41 x 2.79
EG 1250 B*	**32125032 00**	125 x 67 x 50	4.92 x 2.64 x 1.97								
EG 1250 L-BL*	**32125022 00**	125 x 67 x 50	4.92 x 2.64 x 1.97								
EG 1250 FK	**32125042 00**	125 x 67 x 50	4.92 x 2.64 x 1.97								
EG 1250 L-BL-FK*	**32125057 00**	125 x 67 x 50	4.92 x 2.64 x 1.97								
EG 1250 B-FK*	**32125052 00**	125 x 67 x 50	4.92 x 2.64 x 1.97								
EG 1250 F	**32125062 00**	125 x 67 x 51	4.92 x 2.64 x 2.01								
EG 1250 FL*	**32125067 00**	125 x 67 x 51	4.92 x 2.64 x 2.01								

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

*Available on request
L = Enclosure with air vents
B = Cover panel closed
BL = Cover panel with air vents
F = Membrane keypad ared
FK = Plastic front panel
FKL = Plastic front panel with integrated ventilation
DOB = Front access lid screws (factory installaiton recommended)

Accessories

Model Number	Description
WL 1230 EG	Wall mounting brackets (set of 4)
SA 1230 EG	Base screw covers (set of 4)
AK 1230 EG	Keyhole knockout covers (set of 4)
MP 10 EG	Mounting plate for EG 1030-1040
MP 12 EG	Mounting plate for EG 1230-1250
S 1230 EG	4 assembly screws
MP 15 EG	Mounting plate for EG 1530-1560
MP 20 EG	Mounting plate for EG 2030-2070

Futura Sloped Housings

- Enclosures designed for keypads with a ergonomic sloped front
- Designs in which half-shells are assembled either as a console type or with the top shell inverted as a parallel design.

Included in delivery
Lid, base, assembly screws, and 4 rubber feet
RO Version with aluminum front panel

Technical Data

Color	Light gray, similar to RAL 7035. T 900, black, similar to RAL 9005. Special colors or request. 500 piece minimum order required.
Material	ABS plastic
Ingress Protection	IP 40 DIN EN 60529
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	External Dimensions mm L x W	External Dimensions Inches L x W	External Dimensions mm Height Console	External Dimensions Inches Height Console	External Dimensions mm Height Parallel	External Dimensions Inches Height Parallel	Design Console	Design Parallel
T 888 F	**47888200 00**	195 x 275	7.68 x 10.83	24.5 / 48.0	0.96 / 1.90	36.3	1.43		
T 889 F	**47889200 00**	170 x 132	6.69 x 5.20	24.5 / 44.9	0.96 / 1.77	36.3	1.43		
T 898	**47898000 00**	195 x 151	7.68 x 5.94	24.5 / 44.9	0.86 / 1.77	36.3	1.43		
T 898 F	**47898200 00**	195 x 151	7.68 x 5.94	24.5 / 44.9	0.96 / 1.77	36.3	1.43		
T 898 RO	**47898100 00**	195 x 151	7.68 x 5.94	24.5 / 44.9	0.96 / 1.77				
T 898 F-RO	**47898300 00**	195 x 151	7.68 x 5.94	24.5 / 44.9	0.96 / 1.44				
T 899	**47899001 00**	125 x 150	7.68 x 5.94	15.0 / 30.7	0.59 / 1.21	22.8	0.90		
T 890	**47890001 00**	300 x 225	4.92 x 5.91	17.0 / 48.7	0.67 / 1.92				
T 893	**47893001 00**	500 x 225	19.68 x 8.86	17.0 / 48.7	0.67 / 1.92				
T 895 P	**47895101 00**	480 x 330	19.00 x 8.86	89.3	3.51				
T 900	**4790000 00**	280 x 240	11.02 x 9.45	33.0	1.30				

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
F = Console with continuous area
RO = Console with rear wall open, split key area
F-RO = Console with rear wall open, continous key area
P = Console with molded-on section for digital display

BP 810 & BP 900 F Housings

BP 810

- Can be used as a console or handheld unit.
- Elegant ergonomic design, large membrane keypad area, single PC board technology, clamp between lid and base, large front panel area, recessed installation area for cable glands.
- Front panels can be processed separately without any problems and provides adequate space for a wide range of connector designs.

Included in delivery
Lid, base, assembly screws, front panel, and rubber feet.

Technical Data

Color	Light gray, similar to RAL 7035. Special colors on request. Minimum order quantities apply.
Material	ABS plastic
Ingress Protection	IP 40/DIN EN 60529
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm L x D x H	Dimensions Inches L x D x H
BP 810	**45810000 00**	176 x 106 x 54/24	6.93 x 4.17 x 2.13/0.94

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

BP 900-F

- Ideal for use as a charging operation terminal
- Base can be attached parallel to STD 900
- Enclosure ideally suited for use under extreme environmental conditions
- Have three different uses: flat position on a table, angled position on a table, or wall mounted.

Included in delivery
Lid, base, assembly screws, lid seal in groove (in horizontal position), and 2 cover panels

Left - BP 900 F

Technical Data

Color	Agate gray, similar to RAL 7038. Special colors on request. Minimum order quantities apply.
Material	ABS plastic
Ingress Protection	IP 65/DIN EN 60529
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm L x D x H	Dimensions Inches L x D x H
BP 900 F	**45900600 00**	211 x 100 x 118	8.31 x 3.94 x 1.65

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Mini Console Housings

- Two basic sizes, each with opened or closed console surface and open rear section that will accept a 2mm thick slide-in panel
- Console can be easily adapted to meet your requirements by using aluminum front panels.
- Internal mounting bosses in base for self-tapping screws

Included in delivery

Lid, base, 4 screw covers, 4 rubber feet, and 4 assembly screws
(front panels not included)

Technical Data

Color	Light gray, similar to RAL 7035. Screws, covers and wall brackets, agate gray, similar to RAL 7038. Special colors on request. Minimum order quantities apply.
Material	ABS plastic
Ingress Protection	IP 40/DIN EN 60529
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm W x D x H rear	Dimensions Inches W x D x H rear
UM 32014	**45320140 00**	157 x 199 x 100	6.18 x 7.83 x 3.94
UMP 32014 FP	**45320145 00**	157 x 199 x 100	6.18 x 7.83 x 3.94
UMP 32018	**45320180 00**	157 x 199 x 120	6.18 x 7.83 x 4.72
UMP 32018 FP	**45320185 00**	157 x 199 x 120	6.18 x 7.83 x 4.72
UMP 62014	**45620140 00**	291 x 199 x 100	11.46 x 7.83 x 3.94
UMP 62014 FP	**45620145 00**	291 x 199 x 100	11.46 x 7.83 x 3.94
UMP 62018	**45620180 00**	291 x 199 x 120	11.46 x 7.83 x 4.72
UMP 62018 FP	**45620185 00**	291 x 199 x 120	11.46 x 7.83 x 4.72

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number	Description
FP 30014	**56031400 00**	Rear panel, aluminum for UMP 32014 / UMP 32014 FP
FPK 30014	**56031410 00**	Real panel, plastic for UMP 32014 / UMP 32014 FP
FPP 32000	**29320180 00**	Aluminum front panel for console areas
UM 1230 WLN	**56002100 00**	Wall brackets for UMP 32014 and UMP 32016
FP 60014	**56061400 00**	Rear panel aluminum for UMP 62014 / UMP 62014 FP
FPK 60014	**56061410 00**	Real panel plastic for UMP 62014 / UMP 62014 FP
FPP 62000	**29620180 00**	Aluminum front panel for UMP 62014 / UMP 62014FP, UMP 32018 / UMP 32018 FP
FP 30018	**56031800 00**	Rear panel aluminum for UMP 32018 / UMP 32018 FP
FPK 30018	**56031810 00**	Rear panel plastic for UMP 32018 / UMP 32018 FP
UM 1230 WLH	**56002000 00**	Wall brackets for UMP 32018 and UMP 62018
FP 60018	**56061800 00**	Rear panel, aluminum for UMP 32018 / UMP 32018 FP
FPK 60018	**56061810 00**	Rear panel, plastic for UMP 32018 / 32018 FP

Executive Sloped Front Housings

- Console type housing suited for use as a desktop or wall-mount enclosure
- PD version features recessed display window for LCD displays and recessed membrane keypads
- Wall mountable
- PC boards or mounting plates can be attached on mounting bosses in lid and base
- P version features a console-type lid with recessed continuous membrane keypad area

Included in delivery

Lid, base, 4 screws, and rear panel. PD version includes display screen.

Technical Data

Color	Lid, light gray, similar to RAL 7035. Base, covers and rear panels, agate gray, similar to RAL 7038. Special colors on request. Minimum order quantity 500+ pieces.
Material	Impact-resistant polystyrene
Ingress Protection	Closed version: IP 40/DIN EN 60529
Surface Resistance	$>10^{13}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.47

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
EG 1240 P	**32124070 00**	125 x 67.0 x 40	4.92 x 2.64 x 1.57
EG 1240 PD	**32124080 00**	125 x 67.0 x 40	4.92 x 1.64 x 1.57
EG 1545 P	**32154570 00**	150 x 82 .0 x 45	5.91 x 3.23 x 1.77
EG 1545 PD	**32154580 00**	150 x 82.0 x 45	5.91 x 3.23 x 1.77
EG 2060 P	**32206010 00**	200 x 112 x 64	7.87 x 4.41 x 2.52
EG 2060 PD	**32206000 00**	200 x 112 x 64	7.87 x 4.41 x 2.52

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
P = Version with console-type lid
PD = Version with console-type lid and display opening

Accessories

Model Number	Part Number	Description
EG-SA	**33000300 00**	Set of screw covers for assembly screws, 4 piece pack
EG-AK	**33000100 00**	Covers for keyhole suspension, 2 piece pack
EG-GF	**25002100 00**	Rubber feet, pack of 4
EG-M-12	**33012000 00**	Mounting plate for EG 1240
EG-M 15	**33015000 00**	Mounting plate for EG 1545
EG-M 20	**33020000 00**	Mounting plate for EG 2060

Build-A-Box® Electronic Enclosures

Build-A-Box® extrusions are sold in meter lengths and cut to custom lengths to meet your exact design requirements.

Developments in electronics are progressing faster and faster. Whereas complete modules could be housed in large standard enclosures just a few years ago, for added space, today's enclosures must adapt themselves permanently to new requirements.

In addition to conventional protection requirements such as the ingress protection classification (IP), the toughness against electromagnet interfering radiation is now an important selectrion criteria.

Rose electronic enclosures comply with all current requirements for quality electronic enclosures:
- EMC or standard protection version
- for external, switchgear cabinet and internal use
- implementation as table, wall or regulator enclosure
- ingress protection up to IP 65
- design and functionality

Alubos
- 20 profiles are available with profiles that are closed, split horizontally, and/or open on one side
- High mechanical loading capacity of the profile and EMC screening ensure high level of protective functions

Multitronic Build-A-Box®
- 8 enclosure profile configurations from 105W x 36H mm to 208W x 54H mm
- Application area: EMC mounting enclosure in measurement and control engineering

Multitronic TS Build-A-Box®
- 8 enclosure profile configurations from 46/72W x 61H mm to 105W x 84H mm
- Application area: EMC enclosure for measurement/control engineering and DIN rail mounting

Custom Build-A-Box®
- 8 enclosure profile configurations from 105W x 85H mm to 196W x 167H mm
- Application area: PCB slot-in enclosure in measurement and control engineering

Profitronic
- 39 enclosures in sizes from 148 x 235 x 149 mm to 265 x 276 x 241 mm
- Application area: mechanical engineering, MCR-technology, Bus-technology

Profitronic Universal
- 12 enclosures in sizes from 148 x 258 x 149 mm to 265 x 285 x 241 mm
- Application area: mechanical engineering, measurement and control

ALUBOS

- Ergonomic, individual hand-held enclosure in your design
- Available with profiles which are closed, divided horizontally, and open on one side
- High mechanical loading capacity of the profile and EMC screening ensure high level of protective functions

Included in delivery

ABP: Closed extrusion only. Black powder-coated Aluminum sold by the meter

ABPH: Split extrusion only. Black powder-coated Aluminum sold by the meter

ABPU: Extrusion open on one side. Black powder-coated Aluminum sold by the meter

Technical Data

Material	Aluminum extrusion, Al Mg Si 0.5, powder-coated aluminum diecast lid GD-Al Si 12
Color	Powdercoated Satin Black, similar to RAL 9005, fine texture finish. Special colors on request. Minimum order quantities apply
Ingress Protection	IP 65, EN 60529 IP 40 when using parallel adapters (AB-AP) with 600, 800 and 1000 extrusions

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
ABP 600-1000	**84060000 00**	1000 x 57 x 32	39.37 x 2.24 x 1.26
ABP 800-1000	**84080000 00**	1000 x 82 x 32	39.37 x 3.23 x 1.26
ABP 820-1000	**84820000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABP 1000-1000	**84100000 00**	1000 x 106 x 32	39.37 x 4.17 x 1.26
ABP 1040-1000	**84040000 00**	1000 x 108 x 32	39.37 x 4.25 x 1.26
ABP 1300-1000	**84130000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABP 1600-1000	**84160001 00**	1000 x 169 x 52	39.37 x 6.65 x 2.05
ABP 1680-1000	**84680000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23
ABP 2070-1000	**84207000 00**	1000 x 210 x 74	39.37 x 8.27 x 2.91
ABPH 600-1000	**84066001 00**	1000 x 57 x 32	39.37 x 2.24 x 1.26
ABPH 800-1000	**84086001 00**	1000 x 82 x 32	39.37 x 3.23 x 1.26
ABPH 820-1000	**84826000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABPH 1000-1000	**84106001 00**	1000 x 106 x 32	39.37 x 4.17 x 1.26
ABPH 1040-1000	**84046000 00**	1000 x 108 x 42	39.37 x 4.25 x 1.65
ABPH 1300-1000	**84136000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABPH 1680-1000	**84686000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23
ABPU 820-1000	**84827000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABPU 1040-1000	**84047000 00**	1000 x 108 x 42	39.37 x 4.25 x 1.65
ABPU 1300-1000	**84137000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABPU 1680-1000	**84687000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number	Description
ABM 600 AL	84602000 00	Mounting lid, aluminum profile cap
AMB 600 IR	84063000 00	Mounting lid, infrared-permissive plastic cap
ABM 600 SAL	84064000 00	Mounting lid, aluminum hinged flap
ABM 600 AL-BE	84062100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 600 IR-BE	84063100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 600 SAL-BE	84064100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 600	84061000 00	End lid
DI 600-EMV	84200615 00	EMC seal, black (10 pieces)
DI 600-5002	84200614 00	Seal, ultramarine (10 pieces)
DI 600-3000	84200611 00	Seal, flame red (10 pieces)
DI 600-1021	84200612 00	Seal, yellow (10 pieces)
DI 600-6000	84200613 00	Seal, patina green (10 pieces)
ABM 800 AL	84082000 00	Mounting lid, aluminum profile cap
ABM 800 IR	84083000 00	Mounting lid, infrared-permissive plastic cap
ABM 800 SAL	84084000 00	Mounting lid, aluminum hinged flap
ABM 800 AL-BE	84082100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 800 IR-BE	84083100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 800 SAL-BE	84084100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 800	84081000 00	End lid, powder-coated aluminum
ABA 800-1000	84002000 00	Axial adapter for ALUBOS 800/100
DI 800-EMV	84200815 00	EMC seal, black (10 pieces)
DI 800-5002	84200814 00	Seal, ultramarine (10 pieces)
DI 800-3000	84200811 00	Seal, flame red (10 pieces)
DI 800-1021	84200812 00	Seal, yellow (10 pieces)
DI 800-6000	84200813 00	Seal, patina green (10 pieces)
ABD 820	84821000 00	End lid, black seal, screws, screw cover
DI 820-EMV	84208215 00	EMC seal, black (10 pieces)
DI 820-5002	84208214 00	Seal, ultramarine (10 pieces)
DI 820-3000	84208211 00	Seal, flame red (10 pieces)
DI 820-1021	84208212 00	Seal, yellow (10 pieces)
DI 820-6000	84208213 00	Seal, patina green (10 pieces)
ABPU 820-1000 FP2	84828000 00	Front panel for ABPU 820-1000
ABM 1000 AL	84102000 00	Mounting lid, aluminum profile cap
ABM 1000 IR	84103000 00	Mounting lid, infrared-permissive plastic cap
ABM 1000 SAL	84104000 00	Mounting lid, aluminum hinged flap
AMB 1000 AL-BE	84202100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 1000 IR-BE	84103100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 1000 SAL-BE	84104100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 1000	84101000 00	End lid
DI 1000-EMV	84201015 00	EMC seal, black (10 pieces)
DI 1000-5002	84201014 00	Seal, ultramarine (10 pieces)
DI 1000-3000	84201011 00	Seal, flame red (10 pieces)
DI 1000-1021	84201012 00	Seal, yellow (10 pieces)
DI 1000-6000	84201013 00	Seal, patina green (10 pieces)
ABM 1040 AL	84042000 00	Mounting lid, aluminum profile cap
ABM 1040 SAL	84044000 00	Mounting lid, aluminum hinged flap
ABM 1040	84041000 00	End lid
DI 1040-EMV	84200415 00	EMC seal, black (10 pieces)
DI 1040-5002	84200414 00	Seal, ultramarine (10 pieces)
DI 1040-3000	84200411 00	Seal, flame red (10 pieces)
DI 1040-1021	84200413 00	Seal, yellow (10 pieces)
DI 1040-6000	84200412 00	Seal, patina green (10 pieces)
ABPU 1040-1000 FP2	84048000 00	Front panel for ABPU 1040-1000
ABM 1300 AL	84132000 00	Mounting lid, aluminum profile cap
ABD 1300 SAL	84134000 00	Mounting lid, aluminum hinged flap
ABM 1300	84131000 00	End lid
DI 1300-EMV	84201315 00	EMC seal, black (10 pieces)
DI 1300-5002	84201314 00	Seal, ultramarine (10 pieces)
DI 1300-3000	84201311 00	Seal, flame red (10 pieces)
DI 1300-1021	84201312 00	Seal, yellow (10 pieces)
DI 1300-6000	84201313 00	Seal, patina green (10 pieces)
ABPU 1300-1000 FP2	84138000 00	Front panel for ABPU 1300-1000
ABD 1600	84161000 00	End lid, black seals, screws, screw cover for ABD 1600-1000
DI 1600-EMV	84201615 00	EMC seal, black (10 pieces)
DI 1600-5002	84201614 00	Seal, ultramarine (10 pieces)
DI 1600-3000	84201616 00	Seal, flame red (10 pieces)
DI 1600-1021	84201612 00	Seal, yellow (10 pieces)
DI 1600-6000	84201613 00	Seal, patina green (10 pieces)
ABD 1680	84168100 00	End lid, black seals, screws, screw cover for ABD 1680-1000
DI 1680-EMV	84206815 00	EMC seal, black (10 pieces)
DI 1680-5002	84206814 00	Seal, ultramarine (10 pieces)
DI 1680-3000	84206811 00	Seal, flame red (10 pieces)
DI 1680-1021	84206812 00	Seal, yellow (10 pieces)
DI 1680-6000	84206813 00	Seal, patina green (10 pieces)
ABPU 1680-1000 FP3	84689000 00	Front panels for ABPU 1680-1000
ABD 2070	84271000 00	End lid, black seals, screws, screw covers for ABP 2070-1000
DI 2070-EMV	84202715 00	EMC seal, black (10 pieces)
DI 2070-5002	84202714 00	Seal, ultramarine (10 pieces)
DI 2070-3000	84202711 00	Seal, flame red (10 pieces)
DI 2070-1021	84202712 00	Seal, yellow (10 pieces)
DI 2070-6000	84202713 00	Seal, patina green (10 pieces)
AB-1000 WLV	84105000 00	ALUBOS adjustable wall bracket
AB-WL	84005000 00	Wall brackets for use with 600/800/1000/1300
AB-WL 1	84006001 00	Wall brackets for use with 820
AB-WL 2	84007000 00	Wall brackets for use with 1040
AB-WL 3	84008000 00	Wall brackets for use with 1600/1680/2070
AB 600 MKL	84006600 00	Mounting clamp for ALUBOS 600
AB 800 MKL	84006400 00	Mounting clamp for ALUBOS 800
AB 1000 MKL	84006500 00	Mounting clamp for ALUBOS 1000
AB-MKL	84006300 00	Mounting clamp for ALUBOS 600/800/1000
AB 1600 HS	84162000 00	Handle for use with ALUBOS 1600/1680
AB 2000 HS	84200000 00	Handle for use ALUBOS 2070
AB-AP 60	84006000 00	Parallel adapter for ALUBOS 600/800/1000, 60 mm length
AB-AP 100	84010000 00	Parallel adapter for ALUBOS 600/800/1000, 100 mm length
AB-AP 150	84015000 00	Parallel adapter for ALUBOS 600/800/1000, 150 mm length
ABA 800-1000	84002000 00	Axial adapter, adapts ABP 800 to an ABP 1000
AB-GF	84006700 00	Rubber feet

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Alu-Topline

- Desktop enclosure whose innovative technology and ergonomic lines for use in the field of data recording and processing.
- Split profile of the enclosure guarantees easier and faster assembly of electronics and other components.
- Lid can be rotated in order to cover different ranges of application with the same contents.
- Profiles have a range of PCB slots and screw channels so that PCBs can be fitted in the required positions.

Included in delivery
Enclosure profile, split horizontally

Technical Data

Color	Profiles: clear anodized aluminum. End lids: quartz gray, similar to RAL 7039 and graphite gray, similar to RAL 7024. Special colors on request. Minimum order quantities apply.
Material	Profile: Alunminum Al Mg Si 0.5. End lids: ABS plastic
Protection Classifications	IP 40, DIN EN 60529. IP 54, when using seal (AT...DI) with sponge cord factory-installed

Model Number	Model Number	External Dimensions mm L x W x H	External Dimensions Inches L x W x H
ATPH 1850-0150	**92850150 00**	150 x 183.8 x 53.2	5.90 x 7.24 x 2.09
ATPH 1850-0200	**92850200 00**	200 x 183.8 x 53.2	7.87 x 7.24 x 2.09
ATPH 1850-0250	**92850250 00**	250 x 183.8 x 53.2	9.84 x 7.24 x 2.09
ATPH 1850-0300	**92850300 00**	300 x 183.8 x 53.2	11.84 x 7.24 x 2.09
ATPH 1865-0150	**92865150 00**	150 x 183.8 x 68.2	5.90 x 7.24 x 2.68
ATPH 1865-0200	**92865200 00**	200 x 183.8 x 68.2	7.87 x 7.24 x 2.68
ATPH 1865-0250	**92865250 00**	250 x 183.8 x 68.2	9.84 x 7.24 x 2.67
ATPH 1865-0300	**92865300 00**	300 x 183.8 x 68.2	11.81 x 7.24 x 2.68

Meter lengths available upon request. Minimum order may apply.

Accessories

Model Number	Part Number	Description
ATD 1850-7024	**92050024 00**	Lid, graphite gray, similar to RAL 7024, (includes: 2 lids, right/left, 8 screws, 8 screw covers)
ATD 1850-7039	**92050039 00**	Lid, quartz gray, similar to RAL 7039, (includes: 2 lids, right/left, 8 screws, 8 screw covers)
AT 1850 DI*	**92050000 00**	Seal for ingress protection IP 54, (includes: 5 sets of sponge rubber seals, right/left)
ATD 1865-7024	**92065024 00**	Lid, graphite gray, similar to RAL 7024 (includes: 2 lids, right/left, 8 screws, 8 screw covers)
ATD 1865-7039	**92065039 00**	Lid, quartz gray, similar to RAL 7039, (includes 2 lids, right/left, 8 screws, 8 screw covers)
AT 1865 DI*	**92065000 00**	Seal for ingress protection IP 54, (includes: 5 sets of sponge rubber seals, right/left)
AT 1800-0150 WB	**92800150 00**	Wall bracket 150 (includes: 1 wall profile, 2 tapped pins)
AT 1800-0200 WB	**92800200 00**	Wall bracket for profile 200 (includes: 1 wall profile, 2 tapped pins)
AT 1800-0250 WB	**92800250 00**	Wall bracket for profile 250 (includes: 1 wall profile, 2 tapped pins)
AT 1800-0300 WB	**92800300 00**	Wall bracket for profile 300 (includes: 1 wall profile, 2 tapped pins)
AT-IS 00020	**92000100 00**	Insulating strip (includes: 5 insulating strips)
AB-GF	**94006700 00**	Rubbet feet (includes: 4 rubber feet)

*Note: to attain IP 54, in addition to seal AT... DI, a sponge cord must be factory installed in the enclosure profile.

ATPH 1850
Split Profile

ATPH 1865
Split Profile

ATD 18...
Lid made of ABS plastic

BOS-Ecoline

- Clear anodized aluminum profile enclosure system in 3 different versions in 4 profile widths
- Equipped with integral guide grooves for PC boards
- Ecoline features recessed areas for front membranes or membrane keypads
- Can be used with Euro cards

Included in delivery
Extrusion sold in meter lengths

Technical Data

Color	Profiles: clear anodized aluminum. End lids: dust gray, similar to RAL 7037. Special colors on request. Minimum order quantities apply.
Material	Profile: Alunminum Al Mg Si 0.5. End lids: ABS plastic
Protection Classifications	IP 40, EN 60529. IP 54, when using seal (EL-DI) with 620, 8540, 1050 and 1240. ELP type extrusions only.

Model Number	Part Number	External Dimensions mm L x W x H	External Dimensions Inches L x W x H
ELP 620-1000	**83062000 00**	1000 x 57.5 x 22	39.37 x 2.26 x 0.86
ELPH 620-1000	**83626000 00**	1000 x 57.5 x 22	39.37 x 2.26 x 0.86
ELPU 620-1000	**83627000 00**	1000 x 57.5 x 22	39.37 x 2.26 x 0.86
ELP 840-1000	**83084000 00**	1000 x 80.0 x 42	39.37 x 3.14 x 1.65
ELPH 840-1000	**83846000 00**	1000 x 80.0 x 42	39.37 x 3.14 x 1.65
ELPU 840-1000	**83847000 00**	1000 x 80.0 x 42	39.37 x 3.14 x 1.65
ELP 1050-1000	**83105000 00**	1000 x 106 x 52	39.37 x 4.14 x 2.05
ELPH 1050-1000	**83056000 00**	1000 x 106 x 52	39.37 x 4.14 x 2.05
ELPU 1050-1000	**83057000 00**	1000 x 106 x 52	39.37 x 4.14 x 2.05
ELPH-EU 1050-1000	**83055100 00**	1000 x 106 x 52	39.37 x 4.17 x 2.04
ELP 1240-1000	**83124000 00**	1000 x 120 x 42	39.37 x 4.72 x 1.65
ELPH 1240-1000	**83246000 00**	1000 x 120 x 42	39.37 x 4.72 x 1.65
ELPU 1240-1000	**83247000 00**	1000 x 120 x 42	39.37 x 4.72 x 1.65

Accessories

Model Number	Part Number	Description
ELD 620	**83621000 00**	Ecoline 620 plastic end caps, ABS, set of 2
ELDW 620	**83621100 00**	Ecoline 620 wall mount plastic end caps, ABS, set of 2
ELD 840	**83841000 00**	Ecoline 840 plastic end caps, ABS, set of 2
ELDW 840	**83841100 00**	Ecoline 840 wall mount plastic end caps, ABS, set of 2
ELD 1050	**83051000 00**	Ecoline 1050 plastic end caps, ABS, set of 2
ELDW 1050	**83051100 00**	Ecoline 1050 wall mount plastic end caps, ABS, set of 2
ELD 1240	**83241000 00**	Ecoline 1240 plastic end caps, ABS, set of 2
ELDW 1240	**83241100 00**	Ecoline 1240 wall mount plastic end caps, ABS, set of 2
EL 620 DI	**83206210 00**	Ecoline 620 gasket set of 10
EL 840 DI	**83208410 00**	Ecoline 840 gasket set of 10
EL 1050 DI	**83210510 00**	Ecoline 1050 gasket set of 10
EL 1240 DI	**83212410 00**	Ecoline 1240 gasket set of 10

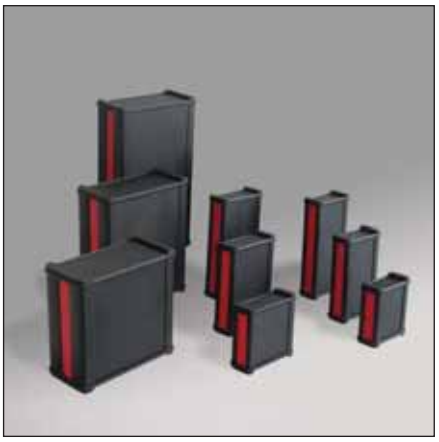
ELP - Closed Profile

ELPH - Horizontally Split Profile

ELPU - Open on one side Profile

NoVoTronic

- Aluminum profile enclosure system in 5 diameters for data acquisition, PC, and measurement and control technology
- External screw channels guarantee complete use of internal area
- Integrated guide grooves for PC boards
- External groove system
- Variable profile lengths



Included in delivery
Enclosure with 2 aluminum diecast lids and 2 multi-function profiles, not screwed.

Technical Data

Color	Profile and lid, jet black, similar to RAL 9005. Multi-function side profile: ruby red, similar to RAL 3003.
Material	Profile: AlMgSi 0.5; DIN 1725. End lids: GD-AlSi 12
Protection Classifications	up to IP 65, EN 60529
Temperature Resistance	-40°F to +90°F

Model Number	Part Number	External Dimensions mm W x H x D	External Dimensions Inches W x H x D	Internal Dimensions mm H x W x D	Internal Dimensions Inches H x W x D
NoVoTronic 80					
80/100	**07501010 00**	98 x 44 x 100	3.76 x 1.73 x 3.94	80 x 36 x 100	3.15 x 1.42 x 3.94
80/160	**07501011 00**	98 x 44 x 160	3.86 x 1.73 x 6.30	80 x 36 x 160	3.15 x 1.42 x 6.30
80/200	**07501012 00**	98 x 44 x 200	3.86 x 1.76 x 7.87	80 x 36 x 200	3.15 x 1.42 x 7.87
80/SL*	**07501099 00**	98 x 44 x SL*	3.86 x 1.76 x SL*	80 x 30 x SL*	3.15 x 1.42 x SL*
NoVoTronic 100					
100/100	**07502010 00**	118 x 44 x 100	4.64 x 1.73 x 3.94	100 x 36 x 100	3.94 x 1.41 x 3.94
100/160	**07502011 00**	118 x 44 x 160	4.64 x 1.73 x 6.30	100 x 36 x 160	3.94 x 1.41 x 6.30
100/200	**07502012 00**	118 x 44 x 200	4.64 x 1.73 x 7.87	100 x 36 x 200	3.94 x 1.41 x 7.87
100/SL*	**07502099 00**	118 x 44 x SL*	4.64 x 1.73 x SL*	100 x 36 x SL*	3.94 x 1.41 x SL*
NoVoTronic 160					
160/160	**07503010 00**	182 x 85 x 160	7.16 x 3.35 x 6.30	160 x 75 x 160	6.30 x 2.96 x 6.30
160/200	**07503011 00**	182 x 85 x 200	7.16 x 3.35 x 6.30	160 x 75 x 200	6.30 x 2.96 x 7.87
160/300	**07503012 00**	182 x 85 x 300	7.16 x 3.35 x 11.81	160 x 75 x 300	6.30 x 2.96 x 11.81
160/SL*	**07503099 00**	182 x 85 x SL*	7.16 x 3.35 x SL*	160 x 75 x SL*	6.30 x 2.96 x SL*
NoVoTronic 130					
130/130	**07502510 00**	157 x 69 x 150	6.18 x 2.72 x 5.90	130 x 57 x 130	5.12 x 2.24 x 5.12
130/160	**07502511 00**	157 x 69 x 160	6.18 x 2.72 x 7.09	130 x 57 x 160	5.12 x 2.24x 6.30
130/200	**07502513 00**	157 x 69 x 220	6.18x 2.72 x 8.66	130 x 57 x 200	5.12 x 2.24 x 7.87
130/SL*	**07502599 00**	157 x 69 x SL*	6.18 x 2.72 x SL*	130 x 57 x SL*	5.12 x 2.24 x SL*
NoVoTronic 200					
200/220	**07504010 00**	233 x 121 x 240	9.17 x 4.76 x 9.45	200 x 105 x 220	7.87 x 4.13 x 8.66
200/280	**07504011 00**	233 x 121 x 300	9.17 x 4.76 x 11.81	200 x 105 x 280	7.87 x 4.13 x 11.02
200/330	**07504012 00**	233 x 121 x 350	9.17 x 4.76 x 13.78	200 x 105 x 330	7.87 x 4.13 x 12.99
200/SL*	**07504099 00**	233 x 121 x SL*	9.17 x 4.76 x SL*	200 x 105 x SL*	7.87 x 4.13 x SL*

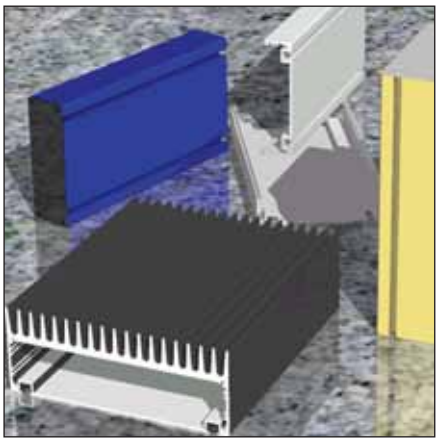
*SL = Special Length
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Part Number	Description	Part Number	Description
07509011 00	Wall profile 80/100-100	**07509005 00**	NoVo wall holder P160
07509012 00	Walll profile 80/100-160	**07509006 00**	Foot/connection element 80
07509013 00	Wall profile 80/100-200	**07509007 00**	Foot/connection element 100
07509099 00	Wall profile 80/SL*	**07509014 00**	Foot connection element 130
07509111 00	Wall profile 130/160-130	**07509008 00**	Foot connection element 160
07509112 00	Wall profile 130/160-160	**83900003 00**	Battery insert 9V block
07509113 00	Wall profile 130/160-200	**83900006 00**	Battery insert 4 AA
07509114 00	Wall profile 130/160-300	**07509211 00**	NoVoTronic PCB profile 200-220
07509199 00	Wall profile 130/160-SL*	**07509212 00**	NoVoTronic PCB profile 200-280
07509002 00	Lid wall holder 80/100	**07509213 00**	NoVoTronic PCB profile 200-330
07509003 00	NoVo wall holder P80	**07529299 00**	NoVoTronic PCB profile 200-SL*
07509004 00	NoVo wall holder P100	**07509214 00**	NoVoTronic PCB profile 80-100
07509015 00	NoVo wall holder P130	**07509010 00**	Transparent cover 160

*SL = Special Length

Multitronic Build-A-Box®



- Aluminum profile that can be cut to any length required and capped with plate aluminum lids
- All profiles slotted internally for PCB or chassis mounting
- T-slot on bottom of profile for DIN rail mounting

Included in delivery
Extrusion only. Sold by the meter.

Technical Data

Material	Bare aluminum, Al Mg Si 0.5
Temperature Range	-40°F to +212°F
Protection Classification	IP 40 to EN 60529

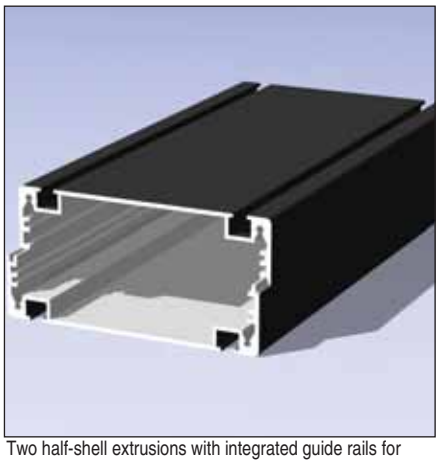
Part Number	Length Inches/mm	Width Inches/mm	Height Inches/mm	PC Card Slot Size
10011109/10011109	39.37 / 1000	4.13 / 105	1.97 / 50	2 x 100 mm
10011109/10011110	39.37 / 1000	4.13 / 105	3.15 / 80	3 x 100 mm
10011110/10011110	39.37 / 1000	4.13 / 105	4.33 / 110	4 x 100 mm
10011109/10011111	39.37 / 1000	4.13 / 105	2.20 / 56	1 x 100 mm
10011111/10011110	39.37 / 1000	4.13 / 105	3.39 / 86	2 x 100 mm
10955170 / 10011113	39.37 / 1000	8.19 / 208	2.13 / 54	2 x 57 mm,1 x 85 mm, 1 x 204 mm
10011108 00	39.37 / 1000	4.13 / 105	1.42 / 36	1 x 100 mm
10011112 00	39.37 / 1000	6.50 / 165	2.56 / 65	2 x 160 mm

These profiles feature external "T" slots for bracket wall-mounting
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
All extrusions sold in 1 meter lengths.

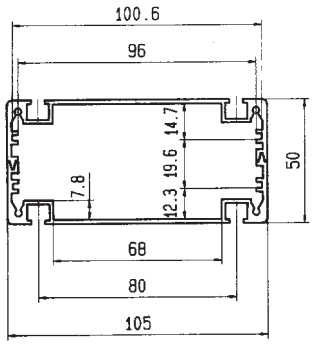
Accessories	Part Number
Unpainted plate lid with screws for 10011109/10011109	**10095151 08**
Unpainted plate lid with screws for 10011109/10011110	**10095153 08**
Unpainted plate lid with screws for 10011110/10011110	**10095154 08**
Unpainted plate lid with screws for 10011111/10011109	**10095150 08**
Unpainted plate lid with screws for 10011111/10011110	**10095152 08**
Unpainted plate lid with screws for 10955170/10011113	**10095517 08**
Unpainted plate lid with wall mount flange and screws for 10955170/10011113	**10095518 07**
Unpainted plate lid with screws for 10011108	**10095150 08**
Unpainted plate lid with screws for 10011112	**10095155 08**
External wall mount brackets (set of 4)	**77000100 00**
Rubber Table Feet	**10094110 00**
Black Lid Screw (M3 x 8)	**10093205 00**

Multitronic Build-A-Box® 10011109/10011109

Part #	Type	Description
10011109 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011109 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)
Accessories		
10095151 08	End Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



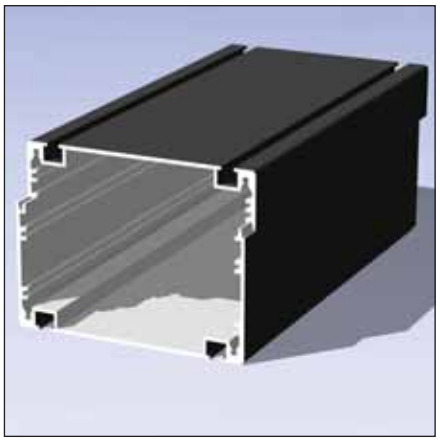
Two half-shell extrusions with integrated guide rails for two 100 mm PC boards, and 4 external "T" slots for bracket wall-mounting. External wall-mount bracket set, optional.



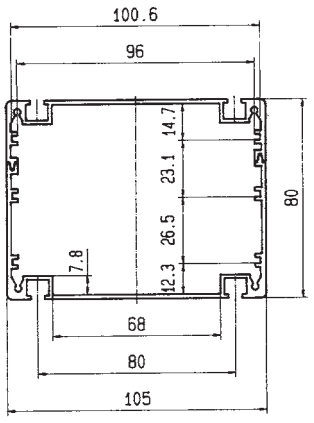
Enclosure Profiles

Multitronic Build-A-Box® 10011109/10011110

Part #	Type	Description
10011109 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011110 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)
Accessories		
10095153 08	End Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Two half-shell extrusions with integrated guide rails for three 100 mm PC boards, and 4 externa; "T" slots for bracket wall-mounting. External wall-mount bracket set, optional.



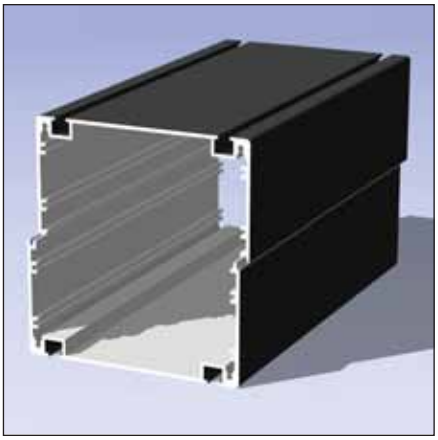
Enclosure Profiles

Multitronic Build-A-Box® 10011110/10011110

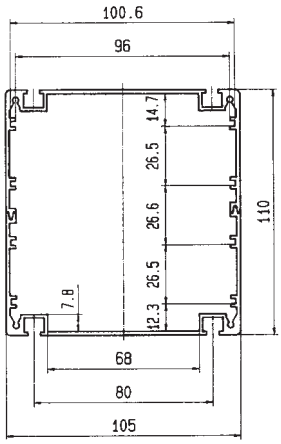
Part #	Type	Description
10011110 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011110 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095154 08	End Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Two-shell extrusion design with integrated guide rails for four 100 mm PC boards, and 4 external “T” slots for bracket wall-mounting. External wall-mount bracket set, optional.



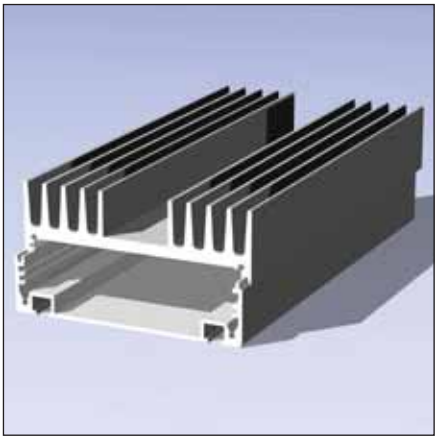
Enclosure Profiles

Multitronic Build-A-Box® 10011111/10011109

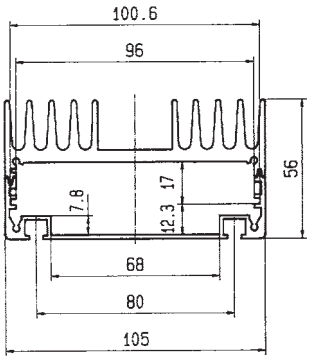
Part #	Type	Description
10011111 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011109 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095150 08	End Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Two-shell extrusion design with integrated heat sink, integrated guide rail for one 100 mm PC boards, and 2 external “T” slots for bracket wall-mounting. External wall-mount bracket set, optional.



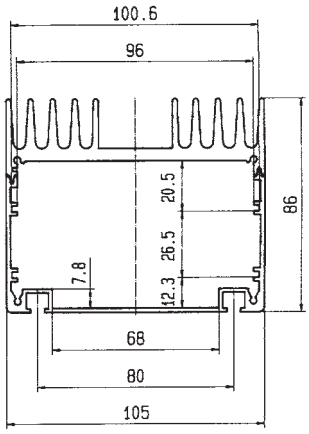
Enclosure Profiles

Multitronic Build-A-Box® 10011111/10011110

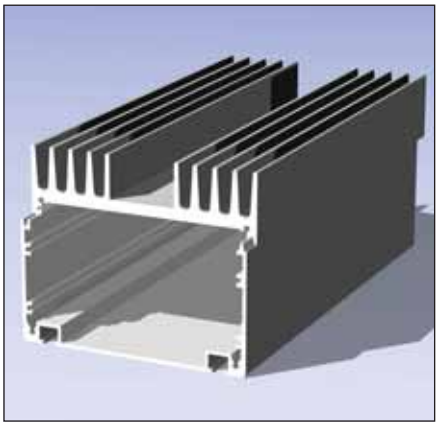
Part #	Type	Description
10011111 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011110 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095152 08	End Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets w/spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Enclosure Profiles



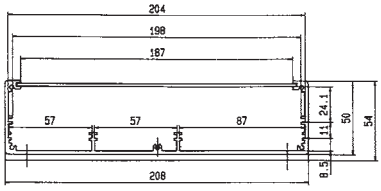
Two-shell extrusion design with integrated heat sink on top extrusion, integrated guide rails for two 100 mm PC boards, and 2 external “T” slots for bracket wall-mounting. External wall-mount bracket set, optional.

Multitronic Build-A-Box® 10955170/10011113

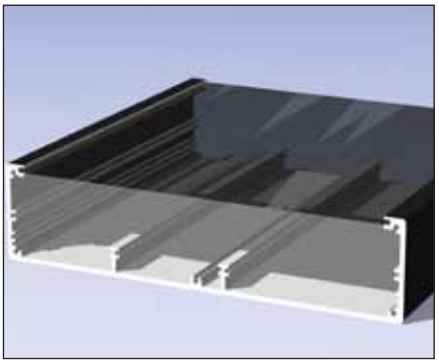
Part #	Type	Description
10955170 00	Plate Lid, Top	Unpainted Aluminum Plate Lid (sold by the meter)
10011113 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095517 08	End Lid	Unpainted Aluminum plate lid with screws
10095518 08	End Lid	Unpainted Plate Lid w/Wall Mount Flange and lid screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Enclosure Profile



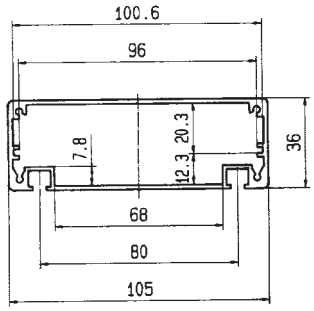
One-shell open extrusion with integrated guide rails for one 204 mm, one 87 mm, two 57 mm PC boards, and top aluminum plate lid. Wall-mount flange plate lids are available as an option.

Multitronic Build-A-Box® 10011108

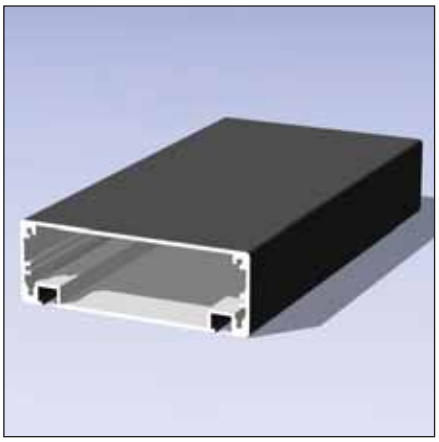
Part #	Type	Description
10011108 00	Extrusion	Extrusion, bare Aluminum (sold by the meter)

Accessories

10095150 08	Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Enclosure Profile



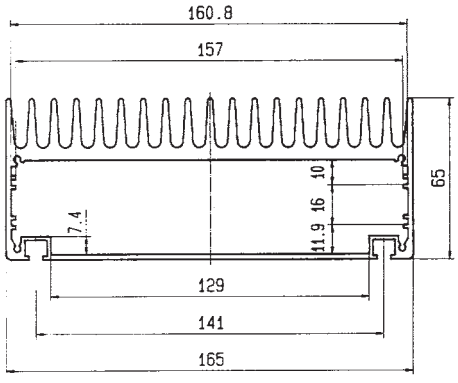
One-shell closed extrusion design with integrated guide rail for one 100 mm PC board and 2 external “T” slots for bracket wall-mounting. External wall-mount bracket set, optional.

Multitronic Build-A-Box® 10011112

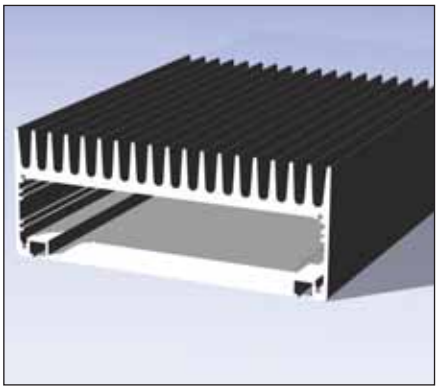
Part #	Type	Description
10011112 00	Extrusion	Extrusion, bare Aluminum (sold by the meter)

Accessories

10095155 08	Lid	Unpainted Aluminum plate lid with screws
77000100 00	Brackets	Set of 4 External Wall Mount Brackets with spring nuts and screws
10094110 00	Rubber Feet	Rubber Table Feet
10093205 00	Screw	Black Lid Screw (M3 x 8)



Enclosure Profile



One-shell closed extrusion design with integrated heat sink, integrated guide rails for two 160 mm PC boards, and 2 external “T” slots for bracket wall-mounting. External wall-mount bracket set, optional.

Multitronic TS Build-A-Box®

- Aluminum profile that can be cut to any length required and capped with plate aluminum lids
- All profiles slotted internally for PCB or chassis mounting
- Optional “L-shaped” aluminum plate lids are offered for wall-mount applications

Included in delivery
Extrusion only. Sold by the meter.

Technical Data

Color	Any color is available.
Material	Aluminum, Al Mg Si 0.5
Temperature Range	-40°F to +212°F
Protection Classification	IP 40 to EN 60529

Part Number	Length Inches/mm	Width Inches/mm	Height Inches/mm	PC Card Slot Size
10011129 /10011129	39.37 / 1000	2.83 / 72	1.81 / 46	42 mm
10011129/10011131	39.37 / 1000	2.99 / 76	2.40 / 61	42, 72 mm
10011131/10011131	39.37 / 1000	2.99 / 76	2.01 / 51	72 mm
10011130/10011131	39.37 / 1000	2.99 / 76	2.54 / 64	72 mm
10011130/10011130	39.37 / 1000	2.99 / 76	3.07 / 78	72 mm
10011132/10011132	39.37 / 1000	4.13 / 105	1.77 / 45	100 mm
10011133/10011132	39.37 / 1000	4.13 / 1.05	2.60 / 66	100 mm
10011133/10011133	39.37 / 1000	4.13 / 1.05	3.42 / 87	100 mm

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
All extrusions sold in 1 meter lengths

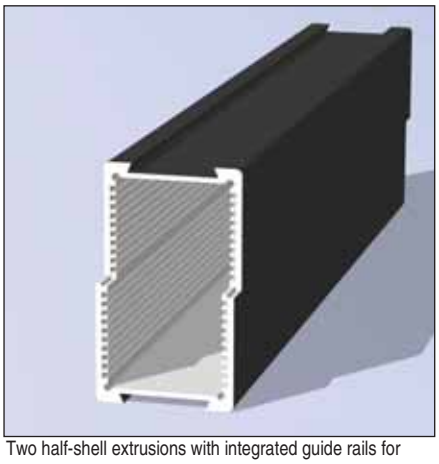
Accessories	Part Number
Unpainted plate lid with screws for 11129/11129	**10095525 08**
Unpainted plate lid with screws & wall flange for 11129/11129	**10095531 08**
Unpainted plate lid with screws for 11129/11131	**10095530 08**
Unpainted plate lid with screws & wall flange for 11129/11131	**10095538 08**
Unpainted plate lid with screws for 11131/11131	**10095526 08**
Unpainted plate lid with screws & wall flange for 11131/11131	**10095532 08**
Unpainted plate lid with screws for 11130/11131	**10095527 08**
Unpainted plate lid with screws & wall flange for 11130/11131	**10095538 08**
Unpainted plate lid with screws for 11130/11130	**10095528 08**
Unpainted plate lid with screws & wall flange for 11130/11130	**10095534 08**
Unpainted plate lid with screws for 11132/11132	**10095529 08**
Unpainted plate lid with screws & wall flange for 11132/11132	**10095535 08**
Unpainted plate lid with screws for 11133/11132	**10095152 08**
Unpainted plate lid with screws & wall flange for 11133/11132	**10095536 08**
Unpainted plate lid with screws & wall flange for 11133/11133	**10095537 08**
Black lid screws M3 x 8	**10093205 00**

Multitronic TS Build-A-Box® 10011129/10011129

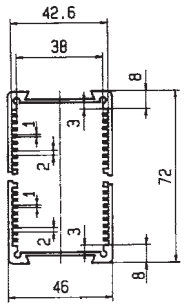
Part #	Type	Description
10011129 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011129 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095525 08	End Lid	Unpainted Plate Lid w/screws for 11129/11129
10095531 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11129/11129
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Two half-shell extrusions with integrated guide rails for 42 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.



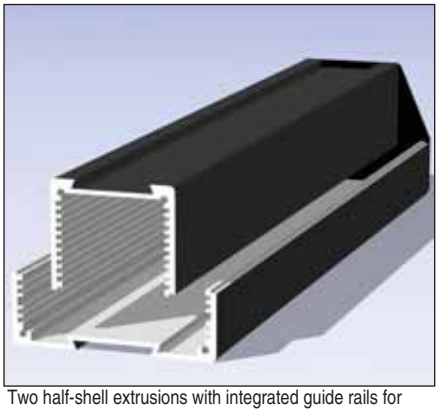
Enclosure Profiles

Multitronic TS Build-A-Box® 10011129/10011131

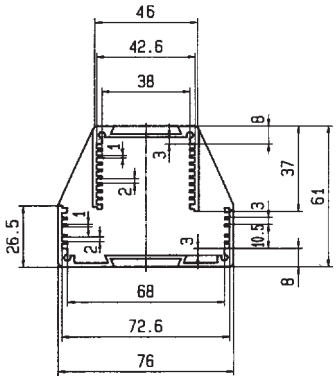
Part #	Type	Description
10011129 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011131 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095530 08	End Lid	Unpainted Plate Lid w/screws for 11129/11131
10095538 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11129/11131
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Two half-shell extrusions with integrated guide rails for 42 and 72 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.



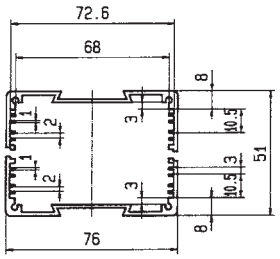
Enclosure Profiles

Multitronic TS Build-A-Box® 10011131/10011131

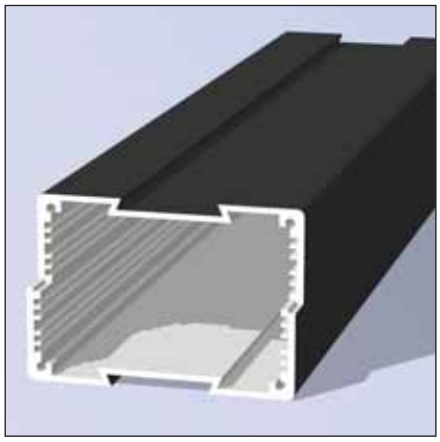
Part #	Type	Description
10011131 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011131 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095526 08	End Lid	Unpainted Plate Lid w/screws for 11131/11131
10095532 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11131/11131
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Enclosure Profiles



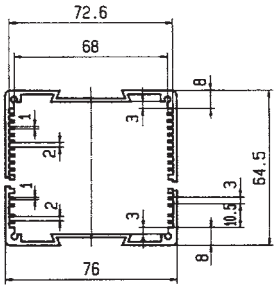
Two half-shell extrusions with integrated guide rails for 72 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.

Multitronic TS Build-A-Box® 10011130/10011131

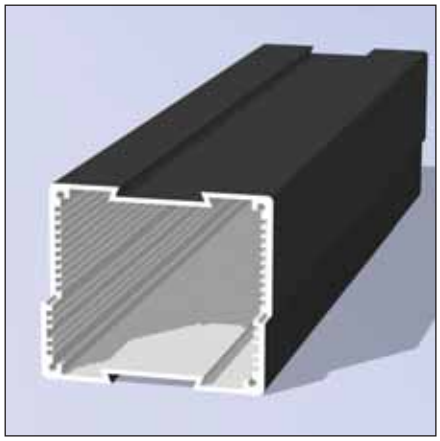
Part #	Type	Description
10011130 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011131 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095527 08	End Lid	Unpainted Plate Lid w/screws for 11130/11131
10095533 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11130/11131
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Enclosure Profiles



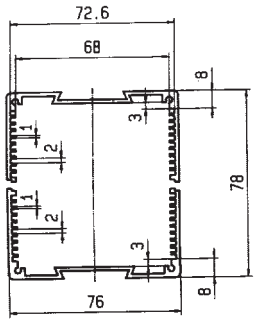
Two half-shell extrusions with integrated guide rails for 72 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.

Multitronic TS Build-A-Box® 10011130/10011130

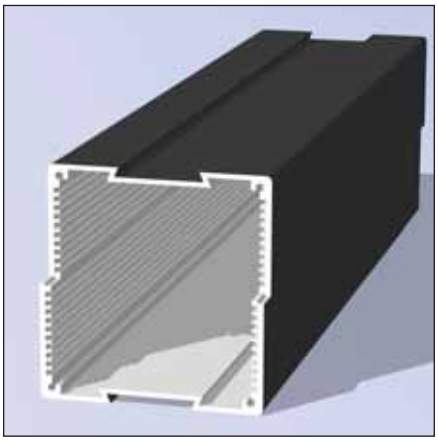
Part #	Type	Description
10011130 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011130 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095528 08	End Lid	Unpainted Plate Lid w/screws for 11130/11130
10095534 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11130/11130
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Enclosure Profiles



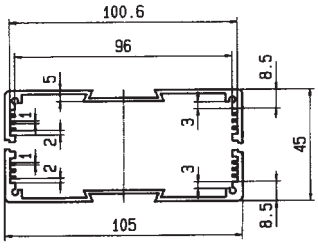
Two half-shell extrusions with integrated guide rails for 72 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.

Multitronic TS Build-A-Box® 10011132/10011132

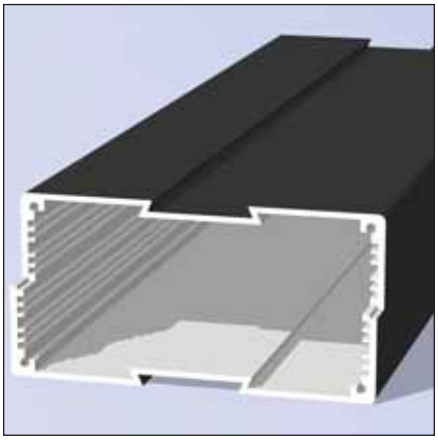
Part #	Type	Description
10011132 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011132 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095529 08	End Lid	Unpainted Plate Lid w/screws for 11132/11132
10095535 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11132/11132
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Enclosure Profiles



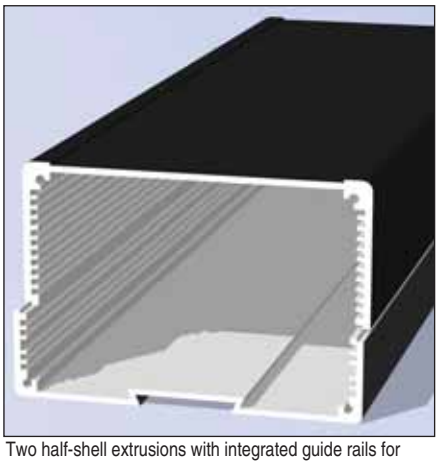
Two half-shell extrusions with integrated guide rails for 100 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.

Multitronic TS Build-A-Box® 10011133/10011132

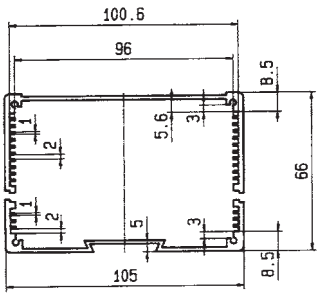
Part #	Type	Description
10011133 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011132 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095152 08	Lid	Unpainted Plate Lid w/screws for 11133/11132
10095536 08	End Lid	Unpainted Plate Lid w/ screws & Wall Flange for 11133/11132
10093205 00	Screws	Black Lid Screw M3x8
77003500 00	Bracket	DIN Rail Bracket



Two half-shell extrusions with integrated guide rails for 100 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.



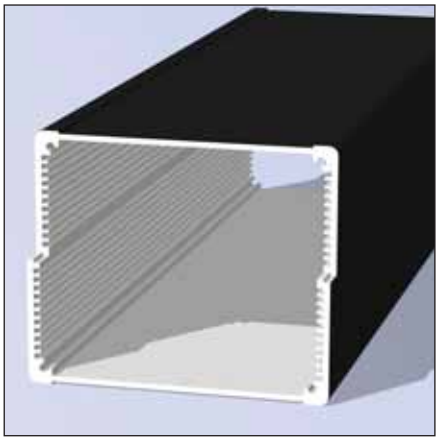
Enclosure Profiles

Multitronic TS Build-A-Box® 10011133/10011133

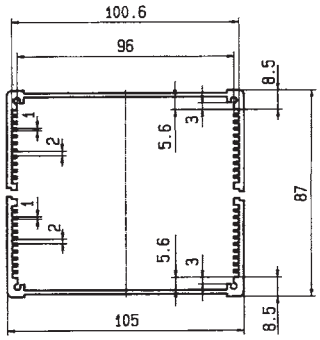
Part #	Type	Description
10011133 00	Extrusion Top	Extrusion only, bare Aluminum (sold by the meter)
10011133 00	Extrusion Bottom	Extrusion only, bare Aluminum (sold by the meter)

Accessories

10095537 08	End Lid	Unpainted Plate Lid with screws and Wall Flange for 11133/11133
10093205 00	Screws	Black Lid Screw M3x8

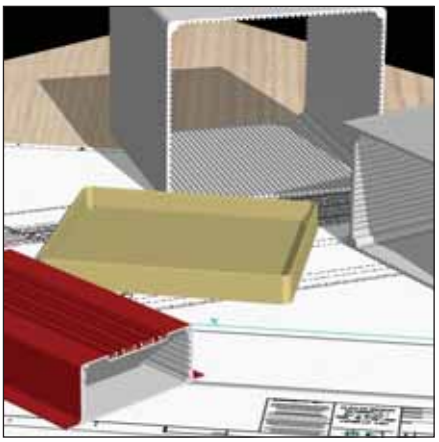


Two half-shell extrusions with integrated guide rails for 100 mm PC boards and exterior slots designed for optional 35 mm DIN Rail mounting bracket.



Enclosure Profiles

Custom Build-A-Box®



- Aluminum electronic enclosures for telecommunications and measurement control technology
- Sold by the meter and cut to custom lengths to meet design needs
- Versions with flange mounting rails integrated into sides
- Different lid versions depending on enclosure type
- Integrated guide slots for PCBs

Included in delivery
Extrusion only. Sold by the meter.

Technical Data

Material	Bare aluminum extrusion Al Mg Si 0.5
Ingress Protection	IP 40 to EN 60529 (dustight) with aluminum plate lid IP 65 to EN 60529 (watertight) with die-cast aluminum lid
Temperature Resistance	-40°F to +212°F with aluminum plate lids -22°F to +176°F with die-cast aluminum lids

Part Number	Length Inches/mm	Width Inches/mm	Height Inches/mm	P.C. Card Slot Sizes
07011100 00	39.37 / 1000	5.12 / 130	1.77 / 45	100 mm
07021100 00	39.37 / 1000	5.12 / 130	2.72 / 69	100 mm
07031100 00	39.37 / 1000	7.72 / 196	4.17 / 106	100 mm / 160
07051100 00	39.37 / 1000	4.09 / 104	3.31 / 84	100 mm / 80.5
07061100 00	39.37 / 1000	6.50 / 165	4.13 / 105	100 mm / 160
07071100 00	39.37 / 1000	7.68 / 195	6.55 / 166	160 mm / 189.5
07101102 00	39.34 / 1000	5.67 / 144	2.66 / 67	100 mm
07111102 00	39.37 / 1000	5.67 / 144	1.69 / 43	100 mm

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
All extrusions sold in 1 meter lengths.

Accessories

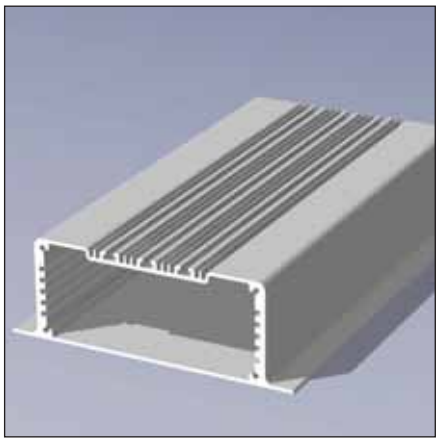
Description	Part Number	Description	Part Number
Dustight lid painted black with lid screws for 0701	**07019509 00**	Watertight die-cast bezel lid unpainted with screws and gasket for 0706	**07061200 98**
Dustight lid unpainted with lid screws for 0701	**07019509 08**	Watertight die-cast membrane bezel lid painted with lid screws and gasket for 0706	**07061200 00**
Dustight lid painted with lid screws for 0702	**07029507 50**	Watertight die-cast membrane bezel lid unpainted with lid screws and gasket for 0706	**07061200 08**
Dustight lid unpainted with lid screws for 0702	**07029507 58**	Watertight die cast lid w/clear door & snap lock painted with lid screws and gasket for 0706	**07061200 91**
Watertight lid painted with lid screws and gasket for 0711	**07110618 20**	Watertight die cast lid w/clear door & key lock painted with lid screws, gasket and key for 0706	**07061200 92**
Watertight lid unpainted with lid screws and gasket for 0711	**07110618 28**	Watertight die cast membrane bezel lid w/clear pc door & side latch painted with screws and gasket for 0706	**07808003 50**
Watertight lid painted with lid screws and gasket for 0710	**07100618 20**	Dustight lid painted with lid screws for 0707	**07079521 20**
Watertight lid unpainted with lid screws and gasket for 0710	**07100618 28**	Dustight lid unpainted with lid screws for 0707	**07079521 28**
Dustight wall mount lid painted with lid screws for 0703	**07038916 00**	Dustight wall mount lid painted with lid screws for 0707	**07079520 20**
Dustight wall mount lid unpainted with lids screws for 0703	**07038916 08**	Dustight wall mount lid unpainted with lid screws for 0707	**07079520 28**
Watertight die-cast lid painted with lid screws and gasket for 0703	**07031200 10**	Watertight die cast lid unpainted with lid screws for 0707	**07071201 30**
Watertight die-cast lid unpainted with lid screws and gasket for 0703	**07031200 18**	Watertight die cast lid unpainted with lid screws and gasket for 0707	**07071201 38**
Dustight lid painted with lid screws for 0705	**07059521 00**	Wall mount die cast lid painted with lid screws and gasket for 0707	**07071201 10**
Dustight lid unpainted with lid screws for 0705	**07059521 08**	Watertight wall mount die-cast lid unpainted with lid screws and gasket for 0707	**07071201 18**
Dustight wall mount lid painted with lid screws for 0705	**07059520 00**	Watertight die-cast bezel lid painted with lid screws and gasket for 0707	**07071201 20**
Dustight wall mount lid unpainted with lid screws for 0705	**07059520 08**	Watertight die-cast bezel lid unpainted with lid screws and gasket for 0707	**07071201 28**
Watertight die-cast lid painted with lid screws and gasket for 0705	**07051200 70**	Watertight die-cast membrane bezel lid painted with lid screws and gasket for 0707	**07071201 40**
Watertight die-cast lid unpainted with lid screws and gasket for 0705	**07051200 78**	Watertight die-cast membrane bezel lid unpainted with lid screws and gasket for 0707	**07071201 48**
Watertight wall mount die cast lid painted with lid screws and gasket for 0705	**07051200 50**	Watertight die-cast lid w/clear door & side latch painted with lid screws and gasket for 0707	**07808004 50**
Watertight wall mount die cast lid painted with lid screws and gasket for 0705	**07051200 58**	Stainless steel lid screw M3 x 6 mm for 0701 and 0702	**10093032 00**
Watertight die cast bezel lid with screws and gasket for 0705	**07051200 60**	Phillips head screw for watertight lid, M4x18 mm for 0711, 0710, 0703, 0705, 0706, 0707	**10093270 00**
Watertight die cast bezel lid with screws and gasket for 0705	**07051200 68**	Slotted countersink screw for dustight lid, M4x6mm for 0703, 0705, 0706, 0707	**10093212 00**
Dustight lid painted with lid screws for 0706	**07069521 10**	Table feet (sold as each)	**10094102 00**
Dustight lid unpainted with lid screws for 0706	**07069521 18**		
Dustight wall mount lid painted with lid screws for 0706	**07069520 10**		
Dustight wall mount lid unpainted with lid screws for 0706	**07069520 18**		
Watertight die-cast lid painted with lid screws and gasket for 0706	**07061200 70**		
Watertight die-cast lid unpainted with lid screws and gasket for 0706	**07061200 78**		
Watertight wall mount die-cast lid painted with lid screws and gasket for 0706	**07061200 80**		
Watertight wall mount die-cast lid unpainted with lid screws and gasket for 0706	**07061200 88**		
Watertight die cast bezel lid painted with lid screws and gasket for 0706	**07061200 90**		

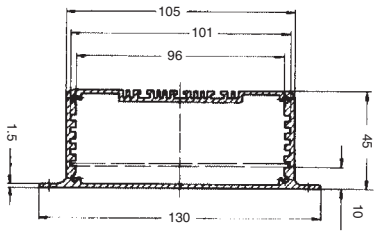
Custom Build-A-Box® 0701

Part #	Type	Description
07011100 10	Extrusion	Extrusion only, bare Aluminum (sold by the meter)

Accessories

07019509 00	End Lid	Dustight Lid–plate Aluminum, painted black, with lid screws
07019509 08	End Lid	Dustight Lid–plate Aluminum, unpainted, with lid screws
10093032 00	Screws	Stainless Steel Lid Screw M3x6 mm
10094102 00	Table Feet	Table Feet (sold as each)





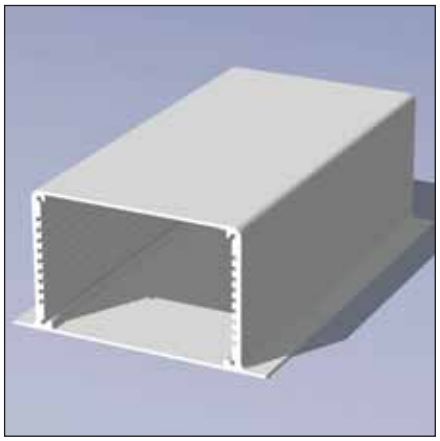
Enclosure Profile

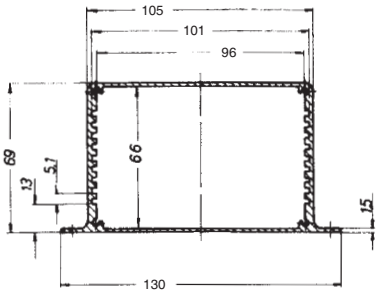
Custom Build-A-Box® 0702

Part #	Type	Description
07021100 20	Extrusion	Extrusion only, bare Aluminum (sold by the meter)

Accessories

07029507 50	End Lid	Dustight Lid–plate Aluminum, painted black, with lid screws
07029507 58	End Lid	Dustight Lid–plate Aluminum, unpainted, with lid screws
10093032 00	Screws	Stainless Steel Lid Screw M3x6 mm
10094102 00	Table Feet	Table Feet (sold as each)





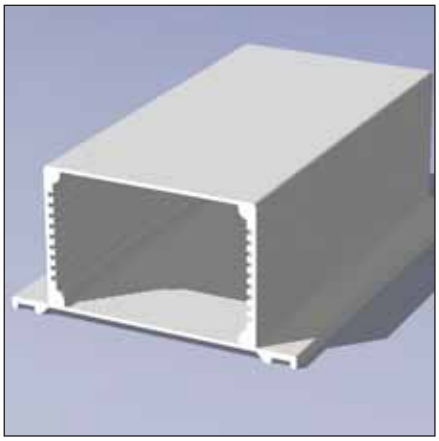
Enclosure Profile

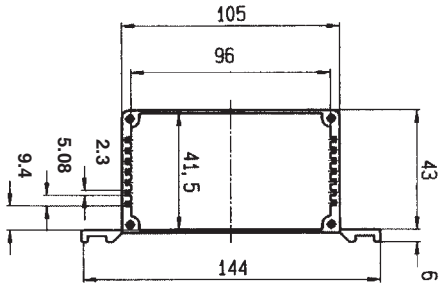
Custom Build-A-Box® 0711

Part #	Type	Description
07111102 40	Extrusion	Extrusion only, bare Aluminum, (sold by the meter)

Accessories

07110618 20	End Lid	Watertight Die-cast Lid–Aluminum, painted black, with lid screws and gasket
07110618 28	End Lid	Watertight Die-cast Lid–Aluminum, unpainted, with lid screws and gasket
10093270 00	Screws	Phillips Head Screw for Watertight Lid M4x18 mm
10094102 00	Table Feet	Table Feet (sold as each)





Enclosure Profile

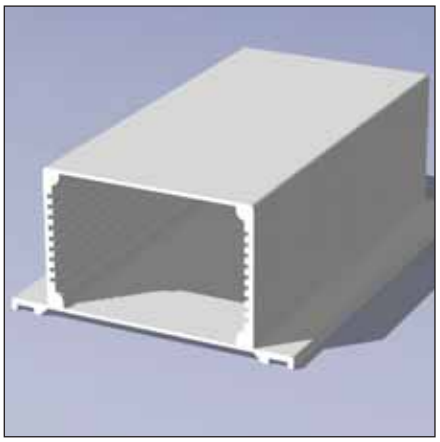
Die-cast Lid

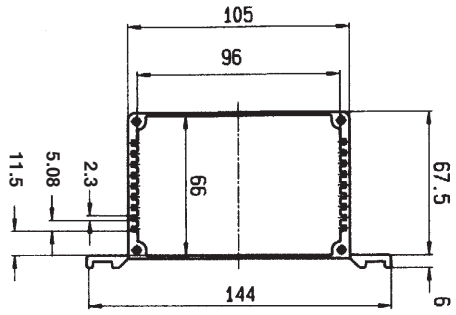
Custom Build-A-Box® 0710

Part #	Type	Description
07101102 30	Extrusion	Extrusion only, bare Aluminum (sold by the meter)

Accessories

07100618 20	End Lid	Watertight Die-cast Lid–Aluminum, painted black, with lid screws and gasket
07100618 28	End Lid	Watertight Die-cast Lid–Aluminum, unpainted, with lid screws and gasket
10093270 00	Screws	Phillips Head Screw for Watertight Lid M4x18 mm
10094102 00	Table Feet	Table Feet (sold as each)





Enclosure Profile

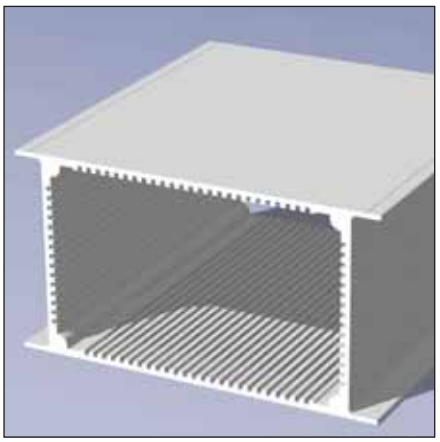
Die-cast Lid

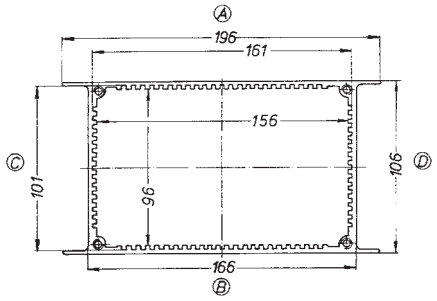
Custom Build-A-Box® 0703

Part #	Type	Description
07031100 30	Extrusion	Extrusion only w/side flanges top and bottom–bare Aluminum (sold by the meter)

Accessories

07038916 00	End Lid	Dustight Wall Mount Lid–plate Aluminum, painted black, with lid screws
07038916 08	End Lid	Dustight Wall Mount Lid–plate Aluminum, unpainted, with lid screws
07031200 10	End Lid	Watertight Die-cast Lid–Aluminum, painted black, with lid screws and gasket
07031200 18	End Lid	Watertight Die-cast Lid–Aluminum, unpainted , with lid screws and gasket
10093212 00	Screws	Slotted Countersink Screw for Dustight Lid M4x6mm
10093270 00	Screws	Phillips Head Screw for Watertight Lid M4x18mm
10094102 00	Table Feet	Table Feet (sold as each)

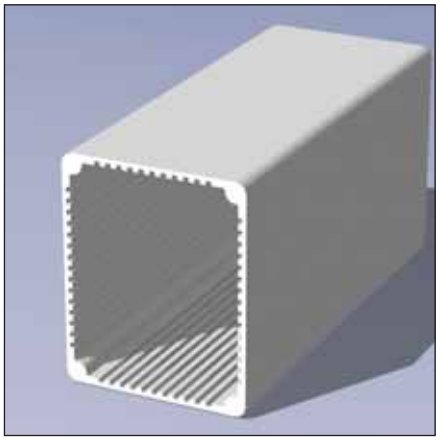




Enclosure Profile

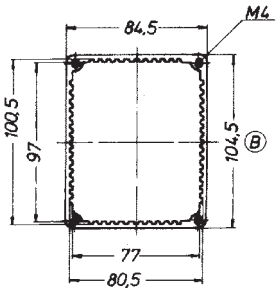
Custom Build-A-Box® 0705

Part #	Type	Description
07051100 50	Extrusion	Extrusion only–bare Aluminum, (sold by the meter)

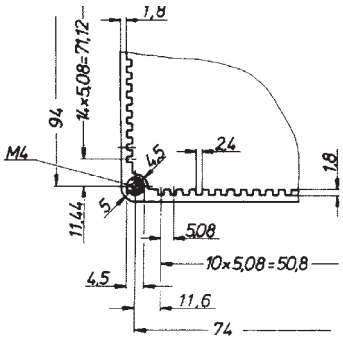


Accessories

07059521 00	Lid	Dustight Lid–plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07059521 08	Lid	Dustight Lid–plate Aluminum, unpainted, with lid screws
07059520 00	Lid	Dustight Wall Mount Lid–plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07059520 08	Lid	Dustight Wall Mount Lid–plate Aluminum, unpainted, with lid screws
07051200 70	Lid	Watertight Die-cast Lid–Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07051200 78	Lid	Watertight Die-cast Lid–Aluminum, unpainted, with lid screws and gasket
07051200 50	Lid	Watertight Wall Mount Die-cast Lid–Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07051200 58	Lid	Watertight Wall Mount Die-cast Lid–unpainted, with lid screws and gasket
07051200 60	Lid	Watertight Die-cast Bezel Lid–Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07051200 68	Lid	Watertight Die-cast Bezel Lid–Aluminum, unpainted, with lid screws and gasket
10093212 00	Screw	Slotted Countersink Screw for Dustight Lid M4x6mm
10093270 00	Screw	Screw for Watertight Lid M4x18mm
10094102 00	Table Feet	Table Feet (sold as each)



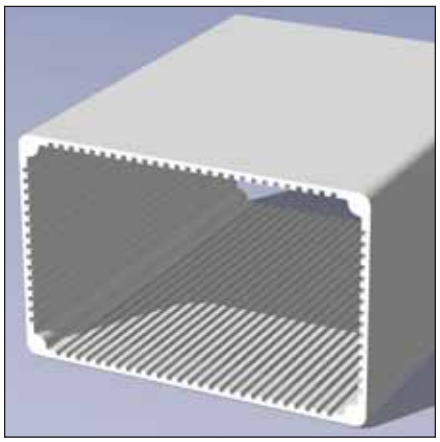
Enclosure Profile



Corner Detail

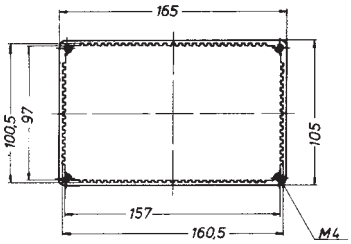
Custom Build-A-Box® 0706

Part #	Type	Description
07061100 60	Extrusion	Extrusion only–bare Aluminum (sold by the meter)

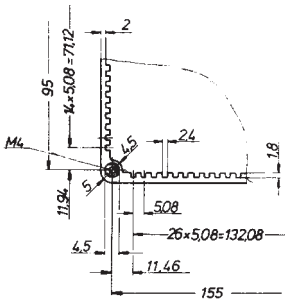


Accessories

07069521 10	Lid	Dustight Lid-plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07069521 18	Lid	Dustight Lid-plate Aluminum, unpainted, with lid screws
07069520 10	Lid	Dustight Wall Mount Lid-plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07069520 18	Lid	Dustight Wall Mount Lid-plate Aluminum, unpainted with screws
07061200 70	Lid	Watertight Die-cast Lid-Aluminum painted jet black similar to RAL 9005, with lid screws and gasket
07061200 78	Lid	Watertight Die-cast Lid-Aluminum, unpainted with lid screws and gasket
07061200 80	Lid	Watertight Wall Mount Die-cast Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07061200 88	Lid	Watertight Wall Mount Die-cast-Aluminum, unpainted, with lid screws and gasket
07061200 90	Lid	Watertight Die-cast Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07061200 98	Lid	Watertight Die-cast Bezel Lid-Aluminum, unpainted, with lid screws and gasket
07061200 00	Lid	Watertight Die-cast Membrane Bezel Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07061200 08	Lid	Watertight Die-cast Membran Bezel Lid-Aluminum, unpainted, with lid screws and gasket
07061200 91	Lid	Watertight Die-cast Lid/w Clear Door & Snap Lock-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07061200 92	Lid	Watertight Die-cast Lid w/Clear Door & Key Lock-Aluminum, painted jet black similar to RAL 9005, with lid screws, gasket and key
07808003 50	Lid	Watertight Die-cast Membrane Bezel Lid with Clear PC Door & Side Latch-Aluminum Lid painted jet black similar to RAL 9005, with lid screws and gasket
10093212 00	Screw	Slotted Countersink Screw for Dustight Lid M4x6mm
10093270 00	Screw	Lid Screw for Watertight Lid M4x18mm
10094102 00	Table Feet	Table Feet (Sold as each)



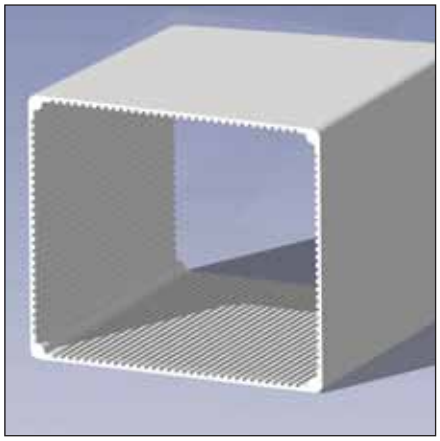
Enclosure Profile

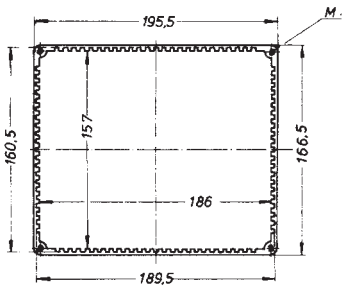


Corner Detail

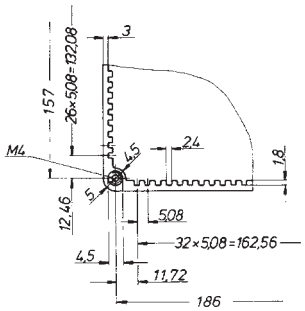
Custom Build-A-Box® 0707

Part #	Type	Description
07071100 70	Extrusion	Extrusion only–bare Aluminum (sold by the meter)
Accessories		
07079521 20	Lid	Dustight Lid-plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07079521 28	Lid	Dustight Lid-plate Aluminum, unpainted, with lid screws
07079520 20	Lid	Dustight Wall Mount Lid-plate Aluminum, painted jet black similar to RAL 9005, with lid screws
07079520 28	Lid	Dustight Wall Mount Lid-plate Aluminum, unpainted, with lid screws
07071201 30	Lid	Watertight Die-cast Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07071201 38	Lid	Watertight Die-cast Lid-Aluminum, unpainted with lid screws and gasket
07071201 10	Lid	Watertight Wall Mount Die-cast Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07071201 18	Lid	Watertight Wall Mount Die-cast Lid-Aluminum, unpainted, with lid screws and gasket
07071201 20	Lid	Watertight Die-cast Bezel Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07071201 28	Lid	Watertight Die-cast Bezel Lid-Aluminum, unpainted, with lid screws and gasket
07071201 40	Lid	Watertight Die-cast Membrane Bezel Lid-Aluminum, painted jet black similar to RAL 9005, with lid screws and gasket
07071201 48	Lid	Watertight Die-cast Membrane Bezel Lid-Aluminum, unpainted, with lid screws and gasket
07808004 50	Lid	Watertight Die-cast Lid w/Clear Door & Side Latch-Aluminum, painted jet black, similar to RAL 9005, with lid screws and gasket
10093212 00	Screw	Slotted Countersink Screw for Dustight Lid M4x6mm
10093270 00	Screw	Lid Screw for Watertight Lid M4x18mm
10094102 00	Table Feet	Table Feet (Sold as each)





Enclosure Profile



Corner Detail

Profitronic

- Aluminum electronic enclosures, chassis fittings in three sizes
- Variable length options using profile technology
- Standard construction or version with connection compartment
- Optional Polycarbonate transparent cover

Included in delivery

Enclosure system - depending on version, either with cast aluminum lids, connection compartment, or transparent cover; please order mounting elements separately.

Technical Data

Material	Al Mg Si 0.5; connection compartment AlSi12
Ingress Protection	IP 65 EN 60529
Opening Angle	For connection compartments and transparent covers 110°
Temperature Resistance	Lid seals -40°F to + 212°F Transparent cover -40° to +158°F; only suitable for external applications
Surface Resistance	Plastic resin stove-enamel finish
Color	Light gray, similar to RAL 7035 - enclosure body and connection compartment Stone gray, similar to RAL 7030 - enclosure lid and external fittings Special colors on request

Type	Part Number 19" Mounting Frame	Part Number 19" Mounting Frame with Transparent Cover	Part Number Front Panel Lid	Part Number Front Panel Lid	Part Number Front Panel Lid and Transparent Cover	Dimensions* mm W x L x H	Dimensions* Inches W x L x H
	Enclosure with connection compartment Standard (63.5 mm)						
19TE	**07191100 00**	**07192100 00**	**07193100 00**	**07193300 00****	**07192300 00**	148 x 236 x 241	5.83 x 9.29 x 9.49
28TE	**07281100 00**	**07282100 00**	**07283100 00**	**07283300 00****	**07282300 00**	191 x 236 x 241	7.52 x 9.29 x 9.49
42TE	**07421100 00**	**07422100 00**	**07423100 00**	**07423300 00****	**07422300 00**	265 x 236 x 241	10.43 x 9.29 x 9.49
	Enclosure with connection compartment Standard (63.5 mm)						
19TE	**07191101 00**	**07192101 00**	**07193101 00**	**07193301 00****	**07192301 00**	148 x 276 x 241	8.53 x 10.87 x 9.49
28TE	**07281101 00**	**07282101 00**	**07283101 00**	**07283301 00****	**07282301 00**	191 x 276 x 241	7.52 x 10.87 x 9.49
42TE	**07421101 00**	**07422101 00**	**07423101 00**	**07423301 00****	**07422301 00**	265 x 276 x 241	10.43 x 10.87 x 9.49
	Enclosure with connection compartment Standard (63.5 mm)						
19TE	**07191200 00**	**07192200 00**	**07193200 00**	-	-	148 x 235 x 149	5.83 x 9.25 x 5.87
28TE	**07281200 00**	**07282200 00**	**07283200 00**	-	-	191 x 235 x 149	7.52 x 9.25 x 5.87
42TE	**07421200 00**	**07422200 00**	**07423200 00**	-	-	265 x 235 x 149	10.43 x 9.25 x 5.87

*Length without lid ** Enclosure length is equal to connection compartment depth

Accessories		Part Number
External mounting for enclosure with connection compartment (set of 2)		**07000100 00**
External mounting for enclosures without connection compartment (set of 2)		**07000200 00**
Special lock with socket wrench for connection compartment (mounted)		**07000017 00**
Turning handle for transparent cover (mounted)		**07000018 00**
Cylinder lock, for transparent cover (mounted)		**07000019 00**
Board guides for PCB's, fixed (set of 10)		**07000010 00**
Board guides for PCB's; variable (set of 10)		**07000011 00**
Insulating strip to fix bus boards (set of 2)	**Type 0719**	**07190020 00**
	0728	**07280020 00**
	0742	**07420020 00**
Aluminum profile (Z rails) to fix connector bars (set of 2)	**Type 0719**	**07190010 00**
	0729	**07280010 00**
	0742	**07420010 00**
Mounting plate for connection compartment	**Type 0719**	**07190030 00**
	0728	**07280030 00**
	0742	**07420030 00**
Self-adhesive table feet (set of 4)		**10070018 00**
Mounting feet (2 pieces)		**07700081 00**

Profitronic Universal

- Aluminum electronic enclosures, chassis fittings in three sizes
- Variable length options using profile technology
- Standard construction or version with connection compartment
- Optional Polycarbonate transparent cover

Included in delivery

Enclosure system - depending on version either with cast aluminum lids, connection compartment or transparent cover; please order mounting elements separately.

Technical Data

Material	Al Mg Si 0.5; connection compartment AlSi12
Ingress Protection	IP 65 EN 60529
Opening Angle	For connection compartments and transparent covers 110°
Temperature Resistance	Lid seals -40°F to + 212°F Transparent cover -40° to +158°F; only suitable for external applications
Surface Resistance	Plastic resin stove-enamel finish
Color	Light gray, similar to RAL 7035 - enclosure body and connection compartment Stone gray, similar to RAL 7030 - enclosure lid and external fittings Special colors on request

Type	Part Number 19" Mounting Frame with Transparent Cover	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number Front Panel Lid	Dimensions mm W x L x H	Dimensions Inches W x L x H
Enclosure with connection compartment (63.5 mm)						
19TE	**07192111 00**	148 x 285 x 241	5.83 x 11.22 x 9.49	**07193111 00**	148 x 280 x 241	5.83 x 11.02 x 9.49
28TE	**07282111 00**	191 x 285 x 241	7.52 x 11.22 x 9.49	**07283111 00**	191 x 280 x 241	7.52 x 11.02 x 9.49
42TE	**07422111 00**	265 x 185 x 241	10.43 x 11.22 x 9.49	**07423111 00**	265 x 200 x 241	10.43 x 11.02 x 9.49
Enclosure without connection compartment						
19TE	**07192211 00**	148 x 263.5 x 149	5.83 x 10.15 x 5.87	**17193211 00**	148 x 258.5 x 149	5.83 x 10.18 x 5.87
28TE	**07282211 00**	191 x 263.5 x 149	7.52 x 10.18 x 5.87	**07283211 00**	191 x 258.5 x 149	7.52 x 10.18 x 5.87
42TE	**07422211 00**	265 x 263.5 x 148	10.43 x 10.18 x 5.87	**07423211 00**	265 x 258.5 x 149	10.43 x 10.18 x 5.87

Accessories		Part Number
External mounting for enclosure with connection compartment (set of 2)		**07000100 00**
External mounting for enclosures without connection compartment (set of 2)		**07000200 00**
Special lock with socket wrench for connection compartment (mounted)		**07000017 00**
Turning handle for transparent cover (mounted)		**07000018 00**
Cylinder lock, for transparent cover (mounted)		**07000019 00**
Board guides for PCB's, fixed (set of 10)		**07000010 00**
Board guides for PCB's; variable (set of 10)		**07000011 00**
Mounting plate for connection compartment	**Type 0719**	**07190030 00**
	0728	**07280030 00**
	0742	**07420030 00**
Self-adhesive table feet (set of 4)		**10070018 00**
Mounting feet (2 pieces)		**07700081 00**

ANG Panel Meter Housing

- First DIN panel meter housing on the market with NEMA 4x protection
- Constructed from hollow extrusion of heavy duty aluminum with internal slotting to accomodate printed circuit boards or chassis.

Included in delivery

Enclosure body, mounting profiles, bezel, front frame, rear lid, 1.5 allen key, adhesive plate, screws and washers.

Technical Data

Color	Black powdercoat
Material	Extruded aluminum
Protection Classifications	NEMA 4X IP 66, DIN 40050

Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
ANG 9610	109.5 x 96 x 96	4.31 x 3.77 x 3.77
ANG 9616	165.5 x 96 x 96	6.51 x 3.77 x 3.77
ANG 9601	Sold in one meter lengths	Sold in one meter lengths

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Part Number	Description
ANG 96 MPI	Aluminum mounting rail
ANG 96 BZ	Front bezel
ANG 96 FF	Front open frame
ANG 96 RL	Rear cover
SST 1230 NG	Replacement screws (set of 8)

Electronic systems are not made for the enclosures that house them; rather the enclosures are made to hold the electronics. For this reason, Bopla offers designers modular enclosures. These enclosure systems are offered in many diverse sizes with a wide range of possibilities for variation. This allows the individual design to come to life.

Electronic device manufacturers look for “packaging” that meets their requirements with regard to design and technology so that the ultimate product can effectively answer the demands of the market. The “package”, in this case, an enclosure made of plastic or metal, is of tremendous importance to the marketability of the device. Technical characteristics, price/performance comparisons, and the appearance of the product can prove central to its success. The extremely broad spectrum of different modular enclosure systems from Bopla represents a remarkable selection of “standards” that can be individualized.

CombiCard 5000-7000
- 3 versions with dimensions from 175.7 mm to 323 mm for the front length

Intercard
- 1 version with dimensions from 212 x 198 x 162.5 mm

CombiSet
- 4 versions with dimensions from 224.5 to 252 mm

CombiNorm Classic
-2 versions with dimensions from 100 x 109.5 x 75 mm to 22.5 x 109.5 x 75 mm

CombiNorm Compact
- 3 versions with dimensions from 19 x 110 x 75 mm to 26 x 110 x 75 mm

CombiCard 1000-3000
- 3 versions with dimensions from 134 mm to 288 mm for the front length

Executive Plug Housings
- 7 versions with dimensions from 125 x 37 mm with height from 15 to 35 mm

SE 4 & SE 5 Plug Housings
-2 versions with dimensions from 65 x 50 x 30 to 120 x 65 x 66 mm

Alurail

- Modular DIN rail enclosure for use in measurement, control, and automation control technology
- Individual design of the enclosure construction is made possible by attaching different module types in various lengths onto the basic profile
- Basic profiles and modules equipped with integrated guide grooves for PCBs

Included in delivery

Profiles sold in meter lengths. Other components sold individually. See below for details.

Technical Data

Material	Profiles: Extruded aluminum profile, Al Mg Si 0.5; Profile caps: Polyamide 6.6 FR
Ingress Protection	Up to IP 40/DIN EN 60529, depending on enclosure construction
Flammability	UL 94 V0/1
Surface Resistance (caps)	$>10^{15}$ Ohm to DIN 53482
Ingress Protection	Up to IP 40/DIN EN 60529 depending on the enclosure construction
Color	Aluminum profile: anodized Profile caps: light gray, similar to RAL 7035 Special colors on request. Minimum quantities apply.

Model Number Basic Profiles	Part Number Basic Profiles	Dimensions mm L x W	Dimensions mm L x W	Model Number Module Profiles	Part Number Module Profiles	Dimensions mm L x W x H	Dimensions mm L x W x H
ARP 75/31-1000	**87010000 00**	990.0 x 75.0	39.00 x 2.95	**ARPM 45/27-1000**	**87110000 00**	990 x 45 x 27.5	39.00 x 2.95 x 1.08
ARP 105/31-1000	**87020000 00**	990.0 x 105	39.00 x 4.13	**ARPM 75-42-1000**	**87110000 00**	990 x 75 x 42.5	39.00 x 2.95 x 1.67

Model Number Split Basic Profiles	Part Number Split Basic Profiles	Dimensions mm L x W	Dimensions Inches L x W	Model Number Split Module Profiles	Part Number Split Module Profiles	Dimensions mm L x H	Dimensions Inches L x H
ARPG 75/31-1000	**87030000 00**	990 x 75	39.00 x 2.95	**ARPMG 00/27-1000**	**87120000 00**	990 x 27.5	39.00 x 1.08

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	Model Number
Profile caps (Includes 2 side panels, 4 assembly screws, 1 snap-on element, 1 positioning screw for snap-on element)	**AR...KS**
Module front panels (Includes 1 anodized front panel)	**ARM...FP**
Side panels, aluminum (Includes 2 side panels, 4 assembly screws, 1 snap-on element, 1 positioning screw for snap-on element)	**AR...-KS-AL**
Module profiles for attaching to the basic profile (Includes 1 enclosure profile)	**ARPM...**
Split module profiles for attaching to the basic profile (Includes 2 aluminum profiles)	**ARPMG 00/...**
Module caps (Includes 2 module profile caps, 4 assembly screws, 2 mounting screws)	**ARM...**
Module front panels (Includes 1 anodized front panel)	**ARM...FP**
Module bridges for attaching the module profiles onto the basic profiles (required if basic profile and module profile are of different lengths. Includes 5 modules bridges, 10 assembly screws)	**AR...MB**
Wall mounting set (Includes 2 wall-mount elements)	**AR...WB**
Grounding set (Includes ground claws 5 pieces)	**AR-E**
Snap-on element (Includes snap-on elements, positioning screws, 5 pieces)	**AR-R**

CombiCard 5000-7000

- Modular construction ensures that the demands made of a future-oriented enclosure system are satisfied in the best possible way
- Hinge system design and the possibility of installing prefabricated mounting racks minimize assembly times
- User-defined access protection
- Double clamp area permits easy, clean wiring with a large number of cable entries

Included in delivery

Modular product sold by individual components. See below for details.

Technical Data

Color	Fronts and bases light gray, similar to RAL 7035. Clear front lid, G-version; side covers light gray, similar to RAL 7035. Rear parts agate gray, similar to RAL 7038 Special colors on request. Minimum quantities apply.
Material	ABS, except FD...G (clear polycarbonate)
Gasket Material	Neoprene
Ingress Protection	IP 66 (IP 30 with ventilation) / DIN EN 60529, NEMA 4, 4X
Surface Resistance	ABS, $>10^{14}$ Ohm to DIN 53482 Polycarbonate, $>10^{15}$ Ohm to DIN 53482
Disruptive Strength	Polycarbonate 28KV/mm to DIN 53481
Flammability	Polycarbonate: UL 94 V2/1.14. ABS: UL 94 HB/1.6
Temperature Range	up to +167°F

Model Number	Front Length mm	Front Length Inches	Front Height mm	Front Height Inches	TE (x 5.08)	HE (x 44.45)
5000	175.7	6.92	146.7	5.77	20	3
6000	226.5	8.92	146.7	5.77	30	3
7000	323.0	12.72	146.7	5.77	49	3

Dimensions without lid

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
For complete information and part numbers please see website. www.rose-bopla.com

Model	FD	FR	FO	BC	RD
Front lids, clear	•			•	
Quick-release fastenings	•				
Lock cover	•				
Lock	•				
Front frames, open		•	•		
Front frame, closed		•	•		
Rear sections with/without terminal compartment					•

Components

Part Number	Version	Depth mm	Depth Inches
FD...(G)	Front lids, clear (Includes: front lid with seal, 2 mounting locks, 1 blind plug, 1 catch)	34	1.34
FR...	Front frames, closed (Includes: front frame with seal, 2 snap-on covers, 4 assembly screws)	34	1.34
FO...	Front frames, open (Includes: front frame with seal, 2 snap-on covers, 4 assembly screws, 10 front panel assembly screws)	34	1.34
BC...(L) - 0.5	Bases - 0.5 (51.51 mm) construction depth (Includes: BC_000.0.5, base with seal, 2 mounted lockes. BC_000 L-0.5, base with air vents without seal, 2 mounted locks		
BC...(L) - 1	Bases - 1 (88.25mm) construction depth (Includes: BC_000-1, base with seal, 2 mounted locks. BC_000 L-1, base with air vents without seal, 2 mounted locks	51.1	2.01
BC...(L) - 1.5	Bases - 1.5 (139.76 mm) construction depth (ncludes, BC_0001.5, base with seal, 2 mounted locks. BC_000 L-1.5, base with air vents without seal, 2 mounted locks)	88.25	3.47
BC...NG(L)	Base NG (control panel mounting) (Includes: base including mounted set of elements for control panel mounting)	139.76	5.50
RD/RDK	Rear sections with/without terminal compartments (Includes: RD - rear section, RDK - rear section, terminal compartment bar, terminal compartment cover including	68	2.68
	seal and assembly screws.	50	1.97
Accessories			
FP...I/AI	Front panels		
M... / K / BK	Mounting plates for RD...,BC...(L)-...RD...K, RD...BK		
WL... / K / BK	Wall bracket		
SR 5670 - 0.5/-1/-1.5	Set of catches		
VA 5670	Quick release fastening hinge (2 pieces)		
SV 5670 2	Lock cover / hinged quick-release fastening (Includes: 1 catch, 1 blind plug)		
BS 5670	Assembly kit		

CombiCard 1000-3000

- Gives the user almost infinite possibilities for the optimal integration of individual electronic components
- Can be used as a desktop, wall or control panel mounted enclosure
- Mountable hinges mean that separate parts can be swiveled as required

Included in delivery

Modular product sold by individual components. See below for details.

Technical Data

Color	Base parts, light gray, similar to RAL 7035; front lid in G-version, crystal clear, front and rear parts, graphite gray, similar to RAL 7024. Special colors on request. Minimum order quantities apply.
Material	ABS, polycarbonate front lids (FD...G), for standard product
Gasket Material	Neoprene
Ingress Protection	IP 65 DIN VDE 0470, NEMA 12
Surface Resistance	ABS, $>10^{14}$ Ohm to DIN 53482, Polycarbonate, $>10^{15}$ Ohm to DIN 53482
Disruptive Strength	Polycarbonate 28KV/mm to DIN 53481
Flammability	ABS, UL 94 HB/1.6, Polycarbonate, UL 94 V2/1.14
Temperature Range	up to +167°F

Model	Front Length mm	Front Length Inches	Front Height Inches	Front Height Inches
1000	134	5.27	144	5.67
2000	184	7.24	144	5.67
3000	281	11.06	144	5.67

Dimensions without lid

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only. For detailed information and part numbers see website. www.rose-bopla.com

	Part Number Prefix						
Model	**FD**	**FR**	**FO**	**FCT**	**FA**	**BC**	**RD**
Front lids	•				•		
Front frames, closed		•					
Front frames, open			•	•			
Front frames, open, with protective door			•	•			
Front panels							
Bases for control and mounting						•	
Rear lids, low/tall							•

Model Number	Version	Depth mm	Depth Inches
Front Sections			
FD...	Front lids with screws	34	1.34
FR...	Front frames, closed with screws	33.6	1.32
FO...	Front frames, open, screws	33.6	1.32
FCT...F(P)	Front frames, open, with protective door and screws	50	1.97
Bases			
BC...(L)	BC... -base, without air vents includes seal. BC...(L) with air vents, no seal.	87.5	3.44
BC...N	Bases, low with seal including integrated fixing kit for control panel mounting	51	2.00
BC...NG	Bases for control panel mounting, (Includes base part with seal and integrated mounting kit for control panel mounting	87.5	3.44
Rear Lids			
RD...	Rear lids, low with seal, screws	29.6	1.16
RD...H(SC)	RD...H-rear lid, tall with seal screws. RD...H(SC)-rear lid, tall with seal, hinges, and assembly material	48	1.89
RD...K(SC)	RD...K-rear lid, terminal compartments cover, seals, screws. RD...K(SC)-rear lid, terminal compartment cover,seals, screws, hinge elements and assembly material	48-60	1.89-2.36
RD...G-K(SC)	Rear lids with large terminal compartment	48-60	1.89-2.36

G=Transparent cover P=Open L=With air vents K=Terminal compartment SC=With hinges

Accessories

Model Number	Version
WR...	Wall frame
WR...H	Wall frames for low/high rear parts
FP..Al	Internal aluminum front panels (assembly material included with FO... and FCT...FP)
FP..AA	External aluminum front panels (including assembly material)
FA...	Aluminum front panels for base parts (including assembly material)
FA...I	Internal mounting plate for base parts in combination with front element (including assembly material)
MR...	Mounting plate for rear wall (includind assembly material)
MR...K	Mounting plate for rear wall lid with terminal compartment (including assembly material)
HS...	Handle

InterCard

- Horizontal and vertical insertion slots for PCBs
- Door hinge system can be mounted on the right or left side
- Wall mounting (three-or four-point) is outside the sealed lip, so it does not affect the ingress protection IP 65
- Terminal compartment covers locks in the open position

Included in delivery

Base, hinged clear lid, mounted with snap lock; terminal compartment cover; screws; threaded inserts for mounting plates.

Technical Data

Color	Light gray, similar to RAL 7035. Special colors available on request. Minimum order applies.
Material	ABS, clear Polycarbonate lid.
Gasket	Neoprene
Temperature Range	up to 167°F
Ingress Protection	IP 65 / DIN EN 60529
Surface Resistance	ABS, $>10^{14}$ Ohm to DIN 53482· Polycarbonate, $>10^{15}$ Ohm to DIN 53482
Disruptive Strength	Polycarbonate, 28 KV/mm to DIN 53481
Flammability	ABS, UL 94 HB/1.6. Polycarbonate, UL 94 V2/1.14

Model	Part Number	Length mm	Length Inches	Height mm	Height Inches	Depth mm	Depth Inches
IC 5000	**07500000 00**	198	7.79	212	8.35	162.5	6.40

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Type	Version	Part Number
SHLO-302	Cylinder catch	**21008310 00**
MP 5000	Mounting plate, screws	**27450000 00**
FA 5000	Front panel, screws	**27350000 00**

CombiSet

- Ideal for mounting individual PCBs or cassettes in installation widths up to 12 TE
- NG version with the wraparound molded covering frame can be installed in control panels
- With lockable clear lid, this enclosure provides ingress protection IP 65

Included in delivery

All models: Base and rear section, upper and lower guide grids, tapped strips and screws. CC...TK includes hinged clear door with knob. CC...NG includes molded-on installation frame on the base and retaining clasps. CC... NGTK additionally includes hinged clear door with knob.

Technical Data

Color	Base, light gray, similar to RAL 7035; rear part, graphite gray, similar to RAL 7024; front door clear. Special colors available on request. Minimum order quantities apply.
Material	ABS, clear Polycarbonate front door
Gasket	Neoprene
Ingress Protection	For version CC 500 TK/NGTK: IP 65 / DIN EN 60529, NEMA 12
Surface Resistance	ABS, $>10^{14}$ Ohm to DIN 53482, Polycarbonate $>10^{15}$ Ohm to DIN 53482
Disruptive Strength	Polycarbonate, 28KV/mm to DIN 53481
Flammability	ABS, UL 94 HB/1.6. Polycarbonate, UL 94 V2/1.14
Temperature Resistance	up to 167°F

Model Number	Part Number	Version	Dimension mm W x H x D	Dimensions Inches W x H x D
CC 500	**19050000 00**	Desktop / wall / rail enclosure	68 x 136 x 224.5	2.68 x 5.35 x 8.83
CC 500 TK	**19050101 00**	Desktop / wall / rail enclosure with door / ingress protection IP 65	68 x 136 x 252.5	2.68 x 5.35 x 9.94
CC 500 NG	**19050200 00**	Control panel mounting enclosure	72 x 144 x 224.5	2.83 x 5.67 x 8.34
CC 500 NGTK	**19050301 00**	Control panel mounting enclosure with door	72 x 144 x 252.5	2.83 x 5.67 x 9.94

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number	Version
CC 500 WR	**39001000 00**	Wall frame
CC 500 MS	**39004000 00**	Mounting kit for DIN EN 60603-2 plug-in connector (previously DIN 41612)
CC 500 TS	**39005000 00**	Rail snap foot for top hat rail DIN EN 60715 TH 35
SHLO - 302	**21009310 00**	Cylinder lock catch
KF 1230	**39302000 00**	Card guides (10 pieces)
KS 1230	**39301000 00**	Card securing devices (10 pieces)

CombiNorm Compact

- Optimal PCB utilization because the unit PCB is inserted from the side
- The right angled shape of the soldering pins makes it possible to mount terminals with components in one soldering process
- Latching of the shell and lid can take place on automated machines because of the special snap trim

Included in delivery
Shell only. Lid and accessories must be ordered separately

Technical Data

Color	Light gray, similar to RAL 7035. Special colors or request. Minimum order quantities apply.
Material	Polyamide 6,6 FR, front flap crystal clear polycarbonate
Flammability	UL 94 V0/1
Surface Resistance	$>10^{15}$ Ohm to DIN 53482
Ingress Protection	IP 40 to DIN EN 60529 for complete enclosure without ventilation. IP 30 to DIN EN 60529 for complete enclosure with ventilation IP 20 to DIN EN 60529 for terminals

Model	Part Number	Version	Dimension mm W x L x H	Dimensions Inches W x L x H
CN 19 GU	**65019000 00**	Enclosure shell, universal	19 x 110.8 x 75	0.75 x 4.36 x 2.95
CN 22 GU	**65022000 00**	Enclosure shell, universal	22 x 110.8 x 75	0.87 x 4.36 x 2.95
CN 26 GU	**65026000 00**	Enclosure shell, universal	26 x 110.8 x 75	1.03 x 4.36 x 2.95
CN-DU	**65000100 00**	Enclosure lid, universal	19/22/26 x 110.8 x 75	0.75/0.87/1.03 x 4.36 x 2.95
CN 19 GU-L	**65019010 00**	Enclosure shell, universal, with air vents (on request)	19 x 110.8 x 75	0.75 x 4.36 x 2.95
CN 22 GU-L	**65022010 00**	Enclosure shell, universal, with air vents (on request)	22 x 110.8 x 75	0.87 x 4.36 x 2.95
CN 26 GU-L	**65026010 00**	Enclosure shell, universal, with air vents (on request)	26 x 110.8 x 75	1.03 x 4.36 x 2.95
CN 19 GK	**65019100 00**	Enclosure shell, contoured	19 x 110.8 x 75	0.75 x 4.36 x 2.95
CN 22 GK	**65022100 00**	Enclosure shell, contoured	22 x 110.8 x 75	0.87 x 4.36 x 2.95
CN 26 GK	**65026100 00**	Enclosure shell, contoured	26 x 110.8 x 75	1.03 x 4.36 x 2.95
CN 19 GK-L	**65019110 00**	Enclosure shell, contoured, with air vents	19 x 110.8 x 75	0.75 x 4.36 x 2.95
CN 22 GK-L	**65022110 00**	Enclosure shell, contoured, with air vents	22 x 110.8 x 75	0.87 x 4.36 x 2.95
CN 26 GK-L	**65026110 00**	Enclosure shell, contoured, with air vents	26 x 110.8 x 75	1.03 x 3.97 x 2.95
CN-DK	**65000200 00**	Enclosure lid, contoured	19/22/26 x 110.8 x 75	0.75/0.87/1.03 x 4.36 x 2.95

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model	Part Number	Version	Dimensions Width mm	Dimensions Width Inches
CN 19 FP	**65019500 00**	Front panel, plug-in	19	0.75
CN 22 FP	**65022500 00**	Front panel, plug-in	22	0.87
CN 26 FP	**65026500 00**	Front panel, plug-in	26	1.02
CN 19 FK	**65019600 00**	Front flap, snap-on	19	0.75
CN 22 FK	**65022600 00**	Front flap, snap-on	22	0.87
CN 26 FK	**65026600 00**	Front flap, snap-on	26	1.02
CN 19 FKG	**65019700 00**	Front flap, clear, snap-on	19	0.75
CN 22 FKG	**65022700 00**	Front flap, clear, snap-on	22	0.87
CN 26 FKG	**65026700 00**	Front flap, clear, snap-on	26	1.02
AK 8191/2DL	**66000052 00**	Connection terminals, 2-pole, on left of component side (seen from front), PCB vertical	19 - 26	0.75 - 1.02
AK 8191/2DR	**66000062 00**	Connection terminals, 2-pole, on right of component side (seen from front), PCB vertical	19 - 26	0.75 - 1.02
AK 8191/3DL	**66000072 00**	Connection terminals, 3-pole, on left of component side (seen from front), PCB vertical	22 - 26	0.87 - 1.02
AK 8191/3DR	**66000082 00**	Connection terminals, 3-pole, on right of component side (seen from front), PCB vertical	22 - 26	0.87 - 1.02
CN-BL1	**66000032 00**	Blind piece, 1-pole, for unused terminal locations	19 - 26	0.75 - 1.02
CN-BL2	**66000042 00**	Blind piece, 2-pole, for unused terminal locations	19 - 26	0.75 - 1.02
CN-WA	**66000012 00**	Wall adapter for mounting single enclosures to wall	19 - 26	0.75 - 1.02
CN-BZ	**66000022 00**	Marking plate for clipping onto upper and lower section of enclosure front	19 - 26	0.75 - 1.02

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

CombiNorm Classic

- 5-width enclosure program for 35 mm rail unit can be adapted to suit specific requirements by means of 4 different terminal types (PCB = variations) which, in some cases, can be combined outside a unit
- Lower part can be supplied with an adjusting flap on the upper side (type CNS...) that permits subsequent access to the electronic parts, e.g. for adjustment purposes
- Clear hood covers provide optimal protection for the operating fronts against dirt, unauthorized access (lead seal) and unintentional terminal operation
- Front lids are membrane-keypad ready

Included in delivery

CN: Base, lid, mounted latch for rail fitting

CNS: Base, lid adjusting flap, mounted latch for rail fitting

Technical Data

Color	Light gray, similar to RAL 7035. Special colors or request. Minimum order quantities apply.
Material	ABS
Flammability	UL 94 HB/1.6
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Ingress Protection	IP 40 to DIN EN 60529

Model	Part Number	Version	Dimensions mm W x L x H	Dimensions Inches W x L x H
CN 22 AK	**65002210 00**	Small control enclosure for max. 8 terminals	22.5 x 109.5 x 75	0.88 x 4.31 x 2.95
CN 45 AK	**65004510 00**	Small control enclosure for max. 16 terminals	45.0 x 109.5 x 75	1.77 x 4.31 x 2.95
CN 55 AK	**65005510 00**	Small control enclosure for max. 20 terminals	55.0 x 109.5 x 75	2.16 x 4.31 x 2.95
CN 70 AK	**65007010 00**	Small control enclosure for max. 26 terminals	70.0 x 109.5 x 75	2.75 x 4.31 x 2.95
CN 100 AK	**65010010 00**	Small control enclosure for max. 138 terminals	100.0 x 109.5 x 75	3.94 x 4.31 x 2.95
CNS 22 AK	**65002230 00**	Small control enclosure for max. 8 terminals with adjustable flap, included	255.0 x 109.5 x 75	10.03 x 4.31 x 2.95
CNS 45 AK	**65004530 00**	Small control enclosure for max. 16 terminals with adjustable flap, included	45.0 x 109.5 x 75	1.77 x 4.31 x 2.95
CNS 55 AK	**65005530 00**	Small control enclosure for max. 20 terminals with adjustable flap, included	55.0 x 109.5 x 75	2.16 x 4.31 x 2.95
CNS 70 AK	**65007030 00**	Small control enclosure for max. 26 terminals with adjustable flap, included	70.0 x 109.5 x 75	2.75 x 4.31 x 2.95
CNS 100 AK	**65010030 00**	Small control enclosure for max. 138 terminals with adjustable flap, included	100.0 x 109.5 x 75	3.94 x 4.31 x 2.95

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model	Part Number	Version
CNH 22 N	**65002260 00**	Hinged hood cover, crystal-clear, low, for enclosure CN(S) 22 AK
CNH 22 H	**65002250 00**	Hinged hood cover, crystal-clear, tall, for enclosure CN(S) 22 AK
CNH 45 N	**65004560 00**	Hinged hood cover, crystal-clear, low, for enclosure CN(S) 45 AK
CNH 45 H	**65004550 00**	Hinged hood cover, crystal-clear, tall, for enclosure CN(S) 45 AK
CNH 55 N	**65005560 00**	Hinged hood cover, crystal-clear, low, for enclosure CN(S) 55 AK
CNH 55 H	**65005550 00**	Higned hood cover, crystal-clear, tall, for enclosure CN(S) 55 AK
CNH 70 N	**65007060 00**	Hinged hood cover, crystal-clear, low, for enclosure CN(S) 70 AK
CNH 70 H	**65007050 00**	Hinged hood cover, crystal-clear, tall, for enclosure CN(S) 70 AK
CNH 100 N	**65010060 00**	Hinged hood cover, crystal-clear, low, for enclosure CN(S) 100 AK
CNH 100 H	**65010050 00**	Hinged hood cover, crystal-clear, tall, for enclosure CN(S) 100 AK
CNB 100	**65010070 00**	Blind bar CNB 100
CNA 100	**65010100 00**	STL adapter CNA 100
AK 700 V		Connection terminals
AK 700 H		Connection terminals
AK 950		Connection terminals
STL 950		Pin bars
AK-BS	**66000100 00**	Terminal indentification strip

RCP/RCPM

- Wall enclosure system for use in measurement and control applications available in 8 basic sizes, each with 6 different designs
- To permit insertion of mounting plates and PCBs, all designs feature vertical and horizontal grooves which ensure optimal unit assembly
- Terminal compartment can be separated from the actual electronics area by means of integrated grooves with separating plates

Included in delivery

Enclosures with hinged lid and latch: Base, clear lid, hinged, clear lid, mounted with latch, terminal compartment covers, screws, blind plug, catch.
Enclosures with covering frame: Base, covering frame, terminal compartment cover, screws
Enclosures with membrane front: Base, recessed front lid, terminal compartment cover, screws, screw cover.

Technical Data

Color	Light gray, similar to RAL 7035
Material	ABS housing, crystal clear polycarbonate lid (Lexan 241A) VO version: Lexan 500 R housing. Lexan 940 A lid. Special materials and colors can be supplied on request. Minimum order quantities apply.
Ingress Protection	Up to IP 65, DIN EN 60529. NEMA 12
Surface Resistance	ABS, $>10^{14}$ Ohm to DIN 53482. Polycarbonate, $>10^{15}$ Ohm to DIN 53482
Disruptive Strength	Polycarbonate 28 KV/mm to DIN 53481
Flammability	UL 94 HB/1.6 - ABS enclosure material, clear polycarbonate lid. (Lexan 241 R) UL 94 V0 - Lexan 500 R enclosure material, Lexan 940 A lid.

Model Number With Hinged Lid and Latch	Part Number With Hinged Lid and Latch	Model Number With Covering Frame	Part Number With Covering Frame	Model Number With Membrane Front	Part Number With Membrane Front	Dimensions mm H x W x D	Dimensions Inches H x W x D
RCP 1300	**41130109 00**	**RCP 130**	**41130009 00**	**RCP 130 F**	**41130609 00**	186 x 131 x 81-103	7.32 x 5.16 x 3.19-4.05
RCPM 1300	**41131109 00**	**RCPM 130**	**41131009 00**	**RCPM 130 F**	**41131609 00**	186 x 131 x 81-103	7.32 x 5.16 x 3.19-4.05
RCP 1600	**41160109 00**	**RCP 160**	**41160009 00**	**RCP 160 F**	**41160609 00**	161 x 166 x 71-93	6.34 x 6.53 x 2.79-3.66
RCPM 1600	**41161109 00**	**RCPM 160**	**41161009 00**	**RCPM 160 F**	**41161609 00**	161 x 166 x 71-93	6.34 x 6.53 x 2.79-3.66
RCP 1700	**41170109 00**	**RCP 170**	**41170009 00**	**RCP 170 F**	**41170609 00**	161 x 166 x 99-121	6.34 x 6.53 x 3.90-4.76
RCPM 1700	**41171109 00**	**RCPM 170**	**41171009 00**	**RCPM 170 F**	**41171609 00**	161 x 166 x 99-121	6.34 x 6.53 x 3.90-4.76
RCP 2000	**41200309 00**	**RCP 200**	**41200009 00**	**RCP 200 F**	**41200609 00**	185 x 213 x 82.5-104.5	7.28 x 8.38 x 3.25-4.11
RCPM 2000	**41201309 00**	**RCPM 200**	**41201009 00**	**RCPM 200 F**	**41201609 00**	185 x 213 x 82.5-104.5	7.28 x 8.38 x 3.25-4.11
RCP 2500	**41250109 00**	**RCP 250**	**41250009 00**	**RCP 250 F**	**41250609 00**	217 x 257 x 110.5-132.5	8.54 x 10.12 x 4.35-5.22
RCPM 2500	**41251109 00**	**RCPM 250**	**41251009 00**	**RCMP 250 F**	**41251609 00**	217 x 257 x 110.5-132.5	8.54 x 10.12 x 4.35-5.22
RCP 3100	**41310109 00**	**RCP 310**	**41310009 00**	**RCP 310 F**	**41310609 00**	261 x 296 x 110.5-132.5	10.27 x 11.65 x 4.35-5.22
RCPM 3100	**41311109 00**	**RCPM 310**	**41311009 00**	**RCPM 310 F**	**41311609 00**	261 x 296 x 110.5-132.5	10.27 x 11.65 x 4.35-5.22
RCP 3500	**41350109 00**	**RCP 350**	**41350009 00**	**RCP 350 F**	**41350609 00**	281 x 296 x 136-158	11.06 x 11.65 x 5.35-6.22
RCPM 3500	**41351109 00**	**RCPM 350**	**41351009 00**	**RCPM 350 F**	**41351609 00**	281 x 296 x 136-158	11.06 x 11.65 x 5.35-6.22
RCP 4000	**41400109 00**	**RCP 400**	**41400009 00**	**RCP 400 F**	**41400609 00**	318.6 x 363.4 x 128.5-150	12.54 x 14.31 x 5.06-5.90
RCPM 4000	**41401109 00**	**RCPM 400**	**41401009 00**	**RCPM 400 F**	**41401609 00**	318.6 x 363.4 x 128.2-150	12.54 x 14.31 x 5.06-5.90

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
RCPM Version = Metric size knock outs

Accessories

Model Number	Part Number	Version
SHLO-302	**21008310 00**	Cylinder catch
RCP/RCPM-HK	**41002501 00**	Hand knob
RCP/RCPM-WL	**41000300 00**	Wall brackets (PU = 2 pieces)
RCP/RCPM 130 M	**41000350 00**	Mounting plate
RCP/RCPM 160/170 M	**41000400 00**	Mounting plate
RCP/RCPM 200 M	**41000500 00**	Mounting plate
RCP/RCPM 250 M	**41000600 00**	Mounting plate
RCP/RCPM 310 M/350M	**41000700 00**	Mounting plate
RCP/RCPM 400 M	**41000800 00**	Mounting plate
FAE 130	**27000100 00**	Front panel, for enclosure 130/1300
FAE 160/170	**27000300 00**	Front panel, for enclosure 160/170
FAE 200	**27000500 00**	Front panel, for enclosure 200
FAE 250	**27000700 00**	Front panel, for enclosure 250
FAE 310/350	**27000900 00**	Front panel, for enclosure 310/350
FAE 400	**27120000 00**	Front panel, for enclosure 400

Bovista

BOPLA

- Individually adaptable enclosure for use in building automation systems and many other fields of electronics
- Enclosure bases can be supplied with or without ventilation in 3 basic sizes
- Eight different lid types, with different sizes and shapes, can be mounted on the base
- Choose between lids with a membrane keypad area, design front or a hinged lid

Included in delivery
Modular product sold by individual components.

Technical Data

Color	Base and wall mount fittings: agate gray, similar to RAL 7038 or white, similar to RAL 9010. Lid: light gray (standard color) similar to RAL 7035 or white (special order) similar to RAL 9010 Module bridges: light gray, similar to RAL 7035. Special colors on request.
Material	ABS - BVT-MB. Polyamide (PA 6, 15% GF) BVL-MB.
Ingress Protection	Up to IP 40, according to DIN EN 60529, depending on construction. Up to IP 30 if used with ventilated bases. Up to IP 20 if used with lids with secondary flap.
Surface Resistance	$>10^{12}$ Ohm to DIN 53482 (Polyamide), $>10^{14}$ Ohm to DIN 53482 (ABS)
Flammability	ABS and Polyamide: UL 94 HB/1.6

Model Number	Part Number Agate Gray	Part Number White	Dimensions mm L x W x H	Dimensions Inches L x W x H	Description
BVT-UT	**40001000 00**	**40101000 00**	200 x 120 x 18	7.87 x 4.72 x 0.71	Compact base
BVT-UT-L	**40001100 00**	**40101100 00**	200 x 120 x 18	7.87 x 4.72 x 0.71	Compact base with ventilation
BVT-UT2	**40001200 00**	**40101200 00**	120 x 80 x 18	4.72 x 3.16 x 0.71	Compact base 2
BVT-UT2-L	**40001300 00**	**40101300 00**	120 x 80 x 18	4.72 x 3.15 x 0.71	Compact base 2 with ventilation
BVT-OT1	**40002100 00**	**40102100 00**	120 x 40 x 18	4.72 x 1.57 x 0.71	Compact lid 1
BVT-OT1-F	**40002110 00**	**40102110 00**	120 x 40 x 18	4.72 x 1.57 x 0.71	Compact lid 1 with membrane keypad area
BVT-OT1-D	**40002120 00**	**40102120 00**	120 x 40 x 18	4.72 x 1.57 x 0.71	Compact lid 1 with design front
BVT-OT2	**40002130 00**	**40102130 00**	120 x 80 x 18	4.72 x 3.15 x 0.71	Compact lid 2
BCT-OT2-F	**40002140 00**	**40102140 00**	120 x 80 x 18	4.72 x 3.15 x 0.71	Compact lid 2 with membrane keypad area
BVT-OT3	**40002150 00**	**40102150 00**	120 x 120 x 18	4.72 x 4.72 x 0.71	Compact lid 3
BVT-OT3-F	**40002160 00**	**40102160 00**	120 x 120 x 18	4.72 x 4.72 x 0.71	Compact lid 3 with membrane keypad area
BVT-OT3-SK	**40002170 00**	**40102170 00**	120 x 120 x 18	4.72 x 4.72 x 0.71	Compact lid 3 with secondary flap
BVL-UT	**40011000 00**	**40111000 00**	270 x 162 x 28	10.63 x 6.38 x 1.10	Control base
BVL-UT-L	**40011100 00**	**40111100 00**	270 x 162 x 28	10.63 x 6.38 x 1.10	Control base with ventilation
BVL-OT1	**40012100 00**	**40112100 00**	162 x 54 x 22	6.38 x 2.12 x 0.87	Control lid 1
BVL-OT1-F	**40012110 00**	**40112110 00**	162 x 54 x 22	6..38 x 2.12 x 0.87	Control lid 1 with membrane keypad area
BVL-OT1-D	**40012120 00**	**40112120 00**	162 x 54 x 22	6.38 x 2.12 x 0.87	Control lid 1 with design front
BVL-OT2	**40012130 00**	**40112130 00**	162 x 108 x 22	6.38 x 4.25 x 0.87	Control lid 2
BVL-OT2-F	**40012140 00**	**40112140 00**	162 x 108 x 22	6.38 x 4.25 x 0.87	Control lid 2 with membrane keypad area
BVL-OT3	**40012150 00**	**40112150 00**	162 x 162 x 22	6.38 x 6.38 x 0.87	Control lid 3
BVL-OT3-F	**40012160 00**	**40112160 00**	162 x 162 x 22	6.38 x 6.38 x 0.87	Control lid 3 with membrane keypad area
BVL-OT3-SK	**40012170 00**	**40112170 00**	162 x 162 x 22	6.38 x 6.38 x 0.87	Control lid 3 with secondary flap

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number Agate Gray	Part Number White	Version
BVT-MB		**40003000 00**	Compact module bridges
BVT-WB	**40040000 00**	**40104000 00**	Compact wall mount plate
BVT-WB 2	**40042000 00**	**40104200 00**	Compact wall mount plate 2
BVT-UP		**40200000 00**	Compact flush mount enclosure
BVT-FO-9010		**40200300 00**	Compact front frame, white, similar to RAL 9010
BVT-FO-7035*		**40200200 00**	Compact front frame, light gray, similar to RAL 7035
BVT-UP2		**40200010 00**	Compact 2 flush-mount enclosure
BVT-FO2-9010		**40200310 00**	Compact 2 front frame, white, similar to RAL 9010
BVT-FO2-7035*		**-**	Compact 2 front frame with 2 mounting screws, light gray, similar to RAL 7035
BVL-MB		**40013000 00**	Control module bridges
DIBLZ AK 30 x 5/IM3/10		**59006986 00**	Distance bolts, boss internal Ø 2.4-2.6
BVL-WB	**40014000 00**	**40114000 00**	Control wall mount plate
BVL-UP		**40300000 00**	Control flush-mount enclosure
BVL-FO-9010		**40300300 00**	Control front frame, white, similar to RAL 9010
BVL-FO-7035*		**40200200 00**	Control front frame, light gray, similar to RAL 7035

*Available on request

BOTEGO

- Enclosure system consisting of two-half shells. Designed for either horizontal or vertical use.
- Extension sets permit optimal adaptation of relevant space.
- Snap-lock technology reduces assembly time.
- Cap sets available in 6 colors to individualize the enclosure.

Included in delivery

2 half shells. Other components sold individually or in sets. See website for details, www.rose-bopla.com

Technical Data

Color	Light gray, similar to RAL 7035. Special colors on request. Minimum order quantities apply.
Material	ABS
Ingress Protection	Closed: IP 40 to EN 60529. With air vents: IP 30 to EN 60529
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm W x H x D	Dimensions Inches W x H x D	Front Panel to be Used
BO 32006	**68320060 00**	174 x 49.96 x 196.9	6.85 x 1.97 x 7.75	BO FP 30006
BO 32006 L	**68320061 00**	174 x 49.96 x 196.9	6.85 x 1.97 x 7.75	BO FP 30006
BO 32009	**68320090 00**	174 x 65.20 x 196.9	6.85 x 2.57 x 7.75	BO FP 30009
BO 32009 L	**68320091 00**	174 x 65.20 x 196.9	6.85 x 2.57 x 7.75	BO FP 30009
BO 32012	**68320120 00**	174 x 80.44 x 196.9	6.85 x 3.17 x 7.75	BO FP 30012
BO 32012 L	**68320121 00**	174 x 80.44 x 196.9	6.85 x 3.17 x 7.75	BO FP 30012
BO 51406	**68514060 00**	240.67 x 49.96 x 136.9	9.47 x 1.97 x 5.39	BO FP 50006
BO 51406 L	**68514061 00**	240.67 x 49.96 x 136.9	9.47 x 1.97 x 5.39	BO FP 50006
BO 51409	**68514090 00**	240.67 x 65.20 x 136.9	9.47 x 2.57 x 5.39	BO FP 50009
BO 51409 L	**68514091 00**	240.67 x 65.20 x 136.9	9.47 x 2.57 x 5.39	BO FP 50009
BO 51412	**68514120 00**	240.67 x 80.44 x 136.9	9.47 x 3.17 x 5.39	BO FP 50012
BO 51412 L	**68514121 00**	240.67 x 80.44 x 136.9	9.47 x 3.17 x 5.39	BO FP 50012
BO 52006	**68520060 00**	240.67 x 49.96 x 196.9	9.47 x 1.97 x 7.75	BO FP 50006
BO 52006 L	**68520061 00**	240.67 x 49.96 x 196.9	9.47 x 1.97 x 7.75	BO FP 50006
BO 52009	**68520090 00**	240.67 x 65.20 x 196.9	9.47 x 2.57 x 7.75	BO FP 50009
BO 52009 L	**68520091 00**	240.67 x 65.20 x 196.9	9.47 x 2.57 x 7.75	BO FP 50009
BO 52012	**68520120 00**	240.67 x 80.44 x 196.9	9.47 x 3.17 x 7.75	BO FP 50012
BO 52012 L	**68520121 00**	240.67 x 80.44 x 196.9	9.47 x 3.17 x 7.75	BO FP 50012
BO 62606	**68626060 00**	307.35 x 49.96 x 256.9	12.10 x 1.97 x 10.11	BO FP 60006
BO 62606 L	**68626061 00**	307.35 x 49.96 x 256.9	12.10 x 1.97 x 10.11	BO FP 60006
BO 62609	**68626090 00**	307.35 x 65.20 x 256.9	12.10 x 2.57 x 10.11	BO FP 60009
BO 62609 L	**68626091 00**	307.35 x 65.20 x 256.9	12.10 x 2.57 x 10.11	BO FP 60009
BO 62612	**68626120 00**	307.35 x 80.44 x 256.9	12.10 x 3.17 x 10.11	BO FP 60012
BO 62612 L	**68626121 00**	307.35 x 80.44 x 256.9	12.10 x 3.17 x 10.11	BO FP 60012

L = With injection molded air vents in both half-shells.
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Version
BO FP ...	Front panel, aluminum Al Mg 3, anodized 2 mm. Front panel available in plastic on request
BO AB...	Extension set. ABS light gray, similar to RAL 7035; additional colors for minimum orders of 500 extension sets
BO-KS	Cap sets
BO-SF...	Angled operating front
BO-PB ...	Filling profile set for mounting rack installation.
BO-PT...	Profile set
BO HS...	Handle
BO FF...	Design foil
BO D...	Design element set
BO WB...	Wall mounting set

Ultramas

- Ideal for small test equipment and computer peripherals, this enclosure can be adapted superbly to your individual space requirements
- Features smooth design lines, flawless satin finish and offered with or without ventilation slots
- Works in either the horizontal or vertical position, making it perfect as a desk or wall-mount

Included in delivery
Lid and base, 8 screw covers, 4 rubber feet, 4 screws M3
Accessories sold separately.

Technical Data

Color	Enclosure, light gray, similar to RAL 7035. Screw covers, brackets and feet in agate gray, similar to RAL 7038.
Material	ABS
Protection Classification	Closed: IP 40 DIN EN 60529. IP 30 DIN EN 60529 with air vents
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm W x D x H	Dimensions Inches W x D x H
UM 32009	**55320000 00**	157.5 x 198.9 x 62.2	6.20 x 7.83 x 2.45
UM 32009 L	**55320010 00**	157.5 x 198.9 x 62.2	6.20 x 7.83 x 2.45
UM 32609	**55326000 00**	157.5 x 258.9 x 62.2	6.20 x 10.19 x 2.45
UM 32609 L	**55326010 00**	157.5 x 258.9 x 62.2	6.20 x 10.19 x 2.45
UM 52011	**55520000 00**	224.2 x 198.9 x 72.4	8.83 x 7.83 x 2.85
UM 52011 L	**55520020 00**	224.2 x 198.9 x 72.4	8.83 x 7.83x 2.85
UM 62009	**55620000 00**	290.9 x 198.9 x 62.2	11.45 x 7.83 x 2.45
UM 62009 L	**55620010 00**	290.9 x 198.9 x 62.2	11.45 x 7.83 x 2.45
UM 62609	**55626000 00**	290.9 x 258.9 x 62.2	11.45 x 10.19 x 2.45
UM 62609 L	**55626010 00**	290.9 x 258.9 x 62.2	11.45 x 10.19 x 2.45

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Version
FP	Front panel, aluminum Al Mg3, anodized, 2 mm
FPK	Front panel, plastic ABS, light gray, similar to RAL 7035, 2 mm, embossed on one side
AB	Extension set left and right, ABS light gray, similar to RAL 7035 (set = 2 pieces)
UM-AS	Fixed set-up foot set (set = 4 pieces)
UM-ASK	Hinged set-up foot set (set = 2 fixed and 2 hinged feet)
UM-WLH	Wall brackets (set = 4 pieces)
UM-VHH	Connecting straps (set = 4 pieces)

BOCARD

- Available in 5 basic sizes, each with 2 bases in different heights. Can be combined with 5 different lid types.
- Range of combinations ensures that the enclosure is suitable for an extremely wide range of applications.
- Terminal compartment can be kept separate from the electronics compartment by means of partitions.

Included in delivery
Modular product sold individually. For details call factory.

Technical Data

Color	Base parts, light gray, similar to RAL 7035. Lids, light gray, similar to RAL 7035 or graphite gray, similar to RAL 7024. DIN Rail holder, black similar to RAL 9005. Special colors on request
Material	ABS. Front lids, polycarbonate. DIN Rail holder, polyamide
Ingress Protection	IP 65/DIN VDE 06529, NEMA 12, depending on combined systems parts.
Surface Resistance	ABS: $>10^{14}$ Ohm to DIN 53482
Flammability	ABS: UL 94 HB/1.6. Polyamide: UL 94 VO/1

Model Number	Part Number Light Gray	Model Number	Part Number Graphite Gray	Dimensions mm H x W x D	Dimensions Inches H x W x D
High enclosure, with clear hinged lid, without terminal compartment					
BCD 160 Set 01-7035	**20163501 00**	**BCD 160 Set 01-7024**	**20162401 00**	179 x 199 x 106.5	7.05 x 7.83 x 4.19
BCD 200 Set 01-7035	**20203501 00**	**BCD 200 Set 01-7024**	**20202401 00**	204 x 229 x 116.0	8.03 x 9.01 x 4.57
BCD 250 Set 01-7035	**20253501 00**	**BCD 250 Set 01-7024**	**20252401 00**	234 x 264 x 141.0	9.21 x 10.39 x 5.55
BCD 310 Set 01-7035	**20313501 00**	**BCD 310 Set 01-7024**	**20312401 00**	289 x 324 x 145.2	11.38 x 12.75 x 5.72
BCS 400 Set 01-7035	**20403501 00**	**BCD 400 Set 01-7024**	**20402401 00**	344 x 404 x 160.5	13.54 x 15.90 x 6.32
Flat enclosure, with clear hinged lid, without terminal compartment					
BCD 160 Set 02-7035	**20163502 00**	**BCD 160 Set 02-7024**	**20162402 00**	179 x 199 x 71.5	7.05 x 7.83 x 2.81
BCD 200 Set 02-7035	**20203502 00**	**BCD 200 Set 02-7024**	**20202402 00**	204 x 229 x 76.0	8.03 x 9.01 x 2.99
BCD 250 Set 02-7035	**20253502 00**	**BCD 250 Set 02-7024**	**20252402 00**	234 x 264 x 86.0	9.21 x 10.39 x 3.38
BCD 310 Set 02-7035	**20313502 00**	**BCD 310 Set 02-7024**	**20312402 00**	289 x 324 x 111.2	11.38 x 12.75 x 4.38
BCD 400 Set 02-7035	**20403502 00**	**BCD 400 Set 02-7024**	**20402402 00**	344 x 404 x 112.0	13.54 x 15.90 x 4.41
High enclosure, with clear hinged lid, for 1 terminal compartment					
BCD 160 Set 03-7035	**20163503 00**	**BCD 160 Set 03-7024**	**20162403 00**	179 x 199 x 106.5	7.05 x 7.83 x 4.19
BCD 200 Set 03-7035	**20203503 00**	**BCD 200 Set 03-7024**	**20202403 00**	204 x 229 x 116.0	8.03 x 9.01 x 4.57
BCD 250 Set 03-7035	**20253503 00**	**BCD 250 Set 03-7024**	**20252403 00**	234 x 264 x 141.0	9.21 x 10.39 x 5.55
BCD 310 Set 03-7035	**20313503 00**	**BCD 310 Set 04-7024**	**20312403 00**	289 x 324 x 145.2	11.38 x 12.75 x 5.72
BCD 400 Set 03-7035	**20403503 00**	**BCD 400 Set 04-7024**	**20402403 00**	344 x 404 x 160.5	13.54 x 15.90 x 6.32
Flat enclosure, with clear hinged lid, for 1 terminal compartment					
BCD 160 Set 04-7035	**20163504 00**	**BCD 160 Set 04-7024**	**20162404 00**	179 x 199 x 71.5	7.05 x 7.83 x 2.81
BCD 200 Set 04-7035	**20203504 00**	**BCD 200 Set 04-7024**	**20202404 00**	204 x 229 x 76.0	8.03 x 9.01 x 2.99
BCD 250 Set 04-7035	**20253504 00**	**BCD 250 Set 04-7024**	**20252404 00**	234 x 264 x 86.0	9.21 x 10.39 x 3.38
BCD 310 Set 04-7035	**20313504 00**	**BCD 310 Set 04-7024**	**20312404 00**	289 x 324 x 111.2	11.38 x 12.75 x 4.38
BCD 400 Set 04-7035	**20403504 00**	**BCD 400 Set 04-7024**	**20402404 00**	344 x 404 x 112.0	13.54 x 15.90 x 4.41
High enclosure, with clear hinged lid, for 2 terminal compartments					
BCD 160 Set 05-7035	**20163505 00**	**BCD 160 Set 05-7024**	**20162405 00**	179 x 199 x 106.5	7.05 x 7.83 x 4.19
BCD 200 Set 05-7035	**20203505 00**	**BCD 200 Set 05-7024**	**20202405 00**	204 x 229 x 116.0	8.03 x 9.01 x 4.57
BCD 250 Set 05-7035	**20253505 00**	**BCD 250 Set 05-7024**	**20252405 00**	234 x 264 x 141.0	9.21 x 10.39 x 5.55
BCD 310 Set 05-7035	**20313505 00**	**BCD 310 Set 05-7024**	**20312405 00**	289 x 324 x 145.2	11.38 x 12.75 x 5.72
BCD 400 Set 05-7035	**20403505 00**	**BCD 400 Set 05-7024**	**20432405 00**	344 x 404 x 160.5	13.54 x 15.90 x 6.32
Flat enclosure, with clear hinged lid, for 2 terminal compartments					
BCD 160 Set 06-7035	**20163506 00**	**BCD 160 Set 06-7024**	**20162406 00**	179 x 199 x 71.5	7.05 x 7.83 x 2.81
BCD 200 Set 06-7035	**20203506 00**	**BCD 200 Set 06-7024**	**20202406 00**	204 x 229 x 76.0	8.03 x 9.01 x 2.99
BCD 250 Set 06-7035	**20253506 00**	**BCD 250 Set 06-7024**	**20252406 00**	234 x 264 x 86.0	9.21 x 10.39 x 3.38
BCD 310 Set 06-7035	**20313506 00**	**BCD 310 Set 06-7024**	**20312406 00**	289 x 324 x 111.2	11.38 x 12.75 x 4.38
BCD 400 Set 06-7035	**20403506 00**	**BCD 400 Set 06-7024**	**20402406 00**	344 x 404 x 112.0	13.54 x 15.90 x 4.41

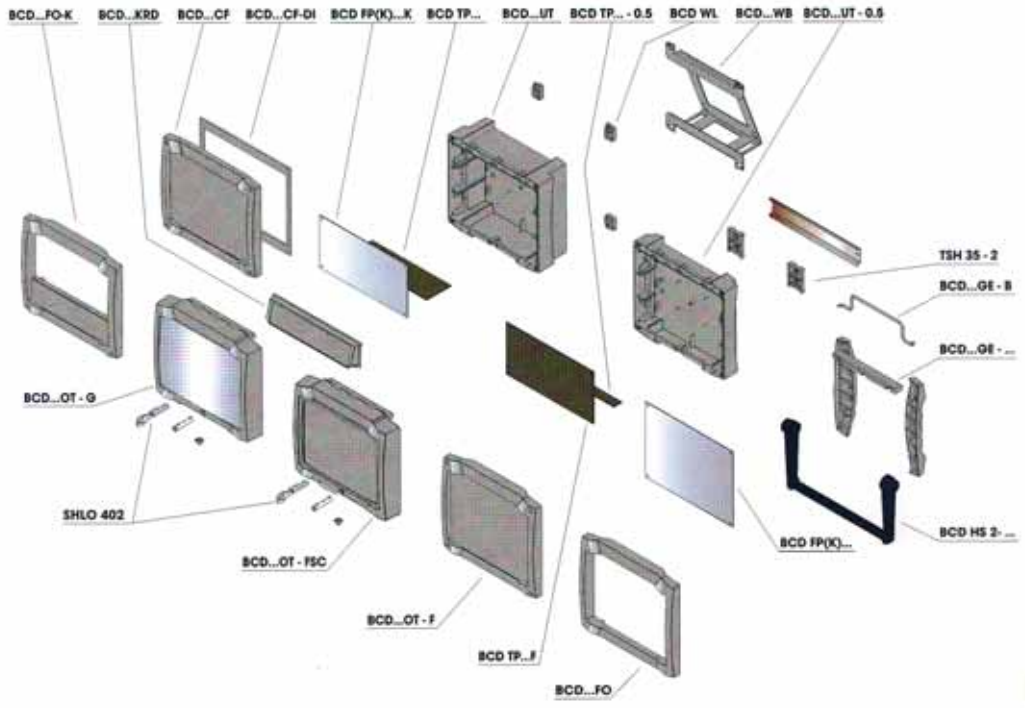
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Model Number	Part Number Light Gray	Model Number	Part Number Graphite Gray	Dimensions mm W x L x H	Dimensions Inches W x L x H
High enclosure with front frame open, without terminal compartment					
BCD 160 Set 07-7035	20163507 00	BCD 160 Set 07-7024	20162407 00	178 x 199 x 89.0	7.01 x 7.83 x 3.50
BCD 200 Set 07-7035	20203507 00	BCD 200 Set 07-7024	20202407 00	203 x 229 x 99.0	7.99 x 9.01 x 3.90
BCD 250 Set 07-7035	20253507 00	BCD 250 Set 07-7024	20252407 00	233 x 264 x 124	9.17 x 10.39 x 4.88
Flat enclosure, with front frame open, without terminal compartment					
BCD 160 Set 08-7035	20163508 00	BCD 160 Set 08-7024	20162408 00	178 x 199 x 54.0	7.01 x 7.83 x 2.12
BCD 200 Set 08-7035	20203508 00	BCD 200 Set 08-7024	20202408 00	203 x 229 x 59.0	7.99 x 9.01 x 2.32
BCD 250 Set 08-7035	20253508 00	BCD 250 Set 08-7024	20252408 00	233 x 264 x 69.0	9.17 x 10.39 x 2.72
High enclosure, with front frame open, including terminal compartment cover					
BCD 160 Set 09-7035	20163509 00	BCD 160 Set 09-7024	20162409 00	178 x 199 x 89.0	7.01 x 7.83 x 3.50
BCD 200 Set 09-7035	20203509 00	BCD 200 Set 09-7024	20202409 00	203 x 229 x 99.0	7.99 x 9.01 x 3.90
BCD 250 Set 09-7035	20253509 00	BCD 250 Set 09-7024	20252409 00	233 x 264 x 124	9.17 x 10.39 x 4.88
Flat enclosure, with front frame open, including terminal compartment cover					
BCD 160 Set 10-7035	20163510 00	BCD 160 Set 10-7024	20162410 00	178 x 199 x 54.0	7.01 x 7.83 x 2.12
BCD 200 Set 10-7035	20203510 00	BCD 200 Set 10-7024	20202410 00	203 x 229 x 59.0	7.99 x 9.01 x 2.32
BCD 250 Set 10-7035	20253510 00	BCD 250 Set 10-7024	20252410 00	233 x 264 x 69.0	9.17 x 10.39 x 2.72
High enclosure, with membrane lid					
BCD 160 Set 11-7035	20163511 00	BCD 160 Set 11-7024	20162411 00	178 x 199 x 89.0	7.01 x 7.83 x 3.50
BCD 200 Set 11-7035	20203511 00	BCD 200 Set 11-7024	20202411 00	203 x 229 x 99.0	7.99 x 9.01 x 3.90
BCD 250 Set 11-7035	20253511 00	BCD 250 Set 11-7024	20252411 00	233 x 264 x 124	9.17 x 10.39 x 4.88
Flat enclosure, with membrane lid					
BCD 160 Set 12-7035	20163512 00	BCD 160 Set 12-7024	20162412 00	178 x 199 x 54.0	7.01 x 7.83 x 2.12
BCD 200 Set 12-7035	20203512 00	BCD 200 Set 12-7024	20202412 00	203 x 229 x 59.0	7.99 x 9.01 x 2.32
BCD 250 Set 12-7035	20253512 00	BCD 250 Set 12-7024	20252412 00	233 x 264 x 69.0	9.17 x 10.39 x 2.72
High enclosure, with hinged membrane lid					
BCD 160 Set 13-7035	20163513 00	BCD 160 Set 13-7024	20162413 00	179 x 199 x 106.5	7.05 x 7.83 x 4.19
BCD 200 Set 13-7035	20203513 00	BCD 200 Set 13-7024	20202413 00	204 x 229 x 116.0	8.03 x 9.01 x 4.57
BCD 250 Set 13-7035	20253513 00	BCD 250 Set 13-7024	20252413 00	234 x 264 x 141.0	9.21 x 10.39 x 5.55
BCD 310 Set 13-7035	20313513 00	BCD 310 Set 13-7024	20312413 00	289 x 324 x 145.2	11.38 x 12.75 x 5.72
BCD 400 Set 13-7035	20403513 00	BCD 400 Set 13-7024	20402413 00	344 x 404 x 160.5	13.54 x 15.90 x 6.32
Flat enclosure, with hinged membrane lid					
BCD 160 Set 14-7035	20163514 00	BCD 160 Set 14-7024	20162414 00	179 x 199 x 71.5	7.05 x 7.83 x 2.81
BCD 200 Set 14-7035	20203514 00	BCD 200 Set 14-7024	20202414 00	204 x 229 x 76.0	8.03 x 9.01 x 2.99
BCD 250 Set 14-7035	20253514 00	BCD 250 Set 14-7024	20252414 00	234 x 264 x 86.0	9.21 x 10.39 x 3.38
BCD 310 Set 14-7035	20313514 00	BCD 310 Set 14-7024	20312414 00	289 x 324 x 111.2	11.38 x 12.75 x 4.38
BCD 400 Set 14-7035	20403514 00	BCD 400 Set 14-7024	20402414 00	344 x 404 x 112.0	13.54 x 15.90 x 4.41

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Description	Model Number	Description
BCD FP...	Front panel, 1.5 mm aluminum	SHLO 402	Cylinder lock (1 lock, 2 keys)
BCD FPK...	Front panel, 2 mm plastic	BCD...WB	Wall mounting fastening angle and assembly screws
BCD TP...	Partition, 1.5 mm hard paper	BCD HS 2-9005	Handle (2 side section, 2 anti-slip elements, profile and assembly material)
BCD M...	Mounting panel, 2 mm hard paper	BCD...GE-7024	Handle element
BCD WL-7035	4 Wall brackets and assembly screws	BCD...GE-B	Set-up bow for handle element
TSH 35-2	DIN rail holders (2 pieces) and assembly screws		



Executive Plug Housing

- This generation of plug enclosures is available in different styles for use in specific countries.
- From 3 lids with sockets, 5 lids without sockets, 2 console type lids, as well as 3 bases with plug, and one base without plug, it is possible to create 40 different plug enclosures.

Included in delivery
Lid and base, assembly screws, including connector pins/socket inserts depending on type.

Technical Data

Color	Lid, light gray, similar to RAL 7035; base, agate gray, similar to RAL 7038. Special colors on request. Minimum order quantities apply.
Material	Polycarbonate/ABS blend plastic
Ingress Protection	IP 40/DIN EN 60529
Flammability	UL 94 VO/1.6
Testing	Tested to VDE 0624/IEC 884
Subject to minimum order quantities	

Model Number	Part Number	Version	Length Inches/mm	Width Inches/mm	Height Inches/mm
ESO 1250 E	**41010004 00**	Lid with socket DIN 49440/CEE 7 III	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1250 CEE	**44020004 00**	Lid with socket CEE 7 V	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1250 SEV	**44030004 00**	Lid with socket SEV 1011 Type 13	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1250 E-K*	**44011004 00**	Lid with socket DIN 49440/CEE 7 III	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1250 CEE-K*	**44021004 00**	Lid with socket CEE 7 V	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1250	**44040004 00**	Lid without socket	4.92 / 125	2.64 / 67	1.38 / 35
ESO 1240	**44050004 00**	Lid without socket	4.92 / 125	2.64 / 67	0.98 / 25
ESO 1230	**44060004 00**	Lid without socket	4.92 / 125	2.64 / 67	0.98 / 25
ESO 1240 P	**44070004 00**	Console lid without socket, keypad area 46 x 90 x 1mm deep	4.92 / 125	2.64 / 67	0.98 / 25
ESO 1240 PD	**44080004 00**	Console lid without socket, keypad area 46 x 70 x 1mm deep. Display opening 46 x 11mm	4.92 / 125	2.64 / 67	0.98 / 25
ESU 1200 E/CEE	**44093004 00**	Base with plug DIN 49441 R2	4.92 / 125	2.64 / 67	0.59 / 15
ESU 1200 SEV	**44091004 00**	Base with plug SEV 1011 Type 12	4.92 / 125	2.64 / 67	0.59 / 15
ESU 1200 E-US	**44092004 00**	Base with plug UL 498 ANSI ST. A5-15	4.92 / 125	2.64 / 67	0.59 / 15
ESU 1200	**44090004 00**	Base with plug	4.92 / 125	2.64 / 67	0.59 / 15

E = German version with ground CEE = French version with ground SEV = Swiss version with ground E/CEE = Swiss version with ground
E-US = US version with ground K = With child safety lock

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

SE 4 and SE 5 Plug Housings

- Eight basic sizes are available. This enclosure program comprises six country-specific plugs and four different sockets.
- Because of their compactness and integrated cable inlets, the enclosures in the SE 510/520 series are especially suitable for use as transformer mains power units.

Included in delivery
Lid and base, mounting screws, including connector pins/socket inserts depending on type.

Technical Data

Color	SE 4 Series - lid, light gray, similar to RAL 7035; base, graphite gray, similar to RAL 7024. SE 5 series, black, similar to RAL 9005. Special colors on request
Material	SE 4 Series-flame-resistance Polycarbonate/ABS blend. SE 5 Series-flame-resistant Polyamide, PA 6.6 FR.
Ingress Protection	IP 40/DIN VDE 60529, IP 30 (enclosures with ventilation)
Flammability	SE 4 Series, UL 94 VO/1.6. SE 5 Series, UL 94 VO/1
Testing	SE 5 Series tested to VDE 0624/IEC 884.
Subject to minimum order quantities	

Model Number	Part Number	Dimensions mm	Dimensions Inches	Version
Plug Enclosures with Euro Plug		L x W x H	L x W x H	
SE 420 EU	**43420204 00**	100 x 50 x 40	3.94 x 1.97 x 1.57	Euro plug, DIN VDE 0620 part 101
Plug Enclosures with German/French Plug				
SE 406 E/CEE*	**43406204 00**	65 x 50 x 30	2.56 x 1.97 x 1.18	
SE 408 E/CEE*	**43408504 00**	65 x 50 x 45	2.56 x 1.97 x 1.77	
SE 410 E/CEE*	**43410104 00**	100 x 50 x 40	3.94 x 1.97 x 0.98	E/CEE = plug with ground, DIN 49441 R2.
SE 420 E/CEE	**43420104 00**	100 x 50 x 25	3.94 x 1.97 x 1.57	* = Available on request. Minimum order applies
SE 430 E/CEE	**43430004 00**	120 x 65 x 40	4.72 x 2.56 x 1.57	
SE 435 E/CEE	**43435004 00**	120 x 65 x 66	4.72 x 2.56 x 2.60	
Plug Enclosures with Swiss Plug				
SE 430 SEV*	**43430604 00**	120 x 65 x 40	4.72 x 2.56 x 1.57	SEV = Swiss version, with ground.
SE 435 SEV*	**43435604 00**	120 x 65 x 66	4.72 x 2.56 x 2.56	SEV-1011 type 12, minimum order 500+. *Available on request.
Plug Enclosures with American Plug				
SE 410 E/US*	**43410404 00**	100 x 50 x 25	3.94 x 1.97 x 0.98	E-US = US version, with ground.
SE 420 E/US*	**43420224 00**	100 x 50 x 40	3.94 x 1.97 x 1.57	UL 498 or ANSI St. A 5-15, minimum order 500+.
SE 430E/US*	**43430104 00**	120 x 65 x 40	4.72 x 2.56 x 1.57	*Available on request. Minimum order applies
SE 435 E/US	**43435204 00**	120 x 65 x 66	4.72 x 2.56 x 2.60	
Plug Enclosures with Appropriate Socket				
SE 432 DE	**43432504 00**	120 x 65 x 50	4.72 x 2.56 x 1.97	DE = German version (DIN 49440/CEE 7 111)
SE 432 DE CEE*	**43432704 00**	120 x 65 x 50	4.72 x 2.56 x 1.97	DE-CEE = French version (CEE 7V)
SE 432 DE SEV*	**43432604 00**	120 x 65 x 50	4.72 x 2.56 x 1.97	DE-SEV = Swiss version (SEV 1011 Type 13)
SE 435 DE	**43435504 00**	120 x 65 x 66	4.72 x 2.56 x 2.60	* = Available on request. Minimum order applies.
SE 435 DE CEE*	**43435704 00**	120 x 65 x 66	4.72 x 2.56 x 2.60	

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Model Number	Part Number	Description
Plugs SE 510...		
SE 510 EU	**43510200 00**	Euro plug DIN VDE 0620 part 101
SE 510 E/CEE	**43510000 00**	German/French plug DIN 49441 R2
SE 510 AS	**43510500 00**	Australian plug AS 3112 without ground 7.5 A
SE 510 US	**43510600 00**	American plug US 498 ANSI ST. A 1-15 without ground 15 A
SE 510 GB*	**43510300 00**	British plug GB-BS 1363 with ground 13 A fuse
SE 510 EU-L	**43510210 00**	Euro plug DIN VDE 0620 part 101, with ventilation
SE 510 E/CEE-L	**43510010 00**	German/French plug DIN 49441 R2, with ventilation
SE 510 AS-L	**43510510 00**	Australian plug AS 3112 without ground 7.5 A, with ventilation
SE 510 US-L	**43510610 00**	American plug US 498 ANSI ST. A 1-15 without ground 15 A, with ventilaiton
SE 510 GB-L*	**43510310 00**	British plug GB-BS 1363 with ground, 13 A fuse, with ventilation
Plugs SE 520...		
SE 520 EU	**43520200 00**	Euro plug DIN VDE 0620 part 101
SE 520 E/CEE	**43520000 00**	German/French plug DIN 49441 R2
SE 520 AS	**43520500 00**	Australian plug AS 3112 without ground 7.5 A
SE 520 US	**43520600 00**	American plug US 498 ANSI ST. A 1-15 without ground 15 A
SE 520 GB*	**43520300 00**	British plug GB-BS 1363 with ground 5 A fuse
SE 520 EU-L	**43520210 00**	Euro plug DIN VDE 0620 part 101, with ventilation
SE 520 E/CEE-L	**43520010 00**	German/French plug DIN 49441 R2, with ventilation
SE 520 AS-L	**43520510 00**	Australian plug AS 3112 without ground 7.5 A, with ventilation
SE 520 US-L	**43520610 00**	American plug US 498 ANSI ST. A 1-15 without ground 15 A, with ventilation
SE 520 GB-L*	**43520313 00**	British plug GB-BS 1363 with ground, 5 A fuse, with ventilation

NGS Panel Meter Housing

- Specifically designed to conform to the dimensional standard DIN 43700
- Housings slotted internally to accept PC boards comes in 36 different sizes
- Clear PVC front covers (available as an accessory) protect the front elements up to IP65

Included in delivery
Enclosure body, standard front frame, rear cover, and assembly screws.

Technical Data

Color	Black, similar to RAL 9005
Material	Flame resistant Noryl SE 1 GFN 1
Ingress Protection	IP 40, IP 65 possible with rubber hoods, part types NGS...GHN
Flammability	UL 94 V1/1.47
Gasket	Neoprene
Impact Resistance	200 JM at 23°C
Disruptive Strength	26 KV/mm to DIN 53481

Model Number	Part Number	Width Inches/mm	Height Inches/mm	Depth Inches/mm	Model Number	Part Number	Width Inches/mm	Height Inches/mm	Depth Inches/mm
NGS 4806	**17480601 00**	1.89 / 48.0	1.89 / 48.0	2.48 / 63.0	**NGS 9408**	**17940801 00**	3.78 / 96.0	1.89 / 48.0	3.35 / 85.0
NGS 4808	**17480801 00**	1.89 / 48.0	1.89 / 48.0	3.36 / 85.0	**NGS 9410**	**17941001 00**	3.78 / 96.0	1.89 / 48.0	4.31 / 109.5
NGS 4810	**17481001 00**	1.89 / 48.0	1.89 / 48.0	4.31 / 109.5	**NGS 9411**	**17941101 00**	3.78 / 96.0	1.89 / 48.0	4.68 / 119.0
NGS 4811	**17481101 00**	1.89 / 48.0	1.89 / 48.0	4.68 / 119.0	**NGS 9413**	**17941301 00**	3.78 / 96.0	1.89 / 48.0	5.55 / 141.0
NGS 4813	**17481301 00**	1.89 / 48.0	1.89 / 48.0	5.55 / 141.0	**NGS 9416**	**17941601 00**	3.78 / 96.0	1.89 / 48.0	6.51 / 165.5
NGS 7406	**17740601 00**	5.67 / 144.0	2.83 / 72.0	2.52 / 64.0	**NGS 9606**	**17960601 00**	3.78 / 96.0	3.78 / 96.0	2.48 / 63.0
NGS 7408	**17740801 00**	5.67 / 144.0	2.83 / 72.0	3.38 / 86.0	**NGS 9608**	**17960801 00**	3.78 / 96.0	3.78 / 96.0	3.35 / 85.0
NGS 7410	**17741001 00**	5.67 / 144.0	2.83 / 72.0	4.35 / 110.5	**NGS 9610**	**17961001 00**	3.78 / 96.0	3.78 / 96.0	4.31 / 109.5
NGS 7411	**17741101 00**	5.67 / 144.0	2.83 / 72.0	4.72 / 120.0	**NGS 9611**	**17961101 00**	3.78 / 96.0	3.78 / 96.0	4.68 / 119.0
NGS 7413	**17741301 00**	5.67 / 144.0	2.83 / 72.0	5.59 / 142.0	**NGS 9613**	**17961301 00**	3.78 / 96.0	3.78 / 96.0	5.55 / 141.0
NGS 7416	**17741601 00**	5.67 / 144.0	2.83 / 72.0	6.55 / 166.5	**NGS 9616**	**17961601 00**	3.78 / 96.0	3.78 / 96.0	6.51 / 165.5
NGS 7706	**17770601 00**	2.83 / 72.0	2.83 / 72.0	2.48 / 63.0	**NGS 9806**	**17980601 00**	5.67 / 144.0	5.67 / 144.0	2.52 / 64.0
NGS 7708	**17770801 00**	2.83 / 72.0	2.83 / 72.0	3.35 / 85.0	**NGS 9806 GR**	**17980605 00**	5.67 / 144.0	5.67 / 144.0	2.68 / 68.0
NGS 7710	**17771001 00**	2.83 / 72.0	2.83 / 72.0	4.31 / 109.5	**NGS 9808**	**17980801 00**	5.67 / 144.0	5.67 / 144.0	3.38 / 86.0
NGS 7711	**17771101 00**	2.83 / 72.0	2.83 / 72.0	4.68 / 119.0	**NGS 9810**	**17981001 00**	5.67 / 144.0	5.67 / 144.0	4.35 / 110.5
NGS 7713	**17771301 00**	2.83 / 72.0	2.83 / 72.0	5.55 / 141.0	**NGS 9811**	**17981101 00**	5.67 / 144.0	5.67 / 144.0	4.72 / 120.0
NGS 7716	**17771601 00**	2.83 / 72.0	2.83 / 72.0	6.51 / 165.5	**NGS 9813**	**17981301 00**	5.67 / 144.0	5.67 / 144.0	5.59 / 142.0
NGS 9406	**17940601 00**	3.78 / 96.0	1.89 / 48.0	2.48 / 63.0	**NGS 9816**	**17981601 00**	5.67 / 144.0	5.67 / 144.0	6.55 / 166.5

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Description
NGS...NF	Spring clamp (pk of 2)
NGS...NK	Screw clamp (pk of 2)
NGS...ZE	Connecting piece for DIN retaining clasp (pk of 2)
NGS...NH	DIN retaining clasp (pk of 2)
NGS...FKT	Plastic front panel, red translucent, 3mm thick
NGS...FAE	Aluminum front panel, anodized aluminum, 1.5mm thick
NGS...F	Membrane front, firmly latching
NGS...TK	NGS front door lockable by means of knob for models 74..., 96..., and 98
NGS...SA	Firmly latching front frame
NGS...AH	Clear hood cover
NGS...DA	Seal enclosure / control panel (pk of 5)
NGS...DI	Seal front panel / enclosure (pk of 5)
NGS...GHN	Flexible tansparent PVC hoods for IP 65 front seal
NGS...RKS	Rear lid
SHLO-302	Cylinder catch for front door

NGS 9806-GR with stepped rear panel.

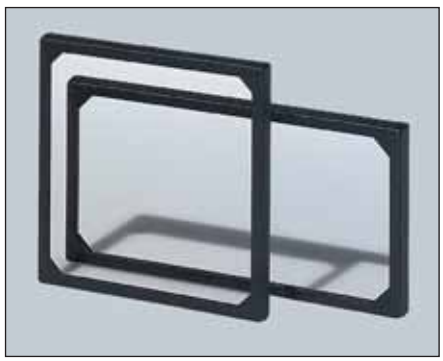
NGS 48

NGS 74

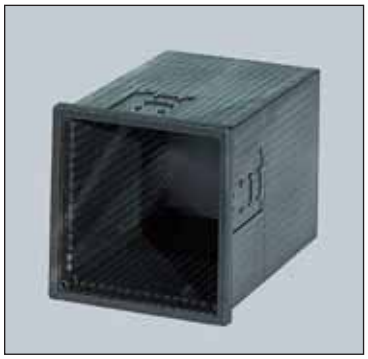
NGS Front Panels

NGS 77

NGS 94



NGS Front Frames



NGS 96

NGS 98

NGS Hood Covers

NGS Front Doors

NGS Cylinder Catch for Front Door

NGS Transparent Rubber Hood

Stainless Steel Enclosure System

Stainless steel enclosure systems can offer considerable advantages in some application areas in comparison with plastic enclosure solutions:

- Food industries
- Packaging industries
- Hazardous environments
- EMC areas
- Field bus areas

Rose stainless steel-enclosure systems are manufactured in materials 1.4404 and 1.4301 as standard. This stainless steel quality offers permanent resistance in both rough environments, in the chemical industry, and is ideal for the cleaning demands of the food industry. Rose stainless steel products offer consistent high surface finish qualitiy as standard (longitudinal finish 240 grain), finishing (precise edging and welding) and ingress protection (IP 65 and IP 66 as standard or higher upon request).

Stainless Steel Industrial Enclosures

- 18 enclosure sizes with lid or hinged door in sizes from 100 x 100 x 61 mm up to 600 x 200 x 121 mm
- Application area: food and packaging industries, as well as hazardous environments

Stainless Steel Cabinets

- 16 enclosure sizes with door and mounting plates in dimensions from 200 x 250 x 90 mm up to 600 x 760 x 210 mm
- Application area: food and packaging industries

Ex Stainless Steel Cabinets and Enclosures ATEX

- 27 enclosure sizes from 100 x 100 x 61 mm up to 600 x 380 x 217 mm
- Application area: EExe, EExia in Zones 1 and 2
- Approvals: PTB 00 ATEX 1101U; PTB 00 ATEX 1052

Standard Stainless Steel Enclosures

UL 50

- Universal standard enclosures for hygienic areas
- High surface quality 1.4301
- No gaps in cover/lower section - ingress protection up to IP 66
- Special versions and sizes available as an option for 25 pieces and above

Included in delivery

Enclosure base with internal mounting support bars for DIN rail mounting, 4 floor break-outs with or without mounting holes, gasket and mounting nuts, cover with internal threaded bolts and captive lid screws.

Technical Data

Material	Stainless steel 1.25 mm or 1.5mm; 1.4301/304. Other materials on request
Ingress Protection	IP 66, EN 60529. High pressure cleaning-resistant on request
Surface	Polished 240 grain. Other surface on request
Temperature Range	-76°F to +266°F

Part Number Enclosure with floor break-outs and mounting holes	Part Number Enclosure without mounting holes	Dimensions mm L x W x H	Dimensions Inches L xW x H
37101006 00	**37101096 00**	100 x 100 x 61	3.94 x 3.94 x 2.40
37151006 00	**37151096 00**	150 x 100 x 61	5.90 x 3.94 x 2.40
37151508 00	**37151598 00**	150 x 150 x 81	5.90 x 5.90 x 3.19
37201006 00		200 x 100 x 61	7.87 x 3.94 x 2.40
37202008 00	**37202098 00**	200 x 200 x 81	7.87 x 7.87 x 3.19
37202012 00	**37202092 00**	200 x 200 x 121	7.87 x 7.87 x 4.76
37301508 00		300 x 150 x 81	11.81 x 5.90 x 3.19
37302008 00		300 x 200 x 81	11.81 x 7.87 x 3.19
37302012 00	**37302092 00**	300 x 200 x 121	11.81 x 7.87 x 4.76
37303012 00		300 x 300 x 121	11.81 x 11.81 x 4.76
37303016 00		300 x 300 x 161	11.81 x 11.81 x 6.34
37383816 00		380 x 380 x 161	14.96 x 14.96 x 6.34
37401508 00		400 x 150 x 81	15.75 x 5.90 x 3.19
37402012 00		400 x 200 x 121	15.75 x 7.87 x 4.76
37403016 00		400 x 300 x 161	15.75 x 11.81 x 6.34
37503016 00		500 x 300 x 161	19.68 x 11.81 x 6.34
37504016 00		500 x 400 x 161	19.68 x 15.75 x 6.34
37602012 00		600 x 200 x 121	23.62 x 7.87 x 4.76
37999999 00		Special dimension	Special dimension

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	Part Number
External bracket set (4 pcs.)	**37105000 00**
Mounting plate screws	**10093041 00**
Allen head lid screws	**10091001 00**

IGS Stainless Steel Cabinets with Hinges

- Universal enclosure with hinge and lock
- High quality polished surface 1.4301
- Custom sizes and versions with flange openings or window available (25 piece minimum)

Included in delivery

Enclosure base with bracket clips and threaded bores for attachment of mounting rail, hinged cover, double ward lock, 4 floor break-outs with attachment holes and sealing plugs.

Technical Data

Material	Stainless steel 1.25 mm or 1.5 mm 1.4301 / 304 other matierial on request
Ingress Protection	IP 65 to EN 60529
Temperature Range	-40°F to +176°F
Seals	VMQ-(silicone) seal or PUR-(polyurethane) seal EMC on request
Surface	Polished, 240 grain, other surfaces on request

Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Number of Locks
37002209 00	200 x 250 x 90	7.87 x 9.84 x 3.54	1
37002215 00	200 x 250 x 150	7.87 x 9.84 x 5.90	1
37003209 00	300 x 300 x 165	11.81 x 11.84 x 6.50	1
37003316 00	350 x 250 x 90	13.78 x 9.84 x 3.54	1
37004416 00	380 x 380 x 165	14.96 x 14.96 x 6.50	1
37004421 00	380 x 380 x 215	14.96 x 14.96 x 8.46	1
37005316 00	500 x 300 x 165	19.68 x 11.81 x 6.50	1
37006316 00	600 x 300 x 165	23.62 x 11.81 x 6.50	1
37006421 00	600 x 380 x 215	23.62 x 14.96 x 8.46	1
37009900 00	Special sizes (please state requested dimensions)		

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	Part Number
Mounting plate for 37002209 and 37002215	**10011066 00**
Mounting plate for 37003209	**10111067 00**
Mounting plate for 37004416	**10011045 00**
Mounting plate for 37006316	**10011068 00**
Mounting plate for 37006421	**10011069 00**
External bracket set (4 pieces)	**37105000 00**

KSS Stainless Steel Switch Gear Cabinets

- Switch gear cabinets with hinged door
- Mounting plate attachment above stud bolts / threaded weld nuts
- Surface polished all sides (240 grain)
- Custom sizes and versions available (25 piece minimum).

Included in delivery

Enclosure system with door, double ward lock, 4 x M6 threaded stud bolts in lid and 4 x M6 threaded weld nuts in base.

Technical Data

Material	Stainless steel 1.25 mm or 1.5 mm 1.4301 / 304
Ingress Protection	IP 65 to EN 60529
Temperature Range	-40°F to + 176°F
Gasket	VMQ gasket (silicone) seal or PUR (polyurethane) EMC on request
Surface	polished, 240 grain

Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Number of Locks
37012315 00	200 x 300 x 155	7.87 x 11.81 x 6.10	1
37013421 00	300 x 380 x 210	11.81 x 14.96 x 8.27	1
37014315 00	400 x 300 x 155	15.75 x 11.81 x 6.10	1
37014621 00	380 x 600 x 210	14.96 x 23.62 x 8.27	2
37015521 00	500 x 500 x 210	19.68 x 19.68 x 8.27	2
37016415 00	600 x 400 x 155	23.62 x 15.75 x 6.10	1
37016821 00	600 x 760 x 210	23.62 x 29.92 x 8.27	4
37019900 00	Special dimensions	-	

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	Part Number
Mounting plate for 37012305	**37019901 00**
Mounting plate for 37013421	**37019902 00**
Mounting plate for 37014315	**37019903 00**
Mounting plate for 37014621	**37019904 00**
Mounting plate for 37015521	**37019905 00**
Mounting plate for 37016415	**37019906 00**
Mounting plate for 37016821	**37019907 00**

Handheld Enclosures

The increasing mobility prevalent in all areas of industry requires portable hand enclosures. Materials, sizes and versions vary depending on the application area. Cable-connected systems made of robust Polyamide or Polyester with high ingress protection are in use, especially in automation engineering. In contrast, the data adquisition and instrumentation industries prefer to use light enclosures with integrated power supplies. The range of hand held enclosure products covers all areas of mobile applications.

Taguan 130 / 180 / 230
- 8 enclosures in four sizes from 125 x 80 x 37 mm to 229 x 97 x 52 mm
- Application area: data acquisition, instrumentation

Beluga 180 / 220 / 380
- 5 enclosures in three sizes from 106 x 187 x 50 mm to 380 x 117 x 68 mm
- Application area: instrumentation and automation engineering, analytical control

Limanda
- Enclosure system for controller components, sizes 270 x 248 x 64 mm and 311 x 281 x 72 mm
- Application area: analytical control and automation engineering

Pilot 250
- 2 enclosures in size 280 x 140 x 86 mm
- Application area: instrumentation and automation engineering, analytical control

Mobile Control Units 2911, 2912, 2913
- 3 enclosures in sizes 280 x 191 x 76 mm to 440 x 191 x 76 mm
- Application area: instrumentation and automation engineering, analytical control

Mobile Control Units
- 3 enclosures with integrated handles in sizes 190 x 70 x 93 mm to 295 x 164 x 116 mm
- Application area: pushbutton and switch enclosures

Mobile Control Units 2921
- 5 enclosures with integrated handle in sizes 206 x 85 x 85 mm to 281 x 160 x 105 mm
- Application area: pushbutton and switch enclosures

Alubos
- 20 profiles are available with profiles that are closed, split horizontally, and/or open on one side, for ergonomic hand-held enclosure designs.
- High mechanical loading capacity of the profile and EMC screening ensure high level of protective functions

Tastomat
- 2 enclosures in sizes 251 x 91 x 46 mm to 251 x 91 x 80 mm
- Application area: ideal for pushbutton or membrane keypad application

ARTEB
- 6 basic enclosures in sizes from 78 x 45 x 18 mm to 236 x 125 x 41mm
- Application area: ideal for applications requiring a display screen or membrane keypad

BOS
- 9 enclosures in sizes from 100 x 65 x 24 mm to 224 x 106 x 40 mm
- Application area: cost-effective handheld enclosure for mobile data collection and processing applications

BOS-Streamline
- 3 enclosures in sizes from 119.3 x 64.9 x 26.5 mm to 209.3 x 98.0 x 34.8 mm
- Application area: ideal for applications requiring a display screen or membrane keypad

Taguan 130 / 180 / 230

- ABS hand held enclosure for data acquisition and instrumentation
- With integrated battery/accumulator compartment
- Versions with or without display opening
- Prepared for acceptance of keypads/silicone switch mats

Taguan 130

Taguan 180/230

Included in delivery

Taguan 130: 5 piece enclosure with top and base, battery compartment, battery compartment cover, head and shaft surround, mounting and enclosure screws.
Taguan 180/230: enclosure with top and base, keyboard surround, head and shaft surround, mounting and enclosure screws.
Please order battery compartment separately.

Technical Data

Color	Enclosure body - green blue, similar to RAL 5020. Models 180/230-keypad plate, battery compartment/pack, black-gray, similar to RAL 7021
Material	ABS
Ingress Protection	IP 40 to EN60529
Surface Resistance	4 x 10^{14} Ohm to DIN 53482
Impact Resistance	24 KV/mm to DIN 53481
Flammability	UL 94 HB
Temperature Range	-40°F to +176°F

Model Number	Part Number	Versions	Dimensions mm W x L x H	Dimensions Inches W x L x H	Weight kg	Weight lbs
Taguan 130 FO	**27010200 00**	Flat, open	80/70 x 125 x 36.7	3.15/2.75 x 4.92 x 1.44	0.085	0.187
Taguan 130 FG	**27010201 00**	Flat, closed	80/70 x 125 x 36.7	3.15/2.75 x 4.92 x 1.44	0.085	0.187
Taguan 130 TO	**27010210 00**	Deep, open	80/70 x 125 x 46	3.15/2.75 x 4.92 x 1.81	0.085	0.187
Taguan 130 TG	**27010211 00**	Deep, closed	80/70 x 125 x 46	3.15/2.75 x 4.92 x 1.81	0.09	0.198
Taguan 180 O	**27010400 00**	Open	84/70 x 180 x 52.5/37.5	3.31/2.75 x 7.07 x 2.07/1.48	0.17	0.374
Taguan 180 G	**27010401 00**	Closed	84/70 x 180 x 52.5/37.5	3.31/2.75 x 7.07 x 2.07/1.48	0.12	0.264
Taguan 230 G	**27010600 00**	Open	97/70 x 229 x 52.5/37.5	3.82/2.75 x 9.01 x 2.07/1.48	0.15	0.330
Taguan 230 O	**27010601 00**	Closed	97/70 x 229 x 52.5/37.5	3.82/2.75 x 9.01 x 2.07/1.48	0.16	0.352

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number	Description	Part Number
Battery holder 4 round cells (T130)	**27010280 00**	Wrist strap (T 180 / 230)	**27010083 00**
Battery holder 9 volt (T130)	**27010281 00**	Display assembly set (T 180)	**27010480 00**
Battery holder for 9 volt (T180 / 230)	**27010094 00**	Display assembly set (T 230)	**27010680 00**
Clip (T130)	**27010282 00**	Switch mat set (T 180 / 230)	**27010481 00**
Keypad FT 130b, 12 printed keys (T130)	**82100001 00**	Switch mat set (T 230)	**27010681 00**
Kaypad FT 130b, 12 keys with plug-in unit (T130)	**82100002 00**	Switch mat set (T 180 / 230)	**27010095 00**
End plate in enclosure color	**27010285 00**	Hand strap (T 180)	**27010484 00**
End plate, transparent	**27010286 00**	Hand strap (T 230)	**27010684 00**
End plate, infra-red	**27010287 00**	Spare display screen set (T 130)	**27010288 00**
Battery compartment empty (T180 / 230) 0.03 kg	**27010080 00**	Spare display screen set (T180)	**27010488 00**
Battery pack 1000 mAh	**27010081 00**	Spare display screen set (T 230)	**27010688 00**
Battery charging station 115 V	**27010084 00**	Spare screws	**27010090 00**
Battery charging station 230 V	**27010086 00**	Head cover, stepped, in enclosure color (T 180/230)	**27010085 00**
Battery charging station without connector charger	**27010088 00**	Head cover, stepped for infra-red (T 180 / 230)	**27010087 00**
Docking station (T180 / 230) without connector charger	**27010096 00**	Head cover, stepped, transparent (T 180 / 230)	**27010089 00**
Docking station (T180 / 230) with connector charger	**27010097 00**	Head cover, straight, in enclosure color (T180 / 230)	**27010091 00**
Angle brackets for PCBs for docking station	**27010098 00**	Head cover, straight, in enclosure color (T 180 / 230)	**27010092 00**
Spring contact, 2-pole (T180 / 230)	**27010082 00**	Head cover, straight, in enclosure color (T 180 / 230)	**27010093 00**

Beluga 180 / 220 / 380

- Polyamide hand held enclosure for measurement control automation engineering
- Ergonomic enclosure shape
- Versions with or without display opening
- Prepared for acceptance of keypads/silicone switch mats

Included in delivery

Beluga 180/220: enclosure with top and base unit, each with mounting bosses, fastening and enclosure screws.
Beluga 380: enclosure with top and base unit, each with mounting bosses, mounting hook/set, fastening and enclosure screws.

Beluga 180/220

Beluga 380

Technical Data

Color	Black-gray, similar to RAL 7021
Material	Polyamide
Ingress Protection	IP 65 to EN 60529
Surface Resistance	10^{12} Ohm to DIN 53482
Impact Resistance	>7 Nm to DIN 50014
Flammability	UL 94 V2
Temperature Range	-40°F to +140°F

Model Number	Part Number	Versions	Dimensions mm W x L x H	Dimensions Inches W x L x H	Weight kg	Weight lbs
Beluga 180 O	**27020200 00**	open	106/75 x 187 x 50	4.17/2.95 x 7.36 x 1.97	0.16	0.35
Beluga 180 G	**27020201 00**	closed	106/75 x 187 x 50	4.17/2.95 x 7.36 x 1.97	0.17	0.37
Beluga 220 O	**27020400 00**	open	116/85 x 220 x 51	4.57/3.35 x 8.66 x 2.01	0.20	0.44
Beluga 220 G	**27020401 00**	closed	116/85 x 220 x 51	4.57/3.35 x 8.66 x 2.01	0.21	0.46
Beluga 380	**27020501 00**	closed	380 x 117 x 68	14.96 x 4.61 x 2.68	0.52	1.15

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number	Description	Part Number
Hook set without magnet (B180 / 220)	**27020080 00**	Hand strap (B 380)	**27020581 00**
Hook set with magnet (B180 / 220)	**27020081 00**	Wall holder (B 380)	**27020582 00**
Keypad FT 180e, 15 keys, printed (B180)	**82100003 00**	Spare screws (B 180 / 220)	**27020082 00**
Keypad FT 180e, 15 keys, with plug-in unit (B180)	**82100004 00**	Spare screws (B 380)	**27020583 00**
Keypad FT 220e, 18 keys, printed (B220)	**82100005 00**	Spare display screen set (B 180)	**27010688 00**
Keypad FT 220b, 18 keys, with plug-in unit (B220)	**82100006 00**	Spare display screen set (B 220)	**27020483 00**
Display assembly set (B180)	**27010680 00**	2-stage enable button, blue	**83500001 00**
Display assembly set, (B220)	**27020482 00**	Battery compartment (B 180 / 220)	**27020085 00**
Cable gland with bending protection M 16 x 1.5	**08100116 00**	Battery holder for 4 round cells for battery compartment	**27020086 00**
Cable gland with bending protection M 20 x 1.5	**08100120 00**	Battery holder for 9 V battery for battery compartment	**27020087 00**
Hand strap (B180/220)	**27020083 00**	Hook set for wall-mounting (B 180/220)	**27020084 00**
Carrying strap (B380)	**28020580 00**		

Limanda

- Polyamide hand held enclosure for automation engineering measurement control and data acquisition
- Large component space
- Interface ports for acceptance of interfaces
- Variable enclosure depth (optional)
- Handle set for acceptance of enable button and batteries

Included in delivery

Enclosure with upper and lower mold, each with mounting bosses including seal and border profile, 3 cover panels for interface compartments, screws and material for front panel mounting.
Front panels must be ordered separately.

Technical Data

Color	Black-gray, similar to RAL 7021
Material	Polyamide enclosure, anodized aluminum front panel
Ingress Protection	IP 65 to EN 60529, NEMA 12
Surface Resistance	10^{12} Ohm to DIN 53482
Disruptive Strength	>7Nm to DIN 50014
Flammability	UL 94 V2
Temperature Range	-40°F to +140°F

Enclosure Type	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Weight kg	Weight lbs
Limanda I	**27030300 00**	311 x 281 x 72	12.24 x 11.06 x 2.83	0.9	1.98
Limanda I EMC	**27030301 00**	311 x 281 x 72	12.24 x 11.06 x 2.83	1.0	2.20
Limanda I for OP17	**27030317 00**	311 x 281 x 97	12.24 x 11.06 x 3.82	1.4	3.09
Limanda II	**27030200 00**	270 x 248 x 64	10.63 x 9.76 x 2.52	0.7	1.54

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number
Limanda I front plate aluminum, natural anodized finish	**27030380 00**
Limanda I EMC front plate	**27030390 00**
Limanda II front plate, aluminum, natural anodized finish	**27030280 00**
Limanda I intermediate frame	**27030381 00**
Limanda I EMC intermediate frame	**27030088 00**
Limanda I handle set without push button	**27030083 00**
Limanda holder	**27030084 00**
Limanda I carrying strap	**27030085 00**
Limanda I quiver	**27030086 00**
Limanda II table stand (set = 2 pieces)	**27030087 00**
Limanda II quiver	**27030089 00**
Limanda I handle set with 3-stage enable button (right-hand version)	**85701001 00**
Limanda I handle set with 3-stage enable button (left-hand version)	**85701002 00**
Enable button (2-stage/1 make contact)	**83500001 00**
Emergency off switch (2 break contacts)	**83500002 00**
Cable connection with bending protection M 16	**08100116 00**
Cable connection with bending protection M 20	**08100120 00**
Cable connection with bending protection M 25	**08100125 00**
Inclination adapter for mounting directly on wall or machine	**50020001 00**
Inclination adapter for mounting directly onto 4949 Suspension System	**50020002 00**
Inclination adapter for mounting directly onto 4945 Suspension System	**50020003 00**
Inclination adapter for mounting directly on 4945 Suspension System	**50020004 00**
Inclination adapter for Limanda bracket on 4949 Suspension System	**50020005 00**
Inclination adapter for Limanda bracket on 4945 Suspension System	**50020006 00**
Inclination adapter for Limanda bracket on wall or machine	**50020007 00**

Pilot 250

- Polyamide hand held enclosure for automation engineering and data acquisition
- Large component space
- Version 3 with closed or front frame
- Rear battery compartment

Included in delivery

Enclosure with top and base unit, each with mounting bosses, battery compartment cover, fastening and enclosure screws.

Technical Data

Color	Base and lid: black gray, similar to RAL 7021 Rear cover: sapphire blue, similar to RAL 5003
Material	Polyamide
Ingress Protection	IP 65 to EN 60529
Gasket	Continuous foamed-in Neoprene
Impact Resistance	>7 Nm, EN 50014
Temperature Range	-40°F to +140 ° F

Enclosure Type	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Version Upper liner
Pilot 250/1	**29250001 00**	140/120 x 280 x 86	5.51/4.72 x 11.02 x 3.38	Closed
Pilot 250/2	**29250002 00**	140/120 x 280 x 86	5.51/4.72 x 11.02 x 3.38	as frame for front panel mounting

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number
Front panel, aluminum for Pilot 250/2	**29250101 00**
Magnet holder, round	**29250102 00**
Battery holder for mounting 4 rounds cells in the enclosure base	**29250103 00**
Battery holder for mounting a 9V battery in the enclosure base	**29250104 00**
Mounting set (2 hooks, 2 bolts with screws)	**29250105 00**
Cable gland with bending protection M 16 x 1.5	**08100116 00**
Cable gland with bending protection M 20 x 1.5	**08100120 00**
Enable button (3-stage)	**on request**

Mobile Controls Units 2911, 2912, 2913

- Polyamide hand held enclosure for automation engineering and data acquisition
- Large component space
- Variable length using profile technology
- Optional EMC suitable version with internal enclosure in aluminum

Included in delivery

Enclosure system consisting of Polyamide internal enclosure with end caps, two PVC side cover profiles, aluminum front panel, rear panel, 2 external end caps, with M 25 x 1.5 threaded hole for cable gland.

Technical Data

Color	End caps: yellow, similar to RAL 1021 Body and rear panel : black, similar to RAL 9005
Material	Inner enclosure body: Polyamide Side cover: Black PVC extrusion Rear panel: Black laminated board, 3mm, plastic-coated End caps: Yellow polyamide
Ingress Protection	IP 65 to EN 60529, NEMA 12
Gasket	Neoprene
Impact Resistance	>7 Nm, EN 50014
Temperature Range	-4°F to +158°F

External Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number Standard Complete	Part Number EMC Complete	Part Number Standard Enclosure Body with Front Panel	Part Number Standard Rear Panel Separate	Part Number Standard Front Panel Separate	Part Number Standard Rear Panel Recessed
191 x 280 x 76	7.52 x 11.02 x 2.99	**29111000 00**	**29141000 00**	**29110000 00**	**29110001 00**	**29110002 00**	-
191 x 330 x 76	7.52 x 12.99 x 2.99	**29121000 00**	**29151000 00**	**29120000 00**	**29120001 00**	**29120002 00**	-
191 x 440 x 76	7.52 x 17.32 x 2.99	**29131000 00**	**29161000 00**	**29130000 00**	**29130001 00**	**29190002 00**	**29130003 00**
Special length	Special length	**29191000 00**	**29171000 00**	**29190000 00**	**29190001 00**	**29190002 00**	-

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number
Wall mount element including enclosure modification	**29001000 00**
Modification for crane cable gland	**29000030 00**
Cable gland with bending protection M 25 x 1.5	**08100125 00**
Cable gland reduction M 25 / M 12	**08102512 00**
Cable gland reduction M 25 / M 16	**08102516 00**
Cable gland reduction M 25 / M 20	**08102520 00**
Crane cable gland for cable diameter 10-22 mm	**29000800 00**
M4 spring nuts for internal mounting, set of 4 pieces	**29000050 00**
PCB mounting set (4 pieces including spring nuts)	**29000060 00**
Wall mount bracket (set single)	**29000070 00**
Magnetic wall mount, 1 piece	**29000080 00**
EMC cable gland with bending protection M 25 x 1.5	**08100125 00**

Mobile Controls Units 2930, 2940, 2950

- Hand held enclosure for measurement control and automation engineering
- Robust design (Polyamide or Polyester)
- Versions with handle and integrated cable entry (2940, 2930 standard)

Included in delivery

2930/2940: enclosure with handle, including cable gland M 20 x 1.5, front panel with assembly screw and wall-mount bracket.
2950: two-part Polyester enclosure with self-adhesive aluminum front panel, enclosure screws and wall-mount bracket

Technical Data

Material	2930, 2940	Polyamide
	2950	Polyester
Temperature Range	2930, 2940	-40°F to +140°F
	2950	-13°F to +194°F
Ingress Protection	2930, 2940	IP 65 to EN 60529
	2950	IP 66 to EN 60529
Gasket	2930, 2940	Stamped foam rubber gasket
	2950	Round Neoprene gasket
Color		Yellow, similar to RAL 1021

Enclosure Type	Part Number	Dimensions Including Handle mm W x L x H	Dimensions Including Handle Inches W x L x H	Dimensions Front Panel mm W x H	Dimensions Front Panel Inches W x H	Mounting Depth mm	Mounting Depth Inches
2940	**29400200 00**	70 x 93 x 190	2.75 x 3.66 x 7.48	61 x 59	2.40 x 2.32	67	2.64
2930	**29300100 00**	115 x 93 x 200	4.53 x 3.66 x 7.87	106 x 69	4.17 x 2.72	67	2.64
2950	**29500100 00**	164 x 116 x 295	6.46 x 4.57 x 11.61	70 x 280	2.75 x 11.02	71	2.79

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number
Mounting plate 2930	**29310000 00**
Wall-mount bracket (2 pieces with screws)	**29600100 00**
Cable gland M 25 x 1.5 (2950)	**08100125 00**

Mobile Controls Units 2921

- Polyamide hand held enclosure for automation and control technology
- Version with handle and integrated cable exit
- Large component space

Included in delivery

Enclosure with handle, including cable gland M 20 x 1.5, front panel, enclosure and front panel screws, and wall-mount bracket.

Technical Data

Material Body	Polyamide
Cable Gland Material	Polyamide
Front Panel Material	Black Polyester
Body color	Yellow, similar to RAL 1021
Ingress Protection	IP 65 to EN 60529, NEMA 12
Impact Resistance	>7 Nm, EN 50014
Gasket Material	Stamped foam rubber
Temperature Resistance	-40° to +140°F

Enclosure Type	Part Number	Dimensions Including Handle mm W x L x H	Dimensions Including Handle Inches W x L x H	Dimensions Front Panel mm W x H	Dimensions Front Panel Inches W x H	Mounting Depth mm	Mounting Depth Inches
Pilot 110	**29211000 00**	85 x 85 x 206	3.35 x 3.35 x 8.11	77 x 77	3.03 x 3.03	63.5	2.5
Pilot 120	**29212000 00**	115 x 85 x 206	4.53 x 3.35 x 8.11	107 x 77	4.21 x 3.03	63.5	2.5
Pilot 130	**29213000 00**	85 x 85 x 236	3.35 x 3.35 x 9.29	77 x 107	3.03 x 4.21	63.5	2.5
Pilot 140	**29214000 00**	160 x 85 x 226	6.30 x 3.35 x 8.90	152 x 97	5.98 x 3.82	63.5	2.5
Pilot 150	**29215000 00**	105 x 85 x 281	4.13 x 3.35 x 11.06	97 x 152	3.82 x 5.98	63.5	2.5

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Description	Part Number
External wall mounting bracket	**10094657 00**
Extra power cable PG 11	**10087222 00**
Extra power cable PG 16	**10087224 00**
Magnetic holder, self-adhesive	**29000080 00**
External wall mounting bracket for 29214000 and 29215000	**10094657 00**

Tastomat

- Developed for use as a factory floor control unit in tough operating conditions
- Gasketed to provide an ingress protection of IP 65 and made of glassbead-reinforced polyamide.
- Designed for easier handling with molded-in ribs in the bottom half of the enclosure

Included in delivery
Lid with seal, base, 6 enclosure screws M 4 x 28 and 4 self-tapping screws for mounting plate

Technical Data

Material	Polyamide, 30% glassbead-reinforced
Color	Light gray, similar to RAL 7035. Special colors on request. Minimum order quanitites apply
Ingress Protection	IP 65 to DIN EN 60529
Flammability	UL 94 HB/1.6

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
TAS 100	**08100000 00**	251 x 91 x 46	9.88 x 3.58 x 1.81
TAS 200	**08200000 00**	251 x 91 x 80	9.88 x 3.58 x 3.15

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

ARTEB 115 / 225 / 335 / 555 / 655 / 865

- Ergonomic handheld enclosure made of durable ABS plastic
- Design concept spanning 6 sizes in numerous combinations with end caps in black and 6 colors
- All sizes are membrane keypad ready
- Battery compartments with integrated front panels to prevent contact with other built-in components

Included in delivery

ART 115: Lid and base, screw, screw cover
ART 225, 335: Lid and base
ART 555, 655, 865: Lids and bases including tool operated snap locks for caps
Please order end caps separately.

Technical Data

Material	ABS
Color	Agate gray, similar to RAL 7038. Special colors available. Minimum order quantities apply.
Ingress Protection	ART 115: IP 40/DIN EN 60529; ART 225 up to 865, IP 40/DIN EN 60529, can be increased to IP 65/DIN EN 60529 with set of seals ART..DI
Flammability	UL 94 HB/1.6
Temperature Resistance	-58°F to +158°F

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
ART 115 F	**34111511 00**	78 x 45 x 18	3.07 x 1.77 x 0.71
ART 225 F	**34122511 00**	98 x 55 x 20	3.86 x 2.16 x 0.79
ART 335 DIS	**34133512 00**	130 x 75 x 26	5.12 x 2.95 x 1.02
ART 335 F	**34133511 00**	130 x 75 x 26	5.12 x 2.95 x 1.02
ART 555 DIS	**34155512 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 555 F	**34155511 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 555 DIS with BE 30	**34155582 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 555 F with BE 30	**34155581 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 555 DIS with BE 60	**34155592 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 555 F with BE 60	**34155591 00**	165 x 92 x 30	6.50 x 3.62 x 1.18
ART 655 DIS	**34165512 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 655 F	**34165511 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 655 DIS with BE 30	**34165582 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 655 F with BE 30	**34165581 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 655 DIS with BE 60	**34165592 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 655 F with BE 60	**34165591 00**	204 x 110 x 41	8.03 x 4.33 x 1.61
ART 865 DIS	**34186512 00**	236 x 125 x 41	9.29 x 4.92 x 1.61
ART 865 F	**34186511 00**	236 x 125 x 41	9.29 x 4.92 x 1.61
ART 865 DIS with BE 30	**34186582 00**	236 x 125 x 41	9.29 x 4.92 x 1.61
ART 865 F with BE 30	**34186581 00**	236 x 125 x 41	9.29 x 4.92 x 1.61
ART 865 DIS with BE 60	**34186592 00**	236 x 125 x 41	9.29 x 4.92 x 1.61
ART 865 F with BE 60	**34186591 00**	236 x 125 x 41	9.29 x 4.92 x 1.61

F= continuous membrane area DIS = display opening BE=battery compartment
Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number	Description
ART 115 KO-1016	**34111523 00**	Top end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 115 KO-3000	**34111525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 115 KO-5015	**34111527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 115 KO-6027	**34111522 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 115 KO-7037	**34111524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 115 KO-7038	**34111521 00**	Top end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 115 KO-IR	**34111526 00**	Top end caps, black, infrared-permissive (5 pcs.)
ART 225 KO-1016	**34122523 00**	Top end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 225 KO-3000	**34122525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 225 KO-5015	**34122527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 225 KO-6027	**34122522 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 225 KO-7037	**34122524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 225 KO-7038	**34122521 00**	Top end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 225 KO-IR	**34122526 00**	Top end caps, black, infrared-permissive (5 pcs.)
ART 225 KU-1016	**34122533 00**	Bottom end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 225 KU-3000	**34122535 00**	Bottom end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 225 KU-5015	**34122537 00**	Bottom end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 225 KU-6027	**34122532 00**	Bottom end caps, light green, similar to RAL 6027 (5 pcs.)
ART 225 KU-7037	**34122534 00**	Bottom end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 225 KU-7038	**34122531 00**	Bottom end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 225 KO-IR	**34122526 00**	Bottom end caps, black, infrared-permissive (5 pcs.)
ART 225 DI	**34122551 00**	Seal set for ARTEB 225 to achieve IP 65 (5 pcs.)
ART 335 KO-1016	**34133523 00**	Top end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 335 KO-3000	**34133525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 335 KO-5015	**34133527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 335 KO-6027	**34133522 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 335 KO-7037	**34133524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 335 KO-7038	**34133521 00**	Top end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 335 KO-IR	**34133526 00**	Top end caps, black, infrared-permissive (5 pcs.)
ART 335 KU-1016	**34133533 00**	Bottom end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 335 KU-3000	**34133535 00**	Bottom end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 335 KU-5015	**34133537 00**	Bottom end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 335 KU-6027	**34133532 00**	Bottom end caps, light green, similar to RAL 6027 (5 pcs.)
ART 335 KU-7037	**34133534 00**	Bottom end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 335 KU-7038	**34133531 00**	Bottom end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 335 KO-IR	**34133526 00**	Bottom end caps, black, infrared-permissive (5 pcs.)
ART 335 BTU 1	**34133541 00**	Partitiions for battery compartment (5 pcs.)
ART 335 BTU 2	**34133542 00**	Partitions for battery compartment (5 pcs.)
ART 335-DI	**34133551 00**	Seal set for ARTEB 335 to achieve IP 65 (5 pcs.)
ART 335 DIS	**34130041 00**	Display screen for ARTEB 335 DIS (5 pcs.)
ART 555 KO-1016	**34155523 00**	Top end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 555 KO-3000	**34155525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 555 KO-5015	**34155527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 555 KO-6027	**34155522 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 555 KO-7037	**34155524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 555 KO-7038	**34155521 00**	Top end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 555 KO-IR	**34155526 00**	Top end caps, black, infrared-permissive (5 pcs.)
ART 555 KU-1016	**34155533 00**	Bottom end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 555 KU-3000	**34155535 00**	Bottom end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 555 KU-5015	**34155537 00**	Bottom end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 555 KU-6027	**34155532 00**	Bottom end caps, light green, similar to RAL 6027 (5 pcs.)
ART 555 KU-7037	**34155534 00**	Bottom end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 555 KU-7038	**34155531 00**	Bottom end caps, agate gray, similar to RAL 7038 (5 pcs.)

Model Number	Part Number	Description
ART 555 BEU-2MN	**34155561 00**	Battery shaft for ARTEB 555 (5 pcs.)
ART 500 DIS	**34150041 00**	Display screen for ARTEB 555 DIS (5 pcs.)
ART 555-DI	**34155551 00**	Seal set for ARTEB 555 DIS to achieve IP 65 (5 pcs.)
ART 555 BTU 1	**34155541 00**	Partitions for battery compartment (5 pcs.)
ART 655 BEU-2MN	**34165561 00**	Battery shaft for ARTEB 655 (5 pcs.)
ART 655 KO-1016	**34165523 00**	Top end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 655 KO-3000	**34165525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 655 KO-5015	**34165527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 655 KO-6027	**34165522 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 655 KO-7037	**34165524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 655 KO-7038	**34165521 00**	Top end caps, agate gray, similar to RAL 7038 (5 pcs.)
ART 655 KO-IR	**34165526 00**	Top end caps, infrared-permissive (5 pcs.)
ART 655 KU-1016	**34165533 00**	Bottom end caps, sulphur yellow, similar to RAL 1016 (5 pcs.)
ART 655 KU-3000	**34165535 00**	Bottom end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 655 KU-1015	**34165537 00**	Bottom end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 655 KU-6027	**34165532 00**	Bottom end caps, light green, similar to RAL 6027 (5 pcs.)
ART 655 KU-7037	**34165534 00**	Bottom end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 655 KU-7038	**34165531 00**	Bottom end caps, agate gray, similar to RAL 7038
ART 655 BTU 1	**34165541 00**	Partitions for battery compartment (5 pcs.)
ART 655 BTU 2	**34165542 00**	Partitions for battery compartment (5 pcs.)
ART 600 DIS	**34160041 00**	Display screen for ARTEB 655 DIS (5 pcs.)
ART 655-DI	**34165551 00**	Seal set for ARTEB 655 to achieve IP 65 (5 pcs.)
ART 865 BEU -2MN	**34165561 00**	Battery shaft for ARTEB 865 (5 pcs.)
ART 865 KO-1016	**34186561 00**	Top end caps, sulfur yellow, similar to RAL 7035 (5 pcs.)
ART 865 KO-3000	**34186525 00**	Top end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 865 KO-5015	**34165527 00**	Top end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 865 KO-6027	**34186527 00**	Top end caps, light green, similar to RAL 6027 (5 pcs.)
ART 865 KO-7037	**34186524 00**	Top end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 865 KO-7038	**34186521 00**	Top end caps, agate gray, similar to RAL 7038
ART 865 KO-IR	**34186526 00**	Top end caps, infrared-permissive (5 pcs.)
ART 865 KU-1016	**34186533 00**	Bottom end caps, sulfur yellow, similar to RAL 7035 (5 pcs.)
ART 865 KU-3000	**34186535 00**	Bottom end caps, flame red, similar to RAL 3000 (5 pcs.)
ART 865 KU-5015	**34186537 00**	Bottom end caps, sky blue, similar to RAL 5015 (5 pcs.)
ART 865 KU-6027	**34186532 00**	Bottom end caps, light green, similar to RAL 6027 (5 pcs.)
ART 865 KU-7037	**34186534 00**	Bottom end caps, dust gray, similar to RAL 7037 (5 pcs.)
ART 865 KU-7038	**34186531 00**	Bottom end caps, agate gray, similar to RAL 7038
ART 865 BTU 1	**34186541 00**	Partitions for battery compartment (5 pcs.)
ART 865 BTU 2	**34186542 00**	Partitions for battery compartment (5 pcs.)
ART 865 BTU 3	**34186543 00**	Partitions for battery compartment (5 pcs.)
ART 800 DIS	**34180041 00**	Display screen for ARTEB 865 DIS (5 pcs.)
ART 865-DI	**34186551 00**	Seal set for ARTEB 865 to achieve IP 65 (5 pcs.)
ART SV-HB-7038	**34155573 00**	Hand operated snap lock (10 pcs.)
ART SV-SR-7038	**34155572 00**	Snap lock, blocking (10 pcs.)
BH 2MC[1]	**34165572 00**	Battery holder L 52.6 x W 26.9 x H 12.0 (5 pcs.)
BH 4MC[1]	**34165573 00**	Battery holder L 50.6 x W 17.8 x H 12.8 (5 pcs.)
BH 2MN[3]	**34165574 00**	Battery holder L 58.0[4] x W31.9 x H 17.2 (5 pcs.)
BH 3MN[3]	**34165575 00**	Battery holder L 58.2[4] x W 49.7 x H 17.5 (5 pcs.)
BH 4MN-BL[3]	**34165576 00**	Battery holder L 58.6[4] x W 33.0 x H31.6 (5 pcs.)
BH 6MN-BL3	**34165577 00**	Battery holder L 59.1[4] x W48.4 H 31.5 (5 pcs.)
BH 9V CLIP	**34165578 00**	Cable: approximately 100mm long
ASC 1	**34090010 00**	Set-up clip, agate gray, similar to RAL 7038
	34333574 00	Dismantling tool

KO = Cap at Top KU = Cap at Bottom IR = Infrared Permissive

1 Connection with soldering tags

2 For battery shaft

3 Connection clip included

4 Length including clip: additional 8 mm

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

ALUBOS

BOPLA

- Ergonomic enclosure ideally suited to handheld or small instrument designs
- Available with profiles that are closed, divided horizontally, or open on one side
- High mechanical loading capacity of the profile and EMC screening ensure a high level of protective function.

Included in delivery

ABP: Closed extrusion only. Black powder-coated aluminum sold by the meter

ABPH: Split extrusion only. Black powder-coated aluminum sold by the meter

ABPU: Extrusion open on one side. Black powder-coated aluminum sold by the meter.

Please order end caps and accessories separately.

Technical Data

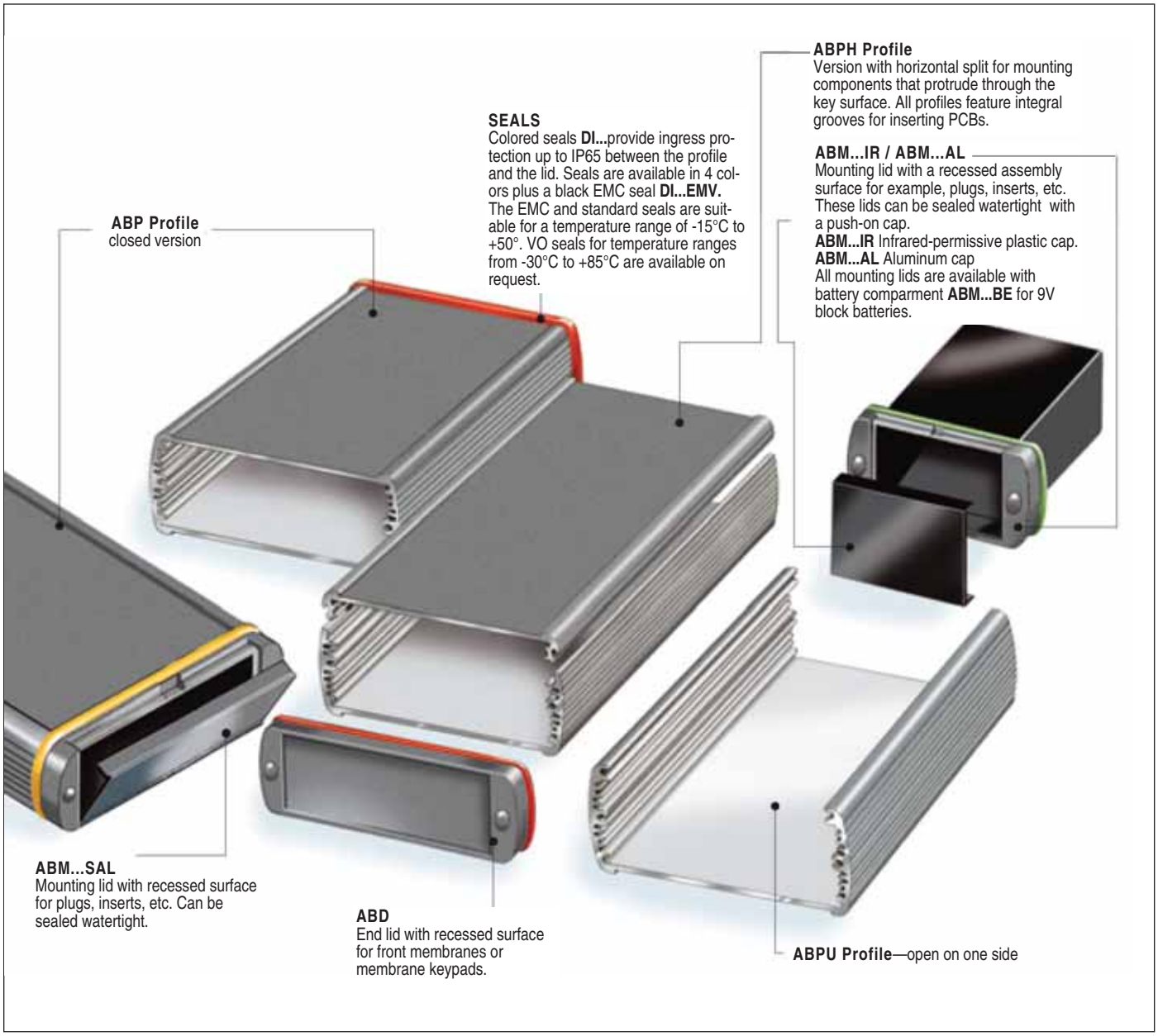
Material	Aluminum extrusion, Al Mg Si 0.5, powdercoated; aluminum diecast lid GD-Al Si 12, powdercoated
Color	Powdercoated Satin Black, similar to RAL 9005, fine texture finish. Special colors on request. Minimum order quantities apply
Ingress Protection	IP 65, DIN EN 60529 IP 40 when using parallel adapters (AP-AP) with 600, 800 and 1000 extrusions

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H
ABP 600-1000	**84060000 00**	1000 x 57 x 32	39.37 x 2.24 x 1.26
ABP 800-1000	**84080000 00**	1000 x 82 x 32	39.37 x 3.23 x 1.26
ABP 820-1000	**84820000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABP 1000-1000	**84100000 00**	1000 x 106 x 32	39.37 x 4.17 x 1.26
ABP 1040-1000	**84040000 00**	1000 x 108 x 32	39.37 x 4.25 x 1.26
ABP 1300-1000	**84130000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABP 1600-1000	**84160001 00**	1000 x 169 x 52	39.37 x 6.65 x 2.05
ABP 1680-1000	**84680000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23
ABP 2070-1000	**84207000 00**	1000 x 210 x 74	39.37 x 8.27 x 2.91
ABPH 600-1000	**84066001 00**	1000 x 57 x 32	39.37 x 2.24 x 1.26
ABPH 800-1000	**84086001 00**	1000 x 82 x 32	39.37 x 3.23 x 1.26
ABPH 820-1000	**84826000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABPH 1000-1000	**84106001 00**	1000 x 106 x 32	39.37 x 4.17 x 1.26
ABPH 1040-1000	**84046000 00**	1000 x 108 x 42	39.37 x 4.25 x 1.65
ABPH 1300-1000	**84136000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABPH 1680-1000	**84686000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23
ABPU 820-1000	**84827000 00**	1000 x 82 x 22	39.37 x 3.23 x 0.87
ABPU 1040-1000	**84047000 00**	1000 x 108 x 42	39.37 x 4.25 x 1.65
ABPU 1300-1000	**84137000 00**	1000 x 138 x 34	39.37 x 5.43 x 1.34
ABPU 1680-1000	**84687000 00**	1000 x 169 x 82	39.37 x 6.65 x 3.23

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Pictures top to bottom: Group shot showing application using parallel adapter **(AB-AP)** and axial adapter **(ABA)**, as well as closed profiles with endcaps; Wall mount application using wall brackets **(AB-WL)**; Application featuring handles **(AB...HS)**; and Application using parallel adapter **(AB-AP)**.

The Anatomy of ALUBOS



Depending on requirements, various lid designs are available to complete the Alubos. These designs include simple end lids, lids with battery compartments, and mounting lids with aluminum caps or infrared-permissive plastic caps.

Diecast aluminum lids, diecast aluminum mounting lid with aluminum hinged flap, and diecast aluminum mounting lid with aluminum profile cap. All lids can be sealed with colored gaskets up to IP 65.

Diecast aluminum lids with recessed surface for mounting front membranes or membrane keypads. Colored seals provide ingress protection up to IP 65.

Accessories

Model Number	Part Number	Description
ABM 600 AL	84602000 00	Mounting lid, aluminum profile cap
AMB 600 IR	84063000 00	Mounting lid, infrared-permissive plastic cap
ABM 600 SAL	84064000 00	Mounting lid, aluminum hinged flap
ABM 600 AL-BE	84062100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 600 IR-BE	84063100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 600 SAL-BE	84064100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 600	84061000 00	End lid
DI 600-EMV	84200615 00	EMC seal, black (10 pieces)
DI 600-5002	84200614 00	Seal, ultramarine (10 pieces)
DI 600-3000	84200611 00	Seal, flame red (10 pieces)
DI 600-1021	84200612 00	Seal, yellow (10 pieces)
DI 600-6000	84200613 00	Seal, patina green (10 pieces)
ABM 800 AL	84082000 00	Mounting lid, aluminum profile cap
ABM 800 IR	84083000 00	Mounting lid, infrared-permissive plastic cap
ABM 800 SAL	84084000 00	Mounting lid, aluminum hinged flap
ABM 800 AL-BE	84082100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 800 IR-BE	84083100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 800 SAL-BE	84084100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 800	84081000 00	End lid, powder-coated aluminum
ABA 800-1000	84002000 00	Axial adapter for ALUBOS 800/100
DI 800-EMV	84200815 00	EMC seal, black (10 pieces)
DI 800-5002	84200814 00	Seal, ultramarine (10 pieces)
DI 800-3000	84200811 00	Seal, flame red (10 pieces)
DI 800-1021	84200812 00	Seal, yellow (10 pieces)
DI 800-6000	84200813 00	Seal, patina green (10 pieces)
ABD 820	84821000 00	End lid, black seal, screws, screw cover
DI 820-EMV	84208215 00	EMC seal, black (10 pieces)
DI 820-5002	84208214 00	Seal, ultramarine (10 pieces)
DI 820-3000	84208211 00	Seal, flame red (10 pieces)
DI 820-1021	84208212 00	Seal, yellow (10 pieces)
DI 820-6000	84208213 00	Seal, patina green (10 pieces)
ABPU 820-1000 FP2	84828000 00	Front panel for ABPU 820-1000
ABM 1000 AL	84102000 00	Mounting lid, aluminum profile cap
ABM 1000 IR	84103000 00	Mounting lid, infrared-permissive plastic cap
ABM 1000 SAL	84104000 00	Mounting lid, aluminum hinged flap
AMB 1000 AL-BE	84202100 00	Mounting lid, aluminum profile cap, battery compartment 9V
ABM 1000 IR-BE	84103100 00	Mounting lid, infrared-permissive plastic cap, battery compartment 9V
ABM 1000 SAL-BE	84104100 00	Mounting lid, aluminum hinged flap, battery compartment 9V
ABD 1000	84101000 00	End lid
ABA 800-1000	84002000 00	Axial adapter for ALUBOS 800/1000
DI 1000-EMV	84201015 00	EMC seal, black (10 pieces)
DI 1000-5002	84201014 00	Seal, ultramarine (10 pieces)
DI 1000-3000	84201011 00	Seal, flame red (10 pieces)
DI 1000-1021	84201012 00	Seal, yellow (10 pieces)
DI 1000-6000	84201013 00	Seal, patina green (10 pieces)
ABM 1040 AL	84042000 00	Mounting lid, aluminum profile cap
ABM 1040 SAL	84044000 00	Mounting lid, aluminum hinged flap
ABM 1040	84041000 00	End lid
DI 1040-EMV	84200415 00	EMC seal, black (10 pieces)
DI 1040-5002	84200414 00	Seal, ultramarine (10 pieces)
DI 1040-3000	84200411 00	Seal, flame red (10 pieces)
DI 1040-1021	84200412 00	Seal, yellow (10 pieces)
DI 1040-6000	84200413 00	Seal, patina green (10 pieces)
ABPU 1040-1000 FP2	84048000 00	Front panel for ABPU 1040-1000
ABM 1300 AL	84132000 00	Mounting lid, aluminum profile cap
ABD 1300 SAL	84134000 00	Mounting lid, aluminum hinged flap
ABM 1300	84131000 00	End lid
DI 1300-EMV	84201315 00	EMC seal, black (10 pieces)
DI 1300-5002	84201314 00	Seal, ultramarine (10 pieces)
DI 1300-3000	84201311 00	Seal, flame red (10 Ppieces)
DI 1300-1021	84201312 00	Seal, yellow (10 pieces)
DI 1300-6000	84201313 00	Seal, patina green (10 pieces)
ABPU 1300-1000 FP2	84138000 00	Front panel for ABPU 1300-1000
ABD 1600	84161000 00	End lid, black seals, screws, screw cover for ABD 1600-1000
DI 1600-EMV	84201615 00	EMC seal, black (10 pieces)
DI 1600-5002	84201614 00	Seal, ultramarine (10 pieces)
DI 1600-3000	84201616 00	Seal, flame red (10 pieces)
DI 1600-1021	84201612 00	Seal, yellow (10 pieces)
DI 1600-6000	84201613 00	Seal, patina green (10 pieces)
ABD 1680	84168100 00	End lid, black seals, screws, screw cover for ABD 1680-1000
DI 1680-EMV	84206815 00	EMC seal, black (10 pieces)
DI 1680-5002	84206814 00	Seal, ultramarine (10 pieces)
DI 1680-3000	84206811 00	Seal, flame red (10 pieces)
DI 1680-1021	84206812 00	Seal, yellow (10 pieces)
DI 1680-6000	84206813 00	Seal, patina green (10 pieces)
ABPU 1680-1000 FP3	84689000 00	Front panels for ABPU 1680-1000
ABD 2070	84271000 00	End lid, black seals, screws, screw covers for ABP 2070-1000
DI 2070-EMV	84202715 00	EMC seal, black (10 pieces)
DI 2070-5002	84202714 00	Seal, ultramarine (10 pieces)
DI 2070-3000	84202711 00	Seal, flame red (10 pieces)
DI 2070-1021	84202712 00	Seal, yellow (10 pieces)
DI 2070-6000	84202713 00	Seal, patina green (10 pieces)
AB-1000 WLV	84105000 00	ALUBOS adjustable wall bracket
AB-WL	84005000 00	Wall brackets for use with 600/800/1000/1300
AB-WL 1	84006001 00	Wall brackets for use with 820
AB-WL 2	84007000 00	Wall brackets for use with 1040
AB-WL 3	84008000 00	Wall brackets for use with 1600/1680/2070
AB 600 MKL	84006600 00	Mounting clamp for ALUBOS 600
AB 800 MKL	84006400 00	Mounting clamp for ALUBOS 800
AB 1000 MKL	84006500 00	Mounting clamp for ALUBOS 1000
AB-MKL	84006300 00	Mounting clamp for ALUBOS 600/800/1000
AB 1600 HS	84162000 00	Handle for use with ALUBOS 1600/1680
AB 2000 HS	84200000 00	Handle for use ALUBOS 2070
AB-AP 60	84006000 00	Parallel adapter for ALUBOS 600/800/1000, 60 mm length
AB-AP 100	84010000 00	Parallel adapter for ALUBOS 600/800/1000, 100 mm length
AB-AP 150	84015000 00	Parallel adapter for ALUBOS 600/800/1000, 150 mm length
ABA 800-1000	84002000 00	Axial adapter, adapts ABP 800 to an ABP 1000
AB-GF	84006700 00	Rubber feet

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

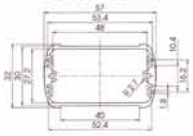
Application showing battery compartment with a closed profile, diecast lid, and seal.

Besides stationary wall brackets, as shown on page 95, an adjustable wall bracket is offered, which allows angles from 0° to 90°.

This Alubos mounting lid, ABM...SAL, can be sealed watertight, even with hinged flap.

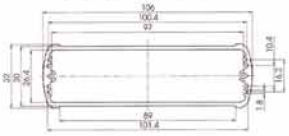
Closed Profiles

ABP 600



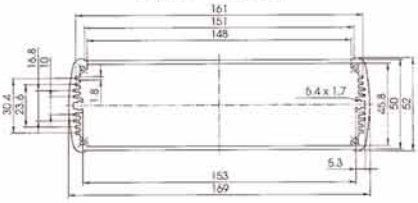
ABP 800

ABP 820

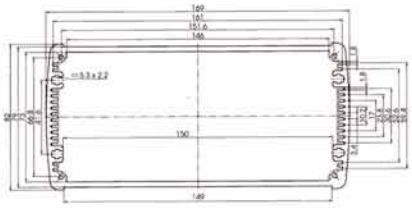
ABP 1000

ABP 1040

ABP1300

ABP 1600



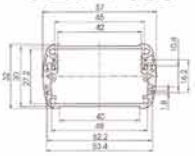
ABP 1680



ABP 2070

Split Profiles

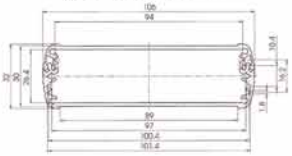
ABPH 600



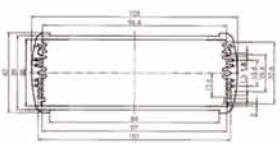
ABPH 800

ABPH 820

ABPH 1000

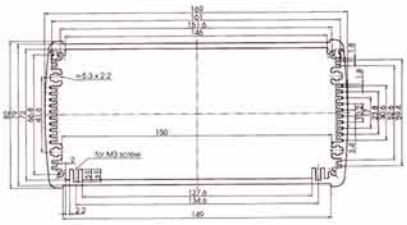


ABPH 1040



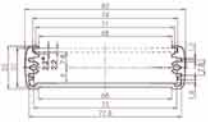
ABPH 1300

ABPH 1680

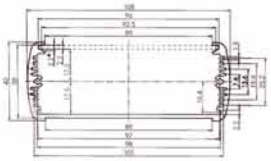


U-Shaped Profiles

ABPU 820

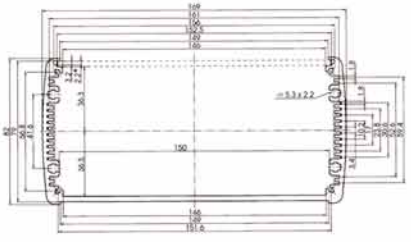


ABPU1040



ABPU 1300

ABPU 1680



BOS

- Versatile ABS handheld enclosure available in either black or gray and over 50 configurations
- Each enclosure provides different equipment features and accessories
- Ideal enclosure for use with a wide range of mobile data collection and processing applications

Included in delivery

Lid, base, and enclosure screws as required. See website for more detailed information on various configurations.

Technical Data

Material	ABS; display screen, clear polycarbonate
Color	Black, similar to RAL 9005 and/or agate gray, similar to RAL 7038. Special colors on request.
Ingress Protection	IP 40/DIN VDE 0470
Surface Resistance	$>10^{14}$ Ohm to DIN 53482
Flammability	UL 94 HB/1.6

Model Number	Type	Part Number Black	Part Number Agate Gray	Dimensions mm L x W x H	Dimensions Inches L x W x H	Display Opening	Battery Compartment For	Ingress Protection DIN EN 60529
BOS 400	With battery compartment	**34400000 00**	-	100 x 65 x 24	3.94 x 2.56 x 0.94	-	9 Volt	IP 40
BOS 400 ASC	Includes integrated set-up clip	**34400500 00**	-	100 x 65 x 24	3.94 x 2.56 x 0.94	-	9 Volt	IP 40
BOS 401	Without battery compartment	**34401000 00**	-	100 x 65 x 24	3.94 x 2.56 x 0.94	-	-	IP 40
BOS 401 ASC	Includes integrated set-up clip	**34401500 00**	-	100 x 65 x 24	3.94 x 2.56 x 0.94	-	-	IP 40
BOS 500	With panoramic display screen	**34500000 00**	**34500003 00**	120 x 60 x 25	4.72 x 2.36 x 0.98	x	9 Volt	IP 40
BOS 501	With display screen	**34501000 00**	**34501002 00**	120 x 60 x 25	4.72 x 2.36 x 0.98	x	9 Volt	IP 40
BOS 502	Without display opening	**34502000 00**	**34502002 00**	120 x 60 x 25	4.72 x 2.36 x 0.98	-	9 Volt	IP 40
BOS 503	With membrane keypad area	**34503000 00**	**34503001 00**	120 x 60 x 25	4.72 x 2.36 x 0.98	-	9 Volt	IP 40
BOS 600	With display screen	**34600000 00**	-	172 x 77 x 25	6.77 x 3.03 x 0.98	x	9 Volt	IP 40
BOS 601	With membrane keypad area	**34601000 00**	-	172 x 77 x 25	6.77 x 3.03 x 0.98	-	9 Volt	IP 40
BOS 602	With loudspeaker grill	**34602000 00**	-	172 x 77 x 25	6.77 x 3.03 x 0.98	-	3 AA	IP 40
BOS 700	With display opening and battery compartment	**34700000 00**	-	150 x 80 x 30	5.90 x 3.15 x 1.18	x	9 Volt	IP 40
BOS 701	With display opening and battery compartment	**34701000 00**	-	150 x 80 x 30	5.90 x 3.15 x 1.18	x	9 Volt	IP 40
BOS 704	With slide for switch	**34704000 00**	-	150 x 80 x 30	5.90 x 3.15 x 1.18	x	9 Volt	IP 40
BOS 705	With slide for switch	**34705000 00**	-	150 x 80 x 30	5.90 x 3.15 x 1.18	x	9 Volt	IP 40
BOS 750	With panoramic display screen	**34750000 00**	**34750001 00**	157 x 84 x 30	6.18 x 3.31 x 1.18	x	9 Volt	IP 40
BOS 751	With display screen	**34751000 00**	**34751001 00**	157 x 84 x 30	6.18 x 3.31 x 1.18	x	9 Volt	IP 40
BOS 752	With membrane keypad area	**34752000 00**	**34752001 00**	157 x 84 x 30	6.18 x 3.31 x 1.18	-	9 Volt	IP 40
BOS 753	With panoramic display screen	**34753000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	x	-	IP 40
BOS 754	With display screen	**34754000 00**	**34754001 00**	157 x 84 x 30	6.18 x 3.31 x 1.18	x	-	IP 40
BOS 755	With membrane keypad area	**34755000 00**	**34755001 00**	157 x 84 x 30	6.18 x 3.31 x 1.18	-	-	IP 40
BOS 756	With panoramic display screen, with slide for switch	**34756000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	x	9 Volt	IP 40
BOS 757	With display screen, with slide for switch	**34757000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	x	9 Volt	IP 40
BOS 758	With membrane keypad area, with slide for switch	**34758000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	-	-	IP 40
BOS 759	With panoramic display screen, with slide for switch	**34759000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	x	-	IP 40
BOS 760	With display screen, with slide for switch	**34760000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	x	-	IP 40
BOS 761	With membrane keypad area, with slide for switch	**34761000 00**	-	157 x 84 x 30	6.18 x 3.31 x 1.18	-	-	IP 40
BOS 800	With panoramic display screen	**34800000 00**	**34800001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	x	4 AA	IP 40
BOS 801	With display screen	**34801000 00**	**34801001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	-	4 AA	IP 40
BOS 802	Without display opening	**34802000 00**	**34802001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	-	4 AA	IP 40
BOS 803	With panoramic display screen	**34803000 00**	**34803001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	x	-	IP 40
BOS 804	With display screen	**34804000 00**	**34804001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	x	-	IP 40
BOS 805	Without display opening	**34805000 00**	**34805001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	-	-	IP 40
BOS 807	With membrane keypad area	**34807000 00**	**34807001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	-	4 AA	IP 40
BOS 808	With membrane keypad area	**34808000 00**	**34808001 00**	196 x 100 x 40	7.72 x 3.94 x 1.57	-	-	IP 40
BOS 900	Without battery compartment and carrying strap	**34900009 00**	**34900000 00**	211 x 100 x 26	8.31 x 3.94 x 1.02	x	-	IP 40
BOS 901	Without battery compartment with carrying strap	**34901009 00**	**34901000 00**	211 x 100 x 26	8.31 x 3.94 x 1.02	x	-	IP 65
BOS 902	With carrying strap	**34902009 00**	**34902000 00**	211 x 100 x 26	8.31 x 3.94 x 1.02	x	4 AA	IP 65
BOS 903	With carrying strap	**34903009 00**	**34903000 00**	224 x 106 x 26	8.82 x 4.17 x 1.02	x	2 - 9 Volt	IP 65
BOS 910	Without battery compartment	**34910009 00**	**34910002 00**	224 x 106 x 40	8.82 x 4.17 x 1.57	x	-	IP 65
BOS 911	Without battery compartment	**34911009 00**	**34911000 00**	224 x 106 x 40	8.82 x 4.17 x 1.57	x	-	IP 65
BOS 912	With battery compartment	**34912009 00**	**34912000 00**	224 x 106 x 40	8.82 x 4.17 x 1.57	x	4 AA	IP 65
BOS 913	With battery compartment	**34913009 00**	**34913000 00**	224 x 106 x 40	8.82 x 4.17 x 1.57	x	2 - 9 Volt	IP 65

ASC = including integrated set-up clip

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

BOS-Streamline

- The construction design permits parallel or inclined arrangement of the half-shells, as well as lengthwise and crosswise use
- Can be used for graphic-capable displays or as a membrane keypad model with continuous membrane keypad
- Ingress protection up to IP 65 depending on design.
- Can be adapted to customers individual requirements with membrane keypads and displays as well as mechanical processing and printing

Included in delivery

BS 400/402/600/602/800/802 F: Lid and base, 4 screws

BS 401/403/404/601/603/604/801/803/804 F: Lid and base, 4 screws, battery compartment including screws, battery contacts

BS 400/402/600/602/800/802 DIS: Lid and base, display window, adhesive film, 4 screws

BS 401/403/404/601/603/604/801/803/804 DIS: Lid and base, display window, adhesive film, 4 screws, battery compartment lid including screws, battery contacts

Technical Data

Color	Enclosure: graphite gray, similar to RAL 7024. Light gray, similar to RAL 7035. Silver coated (minimum order 100 pieces) Special colors on request
Material	ABS plastic
Protection Classifications	IP 40, without seal IP 65 DIN EN 60529, with seal

Model Number	Part Number	Dimensions mm L x W x H	Dimensions Inches L x W x H	Protection Classification	Description
BS 400 F-7024	**82400124 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, graphite gray similar to RAL 7024
BS 400 F-7035	**82400135 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, light gray, similar to RAL 7035
BS 400 F-S**	**82400100 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, silver
BS 400 DIS-7024	**82400224 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, graphite gray, similar to RAL 7024
BS 400 DIS-7035	**82400235 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, light gray, similar to RAL 7035
BS 400 DIS-S**	**82400200 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, silver
BS 401 F-7024	**82401124 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	Continuous membrane surface, battery compartment 3 AAA, graphite gray, similar to RAL 7024
BS 401 F-7035	**82401135 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	Continuous membrane surface, battery compartment 3 AAA, light gray, similar to RAL 7035
BS 401-F-S**	**82401100 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	Continuous membrane surface, battery compartment 3 AAA, silver
BS 401 DIS-7024	**82401224 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	With display cut-out, battery compartment 3 AAA, graphite gray, similar to RAL 7024
BS 401 DIS-7035	**82401235 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	With display cut-out, battery compartment 3 AAA, light gray, similar to RAL 7035
BS 401 DIS-S**	**82401200 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40	With display cut-out, battery compartment 3 AAA, silver
BS 402 F-7024	**82402124 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, fitted round cord seal, graphite gray, similar to RAL 7024
BS 402 F-7035	**82402135 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, fitted round cord seal, light gray, similar to RAL 7035
BS 402 F-S**	**82402100 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, fitted round cord seal, silver
BS 402 DIS-7024	**82402224 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, fitted round cord seal, graphite gray, similar to RAL 7024
BS 402 DIS-7035	**82402235 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, fitted round cord seal, light gray, similar to RAL 7035
BS 402 DIS-S**	**82402200 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, fitted round cord seal, silver
BS 403 F-7024	**82403124 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, battery compartment 3 AAA, graphite gray, similar to RAL 7024
BS 403 F-7035	**82403135 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, battery compartment 3 AAA, light gray, similar to RAL 7035
BS 403 F-S*	**82403100 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	Continuous membrane surface, battery compartment 3 AAA, silver
BS 403 DIS-7024	**82403224 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, battery compartment 3 AAA, graphite gray, similar to RAL 7024
BS 403 DIS-7035	**82403235 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, battery compartment 3 AAA, light gray, similar to RAL 7035
BS 403 DIS-S**	**82403200 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 40/IP 65*	With display cut-out, battery compartment 3 AAA, silver
BS 404 F-7024	**82404124 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, battery compartment 3 AAA, fitted round cord seal graphite gray similar to RAL 7024
BS 404 F-7035	**82404135 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, battery compartment 3 AAA, fitted round cord seal, light gray, similar to RAL 7035
BS 404 F-S**	**82404100 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	Continuous membrane surface, battery compartment 3 AAA, fitted round cord seal, silver
BS 404 DIS-7024	**82404224 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, battery compartment 3 AAA, fitted round cord seal, graphite gray, similar to RAL 7024
BS 404 DIS-7035	**82404235 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, battery compartment 3 AAA, fitted round cord seal, light gray, similar to RAL 7035
BS 404 DIS-S**	**82404200 00**	119.3 x 64.9 x 26.5	4.70 x 2.55 x 1.04	IP 65	With display cut-out, battery compartment 3 AAA, fitted round cord seal, silver

* IP 65 and anti-knock protection when decorative seal BS 400 DI-D... is used

**Available on request - minimum order quantity 100 pieces

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Model Number	Part Number	Dimensions mm L x W x H	External Dimensions Inches L x W x H	Protection Classification	Description
BS 600 F-7024	**82600124 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, graphite gray, similar to RAL 7024
BS 600 F-7035	**82600135 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, light gray, similar to RAL 7035
BS 600 F-S**	**82600100 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, silver
BS 600 DIS-7024	**82600224 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, graphite gray, similar to RAL 7024
BS 600 DIS-7035	**82600235 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, light gray, similar to RAL 7035
BS 600 DIS-S**	**82600200 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, silver
BS 601 F-7024	**82601124 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	Continuous membrane surface, battery compartment 3 AA, graphite gray, similar to RAL 7024
BS 601 F-7035	**82601135 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	Continuous membrane surface, battery compartment 3 AA, light gray, similar to RAL 7035
BS 601 F-S**	**82601100 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	Continuous membrane surface, battery cmompartment 3 AA, silver
BS 601 DIS-7024	**82601224 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	With display cut-out, battery compartment 3 AA, graphite gray, similar to RAL 7024
BS 601 DIS-7035	**82601235 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	With display cut-out, battery compartment 3 AA, light gray, similar to RAL 7035
BS 601 DIS-S**	**82601200 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40	With display cut-out, battery compartment 3 AA, silver
BS 602 F-7024	**82602124 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, fitted round cord seal, graphite gray, similar to RAL 7024
BS 602 F-7035	**82602135 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, fitted round cord seal, light gray, similar to RAL 7035
BS 602 F-S**	**82602100 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, fitted round cord seal, silver
BS 602 DIS-7024	**82602224 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-out, fitted round cord seal, graphite gray, similar to RAL 7024
BS 602 DIS-7035	**82602235 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-out, fitted round cord seal, light gray, similar to RAL 7035
BS 602 DIS-S**	**82602200 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-out, fitted round cord seal, silver
BS 603 F-7024	**82603124 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, battery compartment 3 AA, graphite gray, similar to RAL 7024
BS 603 F-7035	**82603135 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, battery compartment 3 AA, light gray, similar to RAL 7035
BS 603 F-S**	**82603100 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	Continuous membrane surface, battery compartment 3 AA, silver
BS 603 DIS-7024	**82603224 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, battery compartment 3 AA, graphite gray, similar to RAL 7024
BS 603 DIS-7035	**82603235 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, battery compartment 3 AA, light gray, similar to RAL 7035
BS 603 DIS-S**	**82603200 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 40/65*	With display cut-out, battery compartment 3 AA. silver
BS 604 F-7024	**82604124 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, battery compartment 3 AA, fitted round cord seal, graphite gray, similar to RAL 7024
BS 604 F-7035	**82604135 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, battery compartment 3 AA, fitted round cord seal, light gray, similar to RAL 7035
BS 604 F-S**	**82604100 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	Continuous membrane surface, battery compartment 3 AA, fitted round cord seal, silver
BS 604 DIS-7024	**82604224 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-put, battery compartment 3 AA, fitted round cord seal, graphite gray, similar to RAL 7024
BS 604 DIS-7035	**82604235 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-out, battery compartment 3 AA, fitted round cord seal, light gray, similar to RAL 7035
BS 604 DIS-S**	**82604200 00**	159.4 x 77.9 x 33.5	6.27 x 3.07 x 1.32	IP 65	With display cut-out, battery compartment 3 AA, fitted round cord seal, silver
BS 800 F-7024	**82800124 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, graphite gray, similar to RAL 7024
BS 800 F-7035	**82800135 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, light gray, similar to RAL 7035
BS 800 F-S**	**82800100 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, silver
BS 800 DIS-7024	**82800224 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, graphite gray, similar to RAL 7024
BS 800 DIS-7035	**82800235 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, light gray, similar to RAL 7035
BS 800 DIS-S**	**82800200 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, silver
BS 801 F-7024	**82801124 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	Continuous membrane surface, battery compartment 4 AA, graphite gray, similar to RAL 7024
BS 801 F-7035	**82801135 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	Continuous membrane surface, battery compartment 4 AA, light gray, similar to RAL 7035
BS 801 F-S**	**82801100 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	Continuous membrane surface, battery compartment 4 AA, silver
BS 801 DIS-7024	**82801224 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	With display cut-out, battery compartment 4 AA, graphite gray, similar to RAL 7024
BS 801 DIS-7035	**82801235 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	With display cut-out, battery compartment 4 AA, light gray, similar to RAL 7035
BS 801 DIS-S**	**82801200 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40	With display cut-out, battery compartment 4 AA, silver
BS 802 F-7024	**82802124 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, graphite gray, similar to RAL 7024
BS 802 F-7035	**82802135 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, light gray, similar to RAL 7035
BS 802 F-S**	**82502100 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, silver
BS 802 DIS-7024	**82802224 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, fitted round cord seal, graphite gray, similar to RAL 7024
BS 802 DIS-7035	**82802235 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, fitted round cord seal, light gray, similar to RAL 7035
BS 802 DIS-S**	**82802200 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, fitted round cord seal, silver
BS 803 F-7024	**82803124 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, battery compartment 4 AA, graphite gray, similar to RAL 7024
BS 803 F-7035	**82803135 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, battery compartment 4 AA, light gray, similar to RAL 7035
BS 803 F-S**	**82803100 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	Continuous membrane surface, battery compartment 4 AA, silver
BS 803 DIS-7024	**82803224 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, battery compartment 4 AA, graphite gray, similar to RAL 7024
BS 803 DIS-7035	**82803235 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, battery compartment 4 AA, light gray, similar to RAL 7035
BS 803 DIS-S**	**82803200 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 40/65*	With display cut-out, battery compartment 4 AA, silver
BS 804 F-7024	**82804124 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, graphite gray, similar to RAL 7024
BS 804 F-7035	**82804135 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, light gray, similar to RAL 7035
BS 804 F-S**	**82804100 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	Continuous membrane surface, fitted round cord seal, silver
BS 804 DIS-7024	**82804224 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, battery compartment 4 AA, fitted round cord seal, graphite gray, similar to RAL 7024
BS 804 DIS-7035	**82804235 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, battery compartment 4 AA, fitted round cord seal, light gray, similar to RAL 7035
BS 804 DIS-S**	**82804200 00**	209.3 x 98.0 x 34.8	8.24 x 3.86 x 1.37	IP 65	With display cut-out, battery compartment 4 AA, fitted round cord seal, silver

* IP 65 and anti-knock protection when decorative seal BS 400 DI-D... is used

**Available on request - minimum order quantity 100 pieces

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

Model Number	Part Number	Description
BS 400 DI-D-1003	**82841003 00**	Decorative seal, signal yellow, similar to RAL 1003
BS 400 DI-D-3001	**82843001 00**	Decorative seal, signal red, similar to RAL 3001
BS 400 DI-D-5005	**82845005 00**	Decorative seal, signal blue, similar to RAL 5005
BS 400 DI-D-6032	**82846032 00**	Decorative seal, signal green, similar to RAL 6032
BS 400 DI-D-7024	**82847024 00**	Decorative seal, graphite gray, similar to RAL 7024
BS 600 DI-D-1003	**82861003 00**	Decorative seal, signal yellow, similar to RAL 1003
BS 600 DI-D-3001	**82863001 00**	Decorative seal, signal red, similar to RAL 3001
BS 600 DI-D-5005	**82865005 00**	Decorative seal, signal blue, similar to RAL 5005
BS 600 DI-D-6032	**82866032 00**	Decorative seal, signal green, similar to RAL 6032
BS 600 DI-D-7024	**82867024 00**	Decorative seal, graphite gray, similar to RAL 7024

Model Number	Part Number	Description
BS 800 DI-D-1003	**82881003 00**	Decorative seal, signal yellow, similar to RAL 1003
BS 800 DI-D-3001	**82883001 00**	Decorative seal, signal red, similar to RAL 3001
BS 800 DI-D-5005	**82885005 00**	Decorative seal, signal blue, similar to RAL 5005
BS 800 DI-D-6032	**82886032 00**	Decorative seal, signal green, similar to RA: 6032
BS 800 DI-D-7024	**82887024 00**	Decorative seal, graphite gray, similar to RAL 7024
BS SA-7024	**82800011 00**	Screw covers, graphite gray, similar to RAL 7024
BS SA-7035	**82800010 00**	Screw covers, light gray, similar to RAL 7035

Note: Screw covers are not required if decorative seal DI-D is used.

Rose Ex enclosures made of aluminum, polyester and stainless steel correspond to ATEX guidelines. They have the approval II 2G/2D and may be used in zones 1 and 2. The standard temperature range for applications corresponds to T6, -4°F to +104°F; optionally aluminum and stainless steel enclosures can be used from -67°F to +203°F (corresponds to temperature classes T6, T5, T4); and polyester enclosures from -67°F to +131°F (corresponds to temperature classes T6, T5).

Aluminum Ex Enclosures
- Fully assembled enclosure with terminal blocks, cable glands and accessories
- Empty enclosures, component certified

Polyester Ex Enclosures
- More that 60 variations in more than 20 different sizes
- Worldwide use in all climate environments

Okta-Box Enclosures
- Fully assembled enclosure with terminal blocks, cable glands, and accessories.
- 9 variations in 3 sizes.
- Empty enclosure, component certified

Stainless Steel Ex Enclosures
- A rugged enclosure to meet the highest standards
- Robust material, safe system, terminal enclosure for increased and intrinsic safety protection

Stainless Steel Enclosures with Hinged Lid, Ex-IGS
- Enclosures with hinged lid and terminals for instrinsic and increased safety protection
- Empty enclosure with EC - type examination certificate for individual fittings

Beluga
- Handheld empty enclosures for applications in hazardous environments
- 3 enclosure sizes, 180, 220, 380 mm and an optional display opening

Aluminum terminal enclosures E Ex e II T6

- Empty enclosures with EC-type examination certificate for individual fittings
- Terminal enclosure for increased safety and intrinsically safe protection
- Robust aluminum diecast enclosure in standard or flange type

PTB

Included in delivery

Empty enclosure: Enclosure with silicone seal and external ground connection

Terminal enclosure: Enclosure system - depending on version either with silicone seal, external ground connection, DIN rails, internal ground connection, terminals, manufacturing, cable glands.

Technical Data

Explosion protection Ex II 2 G / 2 D	EEx e II T6 (increased safety) EEx ia IIC T6 (intrinsic safety) EEx e(ia) IIC T6 (mixed fitting) Temperature class T5 and T4 on request
Certificates	Empty enclosure: PTB 98 ATEX 3101U Terminal enclosure: PTB 00 ATEX 1063
Material	Aluminum diecast AlSi 12
Painting	Powdercoating
Color	Gray, similar to RAL 7001
Ingress protection	IP 66, EN 60529
Impact resistance	>7 Nm, EN 50014
Temperature range of application acc. EN	-20°F to +104°F (corresponds T6 = 185°F max. surface temperature) -20°F to +131°F (corresponds T5 = 212°F max. surface temperature) -20°F to +195°F (corresponds T4 = 275°F max. surface temperature) Temperature to -67°F with special marking on request

Part Number	Part Number	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Part Number	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H
Ex-e version EN 50014/ EN 50019	Ex-ia version EN 50014/ EN 50020	Empty enclosure EN 50014/ EN 50019			Ex-e version EN 50014/ EN 50019	Ex-ia version EN 50014/ EN 50020	Empty enclosure EN 50014/ EN 50019		
05060603 00	**15060603 00**	**25060603 00**	64 x 58 x 34	2.52 x 2.28 x 1.34	**05165609 00**	**15165609 00**	**25165609 00**	160 x 560 x 90	6.30 x 22.04 x 3.54
05061003 00	**15061003 00**	**25061003 00**	64 x 98 x 34	2.52 x 3.86 x 1.34	**05181810 00**	**15181810 00**	**25181810 00**	180 x 180 x 100	7.09 x 7.09 x 3.94
05061503 00	**15061503 00**	**25161503 00**	64 x 150 x 34	2.52 x 5.90 x 1.34	**05182810 00**	**15182810 00**	**25182810 00**	180 x 280 x 100	7.09 x 11.02 x 3.94
05080806 00	**15080806 00**	**25080806 00**	80 x 75 x 57	3.15 x 2.95 x 2.24	**05231011 00**	**15231011 00**	**25231011 00**	100 x 230 x 110	3.94 x 9.05 x 4.33
05081306 00	**15081306 00**	**25081306 00**	80 x 125 x 57	3.15 x 4.92 x 2.24	**05232011 00**	**15232011 00**	**25232011 00**	230 x 200 x 110	9.05 x 7.87 x 4.33
05081806 00	**15081806 00**	**25081806 00**	80 x 175 x 57	3.15 x 6.89 x 2.24	**05232018 00**	**15232018 00**	**25232018 00**	230 x 200 x 180	9.05 x 7.87 x 7.09
05082505 00	**15082505 00**	**25082505 00**	80 x 250 x 52	3.15 x 9.84 x 2.24	**05232811 00**	**15232811 00**	**25232811 00**	230 x 280 x 110	9.05 x 11.02 x 4.33
05101008 00	**15101008 00**	**25101008 00**	100 x 100 x 80	3.94 x 3.94 x 3.15	**05233311 00**	**15233311 00**	**25233311 00**	230 x 330 x 110	9.05 x 12.99 x 4.33
05101608 00	**15101608 00**	**25101608 00**	100 x 160 x 80	3.94 x 6.30 x 3.15	**05233318 00**	**15233318 00**	**25233318 00**	230 x 330 x 180	9.05 x 12.99 x 7.09
05102008 00	**15102008 00**	**25102008 00**	100 x 200 x 80	3.94 x 7.87 x 3.15	**05234011 00**	**15234011 00**	**25234011 00**	230 x 400 x 110	9.05 x 15.75 x 4.33
05121208 00	**15121208 00**	**25121208 00**	120 x 122 x 80	4.72 x 4.80 x 3.15	**05234023 00**	**15234023 00**	**25234023 00**	230 x 400 x 224	9.05 x 15.75 x 8.82
05121209 00	**15121209 00**	**25121209 00**	120 x 122 x 90	4.72 x 4.80 x 3.54	**05236011 00**	**15236011 00**	**25236011 00**	230 x 600 x 110	9.05 x 23.62 x 4.33
05122208 00	**15122208 00**	**25122208 00**	120 x 220 x 80	4.72 x 8.66 x 3.15	**05314011 00**	**15314011 00**	**25314011 00**	310 x 400 x 110	12.20 x 15.75 x 4.33
05122209 00	**15122209 00**	**25122209 00**	120 x 220 x 90	4.72 x 8.66 x 3.54	**05314014 00**	**15314014 00**	**25314014 00**	310 x 400 x 140	12.20 x 15.75 x 5.51
05123608 00	**15123608 00**	**25123608 00**	120 x 360 x 80	4.72 x 14.17 x 3.15	**05314018 00**	**15314018 00**	**25314018 00**	310 x 400 x 180	12.20 x 15.75 x 7.09
05141409 00	**15141409 00**	**25141409 00**	140 x 140 x 90	5.51 x 5.51 x 3.54	**05314023 00**	**15314023 00**	**25314023 00**	310 x 400 x 230	12.20 x 15.75 x 9.05
04142009 00	**15142009 00**	**25142009 00**	140 x 200 x 90	5.51 x 7.87 x 3.54	**05316011 00**	**15316011 00**	**25316011 00**	310 x 600 x 110	12.20 x 23.62 x 4.33
05161609 00	**15161609 00**	**25161609 00**	160 x 160 x 90	6.30 x 6.30 x 3.54	**05316018 00**	**15316018 00**	**25316018 00**	310 x 600 x 180	12.20 x 23.62 x 7.09
05162609 00	**15162609 00**	**25162609 00**	160 x 260 x 90	6.30 x 10.24 x 3.54	**05606020 00**	**15606020 00**	**25606020 00**	600 x 600 x 200	23.62 x 23.62 x 7.87
05163609 00	**15163609 00**	**25163609 00**	160 x 360 x 90	6.30 x 14.17 x 3.54					

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Fiberglass Terminal Enclosures E Ex e II T6

- Fiberglass enclosure with graphite added to reduce surface static
- Terminal enclosure for increased safety and intrinsically safe protection
- Empty enclosure for individual fittings with EG increased safeguard

PTB

Included in delivery

Empty enclosure: Enclosure system with silicone seal
Terminal enclosure: Enclosure system - depending on version either with silicone seal, DIN rails, internal grounding connection, terminals, continuity plate, manufacturing, cable glands.

Technical Data

Explosion protection Ex II 2 G / 2 D	EEx e II T6 (increased safety) EEx ia IIC T6 (intrinsic safety) EEx e(ia) IIC T6 (mixed fitting) Temperature classes T5 and T4 on request
Certificates	Empty enclosure: PTB 01 ATEX 1061U Terminal enclosure: PTB 00 ATEX 1002
Material	Glassfiber-reinforced duroplastic Polyester, graphite added
Color	Black, similar to RAL 9011
Ingress protection	IP 66, EN 60529
Impact resistance	>7 Nm, EN 50014
Flammability	self-extinguishing, UL 94/V0
Surface resistance	$<10^9$ Ohm, EN 50014
Water absorption	max. 0.7%, ASTM D570
Toxicity	Halogen free
Temperature range of application acc. EN	-4°F to +104°F (corresponds T6 = 185°F max. surface temperature) -20°F to +131°F (corresponds T5 = 212°F max. surface temperature) Temperature to -67°F with special marking on request

Part Number	Part Number	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Part Number	Part Number	Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H
Ex-e version EN 50014/ EN 50019	Ex-ia version EN 50014/ EN 50020	Empty enclosure EN 50014/ EN 50019			Ex-e version EN 50014/ EN 50019	Ex-ia version EN 50014/ EN 50020	Empty enclosure EN 50014/ EN 50019		
06080806 00	**16080806 00**	**26080806 00**	75 x 80 x 55	2.95 x 3.15 x 2.16	**06161609 00**	**16161609 00**	**26161609 00**	160 x 160 x 90	6.30 x 6.30 x 3.54
06080808 00	**16080808 00**	**26080808 00**	75 x 80 x 75	3.95 x 3.15 x 2.95	**06162609 00**	**16162609 00**	**26162609 00**	160 x 260 x 90	6.30 x 10.24 x 3.54
06081106 00	**16081106 00**	**26081106 00**	75 x 110 x 55	2.95 x 4.33 x 2.16	**06163609 00**	**16163609 00**	**26163609 00**	160 x 360 x 90	6.30 x 14.17 x 3.54
06081108 00	**16081108 00**	**26081108 00**	75 x 110 x 75	2.95 x 4.33 x 2.95	**06165609 00**	**16165609 00**	**26165609 00**	160 x 560 x 90	6.30 x 22.05 x 3.54
06081606 00	**16081606 00**	**26081606 00**	75 x 160 x 55	2.95 x 6.30 x 2.16	**06252612 00**	**16252612 00**	**26252612 00**	250 x 255 x 120	9.84 x 10.04 x 4.72
06081608 00	**16081608 00**	**26081608 00**	75 x 160 x 75	2.95 x 6.30 x 2.95	**06252616 00**	**16252616 00**	**26252616 00**	250 x 255 x 160	9.84 x 10.04 x 6.30
06081906 00	**16081906 00**	**26081906 00**	75 x 190 x 55	2.95 x 7.48 x 2.16	**06254012 00**	**16254012 00**	**26254012 00**	250 x 400 x 120	9.84 x 15.75 x 4.72
06081908 00	**16081908 00**	**26081908 00**	75 x 190 x 75	2.95 x 7.48 x 2.95	**06254016 00**	**16254016 00**	**26254016 00**	250 x 400 x 160	9.84 x 15.75 x 6.30
06082306 00	**16082306 00**	**26082306 00**	75 x 230 x 55	2.95 x 9.05 x 2.16	**06256012 00**	**16256012 00**	**26256012 00**	250 x 600 x 120	9.84 x 23.62 x 4.72
06082308 00	**16082308 00**	**26082308 00**	75 x 230 x 75	2.95 x 9.05 x 2.95	**06363609 00**	**16363609 00**	**26363609 00**	360 x 360 x 90	14.17 x 14.17 x 3.54
06121209 00	**16121209 00**	**26121209 00**	120 x 122 x 90	4.72 x 4.80 x 3.54	**06414012 00**	**16414012 00**	**26414012 00**	405 x 400 x 120	15.94 x 15.75 x 4.72
06122209 00	**16122209 00**	**26122209 00**	120 x 220 x 90	4.72 x 8.66 x 3.54					

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Okta-Box Enclosures

ROSE

- Polyester enclosure with graphite added with external flanges
- Empty enclosure for individual fittings with EG increased safeguard
- Terminal enclosure for increased safety and intrinsic safety
- Optional version with window

ATEX

PTB

Included in delivery

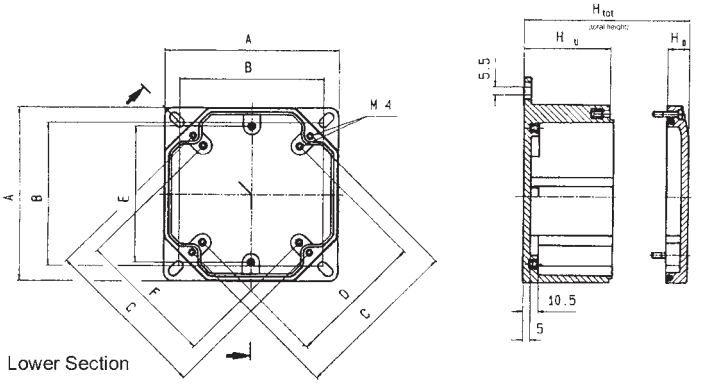
Empty enclosure: Enclosure with silicone seal
Terminal enclosure: Enclosure system - depending on version either with silicone seal, continuity plate, DIN rails, internal grounding connection, terminals, manufacturing, cable glands

Technical Data

Explosion protection Ex II 2 G / 2 D	EEx e II T6 (increased safety) EEx ia IIC T6 (intrinsic safety) EEx e(ia) IIC T6 (mixed fitting) Temperature classes T5 and T4 on request
Certificates	Empty enclosure: PTB 01 ATEX 1061U Terminal enclosure: PTB 00 ATEX 1002
Material	Glassfiber-reinforced duroplastic Polyester, graphite added
Color	Black, similar to RAL 9011
Ingress protection	IP 66, EN 60529
Impact resistance	>7 Nm, EN 50014
Flammability	self-extinguishing UL 94 V0
Surface resistance	$>10^9$ Ohm, EN 50014
Water absorption	max. 0.7%, ASTM D570
Toxicity	Halogen free
Weather resistance	UV stabilized
Temperature range of application acc. EN	-40°F to +104°F (corresponds T6 = 185°F max. surface temperature) -40°F to +131°F (corresponds T5 = 212°F max. surface temperature) Temperature to -67°F with special marking on request

Part Number Ex-e version EN 50019	Part Number Ex-ia version EN 50020	Part Number Empty enclosure EN 50019	Dimensions mm W x L x H	Dimensions Inches W x L x H
06880100 00	**16880100 00**	**26880100 00**	80 x 80 x 70	3.15 x 3.15 x 2.75
06880200 00	**16880200 00**	**26880200 00**	120 x 120 x 75	4.72 x 4.72 x 2.95
06880300 00	**16880300 00**	**26880300 00**	160 x 160 x 93	6.30 x 6.30 x 3.66

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.



Part Number	A	B	C	D	E	F	H_U	H_D	H_{tot}
06880100 00	81	68	73	-	59	-	6.0.5	15	75.5
16880100 00	81	68	73	-	59	-	60.5	15	75.5
26880100 00	81	68	73	-	59	-	60.5	15	75.5
06880200 00	121	100	118	92	92	-	60.5	15	75.5
16880200 00	121	100	118	92	92	-	60.5	15	75.5
26880200 00	121	100	118	92	92	-	60.5	15	75.5
06880300 00	161	140	175	132	99	99	73	20	93
16880300 00	161	140	175	132	99	99	73	20	93
26880200 00	161	140	175	132	99	99	73	20	93

Ex Stainless Steel Enclosures

- Terminal enclosure for increased safety and intrinsically safe protection
- Empty enclosure for individual fittings with EC-type examination certificate
- High quality stainless steel (1.4404)

Included in delivery
Empty enclosure: Enclosure with silicone/PUR seal and external ground connection.
Terminal enclosure: Enclosure system-depending on version either with silicone/PUR seal, continuity plate, DIN rails, internal ground connection, terminals, manufacturing, cable glands.

ATEX

PTB

Technical Data

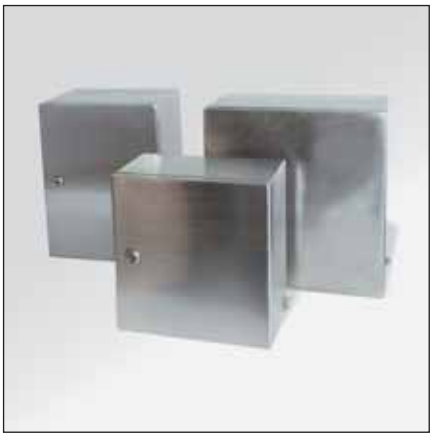
Explosion protection Ex II 2 G / 2 D	EEx e II T6 (increased safety) EEx ia IIC T6 (intrinsic safety) EEx e(ia) IIC T6 (mixed fitting) Temperature class T5 and T4 on request
Certificates	Empty enclosure: PTB 01 ATEX 1101U Terminal enclosure: PTB 00 ATEX 1052
Material	Stainless steel 1.25 mm or 1.5 mm 1.4404 / 316L
Surface	Polished grain 240
Ingress protection	IP 66 EN 60529
Impact resistance	>7 Nm, EN 50014
Temperature range of application acc. EN	-40°F to +104°F (corresponds T6 = 185°F max. surface temperature) -40°F to +131°F (corresponds T5 = 212°F max. surface temperature) -40°F to +194°F (corresponds T4 = 275°F max. surface temperature) Temperature to -67°F with special marking on request

Part Number Ex-e version	Part Number Ex-ia version	Part Number Empty enclosure	Dimensions mm W x L x H	Dimensions Inches W x L x H
35101006 00	**36101006 00**	**34101006 00**	100 x 100 x 61	3.94 x 3.94 x 2.40
35151006 00	**36151006 00**	**34151006 00**	150 x 100 x 61	5.90 x 3.94 x 2.40
35151508 00	**36151508 00**	**34151508 00**	150 x 150 x 81	5.90 x 5.90 x 3.19
35201006 00	**36201006 00**	**34201006 00**	200 x 100 x 61	7.87 x 3.94 x 2.40
35202008 00	**36202008 00**	**34202008 00**	200 x 200 x 81	7.87 x 7.87 x 3.19
35202012 00	**36202012 00**	**34202012 00**	200 x 200 x 121	7.87 x 7.87 x 4.76
35301508 00	**36301508 00**	**34301508 00**	300 x 150 x 81	11.81 x 5.90 x 3.19
35302008 00	**36302008 00**	**34302008 00**	300 x 200 x 81	11.81 x 7.87 x 3.19
35302012 00	**36302012 00**	**34302012 00**	300 x 200 x 121	11.81 x 7.87 x 4.76
35303012 00	**36303012 00**	**34303012 00**	300 x 300 x 121	11.81 x 11.81 x 4.76
35303016 00	**36303016 00**	**34303016 00**	300 x 300 x 161	11.81 x 11.81 x 6.34
35383816 00	**36383816 00**	**34383816 00**	380 x 380 x 151	14.96 x 14.96 x 5.94
35401508 00	**36401508 00**	**34401508 00**	400 x 150 x 81	15.75 x 5.90 x 3.19
35402012 00	**36402012 00**	**34402012 00**	400 x 200 x 121	15.75 x 7.87 x 4.76
35403016 00	**36403016 00**	**34403016 00**	400 x 300 x 161	15.75 x 11.81 x 6.34
35503016 00	**36503016 00**	**34503016 00**	500 x 300 x 161	19.68 x 11.81 x 6.34
35504016 00	**36504016 00**	**34504016 00**	500 x 400 x 161	19.68 x 15.75 x 6.34
35602012 00	**36602012 00**	**34602012 00**	600 x 200 x 121	23.62 x 7.87 x 4.76
35999999 00	**36999999 00**	**34999999 00**	Special size	Special size

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories	
External brackets (4 pieces)	**31105000 00**
Mounting set (gaskets, nuts and screws)	**37990001 00**
External hinge set (2 pieces)	**37000002 00**

Ex Stainless Steel Enclosures with Hinged Lid Ex-IGS



- Enclosure with EC-type examination certificate for individual fittings
- Stainless steel enclosure with terminals for increased safety and intrinsically protection
- High-quality stainless steel version with covered hinges and double ward lock
- Optional flange break outs

Included in delivery

Empty enclosure: Enclosure with hinged lid, double ward lock, silicone/PUR-seal and external ground connection.
Terminal enclosure: Depending on design with hinged lid, double ward lock, silicone/PUR-seal, external ground, DIN rail, internal ground connection, terminals, manufacturing, cable glands.

ATEX

PTB

Technical Data

Explosion protection Ex II 2 G / 2 D	EEx e II T6 (increased safety) EEx ia IIC T6 (intrinsic safety) EEx e(ia) IIC T6 (mixed fitting) Temperature class T5 and T4 on request
Certificates	Empty enclosure: PTB 01 ATEX 1101U Terminal enclosure: PTB 00 ATEX 1052
Material	Stainless steel 1.25 mm or 1.5 mm 1.4301 / 304
Surface	Polished grain 240
Ingress protection	IP 66 EN 60529
Impact resistance	>7 Nm, EN 50014
Temperature range of application acc. EN	-40°F to +104°F (corresponds T6 = 185°F max. surface temperature) -40°F to +131°F (corresponds T5 = 212°F max. surface temperature) -40°F to +194°F (corresponds T4 = 275°F max. surface temperature) Temperature to -67°F with special marking on request

Part Number Ex-e version	Part Number Ex-ia version	Part Number Empty enclosure	Dimensions mm W x L x H	Dimensions Inches W x L x H
35002209 00	**36002209 00**	**34002209 00**	200 x 250 x 90	7.87 x 9.84 x 3.54
35002215 00	**36002215 00**	**34002215 00**	200 x 250 x 150	7.87 x 9.84 x 5.90
35003316 00	**36003316 00**	**34003316 00**	300 x 300x 167	11.81 x 11.81 x 6.57
35003209 00	**36003209 00**	**34003209 00**	350 x 250 x 90	13.78 x 9.84 x 3.54
35004416 00	**36004416 00**	**34004416 00**	380 x 380 x 167	14.96 x 14.96 x 6.57
35004421 00	**36004421 00**	**34004421 00**	380 x 380 x 215	14.96 x 14.96 x 8.46
35005316 00	**36005316 00**	**34005316 00**	500 x 300 x 167	19.68 x 11.81 x 6.57
35006316 00	**36006316 00**	**34006316 00**	600 x 300 x 167	23.62 x 11.81 x 6.57
35006421 00	**36006421 00**	**34006421 00**	300 x 380 x 215	23.62 x 14.96 x 8.46
35009999 00	**36009999 00**	**34009999 00**	Special size	Special size

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories

External brackets (4 pieces)	**37105000 00**
Mounting set (gaskets, nuts and screws)	**37990001 00**

Beluga ATEX

- Hand enclosure for potentially explosive environments
- 3 enclosure sizes 180, 220, 380 mm
- Optionally with display opening

Included in delivery

Lid, base and enclosure screws. See options below.

ATEX

PTB

Technical Data

Explosion protection	Ex II 2 G / EEx e II
Certificates	Empty enclosure: PTB 02 ATEX 1076U
Material	Polyamide 12
Surface resistance	$<10^9$ Ohm to EN 50014
Flammability	UL 94 HB
Color	Black, similar to RAL 9005
Ingress protection	IP 65, EN 60529
Impact resistance	>7 Nm, EN 50014
Temperature range	-4°F to +140°F

Beluga 180

Consisting of top and bottom part, enclosure and board mounting screws, sealing ring, tongue-and-groove system with integrated seal. Open version comes complete with display screen and safety glass. Max. display board dimensions approximately 74 x 56.4 mm or 80 x 54 mm.

Beluga 220

Consisting of top and bottom part, enclosure and board mounting screws, sealing rings, tongue-and-groove system with integral seal. Open version comes complete with display screen and safety glass. Max. display board dimensions approximately 84 x 74.5 mm or 86 x 70.5 mm.

Beluga 380

Consisting of top part with seal, bottom part with hang-up set-up, enclosure and board mounting screws, sealing rings, tongue-and-groove system with integrated seal.

Enclosure Type	Part Number	Version	Dimensions mm W x L x H	Dimensions Inches W x L x H	Weight lbs.
Beluga 180 O	**28020200 00**	open	106/75 x 187 x 50	4.17/2.95 x 7.36 x 1.97	0.35
Beluga 180 G	**28020201 00**	closed	106/75 x 187 x 50	4.72/2.95 x 7.36 x 1.97	0.37
Beluga 220 O	**28020400 00**	open	116/85 x 220 x 51	4.57/3.35 x 8.66 x 2.00	0.44
Beluga 220 G	**28020401 00**	closed	116/85 x 220 x 51	4.57/3.35 x 8.66 x 200	0.46
Beluga 380	**28020501 00**	closed	380 x 117 x 68	14.96 x 4.61 x 2.68	1.15

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Machine control enclosures are used for machine operation. These complex modules, from a simple emergency stop switch up to complete industrial PCs or CNC controllers, must be adapted to the rough environmental conditions placed on the machines. ROSE operating and display enclosures ensure guaranteed protection for built-in electronic components and offer the very best in operator comfort.

Machine Control
For stationary application areas and fitting of controllers and industrial PCs, the ROSE range offers a variety of enclosure types with more that 140 individual solutions, depending on controller size and construction. If your individual solution is not available here, please contact us.

Suspension Arm Systems
Suspension systems link control enclosures with the respective machine. In addition to covering cable routing, they have the task of facilitating optimal positioning of the control enclosure for the user. For this reason we offer a variety of turning knuckles, inclination sets and coupling pieces. The selection of a suitable system depends on the weight and construction of the completely equipped control enclosure.

1300 Machine Control

- Small machine control enclosure in aluminum with protective bumper bars
- Membrane Lid Versions: small machine control enclosure in aluminum with front frame for front panel and keypads
- Robust aluminum diecast enclosure body with front panel
- Transparent cover and handle sets (optional)

Included in delivery

Unpainted diecast aluminum base and bezel.
Membrane Lid Versions: Aluminum front plate - 1F membrane, unpainted base for 1F membrane style, bezel designed for membrane front panel.
Please order front panel separately.

Technical Data

Material	Enclosure body, die cast aluminum, Al Si 12. Bezel, die cast aluminum Al Si 12. Front panel, anodized sheet aluminum, 3mm thick
Ingress Protection	IP 65 to EN 60529
Impact Resistance	>7Nm, EN 50014
Seal	Neoprene
Temperature Range	-40°F to +194°F
Color	Body, agate gray, similar to RAL 7038. Bezel, transport gray, similar to RAL 7043. Special colors on request.

Part Number	Dimensions mm W x L x H	Dimensions Inches W x L x H	Front Panel	Handle Mounting Options				Ext. hinges diecast aluminum swiveling range 150°	Int. hinges stainless steel swiveling range 150°	Mounting plates sheet steel, non-corrosive	DIN rails non-corrosive TS 35	Silicone lid seal, resistant up to 130°	Transparent Covers	Turn bolt lock
13050000 00	230 x 100 x 128	9.05 x 3.94 x 5.04	**10013005 00**	-	-	-	-	•	•	•	•	•	-	•
13070000 00	260 x 160 x 108	10.23 x 6.30 x 4.25	**10013007 00**	-	-	-	-	•	•	•	•	•	-	•
13080000 00	360 x 160 x 108	14.17 x 6.30 x 4.25	**10013008 00**	-	-	-	-	•	•	•	•	•	-	•
13090000 00	560 x 160 x 108	22.05 x 6.30 x 4.25	**10013009 00**	-	-	-	-	•	•	•	•	•	-	•
13100000 00	230 x 200 x 128	9.05 x 7.87 x 5.04	**10013010 00**	•	•	-	•	•	•	•	•	•	•	•
13110000 00	230 x 200 x 198	9.05 x 7.87 x 7.79	**10013010 00**	•	•	-	•	•	•	•	•	•	•	•
13120000 00	230 x 330 x 128	9.05 x 12.99 x 5.04	**10013012 00**	•	•	•	•	•	•	•	•	•	•	•
13130000 00	230 x 330 x 198	9.05 x 12.99 x 7.79	**10013012 00**	•	•	•	•	•	•	•	•	•	•	•
13140000 00	230 x 400 x 128	9.05 x 15.75 x 5.04	**10013014 00**	•	•	•	•	•	•	•	•	•	•	•
13150000 00	230 x 400 x 242	9.05 x 15.75 x 9.53	**10013014 00**	•	•	•	•	•	•	•	•	•	•	•
13160000 00	230 x 600 x 128	9.05 x 23.62 x 5.04	**10013016 00**	•	•	•	•	•	•	•	•	•	•	•
13170000 00	230 x 280 x 130	9.05 x 11.02 x 5.12	**10013017 00**	•	•	-	-	•	•	•	•	•	-	•
13200000 00	310 x 400 x 128	12.20 x 15.75 x 5.04	**10013020 00**	•	•	•	•	•	•	•	•	•	•	•
13210000 00	310 x 400 x 198	12.20 x 15.75 x 7.79	**10013020 00**	•	•	•	•	•	•	•	•	•	•	•
13220000 00	310 x 600 x 128	12.20 x 23.62 x 5.04	**10013022 00**	•	•	•	•	•	•	•	•	•	•	•
13230000 00	310 x 600 x 198	12.20 x 23.62 x 7.79	**10013022 00**	•	•	•	•	•	•	•	•	•	•	•
13240000 00	310 x 400 x 244	12.20 x 15.75 x 9.61	**10013020 00**	•	•	•	•	•	•	•	•	•	•	•
13250000 00	310 x 400 x 158	12.20 x 15.75 x 6.22	**10013020 00**	•	•	•	•	•	•	•	•	•	•	•

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Membrane Lid Version available. Call your factory representative for more information.

Slim Line 2000

- Enclosure system for control and display fittings
- Variable size available in width and depth
- All-round adaptation capabilities for accessories
- Front panel insertion from front and rear

Included in delivery

Profile 1: Extruded aluminum, 80 mm max. mounting depth
Profile 2: Extruded aluminum, 100 mm max. mounting depth
Profile 3: Extruded aluminum, 185 mm max. mounting depth

Technical Data

Material	Enclosure profile: extruded aluminum, Al Mg Si 0.5 DIN 1725 Corner elements: diecast aluminum, Al Si 12 DIN 1725 Rear panel door: sheet metal, Al Mg 3, DIN 1725 Cover profile: thermoplastic material
Ingress Protection	IP 65 to EN 60529, NEMA 12
Temperature Range	-22°F to +176°F
Color	Enclosure: light gray, similar to RAL 7035 Handles: ruby red, similar to RAL 3003

Item Number	Description
Profile 1	Extruded aluminum, 80mm maximum mounting depth
Profile 2	Extruded aluminum, 110mm maximum mounting depth
Profile 3	Extruded aluminum, 185mm maximum mounting depth

Accessories

Part Number	Description
19590020 00	Standard linking bar, one meter length, for split panels
19601004 00	Keyboard holder
19601008 00	Set of 2 hinges with screws
19601001 00	Panel mounting set with 12 screws, spring nuts, brackets
19601002 00	Fastening set 30 spring nuts, brackets, screws
19601007 00	Quick fastening kit for front plate
10036001 00	Set of M5 mounting nuts (8 pieces)
19590011 00	Console mounting kit, 15° fixed
19590012 00	Console mounting kit, 30° fixed
19590013 00	Console mounting kit. adjustable
19601005 00	Floppy disk drive mounting bay
19602004 00	Handle set (1 handle with brackets), 301 mm long for side attachment
19602005 00	Handle set (1 handle with brackets), 345 mm long for side attachment
19602006 00	Handle set (1 handle with brackets), 472 mm long for side attachment
19602002 00	Corner handle set: one L-shaped handle with brackets; three 556/395mm asymetrical for side/bottom attachment

Coupling Adapters for Suspension Arm System 4945, 4949, 4951, 4961, 1981

ItemNumber	Description
19602003 00	Flange coupling adapter for 80 mm profile 1
19602011 00	Flange coulpling adapter for 100 mm profile 2
19602012 00	Flange coupling adapter for 185 mm profile 3

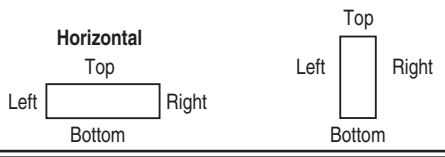
Coupling Adapters for Suspension Arm System 4945, 4949

Part Number	Description
19602007 00	Flange coupling adapter for 110 mm profile 2
19602008 00	Flange coupling adapter for 185 mm profile 3
19602013 00	Flange coupling adapter for 185 mm profile 3

SL 2000 Ordering Guide

Start at the top of this guide and work down, considering all options required. Circle required options and corresponding part numbers. You will build a 10 digit part number, eg., 19020002 01, plus assembly options. Then, call a Rose+Bopla sales person and they will give you pricing, internal dimensions and coupling hole options for the enclosure you designed.

CONSOLE HOLE LOCATION GUIDE



Please Circle All Items Required NOTE: One Inch equals 25.4 mm

DESCRIPTION	FLANGE COUPLING ADAPTER REQUIRED	COUPLING PART NUMBER	CONSOLE BOOT LOCATION	ROSE P.N.
COUPLING HOLES ☐ YES ☐ NO **COUPLING HOLE LOCATION** **INSTALL ADAPTER** ☐ YES ☐ NO	4945 & 4949 Suspension Systems 19602003 - 80mm Profile 19602011 - 110mm Profile 19602012 - 185mm Profile 4951 & 4961 Suspension Systems 19602007 - 110mm Profile 19602008 - 185mm Profile **Price of Adapter Not Included**		Top Left Bottom Right N / A	19
SELECT PROFILE	Profile #1 - 80 mm Profile #2 - 110 mm Profile #3 - 185 mm			01 02 03

ENCLOSURE HEIGHT / WIDTH	CIRCUMFERENCE	HEIGHT	WIDTH	
	Actual Panel Size + 95.6mm = External Height and Width			
Usable Panel Space Required Height:_____ Width:_____ Actual Panel Size (Usable Panel Space + 34mm) Height:_____ Width:_____ Usable Depth:_____ Refer to SL 2000 Drawing	0 - 1200mm	_____ mm	_____ mm	0001
	1201 - 1800mm	_____ mm	_____ mm	0002
	1801 - 2300mm	_____ mm	_____ mm	0003
	2301 - 2800mm	_____ mm	_____ mm	0004
	2801 - 3300mm	_____ mm	_____ mm	0005

DOORS	Rear Panel		00
	Rear Door	Hinge Location, if required (facing the unit). Top Left Bottom Right	01
FRONT PANEL (Circle One) No Front Panel Clear Anodized Mill Finish / Painted	**Install Panel Gasket** ☐ YES ☐ NO	**Install Front Panel: YES or NO** (Circle One) From Front From Front W / Studs From Rear	
MACHINING ☐ YES ☐ NO	Machine to DWG #		
SILK SCREENING ☐ YES ☐ NO	Silk Screen to DWG #		

HANDLES	Type	Installed	Handle Location
☐ YES ☐ NO	Dual Side Handles Corner Handles Console Mounting Kit	Yes - No Yes - No Yes - No	Horizontal or Vertical
	Prices of Handles Not Included		

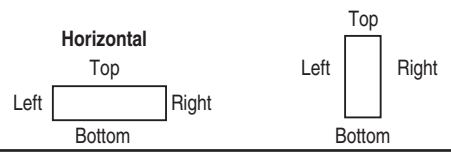
INSTALL			
	Front Bezel	**Black T-Slot Gasket**	**Optional: Keyboard Holder**

NOTES OR SPECIAL INSTRUCTIONS:

CONSOLE REQUIRED
☐ **YES** ☐ **NO**
IF YES, PROCEED TO NEXT PAGE

SL 2000 Console Ordering Guide

CONSOLE HOLE LOCATION GUIDE



Start at the top of this guide and work down, considering all options required. Circle required options and corresponding part numbers. You will build a 10 digit Rose part number, eg., 19010001 00, plus assembly options. Then call a Rose+Bopla sales person and they will give you pricing, internal dimensions and coupling hole options for the enclosure you designed.

Please Circle All Items Required

NOTE: One Inch equals 25.4 mm

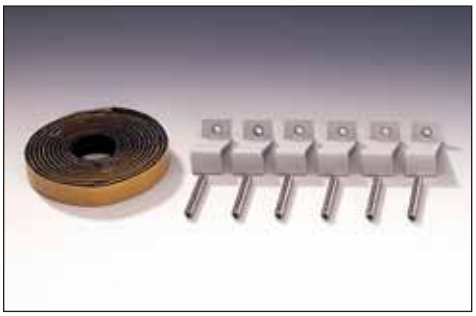
DESCRIPTION	FIXED CONSOLE MOUNTING KIT		CONSOLE MOUNTING KIT LOCATION	ROSE P.N.
CONSOLE MOUNTING KIT-HANDLES ☐ YES ☐ NO **INSTALL MOUNTING KIT-HANDLES** ☐ YES ☐ NO	19590011 00 19590012 00 19590013 00 **Price of Mounting Kit Not Included**	15 Degree Angle 30 Degree Angle Variable / Adjustable	Top Left Bottom Right	19
SELECT PROFILE	Profile #1 - 80 mm Profile #2 - 110 mm Profile #3 - 185 mm			01 02 03
ENCLOSURE HEIGHT / WIDTH Usable Panel Space Required Height:_____ Width:_____ Actual Panel Size (Usable Panel Space + 34mm) Height:_____ Width:_____ Usable Depth:_____ Refer to SL 2000 Drawing	**CIRCUMFERENCE**	**HEIGHT**	**WIDTH** Actual Panel Size + 95.6mm = External Height and Width	
	0 - 1200mm	_____ mm	_____ mm	0001
	1201 - 1800mm	_____ mm	_____ mm	0002
	1801 - 2300mm	_____ mm	_____ mm	0003
	2301 - 2800mm	_____ mm	_____ mm	0004
	2801 - 3300mm	_____ mm	_____ mm	0005
DOORS	Rear Panel Rear Door	Hinge Location, if required (facing the unit). Top Left Bottom Right		00 01
FRONT PANEL (Circle One) No Front Panel Clear Anodized Mill Finish / Painted	**Install Panel Gasket** ☐ YES ☐ NO	**Install Front Panel:** (Circle One)	**YES or NO** From Front From Front W / Studs From Rear	
MACHINING ☐ YES ☐ NO	Machine to DWG #			
SILK SCREENING ☐ YES ☐ NO	Silk Screen to DWG #			
HANDLES	**Type**	**Installed**	**Handle Location**	
☐ YES ☐ NO	Dual Side Handles Corner Handles	Yes - No Yes - No	Horizontal or Vertical	
INSTALL	**Front Bezel**	**Black T-Slot Gasket**	**Optional: Keyboard Holder**	
NOTES OR SPECIAL INSTRUCTIONS:				

SL 2000 Ordering Guide Instruction Sheet

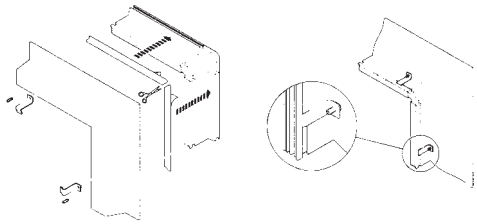
1. **Begin to fill in your SL 2000 part number** as 19__by going down through the SL 2000 Ordering Guide and filling in or circling the required items. You will build a 10-digit part number.
2. **Coupling Hole**–circle yes if you will be using a suspension coupling adapter.
3. **Coupling Hole Location**–select from...top, bottom, left, right. Also circle location guide in top left hand corner of ordering guide sheet.
4. **Install Adapter**–circle yes if you would like us to install the coupling adapter.
5. **Write in the Rose+Bopla flange coupling part number** being used if any.
6. **Select Profile**–your profile choice will depend on your required depth. See drawings and keep in mind that your front plate will affect this choice.
7. **Usable Panel Space**–fill in the usable panel space (in mm) you will need for your control or display panel.
8. **Actual Panel Size**–take your usable space and add 34mm to arrive at this figure.
9. **Usable Depth**–Check your supplied drawings to get this figure. Note: mounting your front plate from the front or rear will affect this dimension.
10. **External Size**–take your actual panel size and add 95.6mm to the height and width to arrive at these circumference dimensions.
11. **Door/Rear Panel**–you have a choice of a screwed-on rear panel or a hinged door. Please circle your choice and also the desired hinge locations.
12. **Front Panel**–Circle your choice of front panel/finish and installation method.
13. **Machining**–Please circle if you would like for us to machine/engrave your panels. if yes, please supply us with your drawing number and fax us a copy for review.
14. **Silkscreen**–Rose+Bopla can provide complete silkscreen services. If you would like this service we will need a drawing for placement and artwork to create the screen.
15. **Handles**–Please provide the part number and location for the handle style you have chosen. Keyboard Holder and Console Mounting Kit are available options. Note: A handle set consists of one handle and the required number of brackets.
16. **Rose+Bopla will install** front bezel material and outside protective rubber unless specified otherwise.
17. **Notes**–please fill in any special notes or instructions for building the unit.
18. **After design review**, a copy of the ordering guide will be faxed to you for final approval and signature.

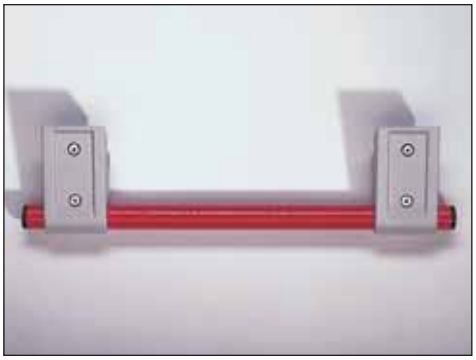
Note: For units with a console, please also fill out the “Console Ordering Guide” using these same guidelines.

SL 2000 Accessories



SL Panel Mounting Set for integrating the SL 2000 into control panels.
19601000 00 Includes fittings, sealing ring, and screws.





SL Handle Set consisting of tube and fittings
19602002 00 Asymmetrical
19602004 00 Side Attachment
19602005 00 Side Attachment
19602006 00 Side Attachment

5400 Machine Control

- Heavy duty aluminum extrusion, self-reinforced with internal ribs and slots
- Choose front and rear panels in either clear anodized aluminum, black anodized aluminum or mill finish aluminum
- Internal gasket protects against dust, water, chips and cutting fluids

Technical Data

Color	Body, doors and rear panel, agate gray, similar to RAL 7038. Corner handles and lock, transport gray, similar to RAL 7043. Custom colors on request.
Material	Al Sl 12, DIN 1725 Al Mg 3, DIN 1725 Al Mg Si 0.5, DIN 1725
Gasket Material	Neoprene foam rubber
Protection Classifications	IP 65 to EN 60529, NEMA 12 including see-through door
Temperature Range	-40°F to +176°F Transparent door: +14°F to +140°F

Panel vs. Enclosure Size

Panel	Description
Working Surface Height	Working Surface Height + 84mm
Working Surface Width	Working Surface Width + 84mm
Visible Surface Height	Visible Surface Height + 75mm
Visible Surface Width	Visible Surface Width + 75mm
Total Height	Total Height + 48mm
Total Width	Total Width + 48mm

5400 Accessory Order Guide

Part Number	Description
10036001 00	M5 Captive Nuts for Internal Slots
10036002 00	M6 Captive Nuts for Internal Slots
10033101 00	Internal Mounting Brackets with nuts and bolts
	Internal Shelf Bracket for 160mm depth
	Internal Shelf Bracket for 240mm depth
	Internal Shelf Bracket for 320mm depth
	Gas Springs for Doors
	External Keyboard Tray

5400 Ordering Guide

CONSOLE HOLE LOCATION GUIDE

Start at the top of this guide and work down, considering all options required. Circle required options and corresponding part numbers. You will build a 10 digit part number, eg., 54000102 02, plus assembly options. Then, call a Rose+Bopla sales person and they will give you pricing, internal dimensions and coupling hole options for the enclosure you designed.

Please Circle All Items Required

NOTE: One Inch equals 25.4 mm

Description				ROSE P.N.
COUPLING HOLE ☐ YES ☐ NO	**Series**	**Type**	**Location**	
	4949 4951, 4961, 4981 4990 OR OTHER TYPE			54
ENCLOSURE HEIGHT / WIDTH Inside Usable Height _____mm Inside Usable Width _____mm	**External Size**			
	Circumference	**Height**	**Width**	
	0 - 1800 mm	_____mm	_____mm	0001
	1801 - 2300 mm	_____mm	_____mm	0002
	2301 - 2800 mm	_____mm	_____mm	0003
	2801 - 3300 mm	_____mm	_____mm	0004
DOORS	**Type**	**Hinge Location (facing door)**	**Configuration**	
	Hinged Front Door	Left Right Top Bottom		
	Hinged Rear Door	Left Right Top Bottom	0 - 1 Door	01
	Hinged Front Clear Door	Left Right Top Bottom	2 Doors	02
	Hinged Rear Clear Door	Left Right Top Bottom	3 Doors	03
ENCLOSURE BODY DEPTH Inside Usable Depth _____mm		**External Size**		
		160 mm		01
		240 mm +		01
		320 mm +		02
		160 mm + 160 mm		03
		240 mm + 240 mm		03
		160 mm + 240 mm		03
		240 mm + 320 mm		04
		240 mm + 160 mm		03
		320 mm + 240 mm		04
		160 mm + 320 mm		03
		320 mm + 320 mm		04
		320 mm + 160 mm		03
DOOR LOCK / LATCH	**Flush Square Door Lock With Key**	**Door Handle/Latch**	**Locking Door Handle w/Key**	
	Front Rear Clear	Front Rear Clear	Front Rear Clear	
1/4 WRAP HANDLES	**Type**	**Location**		
	¼ Handle Horizontal (set of two)	Front Rear		N/A
	¼ Handle Vertical (set of two)	Front Rear		N/A
FRONT / REAR PANELS	**Type**	**Location**		
	Grained / Clear Anodized	Front Rear	Engrave per Dwg #_____	
	Grained / Black Anodized	Front Rear	Machine per Dwg #_____	
	Mill Finish / Painted	Front Rear	Silkscreen per Dwg #_____	
	None	Front Rear	Paint Instructions	
19" ADAPTER PLATES	Grained / Clear Anodized	Front Rear		N/A
INTERNAL MOUNTING PLATES	Mill Finish / Painted	H mm / W mm		N/A

Notes or Special Instructions:

4949 Suspension Arm System

- Industrial tube suspension arm system for supporting machine control enclosures
- Modular construction using steel tubing and individual connection components
- Protected internal cable routing

Included in delivery
Individual system components including assembly material.

Technical Data

Color	Transport gray, similar to RAL 7043
Material	Connection components - aluminum, steel Round Tubing - galvanized steel tube, 48 x 4 mm
Finish	Powder-coat painted connection components
Protection Classifications	IP 54, EN 60529. Foot 49496800, IP 40
Assembly	Cut the tubing. Slide components together. Tighten to required torque, 22 lbs. force (30 Newton Meters). Complete assembly instructions are provided with components.

Connection Components		Part Number	Weight (lbs)
Bass bracket		**49496600 00**	4.18
Foot		**49497200 00**	1.65
Foot		**49496800 00**	1.54
Wall bracket (Horizontal Exit)		**49497000 00**	3.75
Wall bracket (Vertical Exit)		**49496200 00**	3.31
Elbow		**49497100 00**	1.76
Coupling		**49497300 00**	1.10
Coupling		**49497700 00**	1.10
Elbow coupling		**49497500 00**	1.54
Elbow coupling		**49497800 00**	1.54
Angled adapter 30°		**49497600 00**	0.88
Adapter flange for external cable		**49497900 00**	8.82
Tilting adapter		**49498000 00**	1.32

Steel Tubing	Part Number	Weight (lbs)
Round tubing 10 feet, 4 mm wall thickness, zinc plated	**10094158 45**	30.80 (10 feet)
Round tubing 10 feet, 4 mm wall thickness, zinc plated	**10094158 85**	30.80 (10 feet)

4949 Maximum Weight:

3.3 ft.	4.9 ft.	
112	67	lbf.

lbf.=Pounds Force

4951/61/81 Suspension Arm System

- Robust industrial suspension arm system for supporting machine control enclosures
- Modular construction using square steel tubing and cast steel and aluminum connection components
- High loading capacity, long extension capabilities

Included in delivery
Individual system components including assembly material.

Technical Data

Color	Dark gray, similar to RAL 7043. Tubing: zinc plated.
Material	Square connection tubing, 5mm thick, steel, to DIN 2395
Protection Classifications	IP 65, EN 60529, NEMA 12
Assembly	Cut tubing to desired length. Slide components together. Tighten to required torque. Complete assembly instructions provided with components.
Torque Requirements	30 Nm, 22 lbs. force

Connection Components		4951 Part Number	Weight (lbs)	4961 Part Number	Weight (lbs)	4981 Part Number	Weight (lbs)
Base unit bracket		**49516600 00**	30.86	**49616600 00**	40.12	**49816600 00**	51.38
Foot		**49517400 00**	6.61	**49617400 00**	6.61	**49817400 00**	13.23
Wall bracket		**49517000 00**	13.89	**49617000 00**	20.06	**49817000 00**	28.66
Adapter angle coupling (for vertical wiring exit)		**49517900 00**	11.02	**49617900 00**	13.23	**49817900 00**	14.33
Intermediate joint		**49516700 00**	13.67	**49616700 00**	19.62	**49816700 00**	28.00
Elbow		**49518000 00**	9.92	**49618000 00**	12.79	**49818000 00**	17.64
Elbow coupling		**49517500 00**	4.85	**49617500 00**	7.05	**49817500 00**	12.57
Flange elbow coupling		**49517800 00**	4.85	**49617800 00**	7.94	**49817800 00**	12.35
Flange coupling		**49517700 00**	4.63	**49617700 00**	6.17	**49817700 00**	10.80
Adjustable angle coupling		**49516200 00**	3.97	**49616200 00**	4.85	**49816200 00**	6.17
30° fixed angle adapter for flange coupling		**49517600 00**	1.76	**49617600 00**	2.20	**49817600 00**	3.75

Steel Tubing	Part Number	Weight (lbs.)
Support tubing, zinc plated steel, 10 foot sections for 4951	**10094156 45 (51)**	44.00
Support tubing, zinc plated steel, 10 foot sections for 4961	**10094157 45 (61)**	47.00
Support tubing, zinc plated steel, 10 foot sections for 4981	**10094159 45 (81)**	71.00

Maximum Weight:

	3.3 ft.	4.9 ft.	6.6 ft.	8.1 ft.	9.8 ft.	lbf.
System 51	225	146	112			lbf.
System 61	281	180	140	112		lbf.
System 81	337	213	163	135	112	lbf.

lbf.=Pounds Force

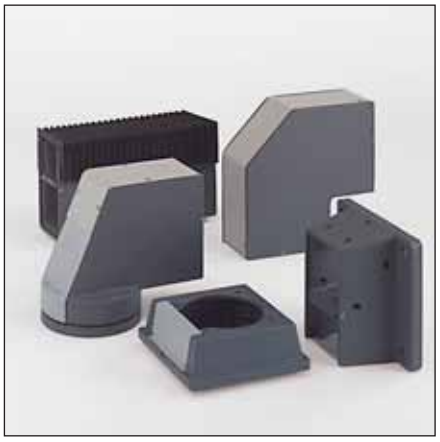
Usable Space:

System 51–40 x 40mm, Inside Dimension of Tubing.
System 61–50 x 50mm, Inside Dimension of Tubing.
System 81–70 x 70mm, Inside Dimension of Tubing.

4990 Suspension Arm System

- Robust industrial suspension arm system for supporting machine control enclosures, with open cable duct for heavy loads
- Modular construction with freely accessible cable duct
- Floor, top-mounting or wall exit options

Included in delivery
System individual components including cable duct covering and assembly material.



Technical Data

Color	Connection Components–transport gray, similar to RAL 7043. Aluminum profile–agate gray, similar to RAL 7038
Material	Tubing–square tubing, 5mm or 8mm thick, steel, to ST 37 DIN 2395. Components–cast iron with copper graphite, or aluminum. Bearing–ball bearing. Textile bellows.
Cable Duct	Free cable passage in system components. Approximately 3.15" W x 2.81" H, 80 x 71.37mm
Torque	22 lbs. force (30 Newton Meters)
Protection Classification	IP 65 when special surface-mounted flange is used between enclosure coupling and control panel.
Load	When using square steel tube 80 x 80 x 5mm (ST 37 DIN 2395), maximum 500N at 3 meter extension. When using square steel tube 80 x 80 x 8mm (ST 37 DIN 2395), maximum 750N at 3 meter extension.

Maximum Weight:

	2.4 ft.	3.3 ft.	4.9 ft.	6.6 ft.	8.1 ft.	9.8 ft.	lbf.
Supporting Tubing 80 x 80 x 5mm	449	337	225	169	135	112	lbf.
Supporting Tubing 80 x 80 x 8mm	449	449	337	253	198	169	lbf.

lbf.=Pounds Force

Description		Part Number	Weight (kg)
Brass bracket		**49906601 00**	44.53
Foot/wall flange		**49907401 00**	13.23
Wall bracket		**49907001 00**	38.58
Intermediate joint		**49906701 00**	38.86
Elbow C		**49907111 00**	20.06
Elbow A		**49907120 00**	9.48
Elbow coupling		**49907501 00**	9.26
Coupling		**49907301 00**	8.60
Watertight top flange (used in conjunction with couplings)		**49900030 00**	2.43
Watertight top flange (used in conjunction with couplings)		**49900020 00**	2.43

Note: Tubing can be cut to specific lengths. Maximum length for UPS 9 feet (108")

Description	Part Number Cable Duct (standard length to fit relevant suspension tube)	Part Number Support Tube 80 x 80 x 5 mm	Part Number Support Tube 80 x 80 x 8 mm
Cable duct	**10094238 00**		
Support tubing, steel		**10094159 45**	
Support tubing, steel			**10094234 00**

*The cable duct needs to be 175 mm shorter that the suspension tube length.

Moterm

- Mobile stand system for system components
- Optional fixed or manually adjusted version
- 2 and 4 wheels available

Included in delivery
Moterm with mounting inclining adapter and adapter plate for Machine Control Systems.
Please order adapter plate separately

Technical Data

Material	Foot: sheet steel Profile: AlMgSi 0.5
Temperature Range	-40°F to +176°F
Painting	Powder coating
Color	Profile: light gray similar to RAL 7035 Foot: black gray similar to RAL 7021
Maximum Load	Dependent on system construction - on request

Description	Part Number
Moterm 1, fixed version, height 1000 mm, 2 wheels	**50010101 00**
Moterm 2, manual adjustable (750 - 1000 mm), 2 wheels	**50010102 00**
Moterm 4, fixed version, height 980 mm, 4 wheels	**50010104 00**
Moterm 5, manual adjustable (730 - 1000 mm), 4 wheels	**50010105 00**

Accessories

Description	Part Number
Adapter plate SL 2000 profile 1	**50010203 00**
Adapter plate SL 2000 profile 2	**50010204 00**
Adapter plate SL 2000 profile 3	**50010205 00**
Adapter plate universal (without holes)	**50010209 00**
Adapter plate Beckhoff CP 7032	**50010210 00**

Inclining Adapter

- Inclining adapter for individual connection between enclosure and suspension systems or for wall mounting
- Simple handling

Included in delivery

Inclining adapter, flange plates, sealing and mounting material

Technical Data

Material	Sheet steel, 2.5 mm Bellow: PVC, RAL 9005 (black)
Surface	Black, similar to RAL 9005, powdered
Temperature Range	-40°F to +140°F

Description	Part Number	Weight (lb)
1. Inclining adapter for mounting to wall or machinery	**50020001 00**	2.87
2. Inclining adapter for suspension system 4945	**50020002 00**	2.20
3. Inclining adapter for suspension system with flange 4945	**50020004 00**	1.98

Cable entries and cable glands must be tightly sealed in accordance with design requirements. Rose+Bopla offers a wide range of cable gland products for this purpose:

–versions in plastic, aluminum, brass and stainless steel
–for Standard, Ex and EMC applications
–for ingress protection to IP 68

Note: Other cable glands on request

Plastic Cable Glands
- Product range in Polyamide (PG and metric thread) as standard or Ex cable gland
- Accessories, blanking plugs, lock nuts, self-sealing grommets and PE seals

Brass Cable Glands
- Product range PG and metric thread as standard, Ex or EMC cable glands
- Accessories, blanking plugs and lock nuts

Stainless Steel Cable Glands
- Product range in 2 versions (PG and metric thread) as standard or Ex cable glands

Polyamide Plastic Cable Glands

Type	Polyamide Cable Gland
Material	Polyamide
Color	RAL 7035
Sealing Inset	NBR
External Seal	-
Ingress Protection	IP 68
Temperature Range	-40°F to +212°F

Polyamide Cable Glands

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7	3 - 6.5	100	**08020207 00**
9	4 - 8	100	**08020209 00**
11	5 - 10	100	**08020211 00**
13.5	6 - 12	100	**08020213 00**
16	10 14	50	**08020216 00**
21	13 - 18	50	**08020221 00**
29	18 - 25	25	**08020229 00**
36	22 - 32	10	**08020236 00**
42	30 - 38	5	**08020242 00**
48	34 - 44	5	**08020248 00**
Metric			
M 12 x 1.5	3 - 6	100	**08080512 00**
M 16 x 1.5	5 - 10	100	**08080516 00**
M 20 x 1.5	8 - 13	100	**08080520 00**
M 25 x 1.5	11 - 17	100	**08080525 00**
M 32 x 1.5	15 - 21	50	**08080532 00**
M 40 x 1.5	19 - 28	10	**08080540 00**
M 50 x 1.5	26 - 35	5	**08080550 00**
M 63 x 1.5	32 - 42	5	**08080563 00**

Type	Plastic Ex Blind Plugs DIN EN 5014/19/20
Certification	Ⓔx II 2 G/D acc. guideline 94/9/EG
Material	Polyamide 6
Color	RAL 9005 (black)
Ingress Protection	IP 68 with seal
Temperature Range	-40°F to +104°F

Polyamide Ex Blind Plug

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		100	**08056707 00**
9		100	**08056709 00**
11		100	**08056711 00**
13.5		100	**08056713 00**
16		100	**08056716 00**
21		100	**08056721 00**
29		50	**08056729 00**
36		20	**08056736 00**
42		20	**08056742 00**
48		20	**08056748 00**
Metric			
M 16 x 1.5		100	**08090616 00**
M 20 x 1.5		100	**08090620 00**
M 25 x 1.5		100	**08090625 00**
M 32 x 1.5		100	**08090632 00**
M 40 x 1.5		20	**08090640 00**
M 50 x 1.5		20	**08090650 00**
M 63 x 1.5		20	**08090663 00**

Type	Polyamide Ex DIN EN 50014/19/20
Certification	Ⓔx II 2 G/D acc. guideline 94/9/EG
Material	Polyamide 6
Color	Black (RAL 9005) Blue (RAL 5012)
Ingress Protection	IP 68 with seal
Temperature Range	-40°F to +140°F

Polyamide Ex Cable Glands

Type	Cable Ø	Pcs/Pack	Part Number	Part Number
PG			**Black**	**Blue**
7	3.5 - 6	20	**08060007 00**	**08065007 00**
9	5 - 8	20	**08060009 00**	**08065009 00**
11	6 - 10	20	**08060011 00**	**08065011 00**
13.5	8 - 13	20	**08060013 00**	**08065013 00**
16	10 - 15	20	**08060016 00**	**08065016 00**
21	13 - 19	20	**08060021 00**	**08065021 00**
29	17 - 25	10	**08060029 00**	**08065029 00**
36	24 - 32	10	**08060036 00**	**08065036 00**
42	28 - 38	10	**08060042 00**	**08065042 00**
48	34 - 44	10	**08060048 00**	**08065048 00**
Metric				
M 16 x 1.5	5 - 8	20	**08080616 00**	**08080716 00**
M 20 x 1.5	8 - 13	20	**08080620 00**	**08080720 00**
M 25 x 1.5	13 - 19	20	**08080625 00**	**08080725 00**
M 32 x 1.5	17 - 25	10	**08080632 00**	**08080732 00**
M 40 x 1.5	24 - 32	10	**08080640 00**	**08080740 00**
M 50 x 1.5	28 - 38	10	**08080650 00**	**08080750 00**
M 63 x 1.5	34 - 44	10	**08080663 00**	**08080763 00**

Polyamide Cable Glands

Type	Polyamide lock nut
Material	Polyamide
Color	RAL 7035
Sealing Inset	-
External Seal	-
Ingress Protection	-
Temperature Range	-40°F to +212°F

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		100	**08020907 00**
9		100	**08020909 00**
11		100	**08020911 00**
13.5		100	**08020913 00**
16		50	**08020916 00**
21		50	**08020921 00**
29		25	**08020929 00**
36		25	**08020936 00**
42		25	**08020942 00**
48		25	**08020948 00**
Metric			
M 12		100	**08090712 00**
M 16		100	**08090716 00**
M 20		100	**08090720 00**
M 25		100	**08090725 00**
M 32		50	**08090732 00**
M 40		50	**08090740 00**
M 50		5	**08090750 00**
M 63		5	**08090763 00**

Type	MZI Cable Gland
Ingress Protection	IP 65
Temperature Range	-4°F to +212°F
Material	Polyamide

MZI Cable Glands

Model	Cable Ø	Connection Thread	Part Number
PG			
MZI 9	6 - 8	13.5	**12060200 00**

Type	PA with bending protection
Ingress Protection	IP 54
	IP 68 - 10 bar with seal
Temperature Range	-40°F to +212°F
Material	Polyamide
Color	Black, RAL 9005

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		50	**08110107 00**
9		50	**08110109 00**
11		50	**08110111 00**
13.5		50	**08110113 00**
16		25	**08110116 00**
21		20	**08110121 00**
Metric			
M 12 x 1.5		50	**08100112 00**
M 16 x 1.5		50	**08100116 00**
M 20 x 1.5		50	**08100120 00**
M 25 x 1.5		20	**08100125 00**

Type	Blind Plugs
Material	Polyamide
Color	RAL 7035
Sealing Inset	-
External Seal	-
Ingress Protection	IP 54
Temperature Range	-10°F to +176°F

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		100	**08020607 00**
9		100	**08020609 00**
11		100	**08020611 00**
13.5		100	**08020613 00**
16		100	**08020616 00**
21		100	**08020621 00**
29		50	**08020629 00**
Metric			
M 12 x 1.5		100	**08090512 00**
M 16 x 1.5		100	**08090516 00**
M 20 x 1.5		100	**08090520 00**
M 25 x 1.5		100	**08090525 00**
M 32 x 1.5		50	**08090532 00**
M 40 x 1.5		50	**08090540 00**

Characteristics: Integrated strain relief, large sealing and terminal section, easy to assemble
Ingress Protection: IP 68
Temperature Range: -4°F to + 212°F

BF/MBF Cable Glands

Model	Cable Ø	Connection Thread	Part Number
PG			
BF 7	3 - 6.5	PG 7	**10000100 00**
BF 9	4 - 8	PG 9	**10000200 00**
BF 11	5 - 10	PG 11	**10000300 00**
BF 13	6 - 12	PG 13.5	**10000400 00**
BF 16	10 14	PG 16	**10000500 00**
BF 21	13 - 18	PG 21	**10000600 00**
BF 29	18 - 25	PG 29	**10000700 00**
BF 36	22 - 32	PG 36	**10000800 00**
Metric			
MBF 12	3 - 6	M 12 x 1.5	**12002100 00**
MBF 16	5 - 10	M 16 x 1.5	**12002200 00**
MBF 20	8 - 13	M 20 x 1.5	**12002300 00**
MBF 25	11 - 17	M 25 x 1.5	**12002400 00**
MBF 32	15 - 21	M 32 x 1.5	**12002500 00**
MBF 40	19 - 28	M 40 x 1.5	**12002600 00**

Characteristics: Integrated strain relief, anti-kink protection, large sealing and terminal section, easy to assemble
Ingress Protection: IP 68
Temperature Range: -4°F to +212° F

BFK/MBFK Cable Glands

Model	Cable Ø	Connection Thread	Part Number
PG, with anti-kink protection			
BFK 7	3 - 6.5	PG 7	**10001100 00**
BFK 9	4 - 8	PG 9	**10001200 00**
BFK 11	5 - 10	PG 11	**10001300 00**
BFK 13	6 - 12	PG 13.5	**10001400 00**
BFK 16	10 - 14	PG 16	**10001500 00**
BFK 21	13 - 18	PG 21	**10001600 00**
Metric, with anti-kink protection			
MBFK 12	3 - 6.5	M 12 x 1.5	**12002103 00**
MBFK 16	5 - 10	M 16 x 1.5	**12002210 00**
MBFK 20-1	6 - 12	M 20 x 1.5	**12002303 00**
MBFK 20-2	10 - 14	M 20 x 1.5	**12002306 00**
MBFK 25	13 - 18	M 25 x 1.5	**12002401 00**

Characteristics: With clamping cage for strain relief
Ingress Protection: IP 65
Temperature Range: -22°F to +212°F

POZ/MPOZ Cable Glands

Model	Cable Ø	Connection Thread	Part Number
PG			
POZ 7	4 - 6	PG 7	**12051809 00**
POZ 9	6 - 8	PG 9	**12051909 00**
POZ 11	8 - 10	PG 11	**12052009 00**
POZ 13	10 -12	PG 13	**12052109 00**
POZ 16	12 - 14	PG 16	**12052209 00**
POZ 21	14 - 18	PG 21	**12052309 00**
POZ 29	18 - 24	PG 29	**12052409 00**
Metric			
MPOZ 12-1	4 - 6	M 12 x 1.5	**12151800 00**
MPOZ 12-2	6 - 8	M 12 x 1.5	**12151900 00**
MPOZ 16	6 - 8	M 16 x 1.5	**12152000 00**
MPOZ 20-1	8 - 10	M 20 x 1.5	**12152100 00**
MPOZ 20-2	10 -12	M 20 x 1.5	**12152200 00**
MPOZ 20-3	12 - 14	M 20 x 1.5	**12152300 00**
MPOZ 25-2	14 - 18	M 25 x 1.5	**12152400 00**
MPOZ 32	18 - 24	M 32 x 1.5	**12152500 00**

Characteristics	With clamping cage for strain relief and anti-kink grommet
Material:	Polyamide
Ingress Protection	IP 65
Temperature Range	-22°F to + 212°F

POZB/MPOZB Cable Glands

Model	Cable Ø	Connection Thread	Part Number
PG			
POZB 7	4 - 6	PG 7	**12052609 00**
POZB 9	6 - 8	PG 9	**12052709 00**
POZB 11	8 - 10	PG 11	**12052809 00**
POZB 13	10 - 12	PG 13	**12052909 00**
POZB 16	12 - 14	PG 16	**12053009 00**
POZB 21	14 - 18	PG 21	**12053109 00**
POZB 29	18 - 24	PG 29	**12053209 00**
Metric			
MPOZB 12-1	4 - 6	M 12 x 1.5	**12152600 00**
MPOZB 12-2	6 - 8	M 12 x 1.5	**12152700 00**
MPOZB 16	6 - 8	M 16 x 1.5	**12152800 00**
MPOZB 20-1	8 - 10	M 20 x 1.5	**12152900 00**
MPOZB 20-2	10 - 12	M 20 x 1.5	**12153000 00**
MPOZB 20-3	12 - 14	M 20 x 1.5	**12153100 00**
MPOZB 25-2	14 - 18	M 25 x 1.5	**12153200 00**
MPOZB 32	18 - 24	M 32 x 1.5	**12153300 00**

Characteristics: Polyamide counter nut for all cable glands with PG or metric connection threads.

GM/MGM Counter Nuts

Model	Connection Thread	Part Number	Width Across Flats
PG			
GM 7	PG 7	**52080100 00**	SW 19
GM 9	PG 9	**52080200 00**	SW 22
GM 11	PG 11	**52080300 00**	SW 24
GM 13	PG 13.5	**52080400 00**	SW 27
GM 16	PG 16	**52080500 00**	SW 30
GM 21	PG 21	**52080600 00**	SW 36
GM 29	PG 29	**52080700 00**	SW 46
GM 36	PG 36	**52080800 00**	SW 60
Metric			
MGM 12	M 12 x 1.5	**52090100 00**	SW 17
MGM 16	M 16 x 1.5	**52090200 00**	SW 22
MGM 20	M 20 x 1.5	**52090300 00**	SW 26
MGM 25	M 25 x 1.5	**52090400 00**	SW 32
MGM 32	M 32 x 1.5	**52090500 00**	SW 41
MGM 40	M 40 x 1.5	**52090600 00**	SW 50

Characteristics: Polyamide blind plugs for closing and sealing unused Pg/metric threaded drill holes. For increased protection, please use sealing ring for connection thread DR.

BL/MBL Blind Plugs

Model	Connection Thread	Part Number
PG blind plugs		
BL 7	PG 7	**52010000 00**
BL 9	PG 9	**52010100 00**
BL 11	PG 11	**52010200 00**
BL 13	PG 13.5	**52010300 00**
BL 16	PG 16	**52010400 00**
BL 21	PG 21	**52010500 00**
BL 29	PG 29	**52010600 00**
BL 36	PG 36	**52010700 00**
Metric blind plugs		
MBL 12	M 12 x 1.5	**52011100 00**
MBL 16	M 16 x 1.5	**52011200 00**
MBL 20	M 20 x 1.5	**52011300 00**
MBL 25	M 25 x 1.5	**52011400 00**
MBL 32	M 32 x 1.5	**52011500 00**
MBL 40	M 40 x 1.5	**52011600 00**

Characteristics: Integrated strain relief, large sealing and terminal section, easy to assemble, anti-twist protection.
Ingress Protection: IP 68
Temperature Range: -4°F to +212°F

MSBF Cable Glands

Connection Thread	Cable Ø	Model	Part Number
Metric			
M 12 x 1.5	3 - 6.0	**MSBF 12**	**13002100 00**
M 16 x 1.5	5 - 9.0	**MSBF 16**	**13002200 00**
M 20 x 1.5	9 - 13.0	**MSBF 20**	**13002300 00**
M 25 x 1.5	11 - 16.0	**MSBF 25**	**13002400 00**
M 32 x 1.5	14 - 21.0	**MSBF 32**	**13002500 00**
M 40 x 1.5	19 - 27.0	**MSBF 40**	**13002600 00**

Characteristics: With clamping cage for strain relief
Ingress Protection: IP 65
Temperature Range: -4°F to +212°F

MSK Cable Glands

Connection Thread	Cable Ø	Model	Part Number
PG			
7	4 - 6	**MSK 7**	**13050100 00**
9	6 - 8	**MSK 9**	**13050200 00**
11	8 - 10	**MSK 11**	**13050300 00**
13.5	10 - 12	**MSK 13**	**13050400 00**
16	12 - 14	**MSK 16**	**13050500 00**
21	14 - 18	**MSK 21**	**13050600 00**
29	18 - 24	**MSK 29**	**13050700 00**

Characteristics: Industrial cable glands in the style of DIN 46320
Ingress Protection: IP 54
Temperature Range: -22°F to +230°F

MSS Cable Glands

Connection Thread	Cable Ø	Model	Part Number
PG			
7	4 - 6	**MSS 7**	**13020100 00**
9	6 - 8	**MSS 9**	**13020200 00**
11	8 - 10	**MSS 11**	**13020300 00**
13.5	10 - 12	**MSS 13**	**13020400 00**
16	12 - 14	**MSS 16**	**13020500 00**
21	15 - 17	**MSS 21**	**13020600 00**

Type	Brass cable gland
Material	Nickel-faced brass
Sealing Inset	NBR
External Seal	O-ring, NBR
Ingress Protection	IP 68
Temperature Range	-40° to +212°F briefly +248°F

Brass Cable Glands

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7	3.5 - 6	50	**08040307 00**
9	4 - 8	50	**08040309 00**
11	5 - 10	50	**08040311 00**
13.5	6 - 12	50	**08040313 00**
16	10 - 14	25	**08040316 00**
21	13 - 18	25	**08040321 00**
29	18 - 25	20	**08040329 00**
36	22 - 32	1	**08040336 00**
42	30 - 38	1	**08040342 00**
48	34 - 44	1	**08040348 00**
Metric			
M 12 x 1.5	3 - 6.5	50	**08080412 00**
M 16 x 1.5	4 - 8	50	**08080416 00**
M 20 x 1.5	6 - 12	50	**08080420 00**
M 25 x 1.5	10 - 14	25	**08080425 00**
M 32 x 1.5	13 - 18	20	**08080432 00**
M 40 x 1.5	18 - 25	1	**08080440 00**
M 50 x 1.5	22 - 32	1	**08080450 00**
M 63 x 1.5	34 - 44	1	**08080463 00**

Characteristics	Large sealing section, easy to assemble.
Ingress Protection	IP 68
Temperature Range	-4°F to +212°F

MSD Cable Glands

Connection Thread	Cable Ø	Model	Part Number
PG			
7	4 - 6.5	**MSD 7**	**13040100 00**
9	5 - 10	**MSD 9**	**13040200 00**
11	7 - 11.5	**MSD 11**	**13040300 00**
13.5	8 - 15.0	**MSD 13**	**13040400 00**
16	8 - 15.0	**MSD 16**	**13040500 00**

Characteristics	Brass counter nut for all cable glands with PG or metric connection

GMS/MGMS Counter Nuts

Connection Thread	Width Across Flats	Model	Part Number
PG			
7	SW 15	**GMS 7**	**13150100 00**
9	SW 18	**GMS 9**	**13150200 00**
11	SW 21	**GMS 11**	**13150300 00**
13.5	SW 23	**GMS 13**	**13150400 00**
16	SW 26	**GMS 16**	**13150500 00**
21	SW 32	**GMS 21**	**13150600 00**
29	SW 41	**GMS 29**	**13150700 00**
36	SW 51	**GMS 36**	**13150800 00**
Metric			
M 12 x 1.5	SW 15	**MGMS 12**	**13160100 00**
M 16 x 1.5	SW 19	**MGMS 16**	**13160200 00**
M 20 x 1.5	SW 24	**MGMS 20**	**13160300 00**
M 25 x 1.5	SW 30	**MGMS 25**	**13160400 00**
M 32 x 1.5	SW 36	**MGMS 32**	**13160500 00**
M 40 x 1.5	SW 46	**MGMS 40**	**13160600 00**

Type: Brass Ex Cable Gland with Seal
Certification: Ex II 2 G/D acc. guideline 94/9/EG
Ingress Protection: IP 68
Temperature Range: -4°F to +221°F

Brass Ex Cable Gland with Seal

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7	3.5 - 6	50	**08040707 00**
9	4 - 8	50	**08040709 00**
11	5 - 10	50	**08040711 00**
13.5	6 - 12	50	**08040713 00**
16	10 - 14	50	**08040716 00**
21	13 - 18	50	**08040721 00**
29	18 - 25	25	**08040729 00**
36	22 - 32	1	**08040736 00**
42	32 - 38	1	**08040742 00**
48	37 - 44	1	**08040748 00**
Metric			
M 12 x 1.5	3 - 6.5	50	**08080812 00**
M 16 x 1.5	4 - 8	10	**08080816 00**
M 20 x 1.5	6 - 12	10	**08080820 00**
M 25 x 1.5	13 - 18	10	**08080825 00**
M 32 x 1.5	18 - 25	10	**08080832 00**
M 40 x 1.5	22 - 30	5	**08080840 00**
M 50 x 1.5	32 - 38	1	**08080850 00**
M 63 x 1.5	37 - 44	1	**08080863 00**

Type: Brass Ex Blind Plug
Certification: Ex II 2 G/D acc. guideline 94/9/EG
Ingress Protection: IP 68
Temperature Range: -22°F to +194°F

Brass Ex Blind Plug

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		50	**08080907 00**
9		50	**08080909 00**
11		50	**08080911 00**
13.5		50	**08080913 00**
16		50	**08080916 00**
21		50	**08080921 00**
29		25	**08080929 00**
36		10	**08080936 00**
42		10	**08080942 00**
48		10	**08080948 00**
Metric			
M 16 x 1.5		50	**08090816 00**
M 20 x 1.5		50	**08090820 00**
M 25 x 1.5		50	**08090825 00**
M 32 x 1.5		25	**08090832 00**
M 40 x 1.5		10	**08090840 00**
M 50 x 1.5		5	**08090850 00**
M 63 x 1.5		5	**08090863 00**

Type	MS cable gland EMC
Material	Nickel-faced brass
Sealing Inset	NBR
External Seal	NBR
Ingress Protection	IP 68
Temperature Range	-40°F to +212°F briefly +248°F

Brass Cable Glands EMC Versions

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		50	**08070007 00**
9		50	**08070009 00**
11		50	**08070011 00**
13.5		50	**08070013 00**
16		50	**08070016 00**
21		50	**08070021 00**
29		25	**08070029 00**
36		1	**08070036 00**
42		1	**08070042 00**
48		1	**08070048 00**
Metric			
M 12 x 1.5		50	**08070112 00**
M 16 x 1.5		50	**08070116 00**
M 20 x 1.5		50	**08070120 00**
M 25 x 1.5		25	**08070125 00**
M 32 x 1.5		25	**08070132 00**
M 40 x 1.5		25	**08070140 00**

Type	MS Blind Plug
Material	Nickel-faced brass
External seal	O-Ring, NBR
Ingress protection	IP 65
Temperature range	-40°F to +176°F

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		100	**08040607 00**
9		100	**08040609 00**
11		100	**08040611 00**
13.5		100	**08040613 00**
16		100	**08040616 00**
21		100	**08040621 00**
29		50	**08040629 00**
36		25	**08040636 00**
42		25	**08040642 00**
Metric			
M 16 x 1.5		50	**08090416 00**
M 20 x 1.5		50	**08090420 00**
M 25 x 1.5		50	**08090425 00**
M 32 x 1.5		25	**08090432 00**
M 40 x 1.5		1	**08090440 00**
M 50 x 1.5		1	**08090450 00**
M 63 x 1.5		1	**08090463 00**

Type	Brass lock nut
Material	Nickel-faced brass
Sealing insert	-
External insert	-
Ingress protection	-
Temperature range	-

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		100	**08040907 00**
9		100	**08040909 00**
11		100	**08040911 00**
13.5		100	**08040913 00**
16		100	**08040916 00**
21		100	**08040921 00**
29		100	**08040929 00**
Metric			
M 16 x 1.5		50	**08090916 00**
M 20 x 1.5		50	**08090920 00**
M 25 x 1.5		50	**08090925 00**
M 32 x 1.5		25	**08090932 00**
M 40 x 1.5		1	**08090940 00**
M 50 x 1.5		1	**08090950 00**
M 63 x 1.5		1	**08090963 00**

Brass Cable Glands EMC Version

Type	Brass lock nut EMC
Material	Nickel-faced brass
Sealing Inset	-
External Seal	-
Ingress Protection	-
Temperature Range	-

Brass Lock Nut EMC

Type	Cable Ø	Model	Part Number
PG			
7		100	**08070907 00**
9		100	**08070909 00**
11		100	**08070911 00**
13.5		100	**08070913 00**
16		100	**08070916 00**
21		100	**08070921 00**
29		100	**08070929 00**
36		100	**08070936 00**
42		100	**08070942 00**
48		100	**08070948 00**
Metric			
M 12 x 1.5		50	**08070812 00**
M 16 x 1.5		50	**08070816 00**
M 20 x 1.5		50	**08070820 00**
M 25 x 1.5		50	**08070825 00**
M 32 x 1.5		25	**08070832 00**
M 40 x 1.5		25	**08070840 00**

Brass Cable Glands EMC Version

Characteristics	For fast, easy EMC connection of cables and leads with the enclosure (via the contact spring and the intermediate connection of the screen mesh). Integrated strain relief, anti-twist protection.
Ingress Protection	IP 68
Temperature Range	-4°F to +212°F

MEMV EMC Cable Glands

Type	Connection Thread	Cable Diameter	Part Number
Metric			
MEMV 16	M 16 x 1.5	5.0 - 9.0	**12102200 00**
MEMV 20	M 20 x 1.5	9.0 - 13.0	**12102300 00**
MEMV 25	M 25 x 1.5	11.0 - 16.0	**12102400 00**
MEMV 32	M 32 x 1.5	14.0 - 21.0	**12102500 00**
MEMV 40	M 40 x 1.5	19.0 - 27.0	**12102600 00**

Polyethylene Cable Glands

Type	PE seal
Material	HP Polyethylene
Color	Transparent
Sealing Inset	-
External Seal	-
Ingress Protection	-
Temperature Range	-22°F to +158°F

PE Seal

Type	Cable Ø	Pcs/Pack	Part Number
PG			
7		50	**08000807 00**
9		50	**08000809 00**
11		50	**08000811 00**
13.5		50	**08000813 00**
16		50	**08000816 00**
21		50	**08000821 00**
29		50	**08000829 00**
36		50	**08000836 00**

Polyethylene Cable Glands

Characteristics: Polyethylene twisting nipple with Pg connection thread for feeding through cables, without IP protection or strain relief.

WN Twisting Nipples

Model	Outer Ø	Connection Thread	Part Number
WN 9	15.2	PG 9	**52020100 00**
WN 11	18.6	PG 11	**52020200 00**
WN 13	20.4	PG 13.5	**52020300 00**
WN 16	22.5	PG 16	**52020400 00**
WN 21	28.3	PG 21	**52020500 00**
WN 29	37	PG 29	**52020600 00**

Characteristics: Blanking plug for BoplaFlex cable glands not fitted with cables to provide IP 65 ingress protection

Material: Polyethylene

VS BF Blanking Plugs for PoplaFlex Cable Glands

Model	For Use With	Part Number
VS BF 7	BF 7 / MBF 12	**10000110 00**
VS BF 9	BF 9 / MBF 16	**10000210 00**
VS BF 11	BF 11	**10000310 00**
VS BF 13	BF 13 / MBF 20	**10000410 00**
VS BF 16	BF 16	**10000510 00**
VS BF 21	BF 21 / MBF 25	**10000610 00**
VS BF 29	BF 29	**10000710 00**
VS BF 32	MBF 32	**10000715 00**
VS BF 36	BF 36	**10000810 00**
VS BF 40	MBF 40	**10000815 00**

Characteristics: Blind washer for all Bopla cable glands. Place the blind washer under the sealing ring if dust protection is required.

Material: Polyethylene

BS Blind Washers for BoplaCon Cable Glands

Model	Connection Thread	Part Number
BS 7	POZ 7 / POZB 7 / MSS 7 / MSD 7 / MSK 7	**12911280 00**
BS 9	POZ 9 / POZB 9 / MSS 9 / MSD 9 / MSK 9	**12911285 00**
BS 11	POZ 11 / POZB 11 / MSS 11 / MSD 11 / MSK 11	**12911290 00**
BS 13	POZ 13 / POZB 13 / MSS 13 / MSD 13 / MSK 13	**12911300 00**
BS 16	POZ 16 / POZB 16 / MSS 16 / MSD 16 / MSK 16	**12911305 00**
BS 21	POZ 21 / POZB 21 / MSS 21 / MSK 21	**12911310 00**
BS 29	POZ 29 / POZB 29 / MSK 29	**12911320 00**

Characteristics: Sealing rings for PG or metric type connection threads.

Material: Nitrite-rubber

DR Sealing Rings

Model	For Connection Thread	Part Number
PG		
DR 7	PG 7	**52030000 00**
DR 9	PG 9	**52030100 00**
DR 11	PG 11	**52030200 00**
DR 13	PG 13	**52030300 00**
DR 16	PG 16	**52030400 00**
DR 21	PG 21	**52030500 00**
DR 29	PG 29	**52030600 00**
DR 36	PG 36	**52030700 00**
Metric		
MDR 12	M 12 x 1.5	**52050100 00**
MDR 16	M 16 x 1.5	**52050200 00**
MDR 20	M 20 x 1.5	**52050300 00**
MDR 25	M 25 x 1.5	**52050400 00**
MDR 32	M 32 x 1.5	**52050500 00**
MDR 40	M 40 x 1.5	**52050600 00**

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Aluminum

ALUMINUM CASTING METHODS

Rose+Bopla uses three methods to produce their die cast aluminum watertight enclosures: Die Casting, Chill Casting, and Sand Casting.

LIMITATIONS

Like all products, Rose+Bopla's cast aluminum enclosures do have limitations. Rose+Bopla cannot change the size of any of these boxes dimensionally. Rose+Bopla's die cast boxes have depth limitations. Most designs are somewhat shallow. Rose+Bopla cannot increase depth. If depth is a problem, use Rose+Bopla's Build-A-Box® enclosures which are made from aluminum extrusion that can be cut to any depth required. If you cannot find the size you need, please call the factory. We can do a custom size for your application. Tooling costs and minimum order may apply.

ROSE+BOPLA COPPER FREE ALUMINUM

Rose+Bopla uses AL Si 12 alloy in its cast aluminum housings. The term "Copper Free" is used to describe aluminum alloys which contain less then 0.4% copper. Rose+Bopla's copper content is .10% for Die Castings and .05% for Chill Castings and Sand Castings. It is the reduction in the copper content which increases the natural corrosion resistant properties of aluminum. Copper Free aluminum is particularly resistant to salt atmospheres, sulphur gases and ammonium nitrate. Above a level of 0.4% copper, the range of corrosion due to galvanic action within the structure of the metal increases rapidly.

Rose+Bopla's aluminum alloys are highly superior to most ferrous materials. For military applications we irridite these enclosures to Mil Spec C-5541, Class 1A or Class 3. Rose+Bopla's "Copper Free" aluminum products provide optimum protection against galvanic corrosion.

ALUMINUM

Mechanical, Electrical, and Thermal Properties	Pressure Die-Cast	Chill Cast	Sand Cast	Extrusion	Unit Of Measurement
Yield	130	80	70	160	N/mm^2
Tensile Strength	240	170	150	215	N/mm^2
Ductile Yield	1	6	5	12	%
Brinnel Hardness	60	55	45	70	HB
Density	2.65	2.65	2.65	2.7	g/cm^3
Castability	Very Good	Excellent	Excellent	-	
Polishability	Good	Adequate	Adequate	Excellent	
Machinability	Good	Good	Good	Excellent	
Weldability	Limited	Excellent	Excellent	Excellent	
Resistance	18-27	18-27	18-27	28-34	$m/\Omega mm^2$
Thermal Conductivity	130-160	140-170	140-170	190-210	W/mK
Heat Resistance	200	200	200	200	°C
Cold Resistance	-100	-100	-100	-100	°C

Aluminum

GENERAL ALUMINUM

Article	DIN Alloy	AA Alloy	Closest Equivalent
Aluminum Castings	AL Si 12	B4130	A413
Aluminum Extrusions	AL Mg Si 0.5	6060	6063
Aluminum Plates	AL Mg 3	5754	5052

ALUMINUM TOLERANCES

Sufficient tolerances must be allowed for cast aluminum enclosures and extruded aluminum enclosures. To properly do this, refer to DIN 1688 for castings and DIN EN 12020 for extrusions. Refer to tolerance charts on page 151 through 154.

Fiberglass

COMPRESSION MOLDED FIBERGLASS

- Fiberglass Watertight Enclosures
- Fiberglass Compression Molded Enclosures
- Fiberglass Mobile Control Enclosures

Made of glass fiber (25mm long) reinforced polyester plastic. Heat pressed compression molded under heat and pressure. This guarantees excellent dimensional stability under heat, excellent mechanical strength and dynamic load capacity, very low friction, excellent abrasion resistance to chemicals and weather, excellent surface finish, excellent dimensional stability and little tendency to stress and cracking.

Reinforced glass fiber fiberglass (polyester) mats come in rolls. The rolls are cut in the correct size, weighed and then placed into a heated mold. Under high pressure the material liquifies, and fills the mold completely. After a few minutes under heat and pressure, the completed housing can be removed for trimming and assembly.

In general, the resistance of this material to acids, bleaches and organic solvents ranges from good to excellent.

Physical Properties	Approx Value	Unit of Measurement	Test Standard
Leakage Current	KA 3c	Class	DIN 53480
Surface Resistance	1.0 x 1013	Ohm	DIN 53482
Absorption of Water	.6	%	DIN 53472
Combustibility	self-extinguishing		ASTD D-635 UL 94 VO
Flame Resistance	self-extinguishing		Almost Non-Flammable
Insulation	fully insulated		VDE 0100-7
Continuous Heat	-40° C +250° C		DIN 53458
Thermal Conductivity:	.6	W/mk (watts per meter x coefficient of thermal expansion)	

NOTE: VALUES SHOWN ARE APPROXIMATE.

Mechanical Properties	Approx Value	Unit of Measurement	Test Standard
Density	1.50	g/cm^3	DIN 53479
Resistance to Pressure	150	N/mm^2	DIN 53453
Elongation	1	%	DIN 53455
Modulus of Elasticity	7100	N/mm^2	DIN 53457
Bending Strength	180	N/mm^2	DIN 53452
Compression Strength	120-150	N/mm^2	DIN 53454
Impact Resistance	21-25	KJ/m^2	DIN 53453
Shear Resistance	180	N/mm^2	DIN 53452

NOTE: VALUES SHOWN ARE APPROXIMATE.

Specifications

Fiberglass

GFK FIBERGLASS

Physical Properties	Approx. Value	Unit of Measurement	Test Standard
Surface Resistance	4 x 10^{15}	Ohm	KDS 0303 DIN 53482
Insulation	fully insulated		VDE 0100
Burning Process	self-extinguishing		UL 94 VO
Toxic Fumes	Free of Halogenated Gases		
Moisture Content	0.2% Max		DIN 53495 ISO/R 62

Polystyrene

Physical Strength	Approx. Value	Unit of Measurement	Test Standard
Tensile strength, yield	27	MPa	ISO 527 ASTM D 638
Tensile strain, yield	1.4	%	ISO 527, ASTM D 638
Tensile modulus	2200	MPa	ISO 527 ASTM D 638
Normal strain at break	25	%	ISO 527
Charpy impact, unnotched + 23° C - 30° C	 150 120	kJ/m^2	ISO 179/1eU
Charpy impact, notched 23° C	16	kJ/m^2	ISO 179/1eA
Heat deflation, temperature Method A Method B	 78 82	°C	ISO 75
Vicat Softening, Temperature Method b	 84	°C	ISO 306
Flame resistance test	HB		UL 94/ISO 1210
Relative Permittivity (100Hz)	2.5	-	ISO 60250
Relative Permittivity (1 MHz)	2.5	-	ISO 60250
Dissipation Factor (100 Hz)	1.5	E-4	ISO 60250
Dissipation Factor (1 MHz)	4	E-4	ISO 60250
Surface resistivity	>10^{13}	Ohms	IEC 60093

Polycarbonate

POLYCARBONATE

Features excellent strength, stiffness and impact resistance, very good thermal stability, tough yet flexible down to -150° F, excellent dimensional accuracy and stability, weather resistance, excellent light transmission (up to 89% with translucent grades), good electrical insulating properties. High gloss finish.

Mechanical fastening is a good technique for attaching materials and components to polycarbonate. It is relatively quick and provides high assembly strength. In addition, mechanical fastening does not subject the plastic to chemical changes, accordingly, losses in the properties of the polycarbonate are minimized.

Screws are one form of mechanical fastening used to minimize induced assembly stresses in polycarbonate use. Thread cutting, rather than thread forming screws are recommended. A thread forming screw merely displaces material, setting-up areas of high stress.

THREAD CUTTING screws remove material and do not cause excessive stress when used properly.

NOTE

POLYCARBONATE IS NOT TOLERANT OF OIL IN GENERAL AND HIGH SULPHIDE OILS, IN PARTICULAR. IF OIL IS CONTINUOUSLY PRESENT, WE DO NOT RECOMMEND POLYCARBONATE.

Polycarbonate

POLYCARBONATE

Physical Properties	Approx. Value	Unit of Measurement	Standard
Tensile stress, break	70 69	MPa	ISO 527 ASTM D 638
Tensile strain, break	110 130	%	ISO 527 ASTM D 638
Tensile stress, yield	63 62	MPa	ISO 527 ASTM D 638
Tensile strain, yield	6 7	%	ISO 527 ASTM D 638
Tensile modulus	2350	MPa	ISO 527
Flexural stress, yield	90 97	MPa	ISO 178 ASTM D 790
Flexural modulus	2300 2340	MPa	ISO 178 ASTM D 790
Izod impact, unnotched + 23° C - 30° C + 23° C	 No failure No failure 3204	 KJ/m^2 KJ/m^2 Jm	 ISO 180/1U ISO 180/1U ASTM D 4812
Izod impact, notched + 23° C - 30° C + 23° C	 25 10 801	 KJ/m^2 Jm	 ISO 180/1A ISO 180/1A ASTM D 256
Charpy impact, unnotched + 23° C - 30° C	 No failure No failure	 KJ/m^2 KJ/m^2	 ISO 179/1eU ISO 179/1eU
Charpy impact, notched + 23° C	 35	 KJ/m^2	 ISO 179/2C
Taber abrasion, CS-17, 1 kg	10	Mg/1000cy	ASTM 1044
Ball indentation, 125° C	Passes	--	IEC 60695-10-2
Thermal conductivity	0.2 0.27	W/m-°C	ISO 8302 ASTM C 177
Specific heat	1.26	J/g-°C	ASTM C 351
Vicat Softening Temperature Method b Method a	 141 153	°C	ISO 306/ASTM D 1525
Long term service temperature	115-135	°C	
Heat deflection temperature Method A Method B	 135 140	°C	 ISO 75 ISO 75
Flame resistance test	V-2		UL 94
Shrinkage	0.5-0.7	%	
Dielectric strength, in air, 3.2mm 1.0 mm in oil, 0.8mm in oil, 1.6mm in oil, 3.2mm	 15 15 35 27 17	 KV/mm	 ASTM D 149 IEC 60243-1 IEC 60243-1 IEC 60243-1 IEC 60243-1
Surface resistivity	>10^15	Ohms	IEC 60093
Volume resistivity	10^15	Ohm-cm	IEC 60093
Permittivity 50 Hz 1 MHz	 2.7 2.7		 IEC 60250 IEC 60250
Water absorption 23°C, 50% RH 23° C, storage in H_2O	 0.15 0.35	 %	 ISO 62 ISO 62

ABS

ABS

ABS offers an excellent combination of mechanical and thermal properties, outstanding stiffness, impact strength, hardness, heat resistance, and dimensional stability. ABS can be chemically electroplated.

Physical Properties	Approx. Value	Unit of Measurement	Test Standard
Tensile stress, yield	50	MPa	ISO 527
Tensile strain, yield	2.3	%	ISO 527
Tensile modulus	2300	MPa	ISO 527
Flexural stress, yield	72	MPa	ISO 178
Flexural modulus	2460	MPa	ISO 178
Izod impact, notched + 23°C	16	KJ/m^2	ISO 180/1A
Charpy impact, unnotched + 23°C -30° C	No failure 75	KJ/m^2	ISO 179/1eU
Charpy impact, notched +23°C - 30°C	18 8	KJ/m^2	ISO 179/2C
Ball indentation, hardness	108	MPa	ISO 2039-1
Thermal conductivity	0.18	W/mK	DIN 52612
Vicat Softening, temperature Method b Method a	97	°C	ISO 306
Heat deflection, temperature Method A Method B	92 96	°C	ISO 75
Flame resistance test	HB		UL 94/ISO 1210
Dielectric Strength	17	KV/mm	IEC 60243-1
Surface resistivity	$>10^{14}$	Ohms	IEC 60093
Volume resistivity	1015	Ohm-cm	IEC 60093
Water absorption 23°C, storage H_2O	0.4	%	ISO 62

ABS

WEATHERABILITY OF POLYCARBONATE & ABS

Unlike the Rose+Bopla compression molded and GFK fiberglass enclosures, our polycarbonate and ABS enclosures are affected by weather, particularly, ultra-violet light.

The quality of most materials deteriorate if they are exposed to the weather for long periods of time.

For ABS moldings, exposure to direct sunlight is harmful. Yellowing of the material gradually leads to changes in most color shades. The surface of the moldings lose their gloss, become harder and rough. If objects damaged in this way are subjected to mechanical load (eg: impact), a marked reduction in their initial toughness is noticeable, particularly if the damaged side is situated in the tensile zone of deflection with prolonged exposure to ultra violet rays, fine micro cracks will appear. Fine micro cracks act as notches. The original micro-crack damage itself only extends to a slight depth, and polishing the weathered surface restores its original toughness.

To decide whether ABS or polycarbonate can be used depends on the extent to which it is affected by the above mentioned changes, the design of the part, and its application.

For example, a part which suffers surface damage by impact in the compressive zone has a much better performance than a part suffering impact in the tensile zone.

Polycarbonate is affected by weathering, but due to its general technical properties being higher in performance than ABS, the polycarbonate parts will retain higher mechanical values after equal exposure to weather.

Specifications

Polyamide

POLYAMIDE SPECIFICATIONS

Material Properties	Approx.Value		Unit of Measurement	Test Standard
Impact Strength	–	35	KJ/m²	DIN 53453
Heat Resistance*	80-100*	120	°C	–
Cold Resistance*	-40	-40	°C	–
Notched Impact Strength	17	20	KJ/m²	DIN 53453
Maximum Bending Stress	150	100	N/mm²	DIN 53452
Elastic Modulus	6000	2700	N/mm²	DIN 53455
Elastic Stretch	4	18	%	–
Flammability	94HB	94HB	Class	UL 94
Water Absorption	1	.9	%	DIN 53472
Creep Resistance	KB 350	KB 350	Class	DIN 53480
Thermal Conductivity	.33	–	w/m °C	VDE 0304/1

*The temperature resistance of the enclosure is dependent upon the installed gasket. Temperature limits can also be influenced by mechanical stress.

Material Properties of Plastics

Material Properties	Unit	Test Requirements	PS	ABS	PC	SE 1 GFN1	PC / ABS Blend	PA6.6 FR	PA6 FR (NV12)	PA6 GF 15	UP–GF
Impact strength +20° C	KJ/m²	ISO 179	–	60	without	30	–	–	without	36	49
Impact strength -40° C		DIN 53453	–	40	breaking	30	–	–	breaking	–	–
Notched impact str. (Charpy) +20° C	KJ/m²	ISO 179	7	10	25	–	–	–	3.5	55	–
Notched impact str. (Charpy) -40° C		DIN 53453	4	4	10	–	–	–	–	—	–
Max. bending stress	N/mm²	ISO 178 DIN 53452	–	64	>70	110	–	–	–	–	100
Round body pressure test	°C	ISO 335–1 DIN 0471/2–1	–	75	125	125	125	–	125	–	–
Retention of shape under heat [1] A	°C	ISO 75	75	80	125	120	120	90	70	150	150
Retention of shape under heat [1] B		DIN 53461	–	85	135	130	130	215	190	210	–
Thermal conductivity	W/mK	DIN 53461 ASTM 648	0.17	0.18	0.2	0.23	–	–	–	–	0.6
Glow hot wire test	°C with mm	ISO 695 DIN 0471/2–1	–	650/2	850/1	960/3.2	960/2	–	850/1	–	–
Combustibility	Grade from mm	UL 94	HB/1.47	HB/1.6	V2/1.14	V1/1.47	VO/1.6	VO/1	V2/1.6	HB/1.6	VO/4
Water absorption	%	ISO 62 DIN 53495 ASTM D 570	<0.1	0.4	0.35	0.22	–	2.2	2.5	2.2	0.7
Surface resistivity	Ohm	IEC 93 DIN 53482 ASTM 257	$>10^{13}$	$>10^{14}$	$>10^{15}$	$>10^{15}$	–	$>10^{15}$	$>10^{12}$	–	$>10^{12}$
Special Volume resistivity	Ohm x cm	IEC 93 DIN 53482 VDE 303 T3 ASTM 257	$>10^{16}$	$>10^{15}$	$>10^{16}$	$>10^{15}$	–	$>10^{15}$	$>10^{15}$	$>10^{12}$	$>10^{13}$
Dielectric strength	KV / mm	IEC 243 DIN 53481 VDE 303 T2 ASTM 149	–	17	28	26	–	–	–	–	25

[1] The ability of the enclosure to maintain their shape when subject to heat depends on a seal being inserted. The temperature resistance can still be affected by mechanical stress.

The above data are for guidance only. It has been determined using standardized test pieces and can vary within normal tolerances.
The combustibility classification refers to the material and deviations are possible in finished parts if these have a different material strength.

Material Chemical Resistance

Type	PS	ABS	PC	PA	Aluminum	Stainless Steel	Polyester
Acetic acid	50%	25%	10%	5%	+	+	40%
Acetone	-	-	-	+	+	+	-
Ammonia	+	25%	-	10%	+	+	-
Benzene	-	-	•	+	+	+	+
Benzole	-	-	-	-	+	+	+
Brake fluid	/	•	-	+	/	/	+
Butane	-	+	+	+	+	/	/
Butanol	/	/	/	+	/	/	+
Calcium chloride	+	+	+	10%	+	+	+
Carbon disulphide	-	-	-	+	+	+	-
Carbon tetrachloride	-	-	/	+	+	/	+
Caustic potash solution	50%	50%	-	50%	/	+	-
Chlorine benzole	-	-	-	+	+	/	+
Citric acid	+	+	10%	/	+	/	+
Diesel oil	-	+	•	+	/	/	+
Detergents	/	/	+	/	/	+	/
Engine oils	•	+	+	+	/	/	+
Formaldehyde	40%	30%	/	•	+	+	30%
Formic acid	40%	-	-	-	•	+	10%
Frigen	/	-	+	+	/	/	+
Fruit Juice	/	/	+	+	/	+	+
Glycerine	+	+	•	+	+	+	+
Heating oil	-	•	•	+	+	+	+
Hydraulic oil	/	/	+	+	/	/	+
Hydrochloric acid	10%	/	20%	-	/	+	+
Lactic acid	80%	80%	+	•	+	+	+
Linseed oil	+	+	+	+	+	+	+
Lubricating oil	/	/	+	+	+	+	+
Methanol	/	/	-	•	+	+	-
Methylene chloride	-	-	-	•	+	+	-
Mineral oils	/	/	+	+	/	/	+
Nitric oils	10%	-	10%	-	+	+	10%
Potassium chloride	+	/	+	10%	•	+	+
Potassium hydroxide	/	/	/	/	-	+	-
Soap suds	/	/	•	/	/	+	+
Soda lye	50%	50%	-	+	/	+	40%
Sodium carbonate	+	+	+	10%	•	+	+
Sodium chloride	+	+	+	-	•	•	+
Sodium hydroxide	/	+	/	/	+	+	-
Sulphuric acid	50%	50%	50%	-	•	+	70%
Tartaric acid	+	+	+	10%	/	/	+
Toluol	-	-	-	+	+	/	+
Trichloroethylene	-	-	-	+	+	/	-
Turpentine oil	-	/	•	+	/	/	+
Water(distilled, river, tap, sea water)	+	+	+	+	/	+	+
Xylol	-	-	-	+	+	/	+
Zinc sulphate	+	+	+	/	•	/	+

+ Resistant to all concentrations
% Resistant to max % concentration
C° Resistant up to max C°
• Conditionally resistant
- Not resistant
/ No information available

Specifications

Military

THE FOLLOWING STANDARDS WILL BE APPLIED ONLY WHEN SPECIFIED.

FEDERAL SUPPLY CODES	Rose Federal Supply Code	#FSCM-4Y520
	Rose Foreign Country Supply Code	#FSCM-C024
	Cage Code	1L9R7
QUALITY PROCEDURES	ISO 9001:2000	
CALIBRATION SYSTEM REQUIREMENTS	ISO 9001:2000	
ASSEMBLY & PACKAGING	Mil Spec	#STD-130
	Special request only.	
ALUMINUM	Mil Spec	ASTM-B85
	ASTM	#B-8560: S 12A
	For Europe:	DIN 230 Alloy

STAINLESS STEEL LID SCREWS

Hardness Cross: 70
Torque: M4 = 18-26 inch lbs. M6 = 26-35 inch lbs.

Torque specs are included for reference only. Rose+Bopla does not recommend using a torque wrench on enclosures (tighten until snug).

MACHINED SURFACES

When specified, Rose+Bopla can:
(A) Machine Surfaces to 125 micro inches or better
(B) Deburr / Break All Sharp Edges
(C) Remove All Burrs

Helicoils

Mil Spec	#NASM-21209 Helicoil Insert Method

Masking Surfaces Prior To Painting

Rose+Bopla will mask all threaded surfaces and connector mating surfaces prior to primer and paint application.

Chemical Surface Treatments

Gold Irridite:	Mil Spec	#C-5541-Class 1A
Clear Irridite:	Mil Spec	#C-5541-Class 3

NOTE: Gold irriditing to Mil Spec C-5541-Class 1A offers superior protection, but creates a less conductive surface for grounding or shielding. Clear irriditing to Mil Spec C-5541-Class 3 offers less protection from corrosion, but leaves a conductive surface which is recommended for optimum EMI shielding. All machined surfaces are irridited after machining.

Anodizing

Mil Spec	# A 8625: Black Anodize Class 2 Type 2, Nickel acetate sealcoat test.
Federal Standard	#595A: Color 37038

NOTE: All machined surfaces can be anodized after machining.

Military: Coatings

Rose+Bopla normally does not paint any inside surfaces on Military boxes, but leaves them gold irridited bare aluminum (unpainted) in accordance with normal requirements.

Rose+Bopla will evaluate coating requirements on a per contract basis. Our capabilities include both wet spray and powder coating.

Silk Screen Ink

Mil Spec	#A-56032	Epoxy Ink White
Mil Spec	#A-56032	Epoxy Ink Black

Engraving

Per customer's specifications.

EMI/RFI Coatings and Gaskets

EMI/RFI SHIELDED COATINGS

We offer the Isolex WP 120 nickel acrylic conductive coating as our standard EMI/RFI coating. Upon request we also have available Electro DAG 7050, copper acrylic conductive coating.

Detailed spec sheet is available upon request.

EMI/RFI SHIELDED STANDARD GASKETS

All data supplied is from manufacturer's engineering data sheets.
We offer the Cho-Seal 1350 gasket as our standard EMI/RFI gasket.
Cho-Seal is a silver-plated glass-filled material and will not remain sufficiently conductive during vibration or after EMP-induced currents.

				Test Standard	Cho-Seal 1350
Grade					Industrial Commercial
Elastomer Binder					Silicone
Conductive Filler					Ag/glass
Volume Resistivity (ohm-cm, max) as supplied				MIL-G-83528 Para. 4.6.11	0.01
Durometer (shore A±5)				ASTM D2240	65
Specific Gravity (±0.2)				ASTM D792	1.8
Tensile Strength (psi, min)				ASTM D412	150
Elongation (percent, min/max)				ASTM D412	75/300
Tear Strength (lb./in., min.)				ASTM D624	25
Compression Set, 70 hrs @ 100° C (percent, max)				ASTM D395 Method B	30
Low Temperature Flex, TRIO (° C, minimum)				ASTM D1329	-55
Maximum Continuous Use Temperature (° C)					160
Shielding Effectiveness	200 kHz (H Field) 100 MHz (E Field) 500 MHz (E Field) 2 GHz (Plane Wave) 10 GHz (Plane Wave)		(db, min.)	MIL-G-83528 Para. 4.6.12	50 100 100 90 80
Electrical Stability	Heat Aging		(ohm-cm, max.)	MIL-G-83528 Para. 4.6.15	
	Vibration	During		MIL-G-83528 Para. 4.6.13	N/A
	Resistance	After			N/A
	Post Tensile Set			MIL-G-83528 Para. 4.6.9	0.01 0.01
	EMP Survivability (KA)			MIL-G-83528 Para. 4.6.16	NS

Gaskets

EMI/RFI SHIELDED OPTIONAL GASKETS (SPECIAL ORDER ONLY)

For military requirements where greater shielding is required, such as EMP survivability, we can supply Cho-Seal 1285 gasket, which meets the Specs listed below. Rose+Bopla DOES NOT stock this gasket. Accordingly, we will have to advise lead-time, delivery, cost and minimum quantity (if applicable), if Rose+Bopla is to supply this higher grade gasket.

			Cho-Seal 1285	Test Standard
Grade				Mil Aerospace
Elastomer Binder				Silicone
Conductive Filler				Ag/Al
Volume Resistivity (ohm-cm, max) as supplied			MIL-G-83528 Para. 4.6.11	0.008
Durometer (shore A±5)			ASTM D2240	65
Specific Gravity (±0.2)			ASTM D792	1.9
Tensile Strength (psi, min)			ASTM D412	200
Elongation (percent, min/max)			ASTM D412	$^{100}/_{300}$
Tear Strength (lb./in., min.)			ASTM D624	30
Compression Set, 70 hrs @ 100° C (percent, max)			ASTM D395 Method B	32
Low Temperature Flex, TRIO (° C, minimum)			ASTM D1329	-65
Maximum Continuous Temperature (° C)				200
Shielding Effectiveness	200 kHz (H Field)	(db, min.)	MIL-G-83528 Para. 4.6.12	60
	100 MHz (E Field)			115
	500 MHz (E Field)			100
	2 GHz (Plane Wave)			105
	10 GHz (Plane Wave)			100
Electrical Stability	Heat Aging	(ohm-cm, max.)	MIL-G-83528 Para. 4.6.15	0.01
	Vibration During		MIL-G-83528 Para. 4.6.13	0.012
	Resistance After			0.008
	Post Tensile Set		MIL-G-83528 Para. 4.6.9	0.015
	EMP Survivability (KA)		MIL-G-83528 Para. 4.6.16	0.9

* Maximum continuous use is defined as 1000 hours at max. rated temperature (compressed between flanges 7-10%) without electrical degradation above the limits given under Electrical Stability-Heat Aging.

CROSS REFERENCE CHART

Rose Part Number	Gasket Size	
	Metric	Inches
10082020 00	2.0mm	.078
10082021 00	2.5mm	.098
10082022 00	3.0mm	.118
10082023 00	3.5mm	.137
10082024 00	4.0mm	.157
10082025 00	5.0mm	.197
10082026 00	5.5mm	.216

Standard Paint Color Guide

STANDARD METALLIC COLOR GUIDE

Product Category	Description Acrylic Enamel #	P. P. G. Industrial	Color
01	Painted Aluminum	RAL 7001	Gray
04	Aluform	RAL 7038	Light Gray
01	Corrosion-Proof Aluminum	DAR 2825H	Bright Blue
07	P.C. Board Extrusions 0701, 0702, 0703, 0710, 0711	RAL 9005	Black
07	Profitronic 19 Body	RAL 7035	White Gray
07	Profitronic 19 Trim	RAL 7030	Stone Gray
88	8850 Support Arms	RAL 7035	Light Gray
49	49, 51, 61, 81 Suspension Components	RAL 7043	Dark Gray
13	Small Machine Control Enclosures 1300 Base	RAL 7038	Light Gray
13	Small Machine Control Enclosures 1300 Bezels	RAL 7043	Dark Gray
SL 2000	Thin Profile Machine Control Enclosures	RAL 7035	White Gray
54	Large Machine Control Enclosures 5400	DAR 5400 SC	Gold Smoke Gray

STANDARD NON-METALLIC COLOR GUIDE

Product Category	Description	RAL Color
02	Fiberglass	7000
06	Fiberglass Safety	9011
PK	Polyamide	7001
03, 33, EM	Polycarbonate	7035
09, ET	ABS	7035
21	ABS Cabinets	7035
21	GFK Cabinets	7032
21	Compression-Molded Fiberglass Cabinets	7038
14	Fiberglass Modular Flange	7032
17	Polycarbonate Modular Flange	7032
08	Polyamide Cable Grips	7035
29	Mobile Control Housings	1021

Cable Grip

CABLE GRIP INSTALLATION INFORMATION

PG cable glands are in the process of being phased out. These will be replaced with metric type glands. Rose+Bopla's PG cable grips employ a special thread not generally available in America, therefore we are standardizing with metric.

Accordingly, Rose+Bopla has a limited stock of taps for sale to customers wishing to drill, tap and install Rose+Bopla's PG type cable grips at their own facilities. We do not offer metric taps, however they can be purchased through your local hardware supplier.

Listed below is the necessary information for drilling and tapping holes for Rose+Bopla's PG or metric cable grips and the appropriate tap part number. Thick wall applications require that you tap holes for cable glands. Thin wall applications may be drilled through with a nut.

CROSS REFERENCE CHART

Metric Cable Grip Size	Tap Size	Metric Tapped Hole Size	Inch Tapped Hole Size	Closest American Drill Size	Metric Through-Hole	Inch Through-Hole
M 12	M 12 x 1.5	10.5 mm	0.413	z (.413)	12.2 mm	0.480
M 16	M 16 x 1.5	14.5 mm	0.571	37/64" (.578)	16.2 mm	0.638
M 20	M 20 x 1.5	18.5 mm	0.728	47/64" (.734)	20.2 mm	0.795
M 25	M 25 x 1.5	23.5 mm	0.925	59/64" (.922)	25.2 mm	0.992
M 32	M 32 x 1.5	30.5 mm	1.2	-	32.2 mm	1.268
M 40	M 40 x 1.5	38.5 mm	1.516	-	40.2 mm	1.583

If you are going to use a polyamide grip with a nut and are not going to tap the hole, you will need to drill a larger hole to push the grip through. Use the chart below for the correct size hole.

DRILL HOLE AND TAP INFORMATION

Cable Grip Size	Rose PG Tap Part Number	Metric Tapped Hole Size	Inch Tapped Hole Size	Closest American Drill Size	Metric Through-Hole	Inch Through-Hole
PG 7	08070000	11.5 mm	0.453	29/64" (.453)	12.3 mm	0.484
PG 9	08090000	14 mm	0.551	35/64" (.547)	15.1 mm	0.594
PG 11	08110000	17.25 mm	0.679	43/64" (.672)	19.6 mm	0.772
PG 13.5	08130000	19 mm	0.748	3/4" (.750)	20.2 mm	0.795
PG 16	08160000	21.25 mm	0.837	53/64" (.828)	22.3 mm	0.878
PG 21	08210000	27 mm	1.063	1 1/16" (1.063)	28.2 mm	1.11
PG 29	08290000	35.5 mm	1.398	1 25/64" (1.391)	36.9 mm	1.453
PG 36	08360000	45.5 mm	1.791	1 51/64" (1.797)	48.8 mm	1.921
PG 42	08420000	52.8 mm	2.079	2 5/64" (2.078)	-	-
PG 48	08480000	58 mm	2.283	2 9/32" (2.281)	-	-

CABLE GRIP SELECTION GUIDE

Wire Size		Metric Size	PG Size	American Size
mm	Inches			
3-6.5	.12-.26	M12	PG 7	-
4-8	.18-.32	M16	PG 9	3/8" NPT
6-10	.24-.39	M16	PG 11	-
6-12	.24-.47	M20	-	-
7-12	.28-.47	-	PG 13.5	1/2" NPT
10-14	.39-.55	M20	PG 16	-
13-18	.51-.71	-	PG 21	3/4" NPT
14-18	.55-.71	M25	-	-
20-25	.79-.98	M32	PG 29	1" NPT
24.32	.95-1.26	M40	PG 36	-
32-38	1.26-1.50	M50	PG 42	-
37-44	1.46-1.73	M63	PG 48	-

Aluminum

TOLERANCES FOR PRESSURE DIECASTINGS (DIN 1688)*

1) Determining the spatial diagonal:

The spatial diagonal R is that between the extreme points of the casting.
It is calculated from the nominal dimensions of the prismatic body, which delimits the casting, whatever its shape

$R = \sqrt{l^2 + b^2 + h^2}$ (spatial diagonal)

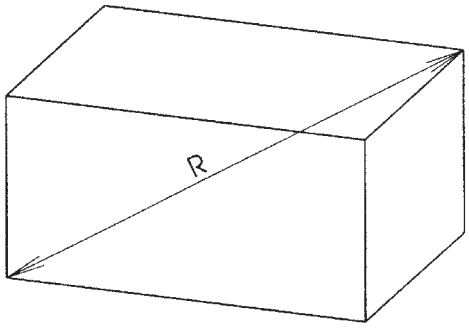


Table 1. Tolerances of dimensions for lengths, widths, heights, central distances, diameters and roundings.

Spatial diagonal area	Degree of exactitude	Shape dependency	Nominal Dimension Area													
			up to 18	over 18 up to 30	over 30 up to 50	over 50 up to 80	over 80 up to 120	over 120 up to 180	over 180 up to 250	over 250 up to 315	over 315 up to 400	over 400 up to 500	over 500 up to 630	over 630 up to 800	over 800 up to 1000	over 1000 up to 1250
over 180	GTA 13	Intrinsic	±0.14	±0.17	±0.20	±0.23	±0.27	±0.32								
		Non-Intrinsic	±0.24	±0.27	±0.30	±0.33	±0.37	±0.42								
over 50 up to 500	GTA 13/5	Intrinsic	±0.17	±0.20	±0.25	±0.30	±0.35	±0.40	±0.45	±0.50	±0.55	±0.60				
		Non-Intrinsic	±0.32	±0.35	±0.40	±0.45	±0.50	±0.55	±0.60	±0.65	±0.70	±0.75				
over 180	GTA 14	Intrinsic	±0.22	±0.26	±0.31	±0.37	±0.44	±0.50	±0.60	±0.65	±0.70	±0.80	±0.90	±1.00	±1.20	±1.30
		Non-Intrinsic	±0.42	±0.46	±0.51	±0.57	±0.64	±0.70	±0.80	±0.85	±0.90	±1.00	±1.10	±1.20	±1.40	±1.50
over 500	GTA 14/5	Intrinsic	±0.25	±0.35	±0.40	±0.45	±0.55	±0.65	±0.75	±0.80	±0.85	±0.95	±1.10	±1.20	±1.40	±1.60
		Non-Intrinsic	±0.55	±0.65	±0.70	±0.75	±0.85	±0.95	±1.00	±1.10	±1.10	±1.20	±1.40	±1.50	±1.70	±1.90

Intrinsic dimensions are those in the same parts of the tool.
Non-intrinsic dimensions are those created by the interaction of movable tool components, e.g. wall thickness and base thickness or dimensions affected by additives or extenders.

*Important: We assume no liability for quoted standards.

Aluminum

TOLERANCES FOR PRESSURE DIECASTINGS (DIN 1688)* CONTINUED

Table 2. Tolerances of dimensions for wall thicknesses, ledges and ribs.

Spatial diagonal area	Degree of exactitude	Shape dependency	Nominal dimensional area		
			up to 3	over 3 up to 6	over 6 up to 10
up to 180	GTA 13	Intrinsic	±0.15	±0.20	±0.20
		Non-Intrinsic	±0.25	±0.30	±0.30
over 50 up to 500	GTA 13/5	Intrinsic	±0.20	±0.25	±0.30
		Non-Intrinsic	±0.35	±0.40	±0.45
over 180	GTA 14	Intrinsic	±0.25	±0.30	±0.35
		Non-Intrinsic	±0.45	±0.50	±0.55
over 500	GTA 14/5	Intrinsic	±0.30	±0.40	±0.45
		Non-Intrinsic	±0.55	±0.65	±0.70

Intrinsic dimensions are those in the same parts of the tool.
Non-intrinsic dimensions are those created by the interaction of movable tool components, e.g. wall thickness and base thickness or dimensions affected by additives or extenders.

Aluminum

TOLERANCES FOR CHILL CASTINGS (DIN 1688)*

In the case of raw castings made of light metal alloys in the chill casting process, all deviations in dimensions are essentially dependent on :

a). the dimensional accuracy of the mold, characterized by the degree of accuracy

b). the position of the mold division, cores, extenders, characterized by the subdivision into intrinsic and non-intrinsic dimensions (see DIN 1680 part 1)

c). the nominal dimensions.

Table 1. Deviations in lengthwise dimensions (lengths, widths, heights, central distances, diameters, roundings).

Degree of accuracy	Shape dependency	Nominal Dimension Area													
		up to 18	over 18 up to 30	over 30 up to 50	over 50 up to 80	over 80 up to 120	over 120 up to 180	over 180 up to 250	over 250 up to 315	over 315 up to 400	over 400 up to 500	over 500 up to 630	over 630 up to 800	over 800 up to 1000	over 1000 up to 1250
GTA 15/5	Intrinsic	±0.45	±0.50	±0.60	±0.75	±0.85	±1.00	±1.20	±1.30	±1.40	±1.60	±1.70	±2.00	±2.30	±2.60
	Non-Intrinsic	±0.55	±0.65	±0.80	±0.95	±1.10	±1.30	±1.50	±1.60	±1.80	±2.00	±2.20	±2.50	±2.80	±3.30

Table 2. Deviations in thickness (wall thicknesses, ledges, ribs).

Degree of accuracy	Shape dependency	Nominal Dimension Area		
		up to 6	over 6 up to 10	over 10 up to 18
GTA 15/5	Intrinsic	±0.60	±1.20	±1.80
	Non-Intrinsic	±0.80	±1.50	±2.20

Intrinsic dimensions are those in the same parts of the tool. **Non-intrinsic** dimensions are those created by the interactions of movable tool components, e.g. wall thicknesses and base thicknesses or dimensions affected by additives or extenders.

*Important: We assume no liability for quoted standards!

Tolerances

Aluminum

TOLERANCES FOR ALUMINUM PROFILES ACCORDING TO DIN EN 12020-2*

The tolerances for the nominal dimensions (see table 1) depend on the following ratios:
- diameter of the minimum circumscribing circle d_u divided by the minimum wall thickness s_{min}.
- maximum wall thickness s_{max} divided by the minimum wall thickness s_{min}.

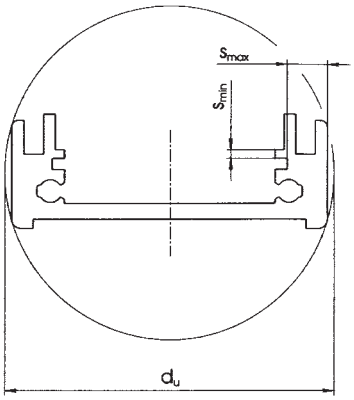


Table 1
Tolerances for linear measurements

Range of dimensions		Tolerances for a ratio of $d_u : s_{min}$	
		up to 40 : 1	over 40 : 1
		and a ratio of $s_{max} : s_{min}$	
over	up to	up to 6 : 1	over 6 : 1
-	10	±0.15	
10	15	±0.20	
15	30	±0.25	
30	45	±0.30	
45	60	±0.40	
60	90	±0.45	
90	120	±0.60	
120	150	±0.70	±0.80
150	180	±0.90	±1.00
180	240	±1.10	±1.20
240	300	±1.40	±1.50

ABPH 800 (Full Profile)

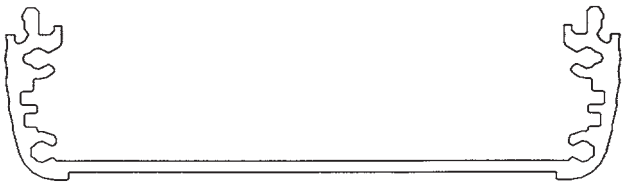


Table 2
Tolerances for the wall thickness of full profiles

Range of dimensions		
over	up to	Tolerances for wall thickness
-	1.5	±0.15
1.5	3	±0.20
3	6	±0.25
6	10	±0.30
10	15	±0.40
15	20	±0.50
20	30	±0.60
30	40	±0.70

ABP 800 (Hollow Profile)

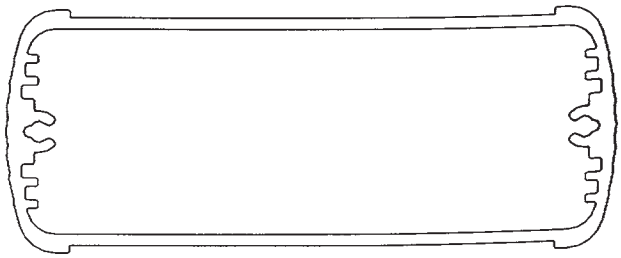


Table 3
Tolerances for the wall thickness of hollow profiles

Range of dimensions		Tolerances for the wall thicknesses with a circumscribing circle d_u			
			over 75	over 130	over 250
over	up to	to 75	to 130	to 250	to 300
-	1.5	±0.20	±0.25	-	-
1.5	2	±0.20	±0.25	±0.30	-
2	3	±0.25	±0.30	±0.35	±0.45
3	6	±0.35	±0.40	±0.50	±0.60
6	9	±0.50	±0.55	±0.70	±0.80
9	12	±0.60	±0.70	±0.85	±0.95
12	15	±0.70	±0.80	±1.00	±1.10
15	20	-	±1.00	±1.20	±1.30

*Important: We assume no liability for quoted standards!

Plastic

TOLERANCES OF PLASTICS ACCORDING TO DIN 16901

Deviations from the nominal dimensions are unavoidable in the manufacture of plastic shapes.

There are various reasons for the deviations:
a) Processing parameters. These are dependent on:
- the evenness of the shape
  the setting of the machine
  the temperature of the tools
  the distortion of the tool under pressure

b) The condition of the tool:
  manufacturing tolerances for tool dimensions (see DIN 16749)
  wear on tools
  deviations in the position of movable tool parts.

The tolerances for this norm have been laid down taking into account these factors and numerous measurements in practice.

The plastics in this norm are divided into tolerance rows. All the plastics used by Rose+Bopla for standard enclosures are in row 130, for which tolerances given below apply. The tolerances apply on the basis of the machining shrinkage working into the tool only for the appropriate enclosure with the standard material stated.

Nominal dimension area

over	0	1	3	6	10	15	22	30	40	53	70
up to	1	3	6	10	15	22	30	40	53	70	90
A	±0.18	±0.19	±0.20	±0.21	±0.23	±0.25	±0.27	±0.30	±0.34	±0.38	±0.44
B	±0.08	±0.09	±0.10	±0.11	±0.13	±0.15	±0.17	±0.20	±0.24	±0.28	±0.34

over	90	120	160	200	250	315	400	500	630	800
up to	120	160	200	250	315	400	500	630	800	1000
A	±0.51	±0.60	±0.70	±0.90	±1.10	±1.30	±1.60	±2.00	±2.50	±3.00
B	±0.41	±0.50	±0.60	±0.80	±1.00	±1.20	±1.50	±1.90	±2.40	±2.90

A = Dimensions which are not tool specific are those formed by the interaction of movable tool parts, e.g. wall thicknesses and floor thicknesses or dimensions which are affected by additives or pushers.
B = Tool-specific dimensions are those in the same part of the tool.

*Important: We assume no liability for quoted standards!

Standards Comparison:

NEMA, UL, CSA Standard Enclosures

Type Designation	National Electrical Manufacturers' Association (NEMA Standard 250)	Underwriters' Laboratories Inc. (UL 50 and UL 508)	Canadian Standards Association (Standard C22.2, Nos. 14, 40 and 94)
1	Enclosures are intended for use indoors, primarily to prevent accidental contact of personnel with the enclosed equipment in areas where unusual service conditions do not exist.	Indoor use primarily to provide a degree of protection against contact with the enclosed equipment and against a limited amount of falling dirt.	General purpose enclosure. Protects against accidental contact with live parts.
2	Indoor use primarily to provide a degree of protection against contact with the enclosed equipment and against a limited amount of falling water and dirt.	An enclosure for indoor use, constructed so as to provide a degree of protection against dripping and light splashing of non-corrosive liquids, and falling dirt.	Indoor use to provide a degree of protection against limited amounts of falling water and dirt.
3	Enclosures are intended for outdoor use primarily to provide a degree of protection against windblown dust, rain, sleet, and external ice formation.	Outdoor use to provide a degree of protection against windblown dust, rain, and sleet; undamaged by the formation of ice on the enclosure.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree or protection against rain, snow, and windblown dust; undamaged by the external formation of ice on the enclosure.
3R	Enclosures are intended for outdoor use primarily to provide a degree or protection against windblown falling rain, sleet, and external ice formation. (May be ventilated).	Outdoor use to provide a degree of protection against windblown dust, rain, and sleet; undamaged by the formation of ice on the enclosure.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure.
4	Enclosures are intended for use indoors or out doors, to protect the enclosed equipment against splashing water, seepage of water, falling or hose directed water, and severe external condensation. They are sleet resistant but not sleet (ice) proof.	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, and hose-directed water; undamaged by the formation of ice on the enclosure.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure.
4X	Type 4X enclosures have the same provisions as Type 4 enclosures and, in addition, are corrosion-resistant.	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, and hose-directed water; undamaged bythe formation of ice on the enclosure; resists corrosion.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure; resists corrosion.
12	Enclosures are intended for use indoors to protect the enclosed equipment against fibers, flyings, lint, dust, and dirt, and light splashing, seepage, dripping and external condensation of non-corrosive liquids.	Indoor use to provide a degree of protection against dust, falling dirt, and dripping non-corrosive liquids.	An enclosure for indoor use, constructed so as to provide a degree of protection against circulating dust, lint, fibers, and flyings; drippings and light splashing of non-corrosive liquids; not provided with knockouts.
13	Enclosures are intended for use indoors primarily to house pilot devices such as limit switches, foot switches, pilot lights, etc., and to protect these devices against lint and dust, seepage, external condensation, and spraying of water, oil, and coolant.	Indoor use to provide a degree of protection against dust and spraying of water, oil, and non-corrosive coolants.	An enclosure for indoor use, constructed so as to provide a degree of protection against circulating dust, lint, fibers, and flyings; seepage and spraying of non-corrosive liquids including oils and coolants.

Please Note: The information presented here is for reference only and is not meant to be a definitive description of the test requirements and/or qualifications. The complete standards should be obtained from the appropriate association or agency.

Comparison of NEMA and IEC Standards

ENCLOSURE TYPES

Europe IEC specifications 144 & 529 define the degree of protection provided electrical enclosures to safeguard personnel against electric shock and equipment within the enclosure from environmental contamination such as entry of water. This is expressed by the letters IP followed by two numerals.

In the USA, NEMA and UL have established a rating system for enclosures which provided for different levels of protection. A direct comparison between IEC and NEMA is not possible but the following table gives an approximate guide.

NEMA TO IEC

Enclosure Rating Comparison

NEMA TYPE	IP 23	IP 30	IP 32	IP 64	IP 65	IP 66	IP 67
1	●						
2		●					
3				●			
3R			●				
4						●	
4X						●	
6							●
12					●		
13					●		

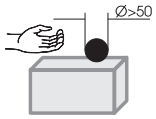
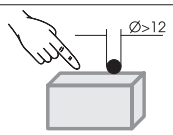
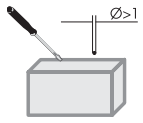
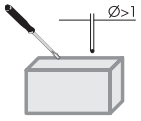
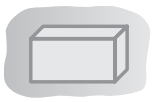
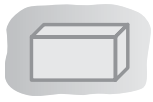
Note: This comparison table is an approximation of NEMA and IEC classifications and is for reference only. Complete standards should be obtained from the appropriate association or agency.

I.P. Ingress Protection Classifications to DIN VDE 0470/EN 60529*

The protection classification offered by an enclosure is shown by the letters IP Ingress Protection, and two digits. The first digit indicates two factors (protection for persons and equipment). The second digit indicates only one factor, protection against water.

Similarly, changes in temperature, as may occur, for example, in the open air, are not taken into account. Such changes in temperature may cause a loss of pressure in the enclosure, and dampness may be absorbed through the seal area. Rose+Bopla can supply pressure compensation elements for this purpose.

First digit: Protection for persons and equipment

	Digit	Persons		Equipment	
		Brief Description	Definition	Brief Description	Definition
	0	Not protected	–	Not protected	–
	1	Protection against the back of the hand touching dangerous parts	A round body, 50mm in diameter, must be at a sufficient distance from dangerous parts	Protection against a solid foreign body of 50mm or more in diameter	A round body, 50mm in diameter, must not fully penetrate
	2	Protection against a finger touching dangerous parts	The test finger, jointed, 12mm in diameter and 80mm long, must be at a sufficient distance from dangerous parts	Protection against a solid foreign body of 12.5mm or more in diameter	A round body, 12.5mm in diameter, must not penetrate at all
	3	Protection against a tool touching dangerous parts	A body, 2.5mm in diameter, must not be able to penetrate	Protection against a solid foreign body of 2.5mm or more in diameter	A round body, 2.5mm in diameter, must not penetrate at all
	4	Protection against a wire touching dangerous parts	A body, 1.0mm in diameter, must not be able to penetrate	Protection against a solid foreign body of 1.0mm or more in diameter	A round body, 1.0mm in diameter, must not penetrate at all
	5	Protection against a wire touching dangerous parts	A body, 1.0mm in diameter, must not be able to penetrate	Protection against dust	No dust penetration
	6	Protection against a wire touching dangerous parts	A body, 1.0mm in diameter, must not be able to penetrate	Sealed against dust	No dust penetration

[1)]Dust must not penetrate in sufficient quantities to prevent the equipment from operating satisfactorily, or to impair safety.

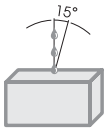
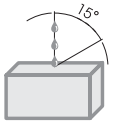
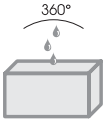
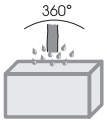
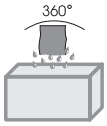
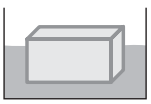
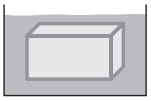
Important note: The protection classifications given for the enclosures refer to unmachined enclosures as supplied. In the case of protection against water in particular (second digit), the test conditions will be met if during the given time for the experiment no water has penetrated, or not in harmful quantities. As the tests to show protection classifications take no account of ageing, the maintenance of the protection classification throughout the lifetime of the equipment in not guaranteed.

*We assume no liability for quoted standards.

Protection Classifications

Example: **IP54**
–first digit 5= protection against dust and wire contact with dangerous parts
–second digit 4= protection against splashing water

Second digit: Protection against water

	Digit	Brief Description	Definition
	0	Not protected	–
	1	Protection against vertical water drops	Drops of water falling vertically onto the enclosure must not have any harmful effects
	2	Protection against vertical water drops when the enclosure is inclined at 15°	Drops of water falling vertically onto the enclosure must not have any harmful effects if the enclosure is inclined by up to 15° on both sides of the vertical
	3	Protection against water spray	Water sprayed onto the enclosure at up to 60° on both sides of the vertical must not have any harmful effects
	4	Protection against water spray	Water splashed onto the enclosure from any direction must not have any harmful effects
	5	Protection against water jet	Water splashed onto the enclosure from any direction must not have any harmful effects
	6	Protection against powerful water jet	A strong water jet directed at the enclosure from any direction must not have any harmful effects
	7	Protection against the effects of temporary immersion in water	Water must not enter in a quantity that could have harmful effects if the enclosure is temporarily immersed in water under standardized pressure and time conditions
	8	Protection against the effects of constant submersion in water	Water must not enter in a quantity that could have harmful effects if the enclosure is kept permanently under water under conditions agreed between the manufacturer and the user; however, these must be more severe than those under figure 7

ROSE+BOPLA
A **Phoenix Mecano** Company

Credit Application

30 day credit limit requested $ _____

Company Name _____ Phone _____

Street Address _____ City _____ State _____ Zip _____

Fax Number _____ Are you incorporated? _____

Where _____ When _____

Tax Exemption Number: _____ Please provide Tax Exemption Certificate with Application

PRINCIPAL OFFICERS

Name _____ Title _____

Name _____ Title _____

BANK REFERENCES

Bank Name _____ Account No. _____ Phone _____

Bank Name _____ Account No. _____ Phone _____

Bank Name _____ Account No. _____ Phone _____

SUPPLIER REFERENCES

Name _____ Phone _____ Fax _____

Address _____ City _____ State _____ Zip _____

Name _____ Phone _____ Fax _____

Address _____ City _____ State _____ Zip _____

Name _____ Phone _____ Fax _____

Address _____ City _____ State _____ Zip _____

TERMS AND APPLICATION FOR CREDIT: We hereby agree that Rose+Bopla terms are Net 30 days from the date of invoice, with interest charge at 1½ percent per month on all accounts past due.

Signature*: _____

Authorized By _____ Title _____ Date _____

DO NOT WRITE BELOW THIS LINE

*It is understood that by signing the Rose+Bopla Credit Application you, the customer, agree to Rose+Bopla's Net 30 credit terms, including a 1½% late finance charge per month for any overdue balance. By signing this document, you also agree to give Rose+Bopla permission to investigate your credit worthiness through trade references and credit bureau research.

ROSE+BOPLA ENCLOSURES • 7330 Executive Way • Frederick, Maryland 21704-8377 • Telephone (301) 696-9800 • Fax (301) 696-9494
A **PHOENIX MECANO** COMPANY

Who Is Phoenix Mecano?

ROSE+BOPLA
A PHOENIX MECANO COMPANY

Phoenix Mecano is dedicated to achieving customer satisfaction through continuous improvement.

Using best business practice, lean manufacturing and sustained supply chain operations Phoenix Mecano Inc. markets its products and services through three product divisions in Maryland. The Frederick, Maryland facility serves as headquarters for North American operations. PMI is part of Phoenix Mecano AG, an international corporation based in Switzerland comprised of independent manufacturing plants worldwide.

Rose+Bopla, a division of PMI, manufactures an extensive line of off-the-shelf and customized enclosures, as well as suspension arm systems. The Rose line is suited for industrial applications and harsh environments in a variety of materials–cast and extruded aluminum; fiberglass; stainless steel; polycarbonate; polyamide; and ABS. By contrast, Bopla produces a diverse line of modular tabletop, handheld, and wall-mount plastic enclosures designed to meet today's demands for aesthetic electronic packaging.

Value-added secondary services at PMI offer our customers a broad range of specialized manufacturing processes. Secondary services include: irriditing, chromating, anodizing, wet painting, powder-coating, silk-screening, engraving, drilling, tapping, milling, etching, in-house prototyping and engineering services, as well as product print generation.

ROSE+BOPLA
A PHOENIX MECANO COMPANY

Rose+Bopla sales representatives are available to assist you in choosing the right enclosure for your application. Orders and inquiries are processed during normal business hours, 8:30 am to 5:00 pm ET, Monday through Friday. Feel free to contact us at 301-696-9800, or learn more online at www.Rose-Bopla.com.

7330 Executive Way
Frederick, Maryland 21704
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ISO 9001:2000 Certified

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