

Welcome to BOPLA City!



ALU-TOPLINE



A Phoenix Mecano Company

Alu-Topline



With Alu-Topline, BOPLA is presenting a new desktop enclosure whose innovative enclosure technology and ergonomic lines create new opportunities for use in the field of data recording and processing.

Two ABS design lids function as a profile end. The split profile of the desktop enclosure guarantees easier and faster assembly of the electronics and other components.

The enclosure is supplied as standard in two profile heights and four lengths. The aluminium profile is available in silver anodised, the end covers are supplied in quartz grey (similar to RAL 7039) and in graphite grey (similar to RAL 7024).

As a system supplier, in addition to mechanical processing BOPLA also offers customer-specific membrane keypads and the assembly of complete enclosures including electronic components.

Enclosure material:

Extruded profile:
Al Mg Si0,5
Plastic lid: ABS
For technical data,
see "the red book"
general catalogue,
pages 644-657

Colour:

Profiles: silver-coloured,
anodized
Lid: quartz-grey
(similar to RAL 7039)
and graphite grey
(similar to RAL 7024)

Ingress protection:

IP 40 / DIN EN 60529
(retrofitted up to IP 54)

Accessories (additional charge):

AT 18.. DI: Seal for IP 54
Note: To upgrade to IP 54,
in addition to seal
AT 18.. DI, a sponge cord must be
factory-fitted in the enclosure
profile.

AT 1800-... WB: Wall fitting

AT-IS 00020: Insulation strip

AB-GF: Rubber feet

The individual components:



ATPH 1850



ATPH 1865

The split profile of the Alu-Topline desktop enclosure guarantees better and easier assembly of the electronics and other components. The lid can be rotated in order to cover different ranges of application with the same contents (e.g. desktop and wall application). Adapter connectors, power plugs etc. can easily be fitted in the required position. A SUB-D connector can also be fitted on the narrow front side of the Alu-Topline 1865 model. The profiles are equipped with slots and screwing channels to accept PCBs or mounting plates. There is a recessed area on the top side for the fitting of membrane keypads.



ATD 18...

Plastic lids made of ABS are available as end covers in either graphite grey or quartz grey. The handle elements integrated in the design lids ensure good handling.



Welcome to BOPLA City!

Alu-Topline



The robust aluminium profiles have the following lengths: 150, 200, 250 and 300 mm. Special lengths are available on request. The split profile guarantees easy assembly of the electronics. The profiles have a range of PCB slots and screw channels so that PCBs can be fitted in the required positions.

ABS plastic lids – in graphite grey or quartz grey – function as profile ends.

The enclosure system has ingress protection IP 40 as standard. By using seal AT 1850 DI, this can be increased to max. IP 54. For this purpose, in addition to the sponge cords, seals must be factory-fitted in the enclosure profile. Please ask us for an individual offer.

Profiles

Order designation

Model	Order no.	Profile length	IP category
ATPH 1850-0150	92850150	150	IP 40
ATPH 1850-0200	92850200	200	IP 40
ATPH 1850-0250	92850250	250	IP 40
ATPH 1850-0300	92850300	300	IP 40

Scope of delivery:

Enclosure profile, split horizontally

Lid

Order designation

Model	Order no.	Design
ATD 1850-7024	92050024	Graphite grey, sim. to RAL 7024
ATD 1850-7039	92050039	Quartz grey, sim. to RAL 7039

Scope of delivery:

2 lids (r. / l.)
8 screws
8 screw covers

Seal for ingress protection IP 54

Order designation

Model	Order no.
AT 1850 DI	92050000

Scope of delivery:

5 sets of sponge rubber seals (r. / l.)

Important:

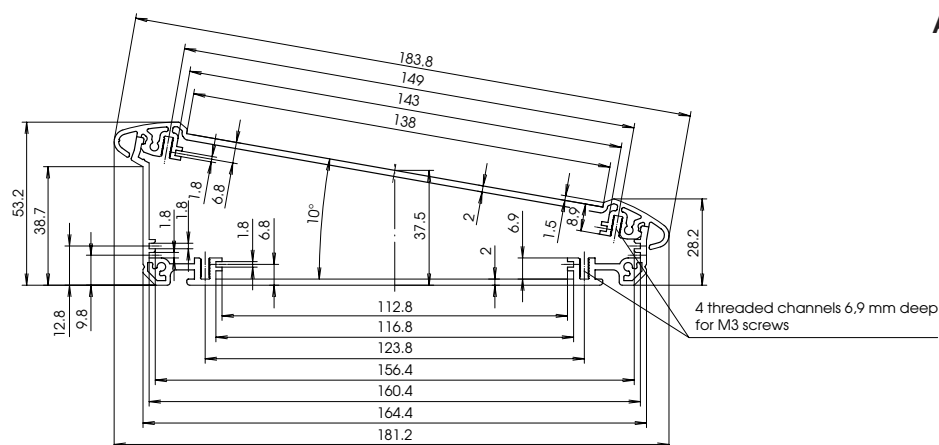
To attain IP 54, in addition to seal AT 1850 DI, a sponge cord must be factory-fitted in the enclosure profile.



Additional BOPLA desktop enclosure: Elegant-Pult

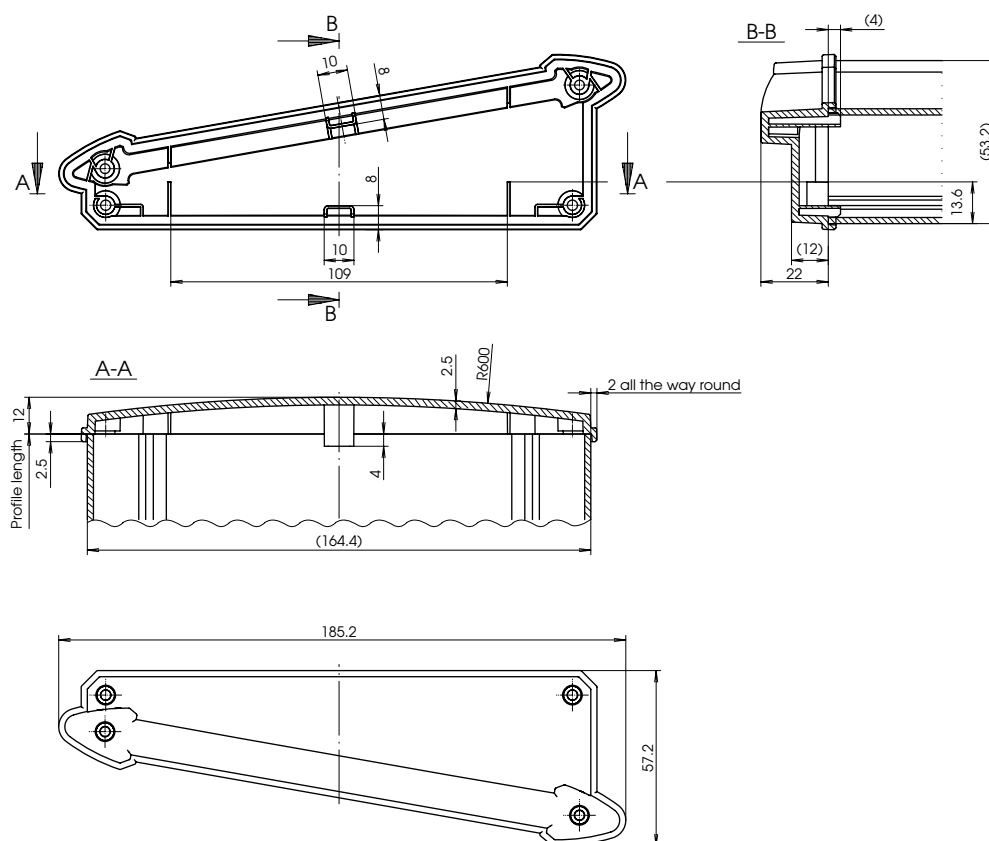
Thanks to its ergonomically inclined desk surface, this enclosure series – made of impact-resistant polystyrene – is ideally suited for use as a table or wall enclosure. Three standard sizes are available for the designs with continuous desk surface or with a desk surface and display opening. Protection category IP 40/DIN EN 60529 is guaranteed for all designs. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 162.

ATPH 1850-...



Z-2802742

ATD 1850-...



Z-2802744

Additional BOPLA desktop enclosure: BOS-Ecoline desktop

BOS-Ecoline combines the advantages of aluminium profiles with the cost-effectiveness of plastic caps to create a superior enclosure concept. Different sizes and profile variants permit use in a very wide range of electronics sectors. The BOS-Ecoline desk model is available in four different cross-section formats; because of the profile construction, the length of all items is variable. Use as a handheld, table and wall-mounted enclosure is also possible. BOS-Ecoline desktop is available on request. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 524.





Welcome to BOPLA City!

Alu-Topline



The robust aluminium profiles have the following lengths: 150, 200, 250 and 300 mm. Special lengths are available on request. The split profile guarantees easy assembly of the electronics. The profiles have a range of PCB slots and screw channels so that PCBs can be fitted in various positions.

ABS plastic lids – in graphite grey or quartz grey – function as profile ends.

The enclosure system has ingress protection IP 40 as standard. By using seal AT 1865 DI, this can be increased to max. IP 54. For this purpose, in addition to the sponge cords, seals must be factory-fitted in the enclosure profile. Please ask us for an individual offer.

Profiles

Order designation

Model	Order no.	Profile length	IP category
ATPH 1865-0150	92865150	150	IP 40
ATPH 1865-0200	92865200	200	IP 40
ATPH 1865-0250	92865250	250	IP 40
ATPH 1865-0300	92865300	300	IP 40

Scope of delivery:

Enclosure profile, split horizontally

Lid

Order designation

Model	Order no.	Design
ATD 1865-7024	92065024	Graphite grey, sim. to RAL 7024
ATD 1865-7039	92065039	Quartz grey, sim. to RAL 7039

Scope of delivery:

2 lids (r. / l.)
8 screws
8 screw covers

Seal for ingress protection IP 54

Order designation

Model	Order no.
AT 1865 DI	92065000

Scope of delivery:

5 sets of sponge rubber seals (r. / l.)

Important:

To attain IP 54, in addition to seal AT 1865 DI, a sponge cord must be factory-fitted in the enclosure profile.



Additional BOPLA desktop enclosure: Bopult

The elegant, ergonomic design is what distinguishes the two ABS desktop enclosures in this enclosure series. For both types, the generously-sized keypad areas allow fitting of a membrane keypad or a front membrane. In addition to desktop use, the 900-F model is ideal for wall fitting. Because of the high level of IP protection, this model is particularly suitable for use under extreme environmental conditions. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 168.

7-2802743

Technical drawing of a mechanical part, showing three views: Top View, Side View (A-A), and End View (B-B).

Top View: Shows the overall shape of the part. Key dimensions include a total length of 185.2, a width of 72.2, and a central slot width of 10. The distance from the left edge to the start of the slot is 109. The distance from the right edge to the end of the slot is 10. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8.

Side View (A-A): Shows the profile of the part. Key dimensions include a total length of 164.4, a width of 12, and a central slot width of 10. The distance from the left edge to the start of the slot is 109. The distance from the right edge to the end of the slot is 10. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8.

End View (B-B): Shows the end of the part. Key dimensions include a total width of 22, a central slot width of 10, and a distance from the left edge to the start of the slot of 109. The distance from the right edge to the end of the slot is 10. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8. The distance from the centerline to the inner edge of the slot is 8. The distance from the centerline to the outer edge of the slot is 8.

Z-2802745

The BOTEBO enclosure system consists of two plastic half-shells. It is available with or without air vents. Its special feature is the innovative snap-lock technology, which considerably reduces the amount of mounting time and work needed. The ergonomically-shaped front permits user-friendly operation. Various design elements and caps in six different colours can modify the basic neutral enclosure to create a very individual look. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 60.



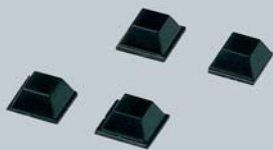


General accessories / PCB mounting



By using the wall fitting, the Alu-Topline profile can easily be fitted to a wall. The enclosure can be mounted on the wall fitting rotated by 180° as required.

Insulating strips for PCB mounting.



The rubber feet have an adhesive layer and can be fitted anywhere on the profile area. No additional processing of the enclosure is necessary.

Wall fitting

Order designation

Model	Order no.	Profile length	For enclosure profile
AT 1800-0150 WB	92800150	144	150
AT 1800-0200 WB	92800200	194	200
AT 1800-0250 WB	92800250	244	250
AT 1800-0300 WB	92800300	294	300

Scope of delivery:

- 1 wall profile
- 2 tapped pins



Insulating strip

Order designation

Model	Order no.
AT-IS 00020	92000100

Scope of delivery:

- 5 insulating strips

Rubber feet

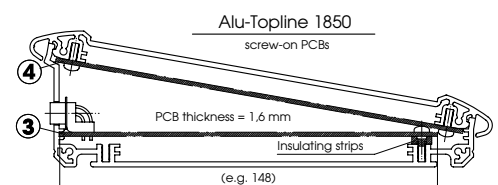
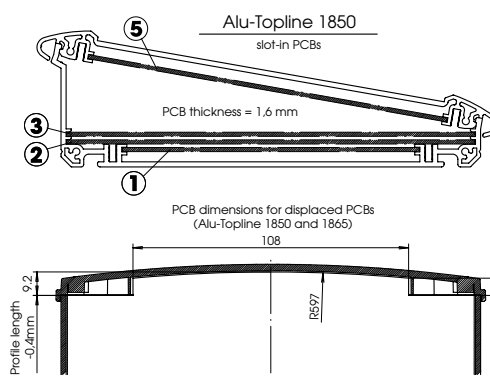
Order designation

Model	Order no.
AB-GF	84006700

Scope of delivery:

- 4 rubber feet

PCB mounting Alu-Topline 1850

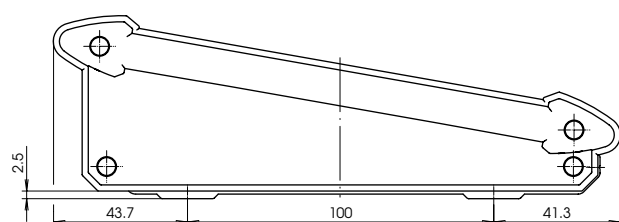


PCB	max. dimensions
PCB 1	116.3 mm x profile length -0.4mm
PCB 2	160.0 mm x profile length -0.4mm
PCB 3	160.0 mm x profile length -0.4mm
PCB 4	162.0 mm x profile length -0.4mm
PCB 5	142.5 mm x profile length -0.4mm

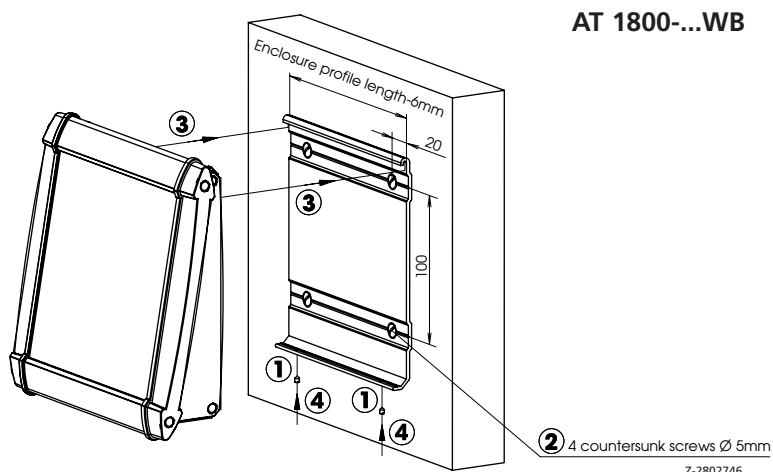


Additional BOPLA desktop enclosure: ALUBOS desk

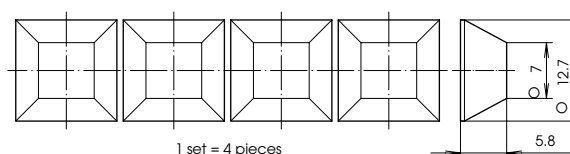
The attractive looks and the seals used as design elements make all electronic parts look good. ALUBOS is available with a closed, horizontal and open-on-one-side profile. With all profile types, the lengths can be selected in such a way as to create a universal, ergonomic and unmistakable desktop enclosure with a special design. Ingress protection up to IP 65 can be guaranteed. ALUBOS desk is available on request. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 534.



- Fitting sequence:
- ① Pre-fit tapped pins.
 - ② Screw the wall profile to the wall.
 - ③ Insert the enclosure into the wall profile. The enclosure can also be rotated by 180°.
 - ④ Tighten the tapped pin.



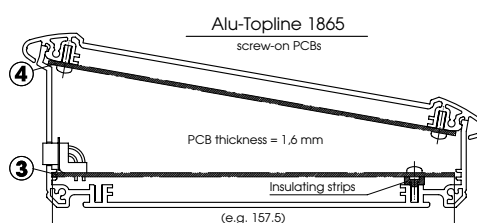
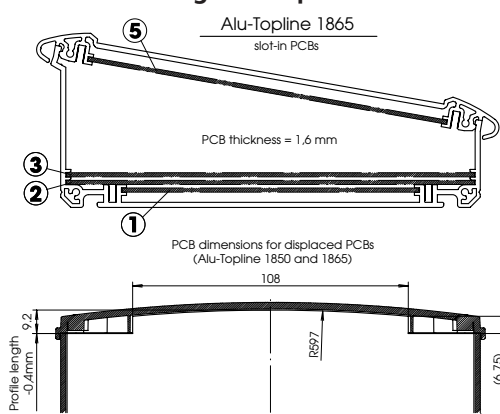
AT 1800-...WB



AB-GF

Z-2501779

PCB mounting Alu-Topline 1865



PCB	max. dimensions
PCB 1	116.3 mm x profile length -0.4mm
PCB 2	160.0 mm x profile length -0.4mm
PCB 3	160.0 mm x profile length -0.4mm
PCB 4	162.0 mm x profile length -0.4mm
PCB 5	142.5 mm x profile length -0.4mm

Z-2802747

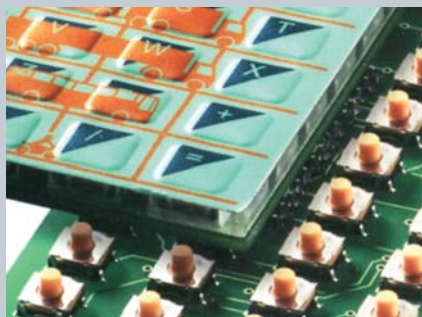
Additional BOPLA desktop enclosure: Futura

This ABS flat control enclosure series is suitable for fitting a mechanical keypad or a display as well as for the flush fitting of a membrane keypad. The enclosure half-shells can be fitted inclined or parallel, so permitting a wide range of applications. Futura provides IP 40 ingress protection and is available in light grey, similar to RAL 7035. Further information is available on the internet at www.bopla.de or in the "the red book" general catalogue starting on page 170.





Membrane keypads



Customer-specific input systems

No matter what size, colour or design - our membrane keypads are manufactured to our customers' exact specifications. Matt, satin-frosted or lustrous front membrane? With or without a clear screen? With or without tactile action point? You choose and, depending on the model, it comes with a safety chamber for each individual snap dome. This prevents the metal domes from slipping, so improving quality considerably. By the way: we also develop and produce input units with short-stroke keys and corresponding front membranes.

Keypads with integrated electronics

The input unit (the membrane keypad or the short-stroke keys) and the matching electronics are on the same carrier — without any fault-prone and expensive plug-in connectors. Here, too, the customer decides whether the carrier is to consist of a single PCB (FR4 etc.) of different thicknesses or of a flexible membrane. One important advantage is that electronic modules can be SMD-inserted, soldered and plated-through without risk to the process as a whole. This means that they do not have to be glued in, as is usually the case with conductive silver applications. Even with maximum packing density, the modules easily adapt to the enclosure geometry.

ProfiLine technology

With ProfiLine, our latest membrane keypad, the user gets much more than a mere input element. Made of deep-drawn acrylic glass, the keys ensure enhanced tactile contact. Plus, there are no limits to individual key design.



Keypads for use in the dark

In the past, if you also wanted to use keypads in the dark, then you often had to accept a compromise. For example, LEDs only produce a point of light, and the well-known problems of using an integrated EL membrane (short operating life, low level of mechanical stability, high cost, EMC problems) mean that they are too complicated and unreliable in use. Our new back-lit Profiline technology offers an effective solution to this problem. The light passes through a hole in a special snap dome into the integrated acrylic inlay, where it is distributed as required. The optimised pressure point functions exactly as before, and the keys can even light up individually.

System solutions

Do you need a complete production run from one source? We are the professional partner you can rely on when it comes to developing system solutions. You, the customer, can take advantage of our many years of experience in designing and manufacturing enclosure systems, membrane keypads, electronic modules and all-in system solutions.

System solutions

Using only state-of-the-art production facilities and operating on the basis of highly-efficient teamwork, we process our enclosures according to the customer's exact specifications.

This service includes the usual mechanical processes such as drilling and milling. We also take care of (i) terminal insertion, (ii) equipment with Pg or metric cable glands, and (iii) assembly of all the electronic elements. Personalised printing and front membranes can be applied and fitted to the enclosure.



Service

Our highly-qualified and motivated employees are always ready to develop and produce electronic modules, terminals and systems which are tailored to meet your special requirements.

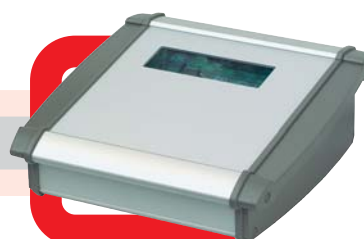
Production capability ranges from the insertion, soldering and testing of the PCBs through to the actual assembly of the modules. If required, we can also seal the PCBs and provide the appropriate ESD packaging for transport purposes.



Electronics

The modern systems of today require professional input devices at the all-important interface between human operator and machine.

Designing keypads which are both functional and attractive is what we do every day. Individual customised solutions are a special feature of our work. Any new developments introduced are all based on everyday practice and are the result of constructive and ongoing dialogue with our customers.



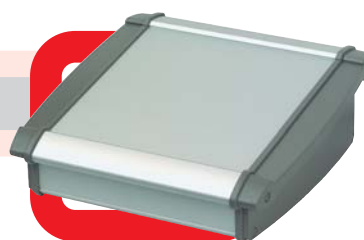
Keypads

Whether working on a standard solution or one specified by the customer, we develop the complete enclosure in full consultation with you, the customer.

BOPLA enclosures protect the valuable components against damage and, thanks to a neutral but aesthetically pleasing design, have an attractive and recognisable look.



Enclosures





Welcome to BOPLA City!



Bopla Gehäuse Systeme GmbH Borsigstraße 17-25 D-32257 Bünde
Tel.: +49 (0) 52 23/969-0 Fax: +49 (0) 52 23/969-100
info@bopla.de www.bopla.de