

Index

Cat No.	PAGE
0005	61,65
0023	78
0024	78
0033	82
0035	83
0042	23,25,27,29
0046	19,21,23
0055	54
0056	54
0061	75
0062	75
0063	75
0067 Lampholder	75
0067 Neon	71
0081	70
0092	61,65
0095	75
0145	67
0167 Cover	11,13,14,35
0177	71
0180 Neon	71
0180 Cover	13,14
0188 Cover	16,17
0195	67,72
0196	72
0232	63,65
0233	72
0234	72
0245	67
0273	68,69
0275	69
0276	69
0277	69
0278	68
0279	61,65
0305	53
0306	53
0307	53
0308	53
0320	52
0323	42
0327	47
0331	61,65
0332	82
0333	82
0340	82
0341	82
0345	83
0347	83
0413	78
0430	20,73
0430 Twin units	28
0434	21,23
0441	27
0445	78
0480	26,73
0494	23,27,29
0506	61,65
0520	82
0539	61,63,65
0568	68
0569	68
0579	71
0581	72
0582	72
0586	70
0589	70
0600	61
0602	61
0616	27
0707	79
0708	79
0709	79
0710	79
0711	79
0717	80
0721	81
0722	81
0723	81
0873	83
0910	42
0911	42,45
0911 Vandal	42,45
0916	41
0917	41
0918	41

Cat No.	PAGE
0919	41
0920	41
0936	47
0938	47
992B	17,73
1041	67
1045	67
1047	76
1048	76,77
1050	76,77
1067	25
1080	61,63,65
1090	78
1091	78
1100	40
1101	40
1250	15
1300	20
13 112	16,17
13 208	16
13 211	17
1350	26
1353	26
1484	26
1487	26
1500	20
1500 Twin units	28
1501	20
1502	20
1510	20,28
1511	20
1520	20,28
1521	20
1522	20
1550	26
1551	26
1552	26
1553	26
1560	26
1561	26
1562	26
1570	26
1571	26
1572	26
1700	64
1710	64
1710 Guard	63
1720	64
1721	64
1722	64
1750	64
1760	64
1770	64
1911	43
1961	43
22--	30-33
23--	30-33
24--	30-31
25--	30-31
2760	69
2820	70
2821	70
2870	70
290-- Snap action	48
2950	67
2951	68
3005	55
3006	55
3101	56
3102	56
3111	56
3130	74
3141	57
3145	57
3146	57
3147	57
3160	74
3161	74
3221	74
340- Snap action	50
390- Snap action	50
3900 Series	62
3950 Series	62
4102	46
5500	22
5500 Twin units	23

Cat No.	PAGE
5503	22
5508	22
6000	18
6000 Twin units	25
6001	18
6002	18
6003	18
6008	18
6009	18
6010	18
6011	18
6030	18,73
6050	24
6051	24
6052	24
6053	24
6054	24
6055	24
6056	24
6057	24
6058	24
6059	24
6060	24
6061	24
6062	24
6066	24
6067	24
6068	24
6090	24
6091	24
6092	24
7000	38
7001	38
7003	38
7004	38
7030	38,73
7050	38
7051	38
7053	38
7054	38
8200	36
8201	36
8250	36
8251	36
8300	34
8300 Vandal	44
8301	34
8301 Vandal	44
8303	34
8304	34
8350	34
8350 Vandal	44
8351	34
8351 Vandal	44
8353	34
8354	34
8500	10
8500 Push	35
8503	10
8550	10
8550 Semi Rotary	11
8553	10
8580	10,73
8600	12
8601	12
8602	12
8610	12
8611	12
8620	14
8630	12,73
8634	13
8650	12
8651	12
8652	12
8653	12
8660	12
8661	12
8670	14
8800	8
8800 Twin units	8
8801	8
8802	8
9000	60
9100	58

appliance switches

indicator lamps

fuseholders

IEC sockets

arcoelectric



Solutions for appliance & electronic applications

Catalogue 168
April
2 0 0 3

this catalogue is available on CD
and on www.arcoelectric.co.uk



Arcoelectric Switches plc,
Central Avenue,
West Molesey, Surrey
England KT8 2RF

tel: +44 (0)20 8979 3232
fax: +44 (0)20 8979 2565
info@arcoswitch.co.uk
www.arcoelectric.co.uk



Solutions for appliance & electronic applications

Arcoelectric Switches plc

Head Office, Sales and R&D

61 Central Avenue, West Molesey,
Surrey, England KT8 2RF

VAT Registration No. GB 211 3314 30

Tel +44 (0)20 8979 3232

Fax +44 (0)20 8979 2565

e-mail info@arcoswitch.co.uk

Web www.arcoelectric.co.uk

Directors

R.A. Collier

H.J.A. Cowley

J. Harris

J. Collier

M.A. Collier

I. Ranken Collins

Chairman

Managing Director

Technical Director

Director

Director

Non-executive Director

Company Secretary

D. Birdwood-Hedger

Export Sales

H.J.A. Cowley

L.A. Hamon

UK Sales

C. Macdonald

North American Customers

We have a 20,000 sqft production
& distribution facility in Los Angeles:

Arcoelectric Corporation,

9001 Canoga Avenue, Canoga Park,
California 91304, USA.

Tel +1 818 700 1933

Fax +1 818 700 9541

e-mail info@arcoelectric.com

Web www.arcoelectric.com

President Carrie Bonica



Arcoelectric worldwide

Arcoelectric Switches plc, established in 1932, specialise in the manufacture of appliance switches, indicator lights and fuseholders for every kind of product from computers to coffee machines and lighting to laser printers.

We have two fully integrated factories totalling 90,000 sq.ft. in Surrey, England, where we manufacture mouldings, springs, pressings and turnings. The majority of our product is assembled automatically.

Arcoelectric also have purpose built factories in Shenzhen, China (42,000sq.ft) and Tunis, North Africa (30,000 Sq.ft.).

The Group has recently acquired Otehall Switches Ltd., a specialist manufacturer of high quality snap-action switches.

Arcoelectric Switches plc and Otehall Switches Ltd are wholly owned subsidiaries of Arcoelectric Holdings plc, a Public Company quoted on the Alternative Investment Market (AIM) in London.



Approvals

The majority of Arcoelectric products are covered by international approvals. These will assist you in obtaining worldwide approval of your own products.

Europe - The  ENEC mark replaces national approval marks for switches complying with product standard EN61058-1.

America - Switch approvals to UL1054.

Canada - Switch approvals to CSA C22.2 No.55-M1986.

Our North African and China factories are also approved by these authorities.

Quality Assurance Approval



We are a BSI Registered Firm to
BS EN ISO 9002: 1994. Certificate No: FM 14821.

Not all products are produced on site, such items are therefore not manufactured under this approval.

  Appliances bearing the   mark are able to circulate freely in Europe. Products in this catalogue, when fitted correctly, comply with the   requirement insofar as it relates to them.

Product from stock

For stock product availability please visit our website, call our sales office or contact your nearest agent or distributor, listed on the back of this catalogue.

Bankers

HSBC Bank plc,
56 High Street, Esher, Surrey, KT10 9RD.
Sterling Account No. 21148257 Sort Code: 40-20-26

HSBC Bank plc,
P.O. Box 181, 27-32 Poultry, London, EC2P 2BX.
U.S. Dollar Account No. 37038042 Sort Code: 40-05-15
Euro Account No. 39023138 Sort Code: 40-05-15

The Hong Kong and Shanghai Banking Corporation Limited,
1 Queen's Road, Central, Hong Kong.
U.S. Dollar Account No. 600-833255
Hong Kong Dollar Account No. 600-833255-001

contents

4, 6, 66 technical data



8 - 29 rocker switches



30 - 33 slide switches



34 - 47 push switches



42 - 45 vandal resist switches



48 - 52 snap-action & safety switches



53 - 57 refrigerator switches



58 - 60 rotary switches



61 - 65 lever switches



66 - 78 indicators



79 - 81 IEC sockets



82 - 83 fuseholders





Solutions for appliance & electronic applications

6 Million Products

Every month we assemble over six million switches, indicator lights, fuseholders and IEC sockets.

5 Manufacturing Centres

Almost all component parts used in our products - mouldings, pressings, springs and turned parts, are manufactured in our own production centres, then assembled and tested fully automatically.

23 Automatic Assembly Machines

The great majority of our rocker, slide, push button and lever switches are assembled automatically.

52 Injection Moulding Machines

Working at pressures up to 80 tons, our mould shop delivers over 250 million components each year.

60,000 Miniature Springs

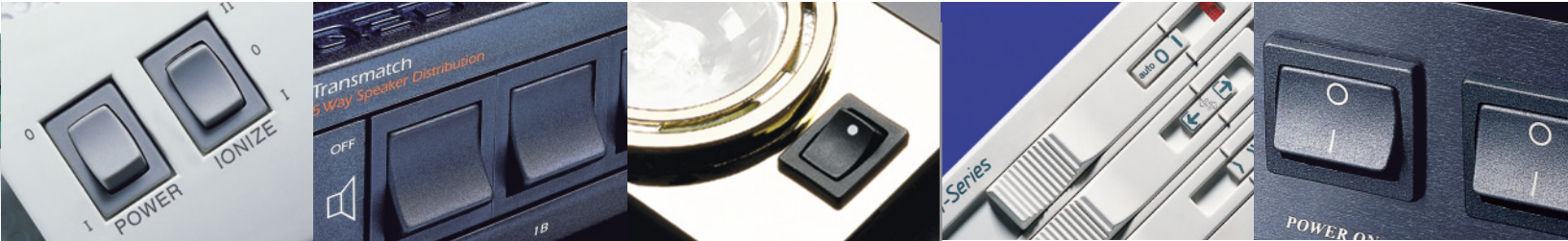
Some only a millimetre or so in diameter, are wound each hour. Every one will be measured and tested.

15 Power Presses

We manufacture over 200,000 contacts and terminals every hour.



Production



effective

design

development

sampling

costing

production

distribution

support

Automated Testing

Each assembly machine tests the electrical and mechanical function of every completed product.

8,000,000 turned parts

On site manufacture of our component parts ensures full control of our production.

Tooling - In-house

A fully equipped toolroom manufactures and maintains the jigs, press and mould tools we use each day.

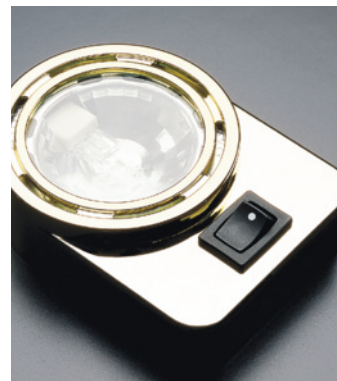
Flexibility of response

Twenty-four hour running allows a positive response to customer requests and ensures a competitively priced finished product.

Research & Development

Our designers will work with you to achieve practical solutions which satisfy your particular design criteria.

Arcoelectric is the largest manufacturer of appliance switches in the UK.



Technical Information - Switches and Fuseholders

Most major technical information is shown on each specific product page, other details are grouped here for easy reference. Details shown here apply to most switches and fuseholders.

Snap-action switches (pages 42, 45 and 48-51), indicators (pages 66-78) and connectors (pages 79-81) have product specific information within the section.

MATERIALS	MOST PRODUCTS	EXCEPTIONS
Body and actuator (opaque)	Nylon 6.6	8300V, 1900V, 0916V & 0911V bezels & actuators are stainless steel 0600 and 3900 actuators are plated brass
Actuator (transparent)	Polycarbonate	
Current carrying parts	Copper Alloy	
Contact points	Silver Alloy	N/A for 0055/56, 0600/2, 0916-0920, 0017, 2000 & 3005/3006. Gold plated for 1100.

PROPERTIES

Electrical

Class II compliant	Confirmed	IEC Sockets
Electrical life (Operations)	>10k, many >50k	See relevant page for details
Contact resistance (switches) new condition	<100mΩ (at 12Vdc,1A)	For 1100 & 2000 call factory
Contact resistance (fuseholders) new condition	5mΩ (average)	
Insulation resistance	>20mΩ	
Dielectric strength:		
across open contacts	>1kV	
between poles	>3kV	
between live parts and accessible metal	>4kV	
Comparative Tracking Index (CTI)	>250	
Temperature rise (terminals) at end of rated life	max 30°K (UL 1054), max 55°K (EN 61058-1)	

PROPERTIES

Physical

Humidity resistance at 91-95% relative humidity (to subsequently comply with requirements of the		
Dielectric strength test)	48hrs	
Impact resistance	>0.5Nm	
Storage temp. (1 year period)	<125°C	Some discolouration of terminals may occur
Flame retardancy	UL94V2	
Solderability to BS 2011 pt.2.1T - (with an iron)	6 secs at 350°C	
Angular movement ± 4° overall (where applicable)	38°	1250, 6000, 8500, 8550, 8600, 8650, 8800 - 26°
Force to operate	2.0N - 20.0N	Call factory for specific values
Fixing nut torque (where applicable)	1.0Nm (8.91 lb/in) nom.	Call factory for specific values

GENERAL INFORMATION

ALL SWITCHES

Heat and Fire resistance Category D.
Ingress Protection without cover is IP40.
Higher ratings where available will be shown on the relevant catalogue page.

ALL PRODUCTS

Solder terminals should not be fitted with "Push on", "QD" or "Fast on" type cable connectors.

Panel holes must be punched in the direction of insertion.

Items marked ♦ on the following pages are assembled automatically.
This ensures the highest attainable quality at a competitive price.

All products should be applied, installed and maintained by the customer using competent persons in accordance with good electrical practice. Products should be tested by the customer in the application to ensure suitability. Special care should be taken not to expose switches to water, dust, corrosive chemicals, silicone, excessive solder flux, cyanoacrylate adhesives, severe impact, extremes of temperature, electrical supply voltage or load current in excess of the specified limits.

Transparent lenses on indicator lights and lit switches are moulded in polycarbonate, a material which is attacked by organic chemicals and animal or vegetable fats.

Please contact the factory for advice on these products.

For performance in accord with the stated ratings, switch actuators should be fully depressed and fully released during operation.

WEIGHTS OF OUR MOST FREQUENTLY SUPPLIED PRODUCTS, not including packaging.

Product	gms	Product	gms	Product	gms	Product	gms	Product	gms
0055, 0056	5.7/6.8	1048	2.8	1570	12.7	5500	7.1	8353	5.9
0305	32.9	1091FH	12.6	1584-1589	11.1	5503	7.8	8500	3.8
0333	4.5	1091FL	52.8	1700H	8.4	5567	14.3	8550	4.8
0345	8.9	1100	2.0	1750H	13.2	6050	13.58	8553	5.2
0340 sw only	7.12	1250SP	5.9	17500	25.6	6053	14.15	8600	3.5
0340K/P	25.0	1250DP	7.0	2000 2pos C SP	3.8	7000	10.4	8620	4.3
0430	5.5	1300	5.7	2000 2pos C DP	4.5	7050	12.3	8650	6.3
0589	3.5	1350	11.2	2000 5pos A SP	6.3	7053	12.9	8670	8.5
0711-1S	16.6	1500	5.7	2000 5pos A DP	7.3	8250	4.9	8800	2.9
0712-S	27.8	1520	6.6	T2225B	5.0	8300	4.0	9100	20.0
0717-1S	22.4	1550	11.2	2950	5.3	8350	5.0		
0900S/L	2.6/2.9	1553	11.8	3111	11.8	8350RP	34.0		

Splashproof & Dust Resistant options for Switches

Suitability

A large number of Arcoelectric products have optional or designed-in resistance to moisture or dust.

For detailed IP ratings call the factory.

The suitability of these products for specific applications is subject to numerous factors including:

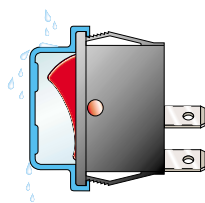
Mounting method and product orientation, air movement, pressure differential across the product, intensity of impinging liquid flow and application voltage.

Splashproofing does not imply total sealing, or resistance to corrosive atmospheres or substances.

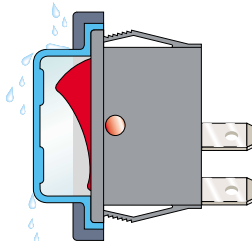
Order code for splash/dust proofing options is shown under the illustration	Page 10 	Pages 12 & 14 	Pages 12 & 14 	Page 16 	Page 16 
	8500 Twin can be fitted with	8600 & 8620 can be fitted with	8650 & 8670 can be fitted with	R13 Single pole can be fitted with	R13 Double pole can be fitted with
	 L167 Push-on cover	 L167 Push-on cover	 L180 Push-on cover	 L188 Push-on cover	 L188 Push-on cover

Order code for splash/dust proofing options is shown under the illustration	Page 18 	Page 20 	Page 22 	Page 24 	Page 26 
	6000 has integral water-thru feature and	1500 and 1300 available with W or B Splashproof rockers or	5503 can be fitted with	6050 has integral water-thru feature and	1550 and 1350 can be fitted with
	 G Snap-on cover option	 G Snap-on cover	 G Snap-on cover	 G Snap-on cover option	 G Snap-on cover

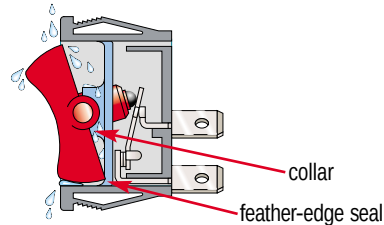
How they work



L167, L180, L188
Push-on splashproof/
dustproof covers
for rocker/push switches



G
Snap-on splashproof/
dustproof cover & bezel
for rocker switches



1500 W and 1500 B splashproof rockers
have internal feather edge seals and a close fitting collar to protect current carrying parts from moisture
Option B has Hytrel moulded collar/seals for enhanced protection

The right system

The fitting of external covers or panel sealing washers will normally alter standard panel acceptance dimensions.

The fitting of external covers is not recommended for momentary (spring return) rocker or lever switches.

In all instances applications should be discussed with the factory. We will advise you on the best system for your application.

For full product details, dimensions and ratings refer to the catalogue page shown in the photograph (not to scale).

Order code for splash/dust proofing options is shown under the illustration

Page 34



8300
can be fitted with



L167
Push-on cover

Page 41



0916V
has integral seal

Page 43



1900
has integral seal

Page 44



8300V
has integral seal

Page 45



0911V
has integral seal

Order code for splash/dust proofing options is shown under the illustration

Page 55



3005
splashproof design

Page 56/57



3100 and 3141
splashproof design

Page 62



3900 and 3950
have integral O-ring seal and can be fitted with



M539 or M1080
neck seal or cover

Page 64



1700 and 1750
can be fitted with



M331, M539, M1080
covers or neck seals

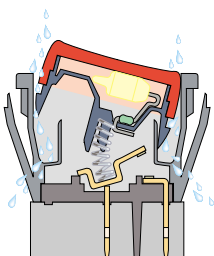
Page 61



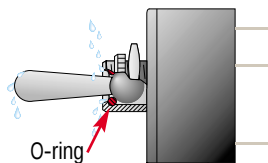
0600
can be fitted with



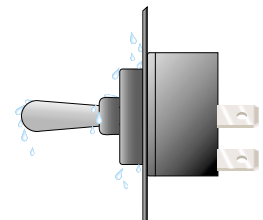
M331, M539, M1080
covers or neck seals



Water-thru
Integral
splashproof
system (pat app.)



O-ring
Integral seal
for 3900 series
metal lever switches



Covers & Neck seals
(with nut fixing)
for lever switches

8800 Thinline Rocker Switches 10A 250Vac



10(6)A 250Vac T100
6(2)A 250Vac T100 5E4 (50,000 Operations)
Inrush 50A to EN60065:1998



UL CSA 15A 250Vac (Twin unit is 10A 250Vac)
UL CSA 125Vac 1/2hp
UL 100°C, file E45221, CSA file LR10990

In house test 10A 28Vdc

3mm contact gap
Technical data on pages 4 & 5

H 8800 V A - - -
TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, ETC

▶ TERMINAL	▶ FUNCTION	▶ ROCKER
H 4.8 x 0.8	1a 1 Switches are ON when pressed over terminal 1 8800 ♦ ON - OFF Single pole Factored product 8801 Call factory for ratings & dimensions ON - OFF (momentary ON) Single pole Factored product 8802 Call factory for ratings & dimensions 42 31 Switches are ON when pressed over terminals 1 or 3 8800/8800 ON - OFF Twin (Single pole)	V Curved
T 3.5 x 0.8 Solder		



H8800VA ---
T8800VA ---



H8800VA ---
T8800VA ---



H8800V/H8800VA
T8800V/T8800VA



H8800V/H8800VA
T8800V/T8800VA

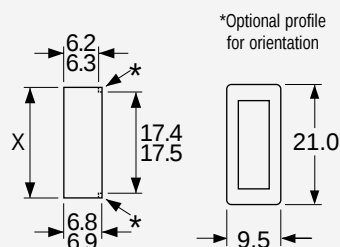
BODY

Panel cut-outs

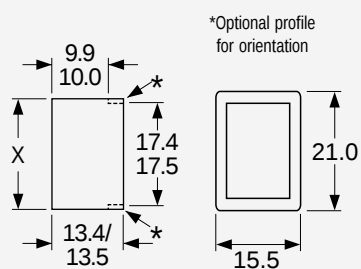
Flange

Cut-outs must be punched in the direction of insertion

A Single pole



A Single pole - Twin



Panel thickness
0.75-1.24
1.25-1.99
2.00-3.00

Dim X
19.1/19.2
19.3/19.4
19.7/19.8

OPTIONS

Finish

Matt finish only

Colour

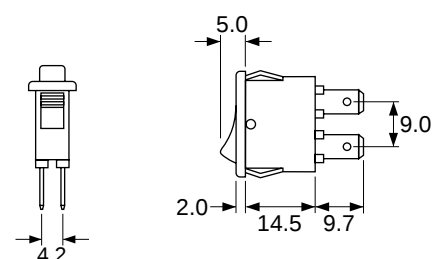
Call factory for custom colours.
A full range is available for large orders

Legend printing

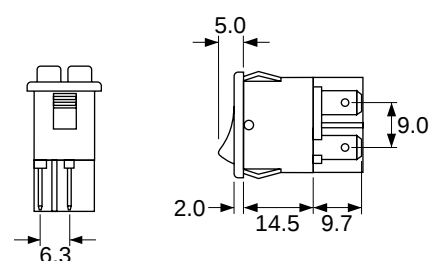
Select from the examples or call the
factory for custom legends

Dimensions (mm)

8800VA (H terminals shown)



8800V/8800VA (H terminals shown)



Examples of printing



CL132



CL133

8500 Rocker Switches - Miniature 10A 250Vac Single & Double Pole



10(6)A 250Vac T125 (non lit types)
6(4)A 250Vac T125 5E4 (50,000 Operations) (non lit types)
10(6)A 250Vac T100 (lit types)



UL CSA 15A Non Ind 250Vac, 14A Ind 250Vac, 10A 277Vac
UL CSA 250Vac 1/2hp, 125Vac 1/4hp
UL 105°C, file E45221, CSA file LR10990



Inrush 85A to EN61058-1 & 10A 28Vdc

3mm contact gap

Technical data on pages 4 & 5 (switches), 66 (indicators)

H 8550 V B ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

TERMINAL	FUNCTION	ROCKER
H 4.8 x 0.8	Approvals & ratings vary with function On Off Switches are ON when pressed over terminal 1	H Slotted for custom adaptors Slots for snap-in buttons
K 2.8 x 0.8	8500 ♦ ON - OFF Single pole (Uses terminals 1a & 2a)	R Semi-rotary
L 2.8 x 0.8 Right angle version of K terminal available on 8500 only	8503 ♦ ON - OFF - Lit Single pole	D Paddle lever (8500 only) (not lit)
R 4.8 x 0.8	8550 ♦ ON - OFF Double pole	V Curved (not lit)
T Solder	8553 ♦ ON - OFF - Lit Double pole	V Curved (lit)
	8580 Available with H terminals only Indicator	X Two colour (not lit)
		A Softline lens



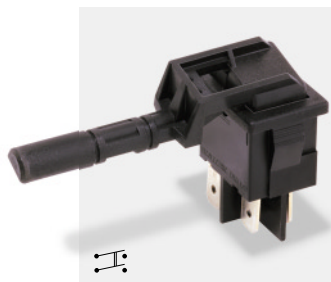
H8500VB ---
T8500VB ---



H8550VB ---
T8550VB ---



H8550XB ---
T8550XB ---



H8550RB Semi-rotary
A splash proofing option



H8553VB ---
T8553VB ---



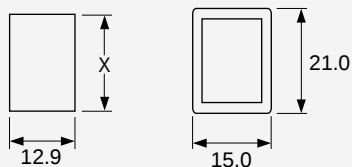
H8580AB ---

BODY

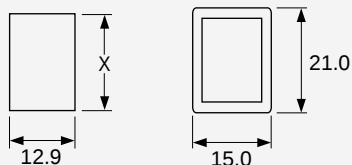
Panel cut-outs Flange

Cut-outs must be punched in the direction of insertion

B
Standard body with terminal barrier



BC
Body without terminal barrier



Dimensions for snap-in fixing

Panel thickness	Dim X
0.75-1.25	19.1/19.2
1.25-2.00	19.3/19.4
2.00-3.00	19.7/19.8

OPTIONS

Finish

Matt finish only

Colour

Call factory for custom colours
A full range is available for large orders

Legend printing

Select from the examples or call the factory for custom legends

Lamp voltage

Call factory for details of other available voltages

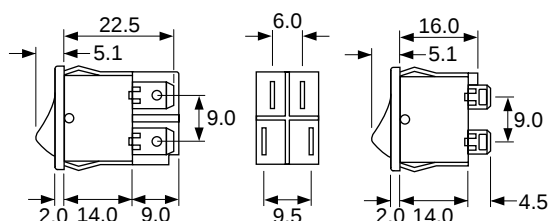
Protective cover L167

(designed to IP65)

Snaps on to bodies with V or X style rockers and A style lens but reduces panel thickness by 0.8mm



DIMENSIONS (mm)



"B" body with barrier for H, T and K terminals

"BC" body w/o barrier primarily for L or R terminals (can be used for all terminals)

Terminal spacing between 1a & 3b - 6.0, between 2a & 4b - 9.5

Examples of printing



CL076



CL080

8600 Rocker Switches - Miniature 10A 250Vac Single & Double Pole



10(4)A 250Vac T90 (unless noted below)



UL CSA See ratings below
UL 65°C, file E45221, CSA file LR10990

In house test

Inrush 25A to EN61058-1 & 10A 28Vdc

3mm contact gap except where marked μ

Technical data on pages 4 & 5 (switches), 66 (indicators)

H 8653 V B ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

TERMINAL	FUNCTION	ROCKER
H 4.8 x 0.8 7.4	Approvals & ratings vary with function On Off Switches are ON when pressed over terminal 3 	V Curved
T 3.5 x 0.8 Solder 6.4	8600 $\blacklozenge$ 10(4)A 16A 250V, 10A 277V ON - OFF 	8650 $\blacklozenge$ 10(4)A 10A 277V
X 3.7 5.3 PCB* 0.8 Sq	8601 $\uparrow$ 6(1)A 16A 250V, 6A 277V ON - OFF (momentary ON) 	8651 $\uparrow$ 6(1)A 6A 277V
Y 1.3 x 0.8 6.0 Right angle PCB Contact the factory for details	8602 $\downarrow$ 10A 16A 250V, 10A 277V ON - OFF (momentary OFF) 	8652 $\downarrow$ 10(4)A 6A 277V
	8610 $\blacklozenge$ 6(1)A 10A 277V ON - ON 	8653 10(4)A 6A 277V
	8611 $\uparrow$ 6A 277V ON - OFF (momentary 1 side) 	8660 $\blacklozenge$ 6(1)A 10A 277V, 1/2HP 277V 1/2HP 250V, 1/4HP 277V
	8620 μ See page 14 ON - OFF - ON 	8661 $\uparrow$ 6A 277V
	8630 Indicator 	8670 μ See page 14





H8600VB ---
T8600VB ---



H8600VB ---
T8600VB ---



H8630FB ---
T8630FB ---



H8650VB ---
T8650VB ---



H8660VB ---
T8660VB ---



H8653VB ---
T8653VB ---

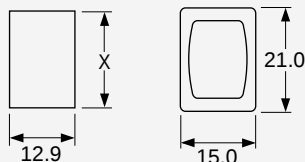
BODY

Panel cut-outs

Flange

Cut-outs must be punched in the direction of insertion

B Single pole

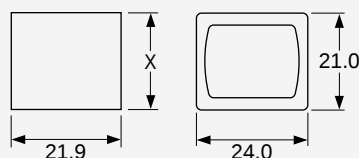


Single Pole dimensions for snap-in fixing

Panel thickness	Dimension X
0.75-1.24	19.1/19.2
1.25-1.99	19.3/19.4
2.00-3.00	19.7/19.8

B (Double Pole) with terminal barrier

BC (Double Pole) w/o terminal barrier



Double Pole dimensions for snap-in fixing

Panel thickness	Dimension X
0.75-1.24	19.1/19.2
1.25-1.99	19.3/19.4
2.00-3.00	19.7/19.8

OPTIONS

Finish

Matt finish only

Colour

Call factory for custom colours
A full range is available for large orders

Legend printing

Select from the examples or call the factory for custom legends

Lamp voltage

Call factory for details of other available voltages

Blanking plate A8634FB

Dummy unit to fill unused panel holes
Single pole size only

Protective covers

L167 for SP

L180 for DP

(designed to IP65)

Snap on to bodies with V rocker or F lens but reduce panel thickness by 0.8mm.
Not for use with momentary types

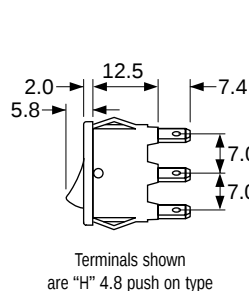


Single Pole options

Most switches shown can have single pole switching in double pole bodies

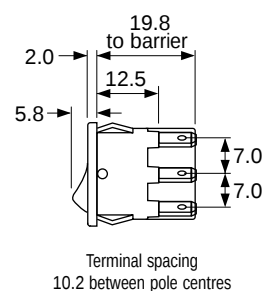
DIMENSIONS (mm)

Single pole



Terminals shown are "H" 4.8 push on type

Double pole



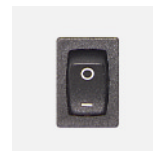
Terminal spacing 10.2 between pole centres

For 8620 and 8670 see page 14

Examples of printing



CL076



CL080



CL141



CL142



CL059



CL058

8620 & 8670 Rocker Switches - 3 Positions 10A 250Vac



10(4)A 250Vac T90



UL CSA 15A 277Vac (Single pole)
 UL CSA 250Vac 1/2hp (Single pole)
 UL CSA 125Vac 1/4hp (Single pole)
 UL CSA 10A 277Vac (Double pole)
 UL CSA 125/250Vac 1/2hp (Double pole)
 UL CSA 277Vac 1/2hp (Single & Double pole)
 UL 90°C, file E45221, CSA file LR10990

In house test 10A 28Vdc

μ contact gap

Technical data on pages 4 & 5



H8620VB - - -
 T8620VB - - -



H8670VB - - -
 T8670VB - - -

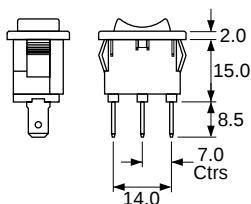
H 8620 V B - - -

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, ETC

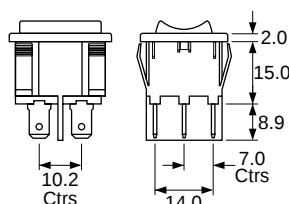
▶ TERMINAL	▶ FUNCTION	▶ ROCKER	▶ BODY	▶ OPTIONS
H 4.8 x 0.8 8.5	 8620 ON - OFF - ON Single pole	V Curved 	B Single pole Panel thickness 0.75-1.24 1.25-1.99 2.00-3.00 Dim X 19.1/19.2 19.3/19.4 19.7/19.8	Finish Matt finish only Colour Call factory for custom colours. A full range is available for large orders Legend printing Select from the examples or call factory for custom legends
T Solder 6.4	 8670 ON - OFF - ON Double pole		B Double pole Panel thickness 0.75-1.24 1.25-1.99 2.00-3.00 Dim X 19.1/19.2 19.3/19.4 19.7/19.8	Protective covers IP65 L167 for SP L180 for DP (designed to IP65) Snaps on to body but reduces panel thickness by 0.8mm
X PCB 0.8sq Switches with X terminals are supplied without terminal barriers			Cut-outs must be punched in the direction of insertion	

Dimensions (mm)

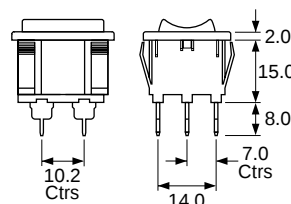
8620VB (H terminals shown)



8670VB (H terminals shown)



8670VB (X terminals shown)



Examples of printing



CL141



CL142

1250 Rocker Switches 10A 250Vac



10(6)A 250Vac T100
6A 400Vac T100
1A 30Vdc



UL CSA 10A 250Vac
UL CSA 16A 250Vac Resistive
UL CSA 125Vac 1/2hp
UL CSA 1A 30Vdc
UL 100°C, file E45221, CSA file LR10990

In house test

Inrush 75A to EN61058-1 & 10A 28Vdc

3mm contact gap

Technical data on pages 4 & 5



C1250AP - - -



C1250AN - - -

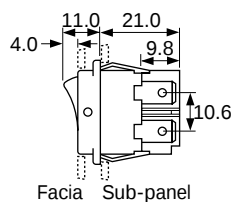
C 1250 A P - - -

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, ETC

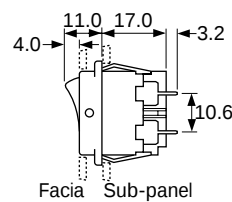
TERMINAL	FUNCTION	ROCKER	BODY	OPTIONS
C 6.3 x 0.8	 On when pressed over terminal 1 1250 ♦ ON - OFF Double pole Poles are 9.0mm between centres.	A Curved Shown in N body	N Panel cut-out Sub-panel Facia Flange Panel thickness 0.75-1.24 1.25-1.99 2.00-3.00 Dim X 26.1/26.2 26.3/26.4 26.7/26.8	Finish Matt finish only Colour Call factory for custom colours. A full range is available for large orders Legend printing Select from the examples or call factory for custom legends
X PCB 0.8sq (N body only)	 On when pressed over terminal 1 1250SP ♦ ON - OFF Single pole	 Shown in P body	P Panel cut-out Panel thickness 0.75-3.00 Cut-outs must be punched in the direction of insertion	

Dimensions (mm)

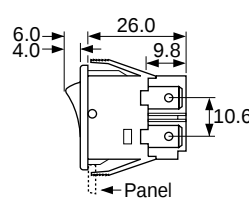
1250AN (C terminals shown)



1250AN (X terminals shown)



1250AP (C terminals shown)



Examples of printing



CL085



CL086

R13 Round Rocker Switches 6A 250Vac



Factored product



SP 6A 250Vac T85,
DP 10(4)A 250Vac T85



UL CSA SP 10A 125Vac & 6A 250Vac (For 16A call the factory)
UL CSA DP 8A 125/250Vac
UL 85°C, file E67774(S) CSA file LR45128

Single pole has μ contact gap
Technical data on pages 4 & 5

Standard products

Are supplied with the body and rocker colour, print & lamp voltage shown in the product illustration and description

R13 112A AAA

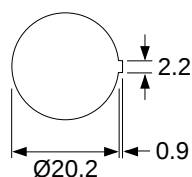
TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

PRODUCT DETAILS

	SP ON - OFF μ Cat no. R13 112A AAA		SP ON - OFF μ <i>Lit 230V</i> Cat no. R13 112B NAC
	SP ON - OFF μ Cat no. R13 112A AAB		SP ON - ON μ Cat no. R13 112C AAA
	SP ON - OFF μ <i>Lit 230V</i> Cat no. R13 112B NAA		SP ON - OFF - ON μ Cat no. R13 112D AAA
	SP ON - OFF μ <i>Lit 230V</i> Cat no. R13 112B NAB		SP ON - OFF μ (Momentary On) Cat no. R13 208F AAA*
	DP ON - OFF Cat no. R13 244A AAA		DP ON - OFF <i>Lit 230V</i> Cat no. R13 244B NAA

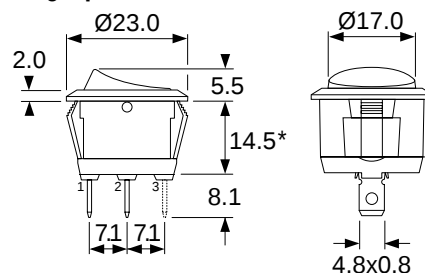
DIMENSIONS (mm)

Panel cut-out



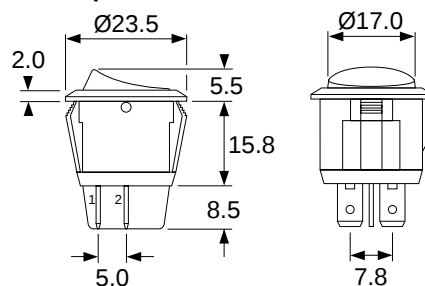
Snap fixing into panel thickness up to 3.0

Single pole



* R13 208F has 12.5mm deep body

Double pole



R13 Round Rocker Switches 6A 250Vac



6A 250Vac T85

UL CSA 10A 125Vac & 6A 250Vac (For 16A call the factory)
UL 85°C, file E67774(S) CSA file LR45128

Single pole has μ contact gap
 Technical data on pages 4 & 5

Special products

Are made to order and can be supplied with a range of body and rocker/lens colours, print & lamp voltage

Call the factory for availability to your special requirements

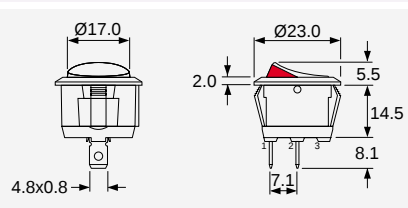
R13 112A2 - -

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

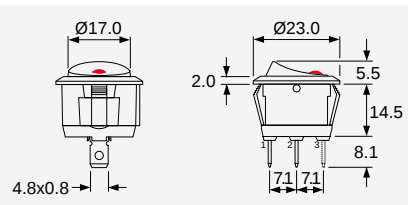
PRODUCT DETAILS



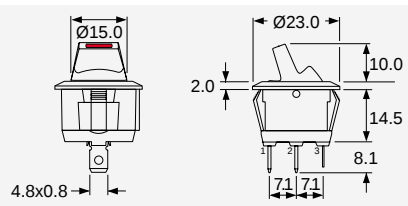
1 2
 SP ON - OFF μ
 Bright colour ON signal
 Cat no.
R13 112A2 - -



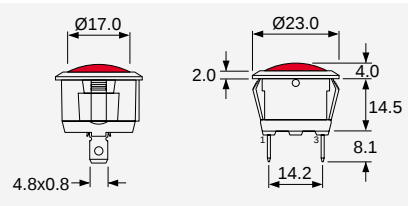
1 2 3
 SP ON - OFF μ
 Lit Window
 Cat no.
R13 112B2 - -



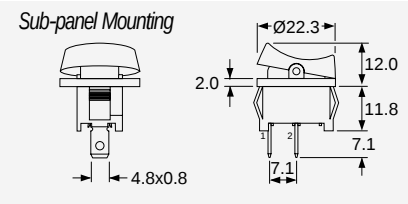
1 2 3- 3+
 SP ON - OFF μ
 Paddle tip has red LED
 Cat no.
R13 112LP - -



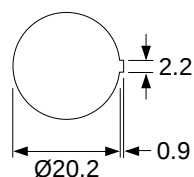
1 3
 Indicator light
 Cat no.
R9 92B - - -



1 2
 SP ON - OFF μ
R13 211A - - -
 1 2 3
 SP ON - ON μ
R13 211C - - -



PANEL CUT-OUT (mm)



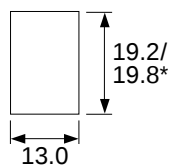
For R13 112A2
 R13 112B2
 R13 112LP
 R9 92B

Snap fixing into panel thickness up to 3.0



Protective cover L188

Snaps on to bodies (not R13 211 or R13 112LP) but reduces panel thickness by 0.6mm



For R13 211A
 R13 211C

* Dependent on panel thickness 0.75 - 3.0

6000 SP Splashproof Rocker Switches 16A 250Vac



European 16(4)A 250Vac T125, 10A 400Vac T125



UL CSA 20A⁺ 277Vac, 250Vac 1½hp, 125Vac 1hp
UL 100°C, file E45221, CSA file LR10990

In house test

Inrush 150A* to EN61058-1 (On - Off only)

20A 28Vdc

* * applies to non-momentary types

6000 Switches feature "Arcshield" to hide visible switching arc

3mm contact gap with Positive Break switching

Call factory for IP details

Technical data on pages 4 & 5 (switches), 66 (indicators)

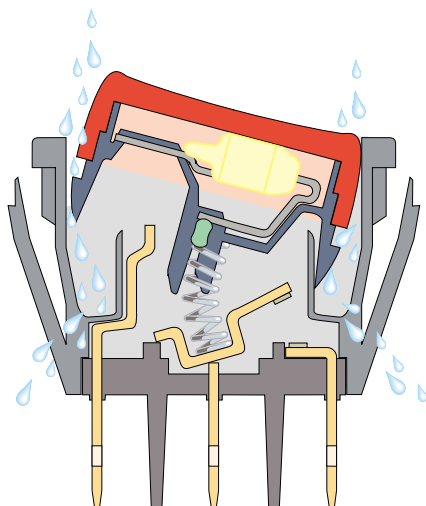
Patent app.

C 6003 A L ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

▶ TERMINAL	▶ FUNCTION	▶ ROCKER
C 6.3 x 0.8	Approvals & ratings vary with function On Off Switches - ON when pressed over terminal 3 	A Softline Matt
	6000 ON - OFF 	
	6001 ON - OFF (momentary ON) 	A Softline Matt Lit
	6002 ON - OFF (momentary OFF) 	
H 4.8 x 0.8	6003 ON - OFF Lit 	
	6008 ON - OFF Lit (Unswitched neutral) 	P Lit window Matt
	6009 ON - OFF (momentary ON) Lit (Unswitched neutral) 	
	6010 ON - ON 	A Lens Matt (6030 indicator only)
S Screw & Clamp N/A for assemblies with 3 terminals	6011 ON - ON (momentary 1 side) 	
	6030 Indicator 	
	For twin switches and double pole circuits see pages 24 & 25	

For IP65 see “options” below



Integral Splashproofing

Current carrying parts are protected from moisture. Droplets which may enter the switch are channelled out through ports in the switch body



C6000AL ---



C6000AL ---



C6010AL ---



C6003AL ---



C6003PL ---



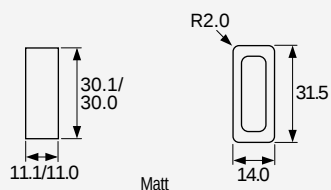
C6030AL ---

NEW

BODY

Panel cut-out ** Flange
Cut-outs must be punched in the direction of insertion

L



OPTIONS

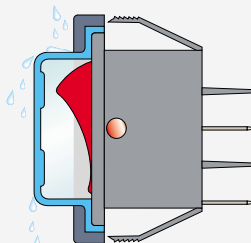
Finish Matt is standard

Colour Call factory for custom colours
A full range is available for large orders

Legend printing Select from the examples
or call factory for custom legends

Lamp voltage Call factory for details

Protective cover (designed to IP65)
The 6000 series is a water thru design.
For a higher level of sealing, a snap on cover
is available (add G after body code). This
reduces panel thickness by 1mm.

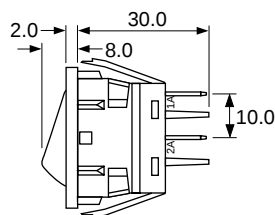


Panel sealing washer W46 is available but
reduces panel thickness by a further 0.8mm.
Covers are not suitable for momentary types.

Mounting orientation may affect splashproofing

For all options call the factory

DIMENSIONS (mm)



Panel thickness

L 0.75 to 2.5mm

** For cut-out details
on momentary switches
call the factory

Examples of printing



EN1224



EN1223

1500 Standard & 1300 Hi Inrush Switches 150A to IEC65 and 16A 250Vac



1500 Series 16(4)A 250Vac T125



UL CSA 16A Non Ind 250Vac, (2 posn) 250Vac 1hp, 125Vac 1/2hp, (3 posn) 250Vac 1/2hp, 125Vac 1/4hp UL 85°C, file E45221, CSA file LR10990



Inrush 36A to EN61058-1 & 20A 28Vdc



1300 series 16(6)A 250Vac T125 5E4 (50,000 Ops.) Ⓢ150A Inrush to IEC 65,



UL CSA 20A 250Vac 1hp, 125Vac 1/2hp UL 85°C, file E45221, CSA file LR10990



20A 28Vdc

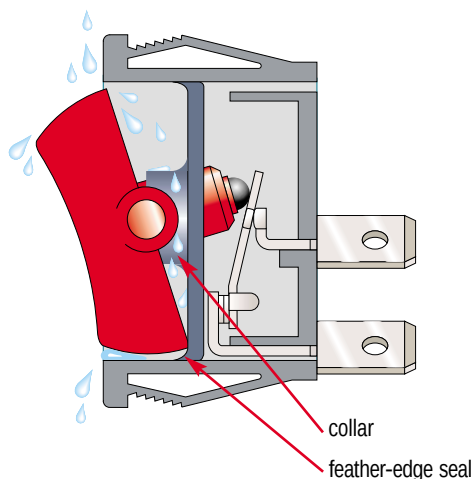
3mm contact gap except if marked μ . Technical data on pages 4 & 5 (switches), 66 (indicators)

C 1300 A L ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

▶ TERMINAL	▶ FUNCTION	▶ ROCKER
C 6.3 x 0.8	Approvals & ratings vary with function On Off Switches - ON when pressed over terminal 1	A Softline Matt
H 4.8 x 0.8*	Standard 1500 ♦	B Splashproof (with Arcshield) Matt
K 2.8 x 0.8*	1501 HP rating N/A	H Slotted (for custom Adaptors) not momentary
T Solder	1502 HP rating N/A	V Curved Matt or gloss
U Right angle "T" solder terminal	1510 ♦ μ HP rating N/A	W Splashproof (with Arcshield) Matt
X PCB 0.8Sq* *N/A for 1300 series	1511 μ HP rating N/A	X Two colour Matt ON - OFF only (not momentary)
	1520 ♦ μ 125V & 250V 1/2 HP H terminal rated T100 only	F Flat lens Gloss (0430 only)
	1521 μ HP rating N/A H terminal rated T100 only	A Softline lens Matt (0430 only) as F but with raised profile
	1522 μ HP rating N/A H terminal rated T100 only	
	0430 X terminal N/A	
	Indicator Technical data on page 66 	

Enhanced Splashproofing



1500 W and B splashproof options

Feather edge seals and a close fitting collar protect current carrying parts from moisture.

B option has Hytel collar/seals for enhanced protection.



C1500AR ---
T1500AR ---



C1500AL ---
T1500AL ---



C1500XL ---
T1500XL ---



C1510AL ---
T1510AL ---



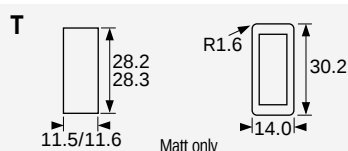
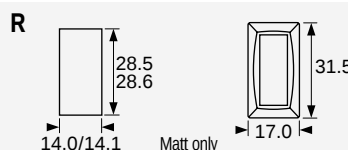
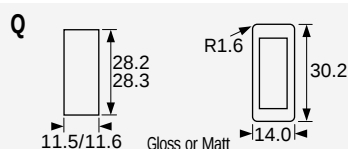
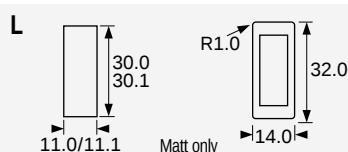
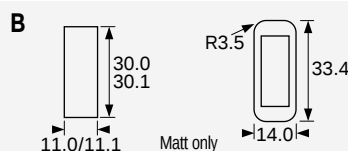
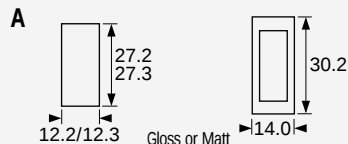
C1520AL ---
T1520AL ---



C0430AL ---
T0430AL ---

BODY

Panel cut-out * Flange
Cut-outs must be punched in the direction of insertion



OPTIONS

Finish Matt is standard

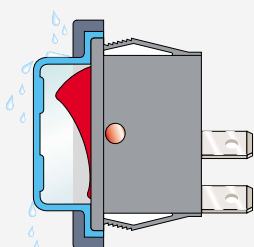
Colour Call factory for custom colours.
A full range is available for large orders

Legend printing Select from the examples or call factory for custom legends

Lamp voltage Call factory for details

Blanking plates A0434 - - Dummy units to fill unused panel holes

Protective cover (designed to IP65)
Snaps on to A, L, Q or T bodies
(add G after body in cat no).
This reduces panel thickness by 1mm.



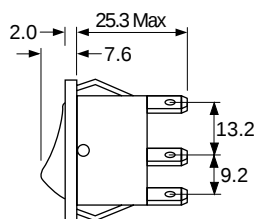
Panel sealing washer W46 is available for the same body sizes but reduces panel thickness by a further 0.8mm
Covers are not suitable for momentary types.

Arcshield

Hides switching arc

For all options call the factory

DIMENSIONS (mm)



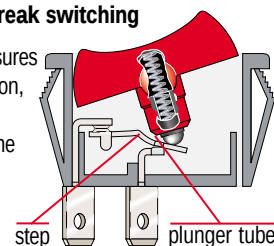
Panel thickness

A,Q 0.75 to 3.3mm
L,B,T 0.75 to 2.5mm
R 0.75 to 3.0mm

* For cut-out details on momentary switches call the factory

1300 High inrush, positive break switching

The 1300 series mechanism ensures contact welds formed at switch-on, are positively separated by the plunger tube acting directly on the step in the moving contact.



Examples of printing



EN602A



EN730



EN822

5500 Lit Rocker Switches - Single Pole 16A 250Vac



16(4)A 250Vac T85
10(3)A 250Vac T100, (12A 250Vac T125 for P rocker only)



UL CSA 15A 250Vac, CSA 16A Non Ind 250Vac
UL CSA 250Vac 1hp, 125Vac 1/2hp
UL 85°C, file E45221, CSA file LR10990

In house test

Inrush 24A to EN61058-1 & 20A 28Vdc

μ contact gap

Technical data on pages 4 & 5 (switches), 66 (indicators)

For Twin units repeat the order details for both the right and left sides

C 5503 A L ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

▶ TERMINAL	▶ FUNCTION	▶ ROCKER
C 6.3 x 0.8	Approvals & ratings vary with function On Off Switches - ON when pressed over terminal 3 	A Softline (Matt only)
H 4.8 x 0.8	5500 ♦ μ ON - OFF 	
T Solder	5503 ♦ μ preferred option ON - OFF Lit Switched neutral 	P Lit window (Matt only)
	5508 μ for special applications ON - OFF Lit Unswitched neutral 	



C5503AL ---



C5500AL ---



C5503PL ---



C5503A/C5430AL



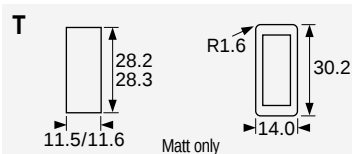
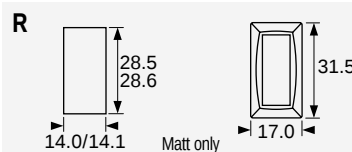
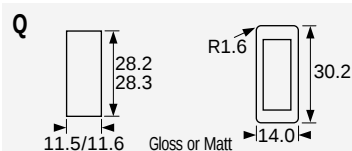
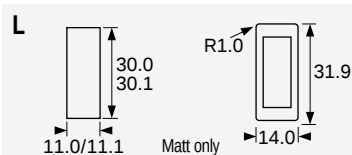
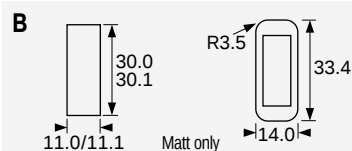
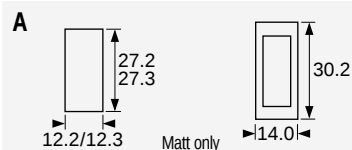
C5503A/C5503AL



C5503P/C5503PL

BODY

Panel cut-out ** Flange
Cut-outs must be punched in the direction of insertion



OPTIONS

Finish Matt is standard

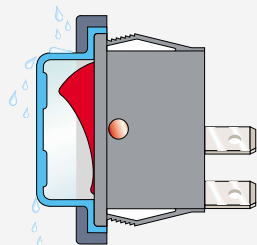
Colour Call factory for custom colours.
A full range is available for large orders

Legend printing Select from the examples
or call factory for custom legends

Lamp voltage Call factory for details

Blanking plate A0434 --(SP) A0494 --(DP)
Dummy units to fill unused panel holes

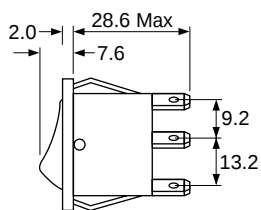
Protective cover (designed to IP65)
Snaps on to A, L, Q or T bodies
(add G after body in cat no).
This reduces panel thickness by 1mm.



Panel sealing washers W46 (Single Pole) and
W42 (Double Pole) are available for these
body types but reduce panel thickness by a
further 0.8mm

For all options call the factory

DIMENSIONS (mm)



Terminal spacing - Poles 10.8 between centres (twin units)

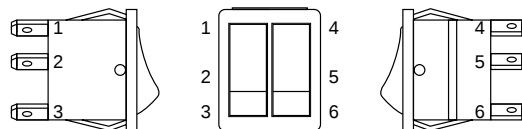
Panel thickness

A,Q	0.75 to 3.3mm
L,B,T	0.75 to 2.5mm
R	0.75 to 3.0mm

** For cut-out details on
momentary switches
call the factory

Twin units

Two single switches or a switch and an indicator light can be
assembled side by side in one double pole body.
For 1500 range panel cut-out details see page 29.
For 5500 range panel cut-out details (L, B and T) call factory.



For twin units the first set of order format details refer to the
left hand unit, when looking at the front of the assembly
(This has terminal numbers 1, 2 & 3)

Examples of printing



EN3036

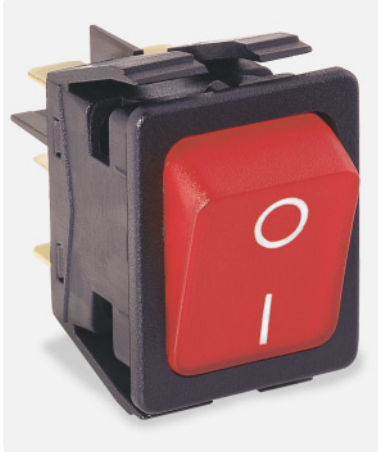


EN3064



EN706

6050 DP Splashproof Switches - IP44 & Twins # 16A 250Vac



European 16(4)A 250Vac T125, 10A 400Vac T125



UL CSA 20A⁺ 277Vac, 277Vac 1hp, 125Vac 1/2hp
UL 100°C, file E45221, CSA file LR10990

In house test

Inrush 150A* to EN61058-1

8(8)A 250Vac T125 5E4 on 6050 only

20A 28Vdc

* * applies to non-momentary types

6050 Switches feature "Arcshield" to hide visible switching arc

3mm contact gap with Positive Break switching

Call factory for IP details on Twin units

Technical data on pages 4 & 5 (switches), 66 (indicators)

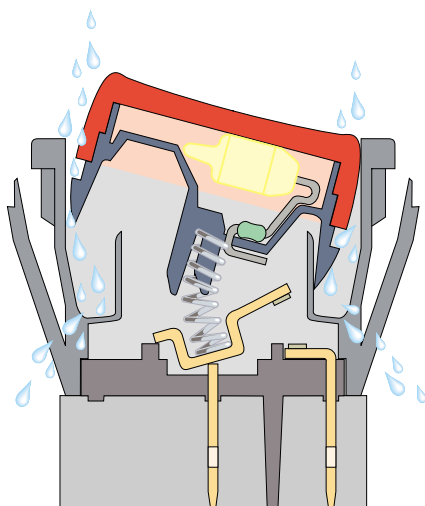
Patent app.

C 6053 A L ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

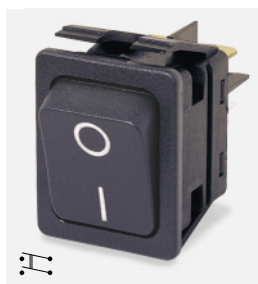
▶	TERMINAL	▶	FUNCTION	▶	ROCKER		
C	6.3 x 0.8	Approvals & ratings vary with function On Off Switches - ON when pressed over terminals 3 & 6			A Softline Matt 		
H	4.8 x 0.8	6050	ON - OFF		6060	ON - ON	
		6051	ON - OFF (momentary ON)		6061	ON - ON (momentary 1 side)	
		6052	ON - OFF (momentary OFF)		6062	2 Circuit ON - ON In house tests only	
		6053	ON - OFF Lit		6066	ON - ON (Single pole) (isolated light)	
		6054	ON - OFF (momentary ON) Lit		6067	ON - ON Lit	
		6055	ON - OFF (Single pole) (momentary ON) Lit		6068	ON - ON 1pole ON - OFF Lit 1pole	
		6056	ON - OFF (Single pole) Isolated light		6090	ON - OFF 1pole ON - OFF Lit 1pole	
		6057	ON - OFF Isolated light		6091	ON - OFF (momentary ON) Lit	
		6058	ON - OFF (Single pole) Lit		6092	ON - OFF 1 pole ON - ON 1 pole Lit	
S	9.7 Screw & Clamp N/A for assemblies with 3 terminals in either pole	6059		ON - OFF (momentary ON) Isolated light		Circuits are Double Pole unless described otherwise	
					P Lit Window Matt 		

For IP65 see “options” below



Splashproof to IP44

Current carrying parts are protected from moisture. Droplets which may enter the switch are channelled out through ports in the switch body



C6050AL ---



C6053AL ---



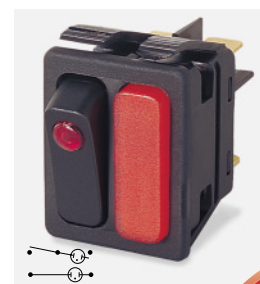
C6053PL ---



C6000A/C6000AL



C6003P/C6003PL



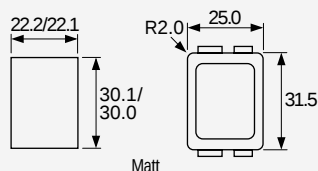
C6003P/C6030AL

NEW

BODY

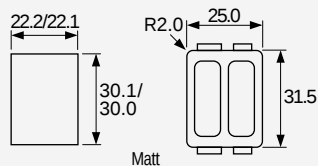
Panel cut-out * Flange
Cut-outs must be punched in the direction of insertion

L Double pole



L Twin units

Contact factory for information on splashproofing and IP ratings



OPTIONS

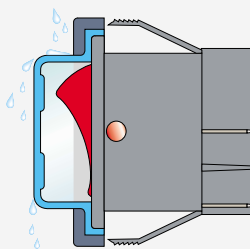
Finish Matt is standard

Colour Call factory for custom colours. A full range is available for large orders

Legend printing Select from the examples or call factory for custom legends

Lamp voltage Call factory for details

Protective cover (designed to IP65 #)
The 6000 series is a water thru design. For a higher level of sealing, a snap on cover is available (add G after body code). This reduces panel thickness by 1mm.



Panel sealing washer W42 is available but reduces panel thickness by a further 0.8mm. Covers are not suitable for momentary types.

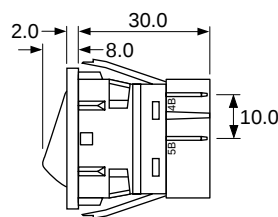
IP Ratings Call the factory for details

Terminal Link P1067 connects the poles of a double pole switch or twin unit

Mounting orientation may affect IP rating

For all options call the factory

DIMENSIONS (mm)



Terminal spacing - Poles 10.5 between centres

Panel thickness

L 0.75 to 3.0mm

* For cut-out details on momentary switches call the factory

Twin units: 2 switches or indicators in one body
Repeat order details for both sides (left side first)
Call factory for IP details on Twin units
Circuits: refer to page 18

Examples of printing



EN1196



EN1197

1550 Standard & 1350 Hi Inrush Switches 150A to IEC65 and 16A 250Vac



"Arcshield" feature hides visible switching arc



1550 Series 16(4)A 250Vac T125



UL CSA 16A 250Vac, (2 posn) 250Vac 1hp, 125Vac 1/2hp, (3 posn) 250 Vac 1/2hp, 125Vac 1/4hp. UL 85°C, file E45221, CSA file LR10990

In house test

Inrush 36A to EN61058-1 & 20A 28Vdc



1350 series 16(4)A 250Vac T85 1E4 (10,000 Ops.)

On request 16(6)A 250Vac T125 5E4 (50,000 Ops.) & 150A Inrush to IEC 65



UL CSA 20A 250Vac 1hp, 125Vac 1/2hp UL 72Vdc 7A, 36Vdc 14A. UL 85°C, file E45221, CSA file LR10990

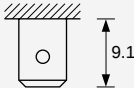
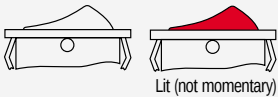
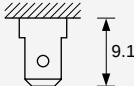
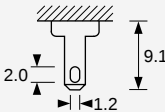
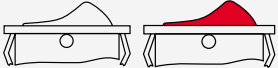
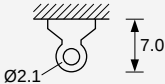
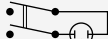
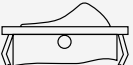
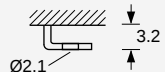
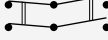
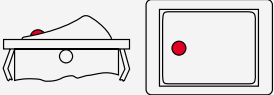
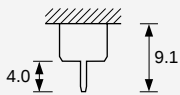
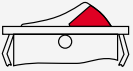
In house test

20A 28Vdc

3mm contact gap except if marked μ . Technical data on pages 4 & 5 (switches), 66 (indicators)

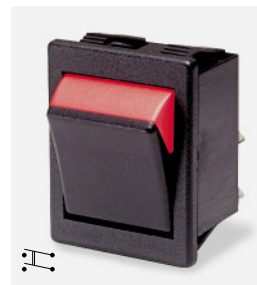
C 1553 A L ---

TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, VOLTAGE ETC

TERMINAL	FUNCTION	ROCKER
C  6.3 x 0.8	Approvals & ratings vary with function On Off Switches - ON when pressed over terminal 1 	A Softline Matt  Lit (not momentary)
H  4.8 x 0.8*	Standard 1550 ♦ Hi Inrush 1350 ♦ ON - OFF 	B Splashproof (with Arcshield) 
K  2.8 x 0.8*	1551 HP rating N/A 1552 HP rating N/A ON - OFF (momentary ON) 	V Curved  Matt or gloss Gloss only Lit (not momentary)
T  Solder	1553 ♦ Not W, X or B rocker 1353 ♦ Not W, X or B rocker ON - OFF Lit 	W Splashproof (with Arcshield) 
U  Right angle T Solder (Not DP)	1560 ♦ μ ON - ON 	P Lit window Matt  Lit (not momentary)
X  PCB 0.8Sq* *Contact factory for details on 1350 series	1561 μ HP rating N/A 1562 μ In house tests only 1570 ♦ μ 125V & 250V 1/2 HP H terminal rated T100 only 1571 μ HP rating N/A H terminal rated T100 only 1572 μ HP rating N/A H terminal rated T100 only 1484 μ In-house tested to 10(3)A 250Vac 1487 μ In-house tested to 10(3)A 250Vac 0480 X terminal N/A ON - ON (momentary 1 side) 2 Circuit ON - ON ON - OFF - ON ON - OFF - ON (momentary 1 side) ON - OFF - ON (momentary 2 sides) 3 position selective OFF - A - A+B 3 position selective A - B - C (link not supplied) Indicator Technical data on page 66 	X Two colour Matt  (On Off only - not momentary) F Flat lens Gloss (0480 only)  Top view A Softline lens Matt (0480 only) as F but with raised profile 



C1350AL ---



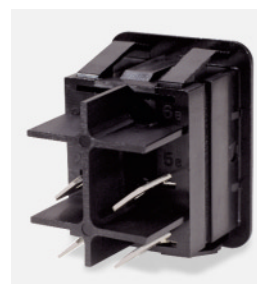
C1550XL ---



C1553PL ---



C0480AL ---



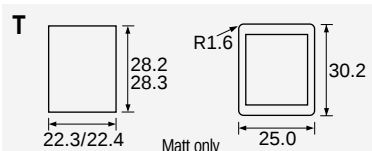
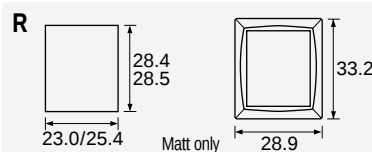
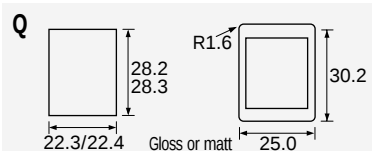
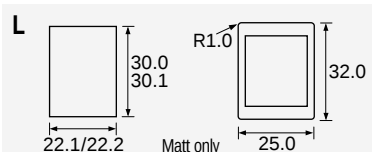
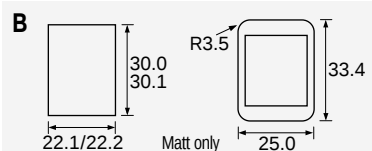
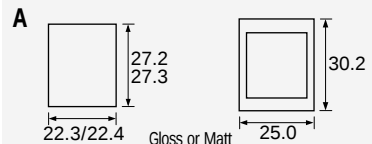
Optional snap-in M441 barrier



C1553AA with M616 guard
Cut-out 22.0/22.1x29.4/29.5
Guard accepts "A" body only

BODY

Panel cut-out * Flange
Cut-outs must be punched in the direction of insertion



OPTIONS

Finish Matt is standard

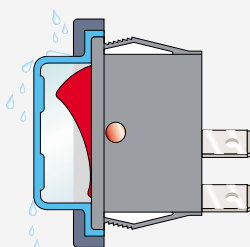
Colour Call factory for custom colours.
A full range is available for large orders

Legend printing Select from the examples or
call factory for custom legends

Lamp voltage Call factory for details

Blanking plates A0494 Dummy units
to fill unused panel holes

Protective cover (designed to IP65)
Snaps on to A, L, Q or T bodies
(add G after body in cat no). This reduces
panel thickness by 1mm.

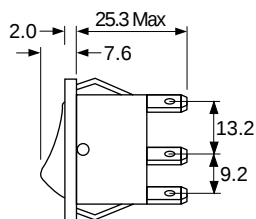


Panel sealing washer W42 is available for
the above body sizes but reduces panel
thickness by a further 0.8mm.
Covers are not suitable for momentary types.

Arcshield
Hides switching arc

For all options call the factory

DIMENSIONS (mm)



Terminal spacing - Poles 10.2 between centres

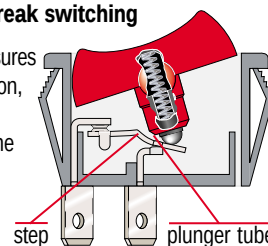
Panel thickness

A,Q 0.75 to 3.3mm
L,B,T 0.75 to 2.5mm
R 0.75 to 3.0mm

* For cut-out details
on momentary switches
call the factory

1350 High inrush, positive break switching

The 1350 series mechanism ensures
contact welds formed at switch-on,
are positively separated by the
plunger tube acting directly on the
step in the moving contact.



Examples of printing



EN602A



EN730



EN822

1500 Twin Units Switches and Indicators 16A 250Vac



16(4)A 250Vac T125



UL CSA 16A 250Vac

UL CSA (2 posn) 250Vac 1hp, 125Vac 1/2hp, (3 posn) 250 Vac 1/2hp, 125Vac 1/4hp

UL 85°C, file E45221, CSA file LR10990

In house test

Inrush 36A to EN61058-1 & 20A 28Vdc

For versions with High Inrush or for 50,000 operations, see pages 20 and 26

3mm contact gap except where marked μ

Technical data on pages 4 & 5 (switches), 66 (indicators)

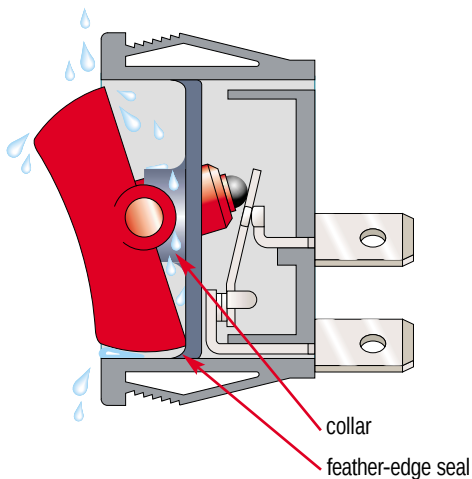
For twin units repeat the order details for both the left and right sides

C 1500 A / C 1510 A L ---

TERMINAL FUNCTION ROCKER TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, ETC

TERMINAL	FUNCTION	ROCKER
C 6.3 x 0.8 H 4.8 x 0.8 K 2.8 x 0.8 T Ø2.1 Solder X 4.0 PCB 0.8Sq	Approvals & ratings vary with function On Off Switches - ON when pressed over terminal 1 or 4 1500 ON - OFF 1510 μ ON - ON HP rating N/A 1520 μ ON - OFF - ON 125V & 250V 1/2 HP, 125V H terminal rated T100 only 0430 Indicator X terminal N/A Technical data on page 66 	A Softline (Matt) B Softline splashproof (Matt) W Curved splashproof (Matt) X Two colour (Matt) (not momentary) ON - OFF only A Softline lens (Matt) (Indicator)

Enhanced Splashproofing



1500 W and B splashproof options

Feather edge seals and a close fitting collar protect current carrying parts from moisture.

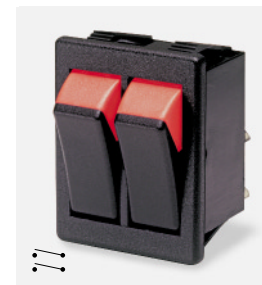
B option has Hytel collar/seals for enhanced protection.



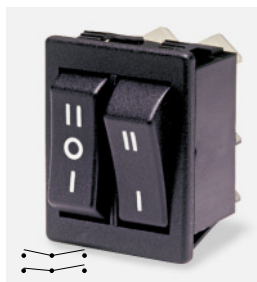
C1500A/C1500AL



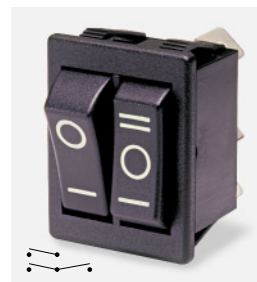
C1500A/C0430AL



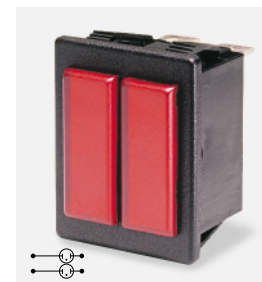
C1500X/C1500XL



C1520A/C1510AL



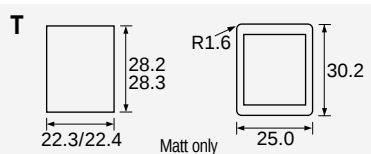
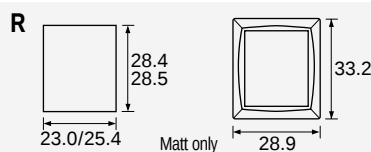
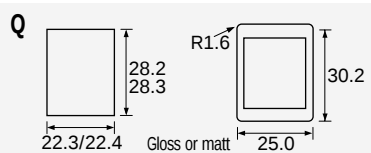
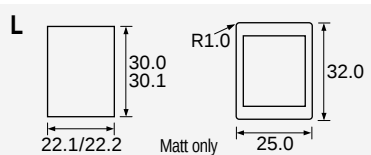
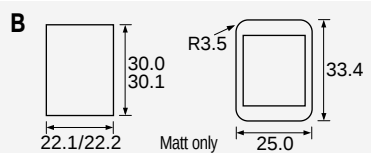
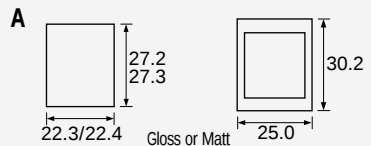
C1500A/C1520AL



C0430A/C0430AL

BODY

Panel cut-out * Flange
Cut-outs must be punched in the direction of insertion



OPTIONS

Finish Matt is standard

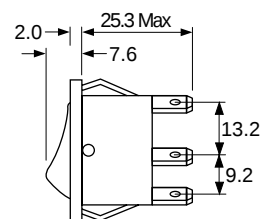
Colour Call factory for custom colours.
A full range is available for large orders

Legend printing Call factory for custom legends.
State if a legend is to appear on the right or left hand unit (viewed from the front)

Lamp voltage Call factory for details

Arcshield
Hides switching arc

DIMENSIONS (mm)



Call the factory for terminal spacing details

Panel thickness

A,Q 0.75 to 3.3mm
L,B,T 0.75 to 2.5mm
R 0.75 to 3.0mm

* For cut-out details
on momentary switches
call the factory

Twin unit terminal numbering

The first 6 digits of the catalogue number refer to the left hand unit when looking at the front. (This has terminal nos. 4, 5 & 6)

Examples of printing



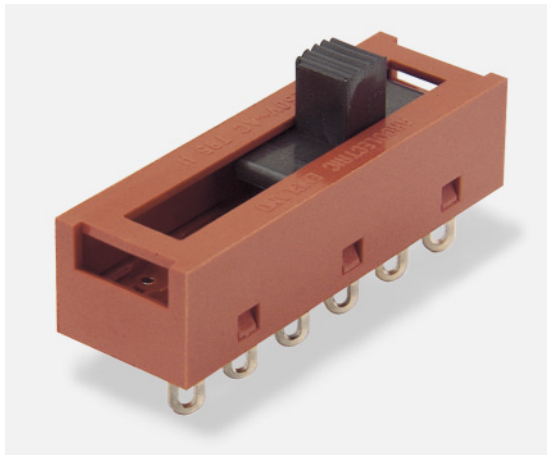
EN602A



EN730

For all options call the factory

2000 Slide Switches - up to 5 position 10A 250Vac



10A 250Vac T85
6(3)A 250Vac T85



UL CSA 16A 250Vac Non Inductive
UL CSA 4A 300Vac
UL65°C, file no. E45221, CSA file no. LR10990

μ contact gap

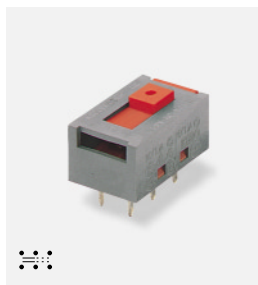
Please specify: Standard action (SP116) or Light action (SP118)
2000 series lubrication is inorganic and does not degrade plastics

Technical data on pages 4 & 5

T 2 2 20 5 C ---

TERMINAL SERIES POSITIONS CIRCUIT SLIDER BODY PRINT, COLOUR, ETC

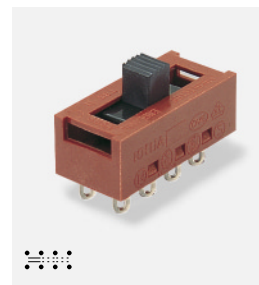
TERMINAL	SERIES	POS'N	CIRCUIT Viewed from back	SLIDER
K 2.0 7.0 1.3 2.8 x 0.8	2	2 ⬆ Switching positions	10 20 30 40 	0 6 D L Limited travel on 2 pos
R Ø1.2 3.6 2.8 x 0.8			10 20 30 40 	1 Not 2 position 7 E Limited travel on 2 pos N
T 2.6 6.0 1.6 Solder		3 ⬆ Switching positions	10 20 30 40 	2 9 G Not 2 position P Limited travel on 2 pos
X 1.6 5.6 PCB 0.8 Sq.			10 20 30 40 	3 A H R
Y 2.6 5.6 PCB 0.8 Sq. For mounting stability switches have extra "support" terminals		4 ⬆ Switching positions	10 20 30 40 	4 B Not 2 position J Not 2 position S Limited travel on 2 pos
* Nominal - Dimension varies with body type. For exact figure call factory			10 20 30 40 	5 Also with legend C K Limited travel on 2 pos T



X22205C ---



T2220EC ---



T23206A ---



T24306A ---



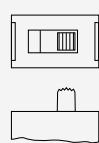
T25302A ---



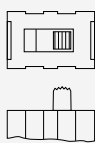
T25100A ---

BODY

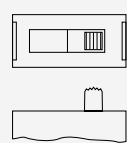
C 2 positions



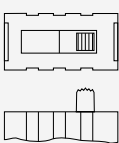
H 2 positions



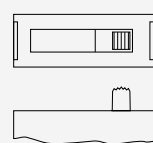
A 3 positions



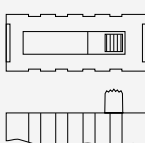
H 3 positions



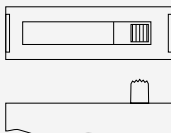
A 4 positions



H 4 positions



A 5 positions



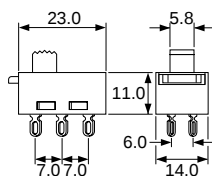
OPTIONS

Colour

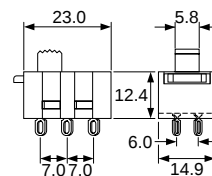
For custom slider colours call the factory.
A full range is available for large orders

DIMENSIONS (mm)

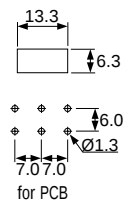
2 Position C body



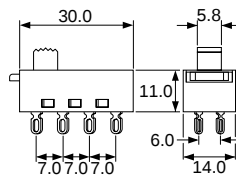
2 Position H body



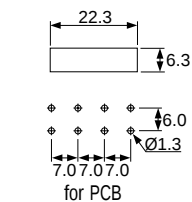
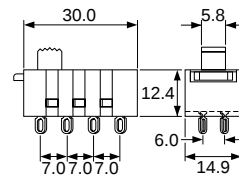
Cut-out/PCB Matrix



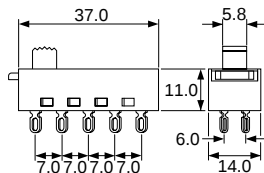
3 Position A body



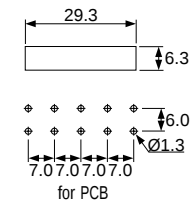
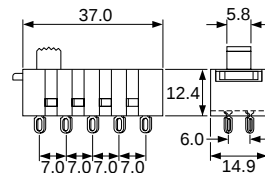
3 Position H body



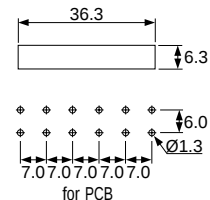
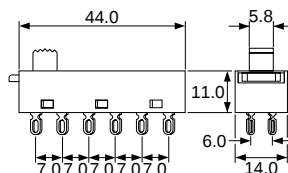
4 Position A body



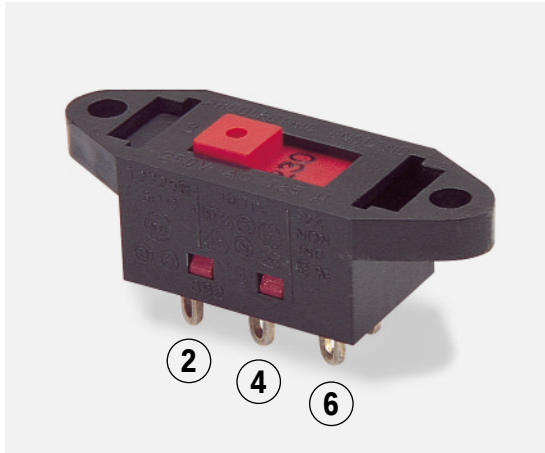
4 Position H body



5 Position A body



2000 Slide Switches - Snap-in & 2 hole fixing 10A 250Vac



10 A 250Vac T85
6(3)A 250Vac T85



UL CSA 16A 250Vac Non Inductive
UL CSA 4A 300Vac
UL65°C, file no. E45221, CSA file no. LR10990

μ contact gap

Please specify: Standard action (SP116) or light action (SP118)

2000 series lubrication is inorganic and does not degrade plastics

Technical data on pages 4 & 5

115/230 is preferred legend

T 2 2 20 5 B ---

TERMINAL SERIES POSITIONS CIRCUIT SLIDER BODY PRINT, COLOUR, ETC

TERMINAL	SERIES	POS'N	CIRCUIT	SLIDER
K 2.8 x 0.8			10 20 	0 2 Pos B Body only 6 2 & 3 Pos B Body only
R 2.8 x 0.8		2 $\updownarrow$ Switching positions	30 40 	2 2 Pos B Body only 7 2 & 3 Pos B Body only
T Solder	2		10 20 30 40 	3 2 & 3 Pos B Body only 8 E Body only Legend optional
X PCB 0.8 Sq. For mounting stability switches have extra "support" terminals * Nominal - Dimension varies with body type. For exact figure call factory		3 $\updownarrow$ Switching positions		4 2 & 3 Pos B Body only 9 2 & 3 Pos B Body only
				5 2 Pos B Body only Also with legend A 2 Pos B Body only
				C E Body & 2 & 3 Pos B Body only D 2 & 3 Pos B Body only
				E 2 Pos B Body only Limited travel on 2 pos H 2 Pos B Body only
				L 2 & 3 Pos B Body only Limited travel on 2 pos M F Body only Legend optional
				N 2 Pos B Body only P 2 & 3 Pos B Body only Limited travel on 2 pos
				S Limited travel on 2 pos 2 & 3 Pos B Body only T 2 & 3 Pos B Body only
				R 2 & 3 Pos B Body only



T22208E ---



T22308E ---



T2230MF ---



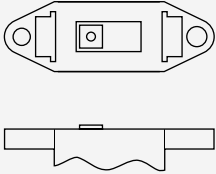
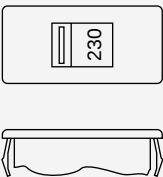
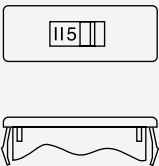
T22205B ---



T22305B ---



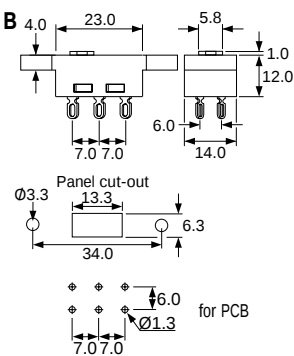
T23204B ---

BODY	OPTIONS
B With fixing holes 	Colour For custom slider colours call the factory. A full range is available for large orders Standard body colour is black
E Snap-in  Cut-outs must be punched in the direction of insertion	Legend printing A wide range is available <i>For all options call the factory</i>
F Snap-in (single pole ON OFF only)  Cut-outs must be punched in the direction of insertion	

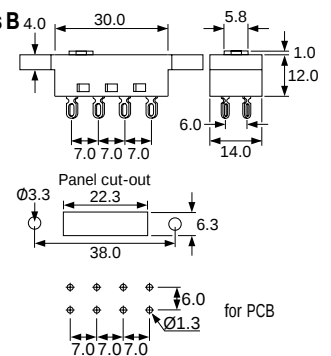
DIMENSIONS (mm)

Cut-out / PCB Matrix

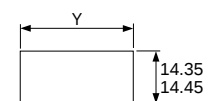
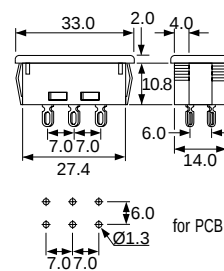
2 Pos B



3 Pos B

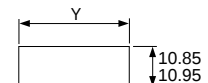
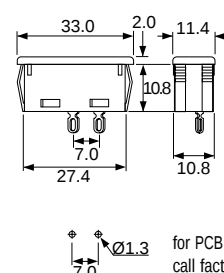


2 Pos E



Panel thickness	Dim. Y
0.8-1.2	29.75/29.85
1.63	30.15/30.25
2.0	30.35/30.45
2.5	30.55/30.65

2 Pos F



Panel thickness	Dim. Y
0.8-1.2	29.75/29.85
1.63	30.15/30.25
2.0	30.35/30.45
2.5	30.55/30.65

8300 Push Button Switches 16A 250Vac



16(4)A 250Vac T85, 1E4 (10,000 Operations)
12(2)A 250Vac T105, 1E4 (10,000 Operations)
8(8)A 250Vac T105, 5E4 (50,000 Operations)
6(6)A 250Vac T125, 5E4 (50,000 Operations)



12A 250Vac DP, 13A 250Vac SP
250Vac 1hp, 125Vac 1/2hp
UL 85°C, file E45221, CSA file LR10990

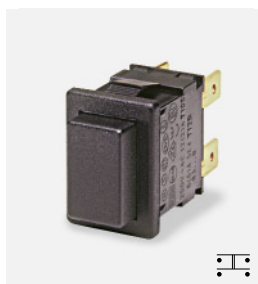
3mm contact gap

Technical data on pages 4 & 5

H 8353 J E ---

TERMINAL FUNCTION ACTUATOR BODY PRINT, COLOUR, ETC

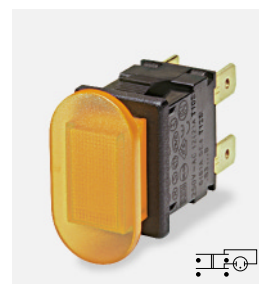
TERMINAL	FUNCTION	ACTUATOR
C 6.3 x 0.8 H 4.8 x 0.8 A As "H" but right angle 4.8 x 0.8 K 2.8 x 0.8 T 2.8 x 0.8 Solder X 4.5 x 0.8 PCB 0.8 Sq V 3.7 x 0.8 Dual pin PCB (Call factory for matrix dims)	Approvals & ratings vary with function Single pole switches use terminals 1 & 2 (& 3) 8300 ♦ ON - OFF Single pole 8301 ♦ ON - OFF (momentary ON) Single pole 8303 ♦ ON - OFF with light Single pole 8304 ♦ ON - OFF (momentary ON) with light Single pole 8350 ♦ ON - OFF Double pole 8351 ♦ ON - OFF (momentary ON) Double pole 8353 ♦ ON - OFF with light Double pole 8354 ♦ ON - OFF (momentary ON) with light Double pole	A Standard actuator D Custom profile actuator H Slotted for custom actuators Slots for snap-in buttons C Square lens E Radiused actuator F Small round actuator J Smooth curved actuator All actuators except D & H available lit



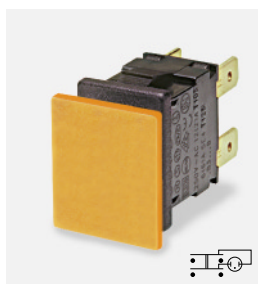
C8350AB ---
T8350AB ---



H8353JE ---
T8353JE ---



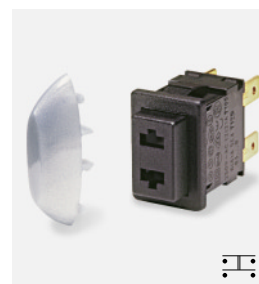
H8353EB ---
T8353EB ---



H8353CB ---
T8353CB ---



H8350DB ---
T8350DB ---



H8350HB ---
Example of actuator

BODY

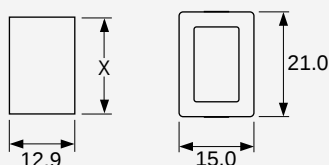
Panel cut-out Flange
Cut-outs must be punched in the direction of insertion

B Standard body

D As B body but with PCB support peg

E Softline style body with radiused bezel

F As E body but with PCB support peg



Dimensions for snap-in fixing

Panel thickness	Dimension X
0.75-1.24	19.1/19.2
1.25-1.99	19.3/19.4
2.00-3.00	19.7/19.8

OPTIONS

Finish

Matt finish standard except on J and D actuators which are gloss

Colour

Call factory for custom colours
A full range is available for large orders

Legend printing

Select from the examples or call factory for custom legends

Special buttons

Some of the many options are shown
Call the factory for the full range

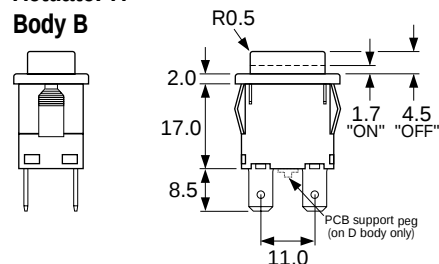
L167 Protective cover (designed to IP65)



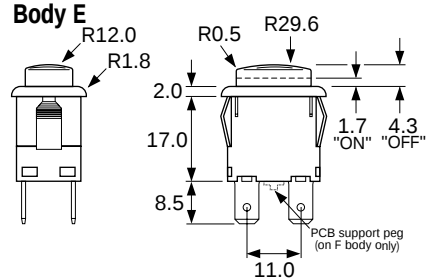
Snap on to switch bodies fitted with "A" or "J" style actuators but reduces panel thickness by 0.8mm

DIMENSIONS (mm)

Actuator A Body B



Actuator J Body E



Spacing between centre of terminals 1 & 3 or 2 & 4 is 10.0mm

Examples of printing



EN1153



EN1152

8200 Push Button Switches 16A 250Vac



16(4)A 250Vac T85, 1E4 (10,000 Operations)
12(2)A 250Vac T105, 1E4 (10,000 Operations)
8(8)A 250Vac T105, 5E4 (50,000 Operations)
6(6)A 250Vac T125, 5E4 (50,000 Operations)



12A 250Vac
250Vac 1hp, 125Vac 1/2hp
UL 85°C, file E45221, CSA file LR10990

3mm contact gap
Technical data on pages 4 & 5

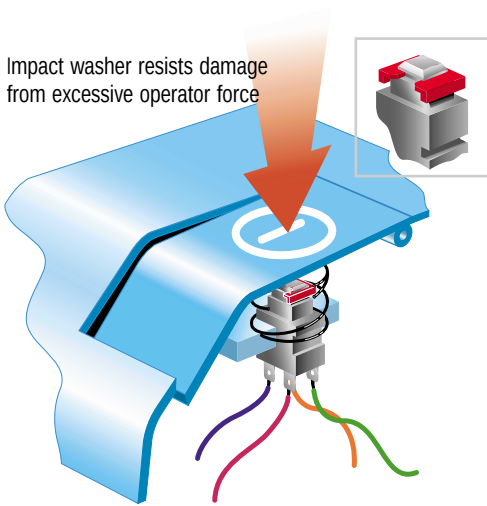
H 8200 A A ---

 TERMINAL FUNCTION ACTUATOR BODY OPTIONS

▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR
C 6.3 x 0.8 H 4.8 x 0.8 A As H, 4.8 x 0.8 Right angle K 2.6 1.5 2.8 x 0.8 T 2.6 1.5 Solder X 4.5 7.0 PCB 0.8 Sq V 4.3 3.7 Ctrs Dual pin PCB 0.8 Sq (Call factory for matrix dims) M 5.3 7.3 As V, PCB but Right angle	 8200 ON - OFF Single pole 8201 ON - OFF (momentary ON) Single pole 8250 ON - OFF Double pole 8251 ON - OFF (momentary ON) Double pole 	A Standard actuator for snap-on custom adaptors B Flat top actuator C Curved top actuator NEW Examples of possible actuation methods Using a Snap on adaptor Facia Using a Hinged Actuator

Alternative Actuator

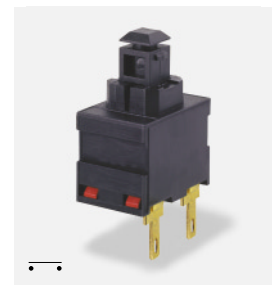
Impact washer resists damage from excessive operator force



C8250AA ---
with impact washer M1226



X8201AA ---



K8200AA ---



A8200AA ---



M8200AC ---



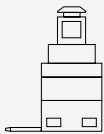
Example of M8200AC



BODY

A

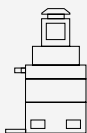
Standard body



See dimensioned drawings for details

C

As standard body but with side support peg for use with M PCB terminals



See dimensioned drawings for details

D

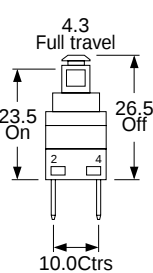
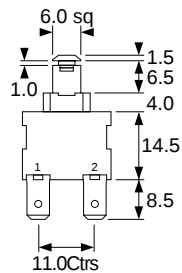
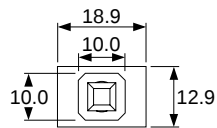
As standard 'A' body but with base support peg for use with V PCB terminals



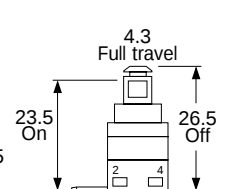
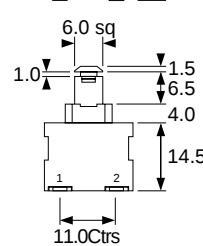
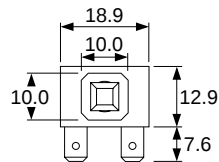
See dimensioned drawings 'A' for details

DIMENSIONS (mm)

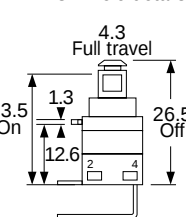
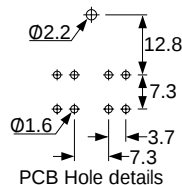
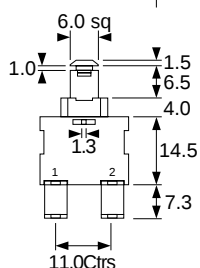
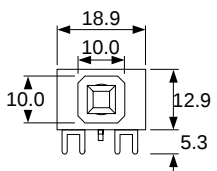
'A' body with 'H' 4.8 terminals



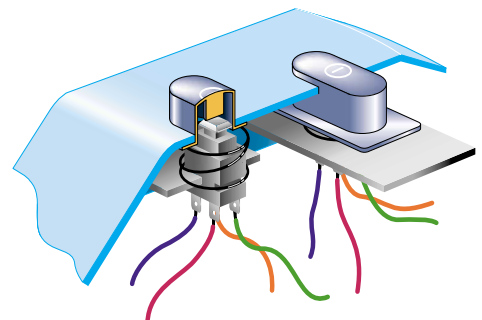
'A' body with 'A' right angle 4.8 terminals



'C' body with 'M' right angle PCB terminals



Example of possible mounting styles



7000 Push Button Switches 16A 250Vac



16(4)A 250Vac T125
8(8)A 250Vac T85



UL CSA 16A Non Ind, 250Vac 1hp, 125Vac 1/2hp
UL65°C, file no. E45221, CSA file no. LR10990



Inrush 35A to EN61058-1 & 16A 28V dc

3mm contact gap

Technical data on pages 4 & 5 (switches), 66 (indicators)

C 7053 A F ---
 TERMINAL FUNCTION ROCKER BODY PRINT, COLOUR, ETC

▶ TERMINAL	▶ FUNCTION			▶ ACTUATOR
C 6.3 x 0.8	7000		Single pole ON - OFF	A Round actuator shown in F body
	7001		Single pole ON - OFF (momentary ON)	
	7003		Single pole ON - OFF with light	
	7004		Single pole ON - OFF (momentary On) with light	A Round actuator shown in G body
	7050		Double pole ON - OFF	
	7051		Double pole ON - OFF (momentary On)	S Rectangular actuator Shown in "A" body N/A for 7030
H 4.8 x 0.8	7053		Double pole ON - OFF with light	
	7054		Double pole ON - OFF (momentary On) with light	
	7030		Indicator	



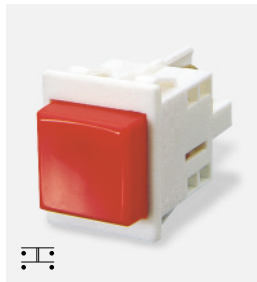
C7000AF ---



C7001AF ---



C7003AF ---



C7050SA ---



C7053AG ---

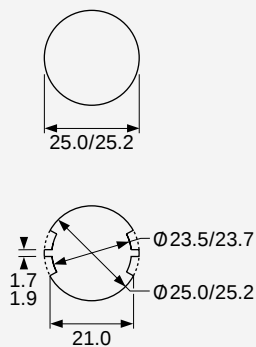


C7030AH ---

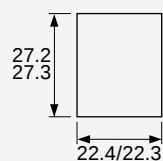
BODY

Panel cut-outs

F H G Body types fit either cut-out



A



Cut-outs must be punched in the direction of insertion

OPTIONS

Finish

Matt finish is standard on bodies
Gloss finish is standard on actuators

Colour

Call factory for custom colours
A full range is available
for large orders

Legend printing

A wide range is available or call the
factory for custom legends

Lamp voltage

Call factory for details of other
available voltages

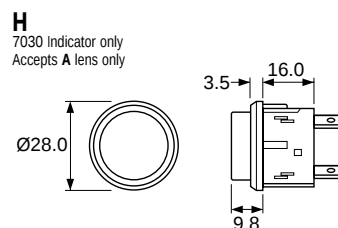
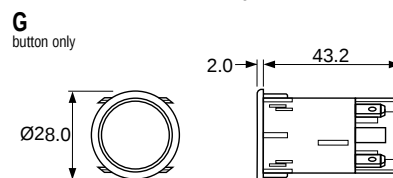
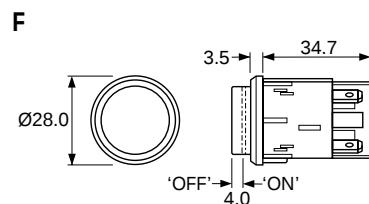
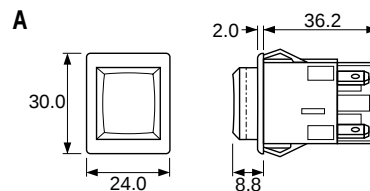
Protective housing (E)

(designed to IP65)
Covers are available for round body
styles, call factory for details

DIMENSIONS (mm)

Panel thickness:

A 0.8 - 2.5mm
F,G,H 0.8 - 5.0mm



H
7030 Indicator only
Accepts A lens only

1100 Push Button Switches 0.125A 125Vac



UL 0.125A 125Vac
UL 0.125A 45Vdc
UL file E45221

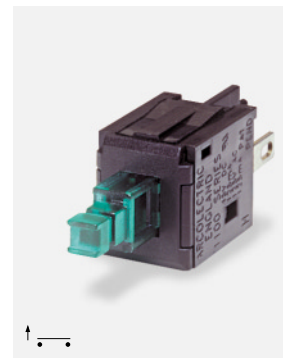
In house test 0.5A 250Vac T85 5E4 (50,000 Operations)

μ contact gap

Technical data on pages 4 & 5



T1100AA - - -



T1101AA - - -

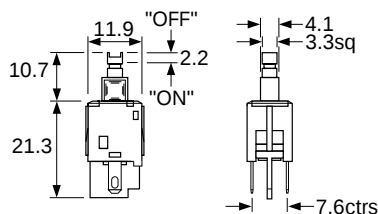
T 1100 A A - - -

TERMINAL FUNCTION ACTUATOR BODY OPTIONS

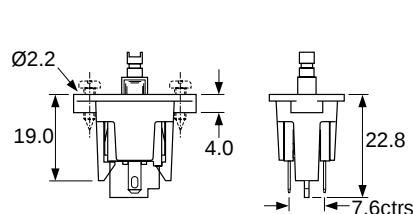
TERMINAL	FUNCTION	ACTUATOR	BODY
T 2.8 x 0.5	 1100 ♦ 1101 ♦ ON - OFF (alternate) Single pole ON - OFF (momentary ON) Single pole	A Actuator without button B Softline button 	A For purpose designed facias and sub-panels B Snap-in fixing Panel thickness 0.75-1.24 1.25-1.99 2.00-3.00 Dimension X 19.1/19.2 19.3/19.4 19.7/19.8 C 2 Hole fixing Ø3.1 7.0 Min 5.0 Min

Dimensions (mm)

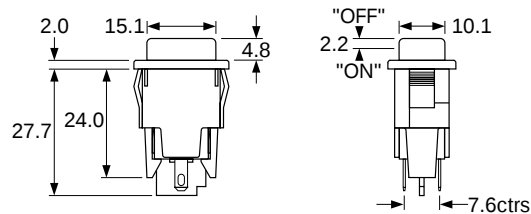
T1100AA (Enclosure mounting)



T1100AC (2 Hole Fixing) No.4 self-tapping screws



T1100BB (Snap-in) Cut-outs must be punched in the direction of insertion



0916 - 0920 Push Button Switches 0.5A 250Vac

Self-Wiping - Slow Make & Break

In house test 0.5A 250Vac T85

μ contact gap

Technical data on pages 4 & 5



T0916SO--- & T0916LO---



T0916VA---

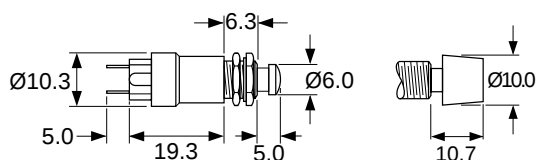
T 0916 S O ---

TERMINAL FUNCTION ACTUATOR BODY COLOUR

TERMINAL	FUNCTION	ACTUATOR	BODY	OPTIONS
T 	0916 Black base SP ON-OFF (momentary ON) 0917 50V only Brown base SP ON-ON (momentary 1 side) 0918 White base SP ON-OFF (momentary OFF) 0919 Black base SP ON-ON (momentary 1 side) 0920 White base DP ON-OFF (momentary ON)	S Small Actuator L Large Actuator V Vandal Resistant IP66 Flat top Stainless steel	O for L and S Actuator Ø7.1 Panel Cut-out Panel thickness Both nuts - 2.5mm No backnut - 4.0mm A for V Actuator (stainless steel) Chamfer profile bezel Ø19.2 Panel Cut-out Panel thickness - 8.0mm	Finish Gloss finish for L and S actuators Colour Call factory for custom colours A full range is available for large orders

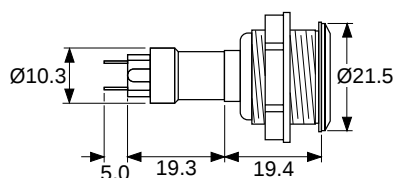
Dimensions (mm)

Nylon S and L actuators



Neck thread - 40 TPI Whit. Actuator travel - 2.5 max

Stainless steel V actuator (IP66)



Neck thread - 26 TPI Whit. Actuator travel - 2.5 max

0910 - 0911 Push Button Snap Action Switches 15(4)A 250Vac



15(4)A 250Vac T85

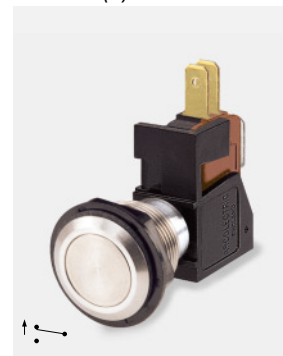


UL 15A, 1/2hp 125-250Vac 85°C,
UL file E91973, CSA file LR98589

Approvals apply to switch mechanism only (34340350COLO00)
μ contact gap
Full rating details and technical data on pages 50 & 51
Ratings are at full plunger travel



C0911KB ---



C0911VA ---

C 0911 K B - - -
TERMINAL FUNCTION ACTUATOR BODY COLOUR



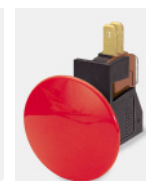
C0911RB ---



C0911PB ---



C0911EB ---

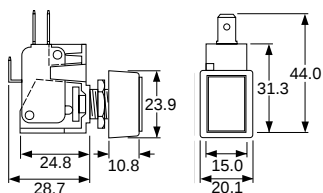


C0911BB ---

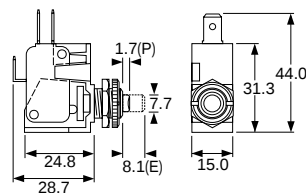
TERMINAL	FUNCTION	ACTUATOR	BODY	OPTIONS
C 12.5 6.3 x 0.8	0910 ON - ON (alternate) 0910 is available with K and N actuators only 0911 ON - ON (momentary)	R Rectangular bezel B Large Contact factory for details E Long P Short K with satin chrome bezel N with nylon bezel V Vandal resistant (911 only) 	B N/A for V Actuator Panel Cut-out Panel thickness Both nuts 2.5mm No backnut 4.0mm A Stainless steel chamfer profile bezel for V actuator only Panel Cut-out Panel thickness 8.0mm	Colour Call factory for custom colours A full range is available for large orders Cover M323 Available for "P" actuator only Covers have internal nylon nut

Dimensions (mm)

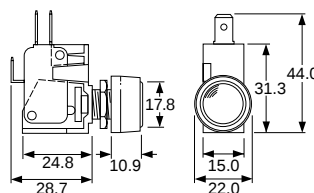
R



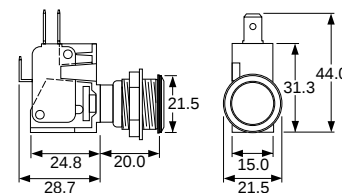
P & E



K & N



V Vandal resistant designed to IP66



1900 Vandal Resistant Switches - Designed to IP66



6A 250Vac T85 25E3

2A 250Vac T85 50E3*



6A 250Vac T85

UL file no. E91973

Approvals apply to switch mechanism only

μ contact gap

Ratings shown are at full plunger travel

Switching mechanisms are snap action (not sealed)

Actuator and bezel are stainless steel

*See rating details and technical data on pages 48 & 49



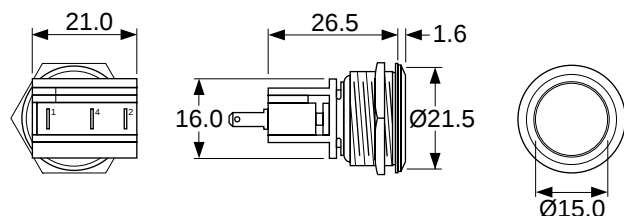
K 1911 V L

TERMINAL FUNCTION ACTUATOR BODY

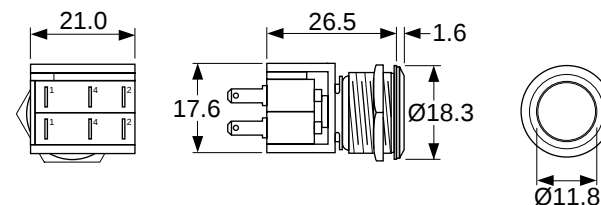
▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY
K 2.8 x 0.5 7.9	1911 ON - ON (momentary 1 side) Single pole	V Flat top (stainless steel)	A Stainless steel Chamfer profile bezel Ø19.2 Panel thickness up to 4.0mm
T 1.14 2.54 3.4 Solder	1961 ON - ON (momentary 1 side) Double pole		L Stainless steel Chamfer profile bezel Ø16.0 Panel thickness up to 4.0mm
X 4.57 5.3 PCB			

Dimensions (mm)

Single pole (K1911VA shown)



Double pole (K1961VL shown)



8300 Vandal Resistant Switches - Designed to IP66



16(4)A 250Vac T85, 1E4 (10,000 Operations)
12(2)A 250Vac T105, 1E4 (10,000 Operations)
8(8)A 250Vac T105, 5E4 (50,000 Operations)
6(6)A 250Vac T125, 5E4 (50,000 Operations)



12A 250Vac DP, 13A 250Vac SP
250Vac 1hp, 125Vac 1/2hp
UL 85°C, file E45221, CSA file LR10990

3mm contact gap
Technical data on pages 4 & 5
Switching mechanism not sealed

NEW



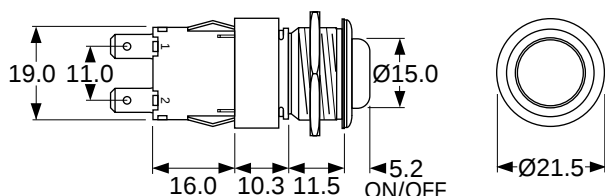
H8300RP ---

H 8300 R P
TERMINAL FUNCTION ACTUATOR BODY

TERMINAL	FUNCTION	ACTUATOR	BODY
C 6.3 x 0.8 10.1	8300 ON - OFF (alternate) Single pole	R Raised top (stainless steel)	P Stainless steel Soft profile bezel
H 4.8 x 0.8 8.5	8301 ON - OFF (momentary ON) Single pole		 Panel thickness 0.75 - 3.0mm For details of alternative panel cut-out and bezel diameters, call the factory
K 2.6 1.5 8.5 Solder	8350 ON - OFF (alternate) Double pole		
T 2.6 1.5 7.0 Solder	8351 ON - OFF (momentary ON) Double pole		
V 3.7Ctrs 4.3 Dual pin PCB			
X 4.5 7.0 0.8Sq PCB			

Dimensions (mm)

8300RP (H terminals shown)



0911 Vandal Resistant Switches - Designed to IP66



16(4)A 250Vac T85



UL 16A, 1/2hp 125-250Vac 85°C,
UL file E91973, CSA file LR98589

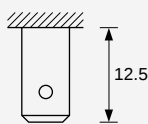
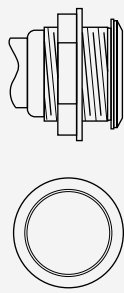
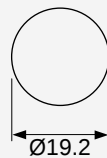
Approvals apply to switch mechanism only (34340350C0L000)
μ contact gap
Full rating details and technical data on pages 50 & 51
Ratings are at full plunger travel



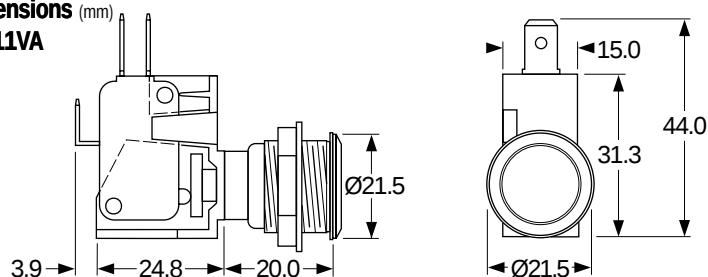
C0911VA ---

C 0911 V A

TERMINAL FUNCTION ACTUATOR BODY

▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY
C  6.3 x 0.8	0911  ON - ON (momentary 1 side)	V Flat top (stainless steel) 	A Stainless steel Chamfer profile bezel  Panel thickness up to 8.0mm

Dimensions (mm) C0911VA



04102 Push Button Switches 16(4)A 250Vac

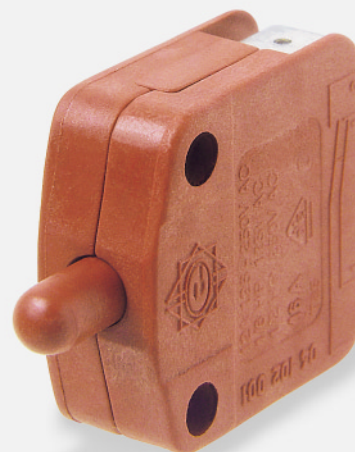
D 16(4)A 250Vac T85 (10,000 operations)

Snap action normally open or closed switching
Large overtravel allows actuator / button tolerance
Button shape allows operation by hinged actuators

μ contact gap
UL94 V1 Button and body
Complies with UL Glow wire test - 850°C Cat D

Additional technical data on pages 4 & 5

Factored
product



04102-001

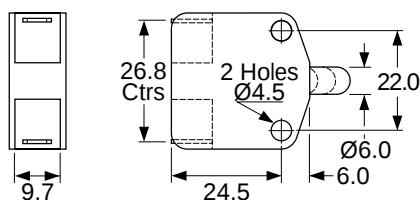
04102-001

TERMINAL FUNCTION ACTUATOR BODY

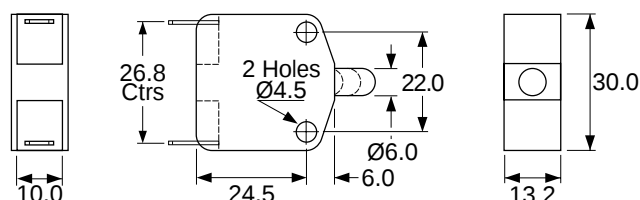
TERMINAL	FUNCTION	ACTUATOR	BODY
6.3 x 0.8 Force when applying connectors ≤80N	04102-001 Single Pole ON-OFF (momentary ON)	(Off) 15.0 (Mom On) 12.4 (Full Travel) 8.0	2 Hole fixing Ø4.5 22.0 (shakeproof washers not to be used with fixings)
6.3 x 0.8 Force when applying connectors ≤80N	04102-001R Single Pole ON-OFF (momentary OFF)	(On) 15.2 (Mom Off) 13.0 (Full Travel) 8.2	

Dimensions (mm)

04102-001



04102-001R



0936 - 0938 Push Button Switches 0.5A 250Vac

In house test 0.5A 250Vac
In house test 0.25A 250Vdc

μ contact gap
 Technical data on pages 4 & 5



C0936PC ---



C0938MA ---

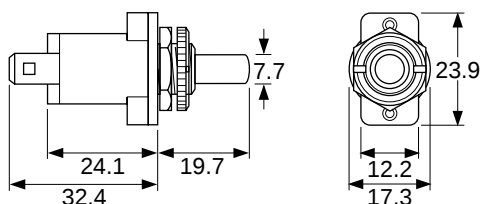
C 0936 P A ---

TERMINAL FUNCTION ACTUATOR BODY OPTION

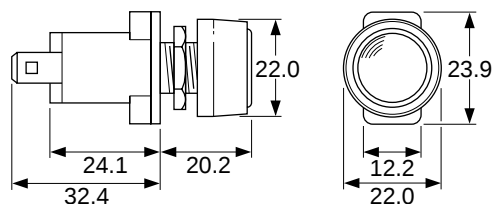
▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY	▶ OPTIONS
C 8.3 6.3 x 0.8	0936 ON - OFF (momentary ON)	P Small round push K satin chrome bezel M moulded nylon bezel both with large round push Specify Satin chrome or nylon (black / white) bezel	C Nylon top plate and fixing neck 12.7 Back nut must be fitted A Metal top plate and fixing neck For Low Voltage (up to 50V) only 12.7 Back nut must be fitted	Push button finish Gloss finish only Push button colour Red, black for other colours call the factory Cover M327 Available for "P" actuator Covers have internal nylon nut

Dimensions (mm)

0936 / 0938 P



0936 / 0938 K / M



290 Series V4 Snap-action Switches Up to 6A 250Vac



6A 250Vac T85 25E3 - *150g
 2A 250Vac T85 50E3 - *60g



6A 250Vac T85 - *150g
 2A 250Vac T85 - *60g
 UL file no. E91973 ** Operating force

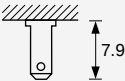
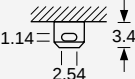
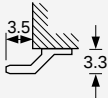
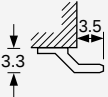
Ratings shown are at full plunger travel
 μ contact gap



For sealed snap-action switches contact the factory



29	1	20	150	CO	L002
SERIES	TERMINAL	CONTACT GAP	OPERATING FORCE	FUNCTION	ACTUATOR

▶ SERIES	▶ TERMINAL	▶ CONTACT GAP	▶ OPERATING FORCE	▶ FUNCTION	
29	1  2.8 x 0.5	20 (0.5 mm)	gms	 CO ON - (ON) (momentary 1 side)	
	2  Solder		60		
	3  PCB				
	4  LH PCB				
	5  RH PCB		150		
Viewed from plunger end					



293 20 150 CO L000



291 20 60 CO - - - -



294 20 150 CO 0000



292 20 150 CO R000



291 20 150 CO R001



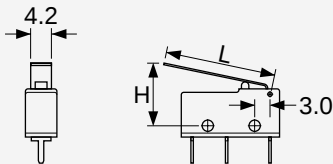
292 20 150 CO 0000



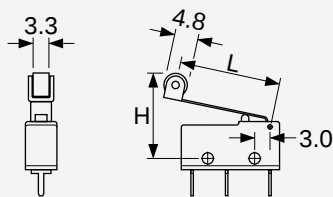
ACTUATOR

No lever
0000

Plain lever
L000
L001
L002

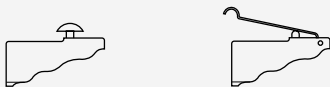


Roller lever
R000
R001
R002

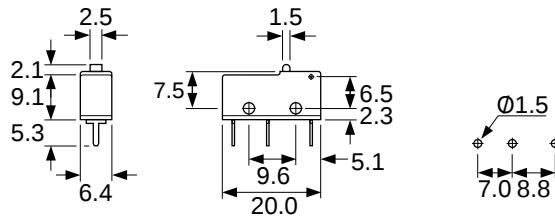


	L000	L001	L002	R000	R001	R002
Dim H	12.23	15.19	19.93	16.97	19.93	24.66
Dim L	17.5	30.0	50.0	15.91	28.41	48.41

Many alternative actuators are available from fully adjustable tooling
Contact factory for details



DIMENSIONS (mm)



TECHNICAL DATA

Mechanical life	>5 million operations
Temperature rating	T85°C
Insulation	>1,250V
Tracking resistance	PTI KB 250

MECHANICAL DATA

High at rest point**	8.92
Trip point**	8.16-8.54
Pre-travel	0.38-0.76
Movement differential	0.15 (max)
Overtravel	0.6 (min)

Operating force (nominal)	Release force (min)
60g	10g
150g	50g

**Measured from fixing hole centres to top of plunger

MATERIALS

Body, lid & Plunger	Glass-filled nylon 6.6, VO
Plunger	Glass-filled nylon 6.6, VO
Terminals	Brass
Moving contact arm	Phosphor bronze
Spring	Stainless steel
Contacts	Fine silver
Actuator/roller	Stainless steel/acetal

340 & 390 Series V3 Snap-action Switches Up to 25(4)A 250Vac



340 Series

16(4)A 250Vac T85 50E3 **16A** 125/250Vac 1/2hp **T85***350g All functions
 16(4)A 250Vac T85 25E3 **16A** 125/250Vac 1/2hp **T85***120g All functions
 10(4)A 250Vac T85 25E3 **10A** 125/250Vac 1/4hp **T85*** 75g All functions

390 Series

25(4)A 250Vac T85 50E3 **22A** 125/250Vac 1hp **T85***350g NO or NC
 22(4)A 250Vac T85 50E3 **22A** 125/250Vac 1hp **T85***120g NO or NC
 20(4)A 250Vac T85 10E3 **20A** 125/250Vac 1hp **T85***350g CO
 16(4)A 250Vac T85 50E3 **16A** 125/250Vac 1/2hp **T85***120g CO

UL file no. E91973

*Operating force

Ratings shown are at full plunger travel
 μ contact gap

34 3 40 350 NO ZDSO

SERIES TERMINAL CONTACT GAP OPERATING FORCE FUNCTION ACTUATOR

▶ SERIES	▶ TERMINAL	▶ CONTACT GAP	▶ OPERATING FORCE	▶ FUNCTION
34 (See ratings above for 340 Series)	2 Solder (34 Series) Both end terminals shown	40 (1.0 mm)	Operating force in gms 075 (34 Series only)	 CO ON - (ON) (momentary 1 side)
	2 Solder (39 Series)			
39 (See ratings above for 390 Series)	3 6.3 x 0.8 (34 & 39 Series)		120 (34 & 39 Series)	 NO (ON) - OFF (momentary On)
	5 4.8 x 0.5 (34 Series)			
	6 4.8 x 0.8 (34 Series)		350 (34 & 39 Series)	 NC ON - (OFF) (momentary Off)



343 40 120 CO ZDS1



342 40 120 CO ZD01



343 40 075 CO - - -



346 40 350 NC - - -



346 40 120 NO - - -



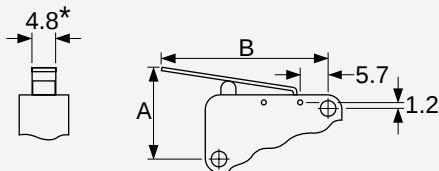
343 40 120 CO L000



ACTUATOR

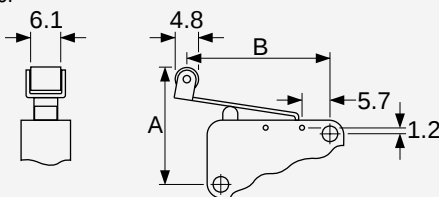
No lever
L000

Plain lever
ZD00
ZD01
ZD02



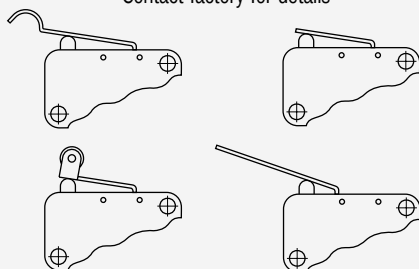
* 7.0 & 9.5mm wide levers also available - contact factory

Roller lever
ZDS0
ZDS1

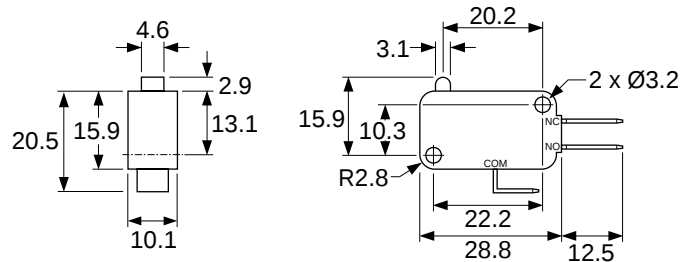


	ZD00	ZD01	ZD02	ZDS0	ZDS1
Dim A	17.0	18.6	25.8	22.2	23.9
Dim B	22.6	33.9	84.4	19.7	31.7

Many alternative actuators are available from fully adjustable tooling.
Contact factory for details



DIMENSIONS (mm) (3 terminals shown)



TECHNICAL DATA

Mechanical life	>10 million operations
Temperature rating	T85°C
Insulation	>1,250V
Tracking resistance	PTI KB 300

MECHANICAL DATA

High at rest point**	15.93
Trip point**	14.4-15.17
Pre-travel	0.76-1.52
Movement differential	0.25 (max)
Overtravel	1.32 (min)

Operating force (nominal)	Release force (min)
75g	25g
120g	40g
350g	100g

**Measured from lower hole centre to top of plunger.

MATERIALS

Body, lid & Plunger	Glass-filled nylon 6.6, VO
Terminals	Brass (silver plated for solder) - 34 Series Brass silver plated - 39 Series
Rocker arm	Brass silver plated
Moving contact	Phosphor bronze silver plated
Spring	Beryllium copper
Contacts	Fine silver (34 Series), silver cadmium oxide (39 Series)
Actuator/roller	Stainless steel/acetal
Dummy contacts	Glass-filled nylon 6.6, VO

Safety Cut-out Switches 16A 250Vac



C0320AA
16.1A 250Vac



C0320BB
16(4)A 250Vac 1/2hp



μ contact gap

These safety switches are assembled with snap-action switches shown on pages 50 and 51

Technical data, alternative ratings and approvals are listed on the above pages



Safety requirements for Portable Heaters can be met by the fitting of a safety cut-out switch
The heater will then turn off if overturned

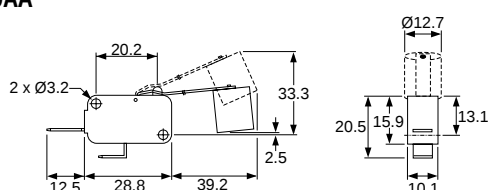
C0320AA - - -

TERMINAL FUNCTION ACTUATOR MOUNTING

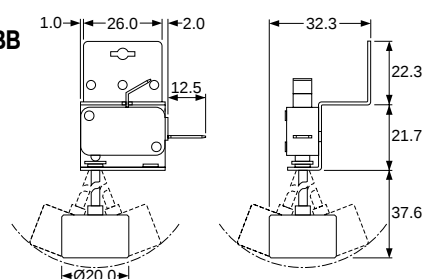
ORDER CODE	TERMINAL	FUNCTION	ACTUATOR	MOUNTING
C0320AA		 ON - OFF (momentary OFF)		
C0320BB		 ON - OFF (momentary OFF)		

Dimensions (mm) (for assemblies fitted with 340 & 390 series switches)

C0320AA



C0320BB



0305 Combined Switch / Lampholder for Freezers

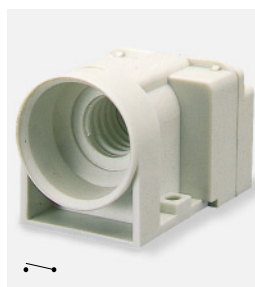


2A 250Vac 25 T 85

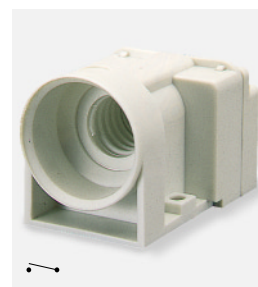


UL15W 125/250Vac
UL 65°C, file E116391

For approval status on versions
0306 and 0308 call the factory
Switched units have μ contact gap
Technical data on pages 4 & 5



C0305RT - - -



C0305LT - - -

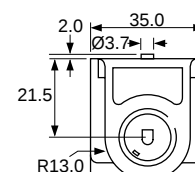
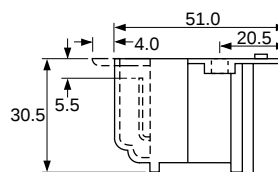
C 0305 R T - - -

TERMINAL FUNCTION MOUNTING BODY COLOUR, ETC

► TERMINAL	► FUNCTION	► MOUNTING	► BODY	► OPTIONS
C 6.3 x 0.8	0305 (E14) ON - OFF Switch and Lampholder 0306 (E12) ON - OFF Switch and Lampholder	L For Left hinged lid for 0305/0306 switches not for 0307 lampholders View from bulb end	T Body without flange for 0305/0306 switches Top view	Colour Call factory for colours. A full range is available for large orders
H 4.8 x 0.8	0307 (E14) Lampholder only (No Switch) 0308 (E12) Lampholder only (No Switch)	R For Right hinged lid for 0307 lampholders or 0305/0306 switches View from bulb end	S Body with rear flange for 0307 lampholders and for 0305/0306 switches Top view	

Dimensions (mm) and Properties

The mechanism of this switch/lampholder does not contain mercury and may be safely used in food storage equipment.
When fitted to the lid of a freezer storage cabinet, the switch will operate the lamp when the lid is opened to the angle of tilt shown in the drawing.



0055 Refrigerator Door Switches



0055 & 0056

2(0.2)A 250Vac 25T125 5E4
(50,000 operations)

μ contact gap

Technical data on pages 4 & 5



C0055RB ---



C0056RB ---

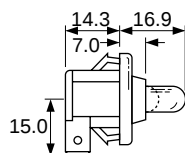
C 0055 R B - - -

TERMINAL FUNCTION ACTUATOR BODY COLOUR, ETC

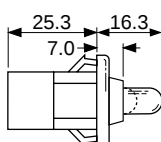
▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY	▶ OPTIONS
C 6.3 x 0.8 9.1	0055 ON - OFF (momentary OFF)	R 	B Panel cut-out Ø19.05 19.2 Panel thickness 0055 1.0 - 1.6 0056 1.0 - 2.6 Flange Ø24.1 6.6	Finish Gloss finish only Colour White is standard Call factory for custom colours
H (0056 only) 4.8 x 0.8 9.1	0056 ON - OFF (momentary OFF)			

Dimensions (mm)

C0055RB



C0056RB



3005 Refrigerator Door Switches *Splashproof*



3005 25W 25T85 5E4 (50,000 Operations) 250Vac
3006 65W 25T85 5E4 (50,000 Operations) 250Vac

These products require 3mm minimum actuator stroke to ensure switch action and rating above

μ contact gap
Technical data on pages 4 & 5



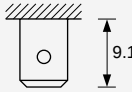
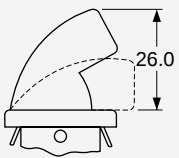
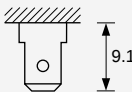
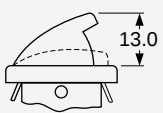
C3005CB ---



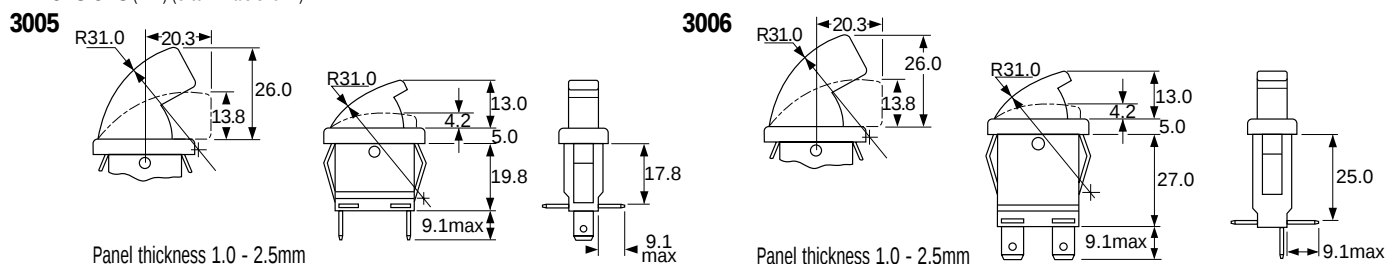
C3005BL ---

C 3005 C B - - -

TERMINAL FUNCTION ACTUATOR BODY COLOUR, ETC

▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY	▶ OPTIONS
C  6.3 x 0.8	3005  ON - OFF (momentary OFF) 1mm max travel to OFF position	B  26.0	3005 or 3006  Terminal direction (viewed from hinge end) Panel cut-out: 12.1/12.2 x 25.4/25.5 Flange: 14.0 x 30.2	Finish Gloss finish only Colour White is standard Call factory for custom colours A full range is available for large orders
H  4.8 x 0.8	3006  ON - OFF (momentary ON) 3mm min travel to ON position	C  13.0	3005 only  Terminal direction (viewed from hinge end) Panel cut-out: 12.1/12.2 x 25.4/25.5 Flange: 18.0 x 30.2	

Dimensions (mm) (C terminals shown)



3100 Refrigerator Door Switches *Splashproof*



5A 250Vac 25T85 5E4 (50,000 Operations)



UL CSA 5A 250Vac

UL 85°C, file E45221, CSA file LR10990

In house test

200W 250Vac Lampload (400,000 operations)

μ contact gap

Technical data on pages 4 & 5

Sealed terminals option available. Call factory for details



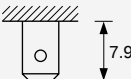
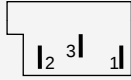
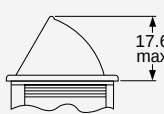
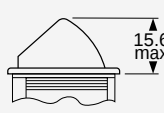
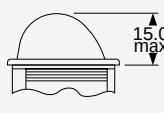
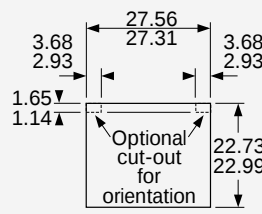
E3102AA ---



E3111BA ---

E 3102 A A - - -

TERMINAL FUNCTION ACTUATOR BODY COLOUR, ETC

▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY	▶ OPTIONS
E  4.8 x 0.5 For sealed terminals call the factory	 3101  ON - OFF (momentary ON) 3102  ON - OFF (momentary OFF) 3111  ON - ON (momentary 1 side)	A  B  C  D  E 	A  Panel cut-out Panel thickness 1.0 - 2.5mm	Finish Gloss finish only Colour White is standard Call factory for custom colours A full range is available for large orders

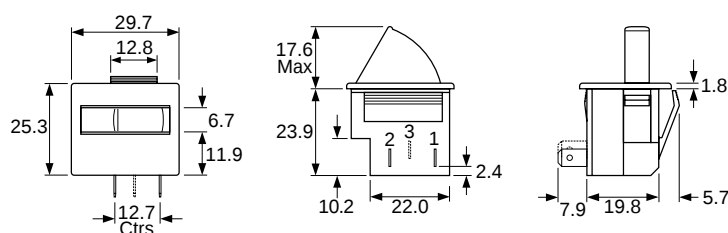
Dimensions (mm) ("A" actuator shown)

3101 uses terminals 1,2

3102 uses terminals 1,2

3111 uses terminals 1,2,3

For details of actuator travel
and switching angles call the factory



3140 Refrigerator Door Switches *Splashproof*



5A 250Vac 25T85 5E4 (50,000 Operations)



UL CSA 5A 250Vac
UL 85°C, file E45221, CSA file LR10990

In house test

200W 250Vac Lampload (400,000 operations)

3mm contact gap

Technical data on pages 4 & 5

Sealed terminals option available. Call factory for details



HK3141AA ---



H3145AA ---

HK 3141 A A - - -

TERMINALS FUNCTION ACTUATOR BODY COLOUR, ETC

▶ TERMINAL	▶ FUNCTION	▶ ACTUATOR	▶ BODY	▶ OPTIONS
H 4.8 x 0.8 Standard format is H terminals in positions 1 & 2 and K terminals in positions 3 & 4 For sealed terminals call the factory	3141 ON - ON (momentary) 3145 ON - OFF (momentary OFF) 3146 ON - OFF (momentary ON)	A B C D E	A Panel cut-out Panel thickness 1.0 - 2.5mm	Finish Gloss finish only Colour White is standard Call factory for custom colours A full range is available for large orders

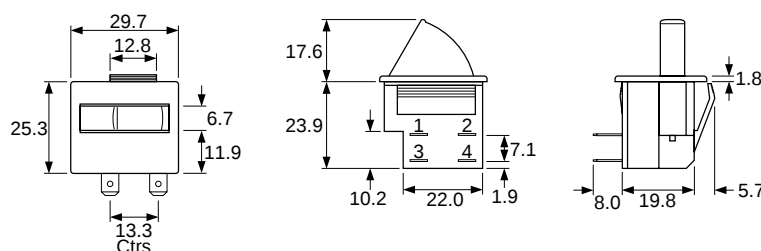
Dimensions (mm) ("A" actuator shown)

3141 uses terminals 1,2,3,4

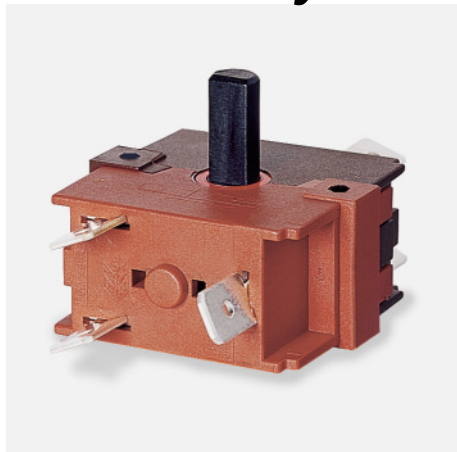
3145 uses terminals 3,4

3146 uses terminals 1,2

For details of actuator travel and switching angles call the factory



9100 Rotary Switches 16A 250Vac



16(4)A 250Vac T125
16A 400Vac T125
8(8)A 250Vac T125 5E4 (50,000 Operations)



UL CSA 20A Non Ind 277Vac, 250Vac 2hp, 125Vac 1hp
UL85°C, file no. E45221, CSA file no. LR10990



20A 28V dc

9100 switches are highly versatile with up to 6 positions at 30° intervals and 6 terminals per switch. For more complex switching (7 positions & over), contact the factory
Two switches may be stacked to give up to 12 terminal switching

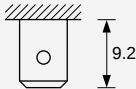
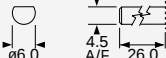
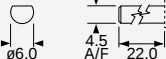
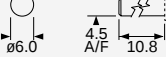
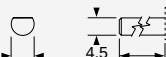
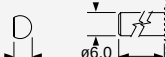
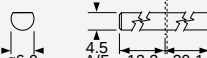
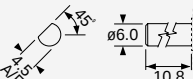
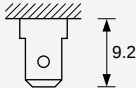
Custom spindles of any length, with or without a "D" flat, can be produced from our infinitely variable tooling. The flat can be at any angle

3mm contact gap

Technical data on pages 4 & 5

C 9 5 01 D A

TERMINAL SERIES POSITIONS CIRCUIT SPINDLE BODY

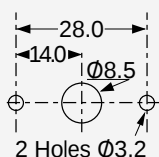
▶ TERMINAL	▶ SERIES	▶ POSITION	▶ CIRCUIT	▶ SPINDLE																																																																								
C  6.3 x 0.8	9	2 Switching positions	9100 switches offer almost infinite switching options For this reason it is impractical to show all the options available The table below gives an example of a 5 position switching sequence: OFF, 1, 1+2, 1+2+3, 1+2+3+4 <table><tr><th>Off</th><th>Pos 1</th><th>Pos 2</th><th>Pos 3</th><th>Pos 4</th><th>Pos 5</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> The code for your chosen circuit will be allocated by our technicians Please contact the factory for details Use the blank table to plan your switching up to 6 positions <table><tr><th>Pos 1</th><th>Pos 2</th><th>Pos 3</th><th>Pos 4</th><th>Pos 5</th><th>Pos 6</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Off	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5																															Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6																															A  B  C  D  M  N  P  R  for 2 gang switching S  L supplied without spindle
Off		Pos 1	Pos 2	Pos 3	Pos 4	Pos 5																																																																						
																																																																												
Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6																																																																							
																																																																												
H  4.8 x 0.8 For approval information on H terminals, contact the factory Simple circuits may not use all terminals Unnecessary terminals may be omitted.	3 Switching positions	4 Switching positions	5 Switching positions	6 Switching positions																																																																								

9201 OFF, 1	9202 OFF, 1+2	9203 OFF, 3	9204 OFF, 1+3	9301 OFF, 1, 1+2	9304 1+3, OFF, 2+4	9305 1, OFF, 2
9312 OFF, 2+3, 2+3+4	9313 OFF, 3, 3+4	9401 OFF, 1, 2+3, 1+3	9402 OFF, 1, 1+2, 1+2+3	9403 OFF, 1, 1+4, 1+2+4	9404 OFF, 1+3, 1+4, 1+3+4	9405 OFF, 1+4, 2+4, 3+4
9407 OFF, 1, 2, 3	9408 1, 2, 3, 4	9409 OFF, 3, 4, 3+4	9411 OFF, 4, 1+4, 1+2+4	9414 OFF, 1, 3, 1+3	9419 OFF, 1+2, 1+4, 1+2+3+4	9421 OFF, 1+2, 1+4, 1+2+4
9422 OFF, 1, 2, OFF	9423 OFF, 3, 1+3, 1+2+3	9501 OFF, 1, 1+2, 1+2+3, 1+2+3+4	9503 OFF, 1, 2, 1+3, 1+3+4	9504 OFF, 1+4, 1+3, 2+3, 1+2+3	9505 OFF, 1, 1+2, 1+3, 1+2+3	9509 OFF, 4, 1+4, 3+4, 1+3+4

BODY

A

Standard 2 hole fixing



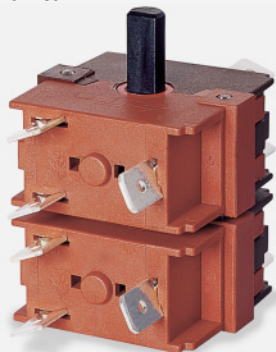
Recommended fixing

2 off No4 / 3.0mm self tapping screws
5.0mm min penetration into switch body

Snap together body sections withstand
>1.0Nm separation force

Stacked Switches

For more complex switching a
second switch may be stacked
on the first



OPTIONS

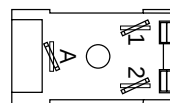
Anti-rotation stops

May be fitted at any of the index positions
to limit the maximum angle of rotation

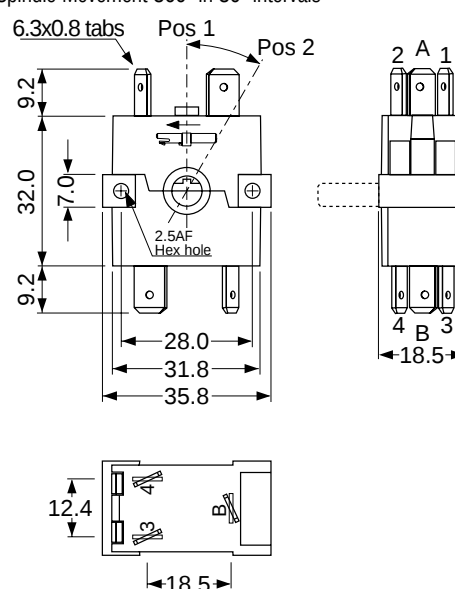
Panel clearance

A spacer can be fitted to the switch body
to increase the clearance between the
mounting panel and switch terminals

DIMENSIONS (mm)



Spindle Movement 360° in 30° intervals



Note
In the circuits on this page,
the symbol ● shows the
position of the switch cam,
NOT the position of the
spindle flat

For all options call the factory

9000 Rotary Switches For Foot Spas 2A 250Vac



2A 250Vac T85



UL 2A 250Vac, 65°C, file E45221

μ contact gap

Technical data on pages 4 & 5

A 4-position single pole rotary switch.

All nylon construction, threaded neck and flatted 6.0mm dia. spindle.

Positive detent action, 90° between index positions.

Stops available to restrict rotation.

Various circuits may be obtained by changing the supply and load connections or by omission of one or two terminals.

Line and loads may be connected to any terminals.

Any three of the four contacts are always connected.

Illustrated loads and line are for example only.

Suitable for class II appliances.

Patent app.



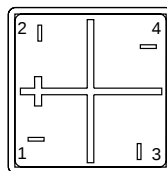
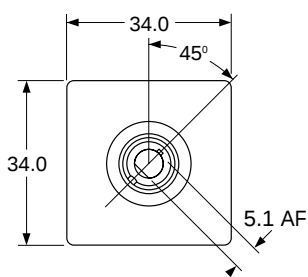
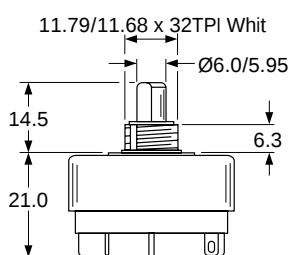
T9000 00 ---

T 9000

TERMINAL FUNCTION

TERMINAL	FUNCTION	BODY	OPTIONS
T	9000 Position 1 <i>Viewed from terminal side</i> Position 2 Position 3 Position 4	Panel Cut-out Panel thickness 1.25 - 3.5mm	Rotation Stops Can be specified to limit the number of switching positions

Dimensions (mm)



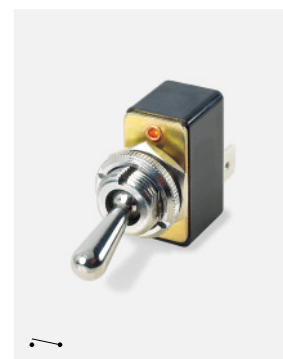
0600 Lever Switches 1A 250Vac

In house test 1A 250Vac
10A 6/24Vdc

3mm contact gap
Technical data on pages 4 & 5



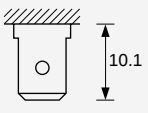
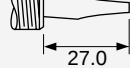
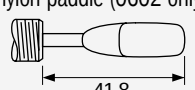
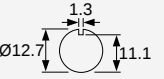
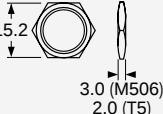
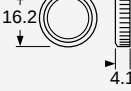
C0600HD ---



C0600CC ---

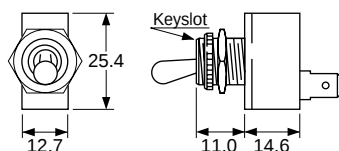
C 0600 H D ---

TERMINAL FUNCTION ACTUATOR BODY OPTIONS

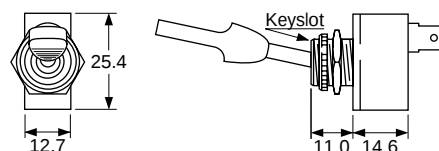
► TERMINAL	► FUNCTION	► ACTUATOR	► BODY	► OPTIONS
C  6.3 x 0.8 10.1	0600  ON - OFF 0602  ON - OFF (momentary ON)	C Chromed brass (0600)  15.0 U Nylon (0600)  12.1 G Nylon (0600)  27.0 H Nylon (0600)  17.0 S Chromed brass stem/ nylon paddle (0602 only)  41.8	D Nylon neck and top plate (Used with actuator codes U, G and H) C Metal neck and top plate (Used with actuator codes C and S)  Panel thickness - 3.5mm Back nut must be fitted Fixing nuts (Standard is M506 & T92) T5 Hex brass M506 Hex nylon  15.2 3.0 (M506) 2.0 (T5) T92 Knurled brass  16.0 2.6 M279 Knurled nylon  16.2 4.1	Cover M331 (C Actuator only)  Seal M539 (C,H & U Actuators) Actuator visible  Cover M1080 (C Actuator only)  Covers have internal nylon nuts

Dimensions (mm)

0600 (U actuator shown)



0602



3900 Splashproof Metal Lever Switches 16A 250Vac



16(4)A 250Vac T85 (3900 & 3950)
 10(4)A 250Vac T85 (All other circuits)
 UL CSA 20A 125/277Vac (ON-OFF Circuits)
 UL CSA 16A 125/277Vac (Other Circuits)
 UL CSA 7A 72Vdc, 14A 36Vdc
 UL 250Vac 1hp, 125Vac 1/2hp
 UL 85°C, file E45221, CSA file LR10990

Inrush rating - Contact factory for details

Approvals and ratings vary with function
 3mm contact gap except where marked μ
 Integral O-ring neck seal
 Technical data on pages 4 & 5

C 3900 B A - - -

 TERMINAL FUNCTION ACTUATOR BODY OPTIONS

TERMINAL		FUNCTION		ACTUATOR
C		Single pole	Double pole	B
	3900	ON - OFF	3950	
	3901	ON - OFF (momentary ON)	3951	
	3902	ON - OFF (momentary OFF)	3952	
	3910	ON - ON	3960	
	3911	ON - ON (momentary 1 side)	3961	
	3920	ON - OFF - ON μ	3970	
S				
	Screw & clamp available for On - Off switches only			
T				Finish is nickel plate
	Solder			



C3900BA ---



C3920BA ---



Guard R17-10
Anti-rotation tab can be specified
for guard fitted in On or Off position



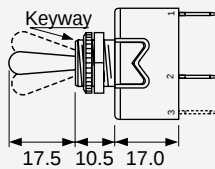
C3950BB ---



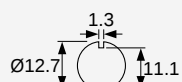
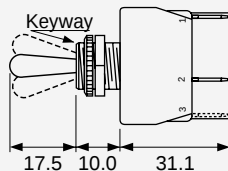
C3972BB ---

BODY

A Without terminal barrier Single pole



B With terminal barrier Double pole only



Panel hole (all types)

OPTIONS

Neck Seal M539

Actuator is visible



Cover M1080



Covers have internal nylon nuts

Fixing nuts

Nickel plated brass are supplied



Hex Back nut



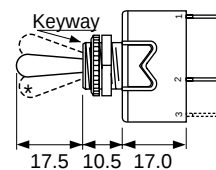
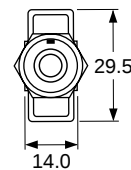
Knurled Front nut

Panel thickness 4.0 with backnut

DIMENSIONS (mm) * Indicates ON position (for On - Off switches)

Single Pole

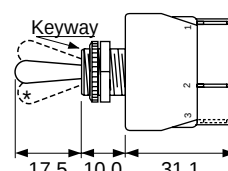
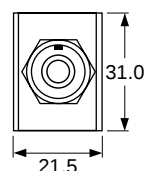
(C terminals shown)



Optional
P232 plate
SP or DP

Double Pole

(C terminals shown)



1700 & 1750 Lever Switches 16A 250Vac Single and Double Pole



16(4)A 250Vac T85



UL 20A 250Vac Non Ind (Single pole)
 UL 16A 250Vac Non Ind (Double pole)
 UL CSA (2 pos types) 250Vac 1hp, 125Vac 1/2hp
 UL CSA (3 pos types) 250Vac 1/2hp, 125Vac 1/4hp
 CSA 16A 250Vac Non Ind
 UL 85°C, file E45221, CSA file LR10990
 UL and CSA N/A on momentary types



Inrush 36A to EN61058-1 & 20A 28Vdc

Selective "A, B, C" and "Off, A, A+B" circuits at 5 amp also available
 3mm contact gap except where marked μ
 Technical data on pages 4 & 5

C 1750 H O - - -
 TERMINAL FUNCTION ACTUATOR BODY OPTIONS

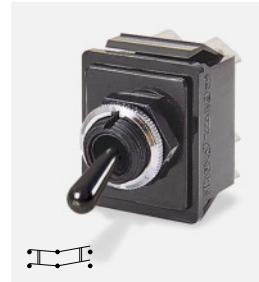
▶	TERMINAL	▶	FUNCTION	▶	ACTUATOR
C	 6.3 x 0.8	Single pole 1700 ♦ 	ON - OFF	Double pole 1750 	H
H	 4.8 x 0.8	1710 μ ♦ 	ON - ON	1760 μ 	R
K	 2.8 x 0.8	1720 μ ♦ 	ON - OFF - ON	1770 μ 	
T	 Solder	1721 μ ↑	ON - OFF - ON (momentary 1 side)		
X	 PCB 0.8 Sq	1722 μ ↑	ON - OFF - ON (momentary 2 sides)		The switch is on between centre terminals (2 & 5) and the terminals over which the lever is positioned



C1700RO ---



C1700HO ---



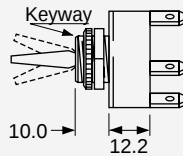
C1760RO ---



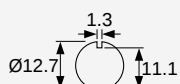
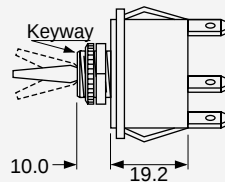
C1750HO ---

BODY

0 Single pole



0 Double pole



Panel hole (all types)

Panel thickness (Max)
Both nuts - 3.5mm
Less backnut - 6.5mm

OPTIONS

Neck Seal M539 Rubber -57T145 (H & R Actuators) Actuator visible



Cover M1080 Rubber -57T145 (R Actuator only)



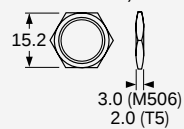
Cover M331 PVC -5T85 (R Actuator only)



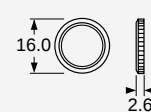
Covers have internal nylon nuts

Fixing nuts (Standard is M506 & T92)

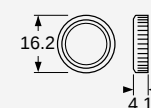
T5 Hex brass
M506 Hex nylon



T92 Knurled brass



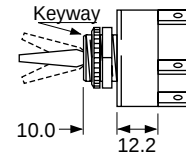
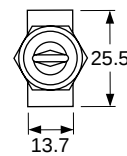
M279 Knurled nylon



DIMENSIONS (mm)

Single Pole

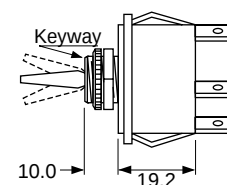
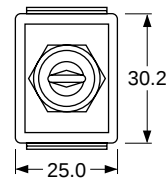
(C terminals shown)



Optional
P232 plate
SP or DP

Double Pole

(C terminals shown)



Optional terminal barrier M441 is available

Technical Information - Indicators

The majority of Arcoelectric indicator lights can be supplied with alternative light sources:

Neon, Fluorescent, Filament lamp or LED.

NEON and FLUORESCENT LAMPS

Colours

Red, Amber and Clear neon, Green fluorescent.

Maximum striking voltages

Standard brightness types 65Vac 90Vdc,

High brightness types 85Vac 135Vdc.

High brightness types are usually fitted.

Life

Typically 25,000 hours (Green fluorescent lamps 20,000 hours).

(Measured to a point when the light output of the lamp is half its original level.)

The end of life for a neon lamp is not usually a sudden failure.

False signals due to long wiring

It is possible for neon or fluorescent tubes to glow when they should be off. The false signal is caused by the capacitance effect of fairly long wiring to the indicator being adjacent to other live cables.

This effect can be prevented in most cases by fitting a 100K resistor across the supply wires close to the indicator assembly.

MATERIALS

Moulded bodies and bases	Nylon 6.6
Metal bodies and bezels	Chrome plated brass (except #)
Lenses	Polycarbonate
Terminals (most types)	Brass (electro-tin plated)
Terminals (exceptions)	Brass (flash silver* or nickel** plated)
Threaded metal nuts	Brass (nickel plated on 0275/7)
Other fixings	Call factory for details

* R9, 0061, 0062, 0430, 0480, 1090, 1091, 6030, 7030, 8630, 8580

** # 3130, 3160, 3161, 3221 have nickel plated terminals with steel screws and plated polyamide bezel trims

TEMPERATURE RATING

Authority	with Terminals	with Wire leads	
		PVC	SILICONE
European	T125°C	T105°C	T125°C
UL	T65/75°C	T65/75°C	

FILAMENT LAMPS

Colours

Red, Amber, Green, (Clear and Blue - check availability)

LEDS

Colours

Red, Yellow and Green.

Voltage

Basic voltage 2.0/2.2V. Some items are available with integral resistors for 12V use. For details of resistors required for higher voltages, please call the factory.

Current

Maximum continuous forward current 35mA.

Life

>100,000hrs

Polarity

LED flat side is - negative, round side + positive.

SYMBOLS



Terminals
C 6.3, H 4.8, K 2.8



Wire leads
200mm long Standard



Solid wires
LED only



Panel hole size



Panel thickness



Temperature rating

Indicator Lights (Neon, LED and Filament Lamp)



UL file E63363

CSA file LR29381

Colours and voltages:

Neon	Red, Amber, Green, Clear 100/130V (marked 110V), 200/250V (marked 230V)
LED	Red, Yellow, Green 2.0/2.2V Resistors for other voltages available
Filament lamp	Red, Amber, Green, (Clear & Blue check availability) 6V, 12/14V, 24/28V

To create a catalogue number:

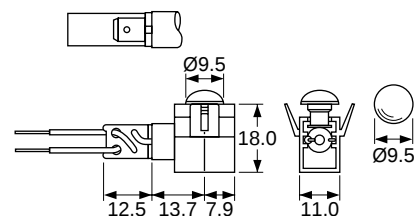
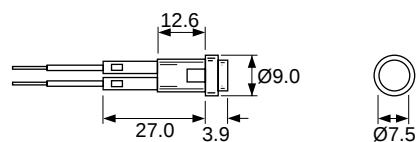
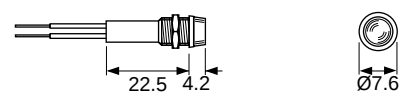
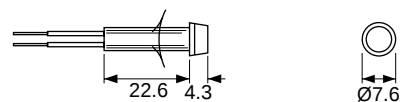
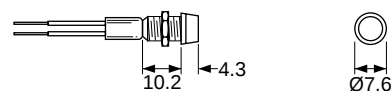
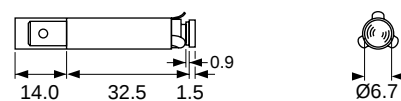
Refer to the 2 columns below (terminal and type)

Then state:

Lens colour, voltage and whether neon, LED or filament lamp

TERM	TYPE	PANEL & °C
C 6.3	(C) 0145 AA S D N F S	5.8 3.0max page 66
L W	(L) 1041 00 Chrome bezel 	6.3 6.3max page 66
L W	(L) 1045 00 Chrome bezel available S D N F S	6.3 10.0max page 66
L W	(L) 0245 00 Chrome bezel available S D N F S	7.1 6.3max page 66
L	L 2950 00 Chrome bezel available S D N F S	8.0 0.8-1.6 page 66
L C 6.3	(L) 0195 BB S D N F KEMA EUR S	8.0 0.8-3.0 page 66

DIMENSIONS (mm)



Indicator Lights (Neon, LED and Filament Lamp)



UL file E63363

CSA file LR29381

Colours and voltages:

Neon

Red, Amber, Green, Clear
100/130V (marked 110V), 200/250V (marked 230V)

LED

Red, Yellow, Green
2.0/2.2V Resistors for other voltages available

Filament lamp

Red, Amber, Green, (Clear & Blue check availability)
6V, 12/14V, 24/28V

To create a catalogue number:

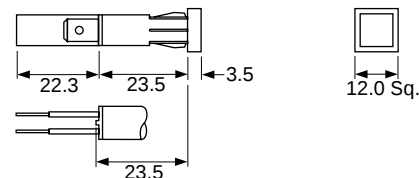
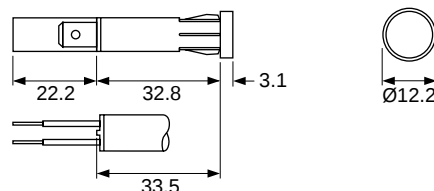
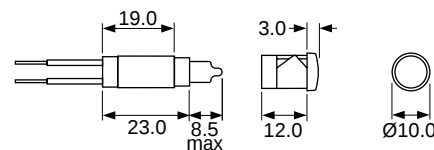
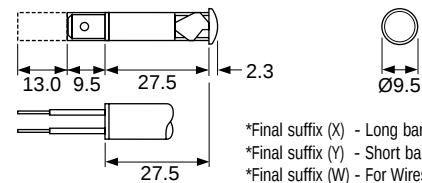
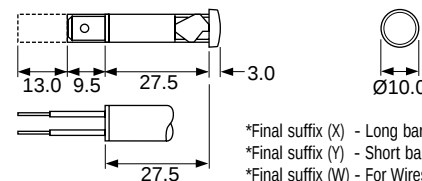
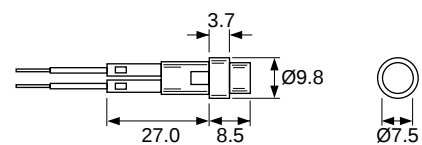
Refer to the 2 columns below (terminal and type)

Then state:

Lens colour, voltage and whether neon, LED or filament lamp

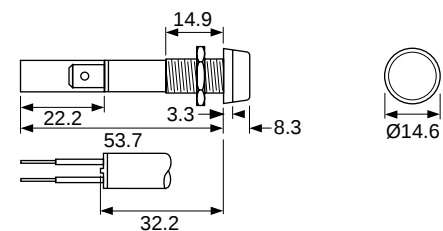
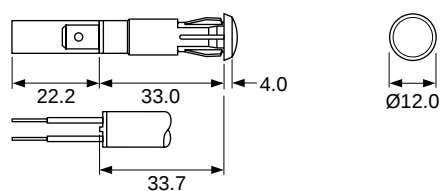
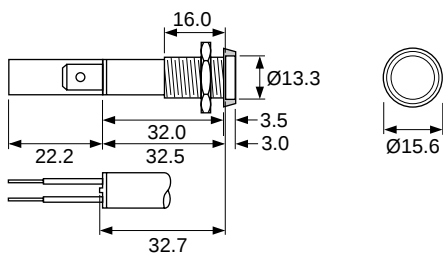
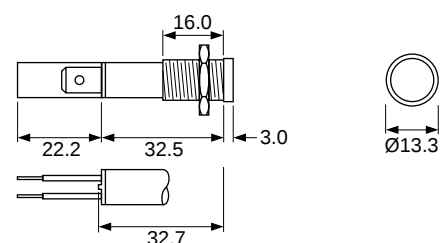
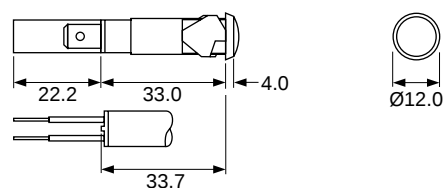
TERM	TYPE	PANEL & °C
L	L 2951 00 Chrome bezel available  S D N H KEMA UL	 8.0  0.8-1.6  page 66
L	(H) 0568 A(*) Deep lens profile  UL (VDE at T100) NEW	 8.0  0.8-3.5  page 66
K 2.8		
H 4.8		
L	(H) 0568 B(*) Shallow lens profile  UL (VDE at T100) NEW	 8.0  0.8-3.5  page 66
K 2.8		
H 4.8		
L	(L) 0569 AW  UL NEW	 9.0  0.8-2.5  Call factory
K 2.8		
H 4.8		
C 6.3	(C) 0273 00  S D N H KEMA UL	 9.0  2.0 max  page 66
L	(C) 0278 00  S D N H KEMA UL	 9.0  2.0 max  page 66
K 2.8		
H 4.8		
C 6.3		

DIMENSIONS (mm)

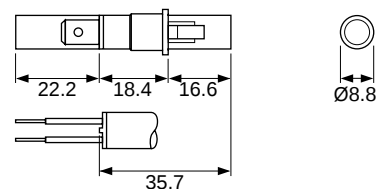


TERM	TYPE	PANEL & °C
L K 2.8 H 4.8 C 6.3	(C) 0276 AA 	9.5 0.8-2.8 page 66
L K 2.8 H 4.8 C 6.3	(C) 0275 00 	10.0 12.0 max page 66
L K 2.8 H 4.8 C 6.3	(C) 0275 00 Chrome bezel 	10.0 11.5 max page 66
L K 2.8 H 4.8 C 6.3	(C) 0276 00 	10.0 2.8 max page 66
L K 2.8 H 4.8 C 6.3	(C) 0277 00 Chrome bezel 	10.0 12.0 max page 66
L K 2.8 H 4.8 C 6.3	(C) 0273 LL NEW 	10.0 0.6-2.0 page 66

DIMENSIONS (mm)



For sub-panel mounting, behind a facia



Indicator Lights (Neon, LED and Filament Lamp)



UL file E63363

CSA file LR29381

Colours and voltages:

Neon	Red, Amber, Green, Clear 100/130V (marked 110V), 200/250V (marked 230V)
LED	Red, Yellow, Green 2.0/2.2V Resistors for other voltages available
Filament lamp	Red, Amber, Green, (Clear & Blue check availability) 6V, 12/14V, 24/28V

To create a catalogue number:

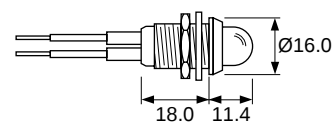
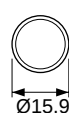
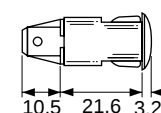
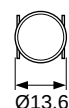
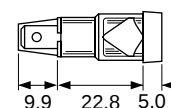
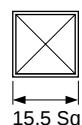
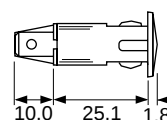
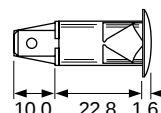
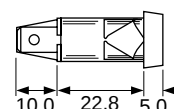
Refer to the 2 columns below (terminal and type)

Then state:

Lens colour, voltage and whether neon, LED or filament lamp

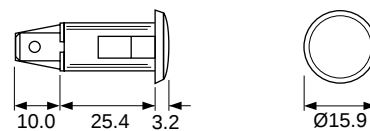
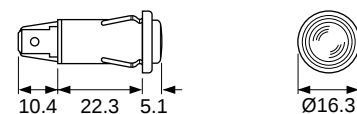
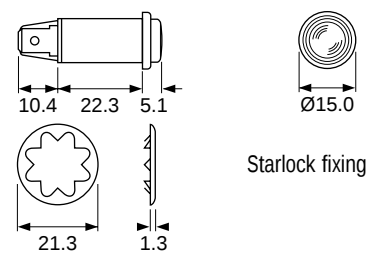
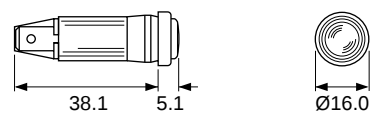
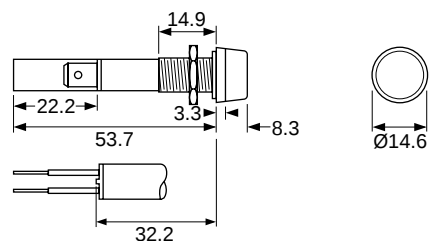
TERM	TYPE	PANEL & °C
L	(C) 2820 00 	12.0 0.75-2.0 page 66
K 2.8		
H 4.8		
C 6.3		
L	(C) 2821 00 	12.0 or 12.7 Ø12.0 = 0.8-2.5 Ø12.7 = 1.1-2.5 page 66
K 2.8		
H 4.8		
C 6.3		
L	(C) 0586 00 	12.5 0.8-1.5 page 66
K 2.8		
H 4.8		
C 6.3		
L	(C) 2870 00 	12.7 0.75-2.0 page 66
K 2.8		
H 4.8		
C 6.3		
L	(C) 0589 00 	12.7 0.8-1.5 page 66
K 2.8		
H 4.8		
C 6.3		
L	L 0081 00 Chrome bezel 	12.7 9.5 page 66

DIMENSIONS (mm)



TERM	TYPE	PANEL & °C
L K 2.8 H 4.8 C 6.3	(C) 0177 00 Chrome bezel  	 12.7  12.0max  page 66
L K 2.8 H 4.8 C 6.3	(C) 0067 00 Chrome bezel  	 12.7  1.14max  page 66
L K 2.8 H 4.8 C 6.3	(C) 0180AA  	 12.7  19.0max  page 66
L K 2.8 H 4.8 C 6.3	(C) 0180BB Chrome bezel  	 13.5  0.9-1.14  page 66
L K 2.8 H 4.8 C 6.3	(C) 0579 00  	 14.0  2.5max  page 66

DIMENSIONS (mm)



Indicator Lights (Neon, LED and Filament Lamp)



UL file E63363

CSA file LR29381

Colours and voltages:

Neon

Red, Amber, Green, Clear
100/130V (marked 110V), 200/250V (marked 230V)

LED

Red, Yellow, Green
2.0/2.2V Resistors for other voltages available

Filament lamp

Red, Amber, Green, (Clear & Blue check availability)
6V, 12/14V, 24/28V

To create a catalogue number:

Refer to the 2 columns below (terminal and type)

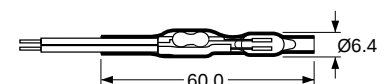
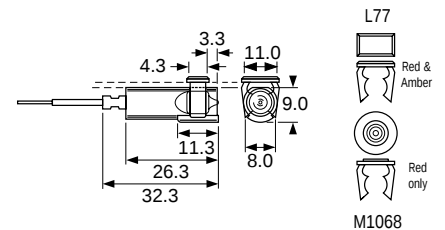
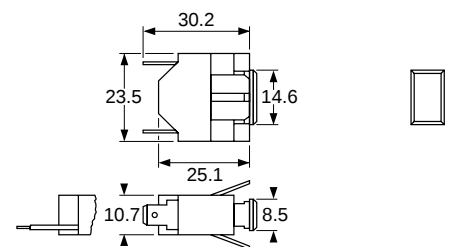
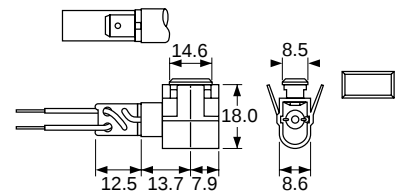
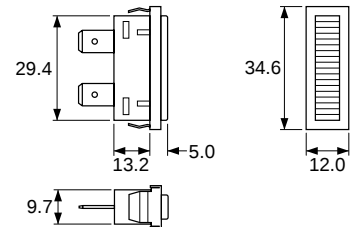
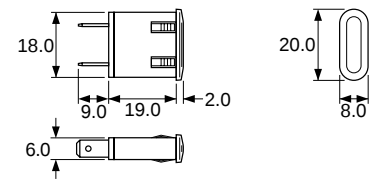
Then state:

Lens colour, voltage and whether neon, LED or filament lamp

* Call factory for details

TERM	TYPE	PANEL & °C
H 4.8	H 0581 AY 	 18.2/18.3 6.2/6.3* 2.0-3.5 page 66
C 6.3	C 0582 AY 	 32.5/32.6 10.0/10.1* 0.8-2.3 page 66
L	L 0195 00 	 13.0x6.5 0.8-3.0 page 66
L	(C) 0196 AA 	 13.0x6.5 0.8-3.0 page 66
L	L 0234 00 	 9.27/9.50 4.75* 0.71-1.62 page 66
L	L 0233 00 	 page 66

DIMENSIONS (mm)



Neon tube, resistor and flexible lead assembly, protected by "shrunk on" transparent sleeving

Indicator Lights (To match 8500, 8600, R13, 1500, 1550, 5500, 6000, 8300 and 7000 switches)



UL file E63363

CSA file LR29381

Colours and voltages:

Neon	Red, Amber Green, Clear 100/130V (marked 110V), 200/250V (marked 230V)
LED	Red, Yellow, Green 2.0/2.2V Resistors for other voltages available
Filament lamp	Red, Amber, Green, Clear and Blue 6V, 12/14V, 24/28V

For full product details, to create a catalogue number or to order:

Refer to the catalogue page shown against each item

TERM	TYPE
------	------

H 4.8

H8580 AB



H 4.8

T

X

H8630 FB



H 4.8

R9 92B



Factoryed product

Approvals details - contact the factory

C 6.3

H 4.8

K 2.8

T

U

C0430 A(*)

NEW

C6030 AL

6030 - L body & C terminals only

C 6.3

H 4.8

K 2.8

T

U

C0480 A(*)



C 6.3

H 4.8

C7030 AH



DIMENSIONS (mm)

Full product details on pages 10-11				Cut-out	Flange
Body Code	Panel thickness	X	Y		
B	0.75-1.25	19.1/19.2	12.9/13.0		
	1.25-2.0	19.3/19.4	12.9/13.0		
	2.0-3.0	19.7/19.8	12.9/13.0		

Full product details on pages 12-13				Cut-out	Flange
Body Code	Panel thickness	X	Y		
B	0.75-1.25	19.1/19.2	12.9/13.0		
	1.25-2.0	19.3/19.4	12.9/13.0		
	2.0-3.0	19.7/19.8	12.9/13.0		

Full product details on pages 16-17		Cut-out	Flange
Snap fixing in panels thickness up to 3.0			
		Ø20.2	Ø23.0

Full product details on pages 18-19 & 20-21				Cut-out	Flange
Body *Code	Y	X	Y	X	
A	12.2/12.3	27.2/27.3	14.0	30.2	
B	11.0/11.1	30.0/30.1	14.0	33.4	
L	11.0/11.1	30.0/30.1	14.0	31.9	
R	14.0/14.1	28.5/28.6	17.0	31.5	

Full product details on pages 26-27				Cut-out	Flange
Body *Code	Y	X	Y	X	
A	22.3/22.4	27.2/27.3	25.0	30.2	
B	22.1/22.2	30.0/30.1	25.0	33.4	
L	22.1/22.2	30.0/30.1	25.0	32.0	
R	23.0/25.4	28.4/28.5	28.9	33.2	

Full product details on pages 38-39		Cut-out	Flange
Body Code	Cut-out	Flange	
H	Ø25.0/25.2	Ø28.0	
			25.0/25.2
			Ø28.0

Neon & LED Indicator Lights Sealed to IP52 and IP54



Colours and voltages:

Neon Red, Amber, Green
120/230Vac 0.5W (Red base)

LED Red, Amber, Green
28Vac/dc 1W (Green base)

Neon versions feature integral current limiting & ghost lighting resistors

LED versions have rectifier diodes & resistors for direct connection to 28Vac/dc

To order

Select a number from the "type" column

Then state:

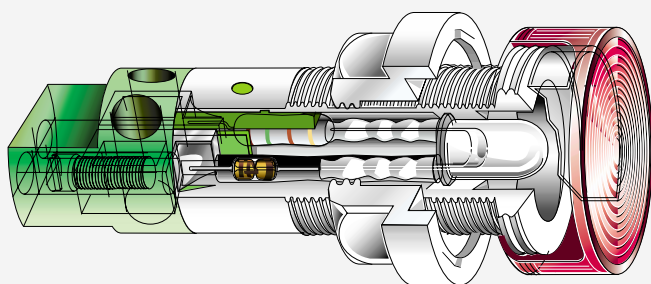
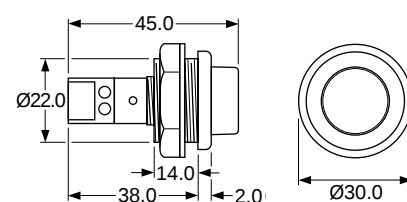
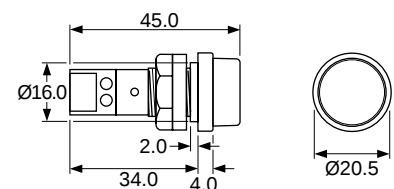
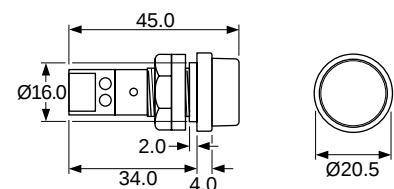
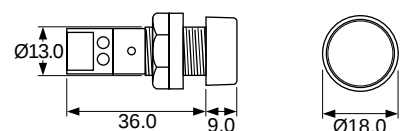
Lens colour, voltage and whether neon or LED

All versions have recessed screw terminals

IP52 is standard. A panel sealing washer is available for IP54

TERM	TYPE	PANEL & °C
Recessed Screw 	3130 No bezel 	 T120 neon T50 LED
Recessed Screw 	3160 Black bezel 	 T120 neon T50 LED
Recessed Screw 	3161 Satin chrome style bezel 	 T55 neon T50 LED
Recessed Screw 	3221 Large black bezel 	 T120 neon T50 LED

DIMENSIONS (mm)



Select the version most suitable for your application from the 4 types shown

Or call the factory for availability to your special requirements

Low Voltage Lampholders

Colour and voltage:

These lampholders are suitable for up to 50V max.
Bulbs will be supplied (dependent on order quantity)
if a voltage is specified

Colours - Red, Amber, Green, (Clear & Blue, check availability)

To create a catalogue number:

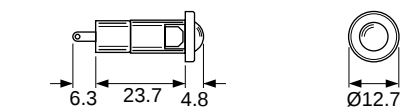
Refer to the 2 columns below (terminal and type)

Then state:

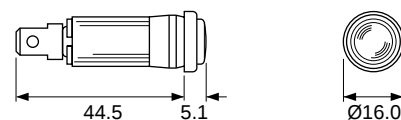
Lens colour and voltage

TERM	TYPE	PANEL & °C
T 	T0061 AO (LES) 	 9.5  0.9-1.14  T85
C 6.3 	C0067 OO (BA7s) Chrome bezel 	 12.7  1.14max  T85
T 	T0062 AO (Midget flange) Chrome bezel  T0063 AO (LES) Chrome bezel	 12.7  9.6max  T85
T 	T0062 MO (Midget flange)  T0063 MO (LES)	 12.7  9.6max  T85
S 	S0095 OO 	 T85

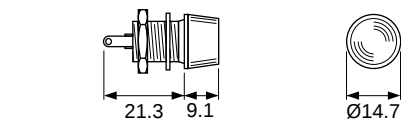
DIMENSIONS (mm)



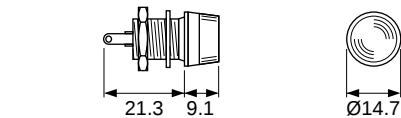
Rear of panel bulb replacement



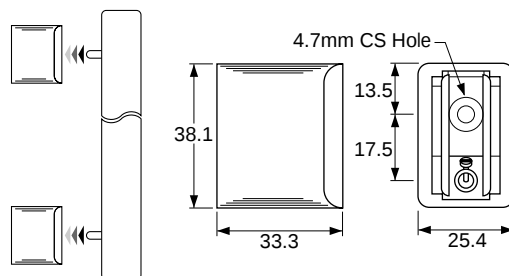
Rear of panel bulb replacement



Front of panel bulb replacement



Front of panel bulb replacement



Paired Architectural lampholders with philinea lamp

LED Lamps and LED Lampholders

LED Lampholders can be supplied with or without lamps

Colours:

Red, Yellow and Green LEDs
(High Intensity is standard. Option of extra super bright)

Voltages:

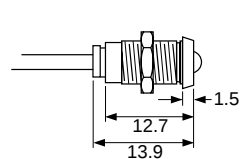
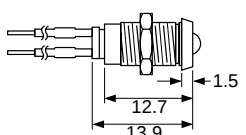
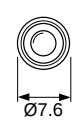
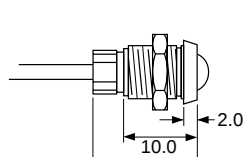
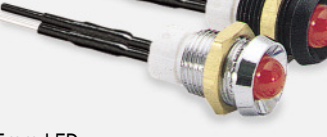
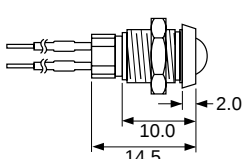
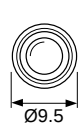
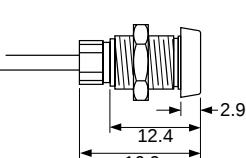
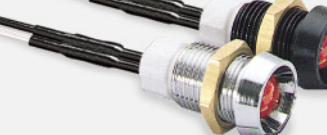
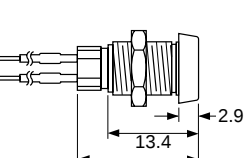
LEDs are available for direct connection to 2.0/2.2V. or 12Vdc
For other voltages contact the factory

To create a catalogue number:

Refer to the 2 columns below (terminal and type)

Then state:

LED colour and voltage and body finish (Black or Chrome)

TERM	TYPE	PANEL & °C	DIMENSIONS (mm)	
W  LED fitted	(W) 1047 00  3mm LED	 6.3  6.3max  T85	 1.5 12.7 13.9	 Ø7.6
A LED not fitted				
L  LED & Wires fitted	L 1047 00  3mm LED	 6.3  6.3max  T85	 1.5 12.7 13.9	 Ø7.6
W  LED fitted	(W) 1048 00  5mm LED	 8.0  5.5max  T85	 2.0 10.0 14.5	 Ø9.5
A LED not fitted				
L  LED & Wires fitted	L 1048 00  5mm LED	 8.0  5.5max  T85	 2.0 10.0 14.5	 Ø9.5
W  LED fitted	(W) 1050 00  5mm LED with focusing reflector	 8.0  7.0max  T85	 2.9 12.4 16.9	 Ø10.0
A LED not fitted				
L  LED & Wires fitted	L 1050 00  5mm LED with focusing reflector	 8.0  7.0max  T85	 2.9 13.4 17.9	 Ø10.0

LED Lamps and LED Lampholders - Designed to IP66

LED Lampholders can be supplied with or without lamps

Colours:

Red, Yellow and Green LEDs
(High Intensity is standard. Option of extra super bright)

Voltages:

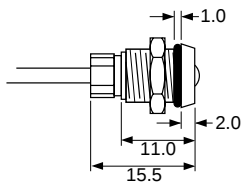
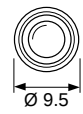
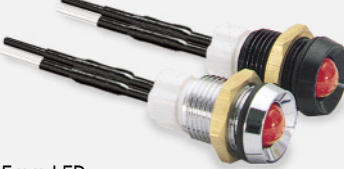
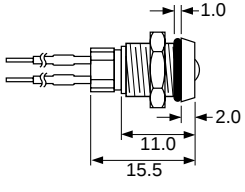
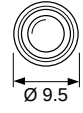
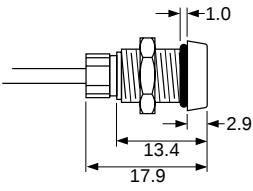
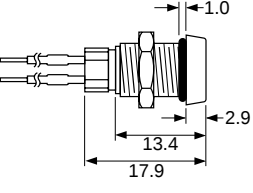
LEDs are available for direct connection to 2.0/2.2V. or 12Vdc
For other voltages contact the factory

To create a catalogue number:

Refer to the 2 columns below (terminal and type)

Then state:

LED colour and voltage and body finish (Black or Chrome)

TERM	TYPE	PANEL & °C	DIMENSIONS (mm)
W  LED fitted	(W) 1048 OA Designed to IP66  5mm LED	 8.0  5.5max  T85	 
A LED not fitted			
L  LED & Wires fitted	L 1048 OA Designed to IP66  5mm LED	 8.0  5.5max  T85	 
W  LED fitted	(W) 1050 OA Designed to IP66  5mm LED with focusing reflector	 8.0  7.0max  T85	 
A LED not fitted			
L  LED & Wires fitted	L 1050 OA Designed to IP66  5mm LED with focusing reflector	 8.0  7.0max  T85	 

Properties

Sealing

O-ring sealing equivalent to IP66, of both the LED to bezel, and bezel to panel is available where shown

Polarity

The nylon base mouldings are polarity marked

Body Material and Finish

Chromed brass or Black oxide coated brass

Lampholders only

Items prefixed 'A' are supplied without LEDs

LED wires or PVC covered wire leads

125mm min length wires, 6.3mm standard strip
Alternative colours, length and strip available

Low Voltage Lampholders *with sealing option*

Bulbs will be supplied (dependant on order quantity)
if a voltage is specified
These lampholders are suitable for up to 50V max.

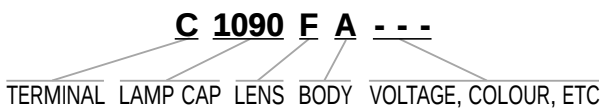
Colours - Red, Amber, Green, (Clear & Blue, check availability)
Brass bodies have polished chrome finish

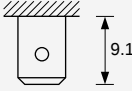


 C1090FP - - -

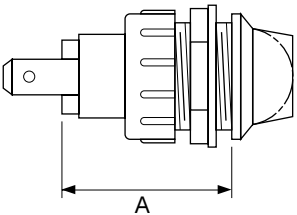


 C1090FL - - -



▶ TERMINAL	LAMP CAP	LENS	THREADED BODY		
C  6.3 x 0.8	1090 E10 	F Flat 	Panel Hole Dia.	Body Material <i>for E10 types</i>	Dimension A
			A 19.0	Brass	35.0
			D 19.0	Brass	30.2
			E 19.0	Nylon	30.2
			*P 19.0	Nylon (+ chrome trim)	30.2
			G 19.0	Brass	24.6
			H 19.0	Nylon	24.6
			L 25.4	Brass	30.2
	1091 BA9s 	V Domed  N/A for L & M body	Panel Hole Dia.	Body Material <i>for BA9s types</i>	Dimension A
			B 19.0	Brass	35.0
			C 19.0	Nylon	35.0
			*Q 19.0	Nylon (+ chrome trim)	35.0
			M 25.4	Brass	41.8
		L No lens	All E10 and BA9s types are suitable for panel thickness up to 6.2mm. Some versions will accept panels up to 11.2mm thick		

DIMENSIONS mm



OPTIONS

Sealing

Neoprene washers to seal between bezel and panel (W23) and lens and bezel (W24) to give a seal equivalent to IP66 are available on most versions

F0445 MO

P.V.C. Insulating terminal cover.



*Note P and Q body codes denote a nylon body fitted with a chrome bezel trim (previously **F0413PO**)

IEC Connectors & NEMA Receptacles



10A 250Vac

UL CSA 10A 250Vac UL 65°C

Terminal data shown at section end

For stock availability & additional options call the factory

To order:

State type number, connector terminal code, switch terminal code (if applicable), and for snap-in items, the panel thickness. Stocked items are for 1.0mm panels

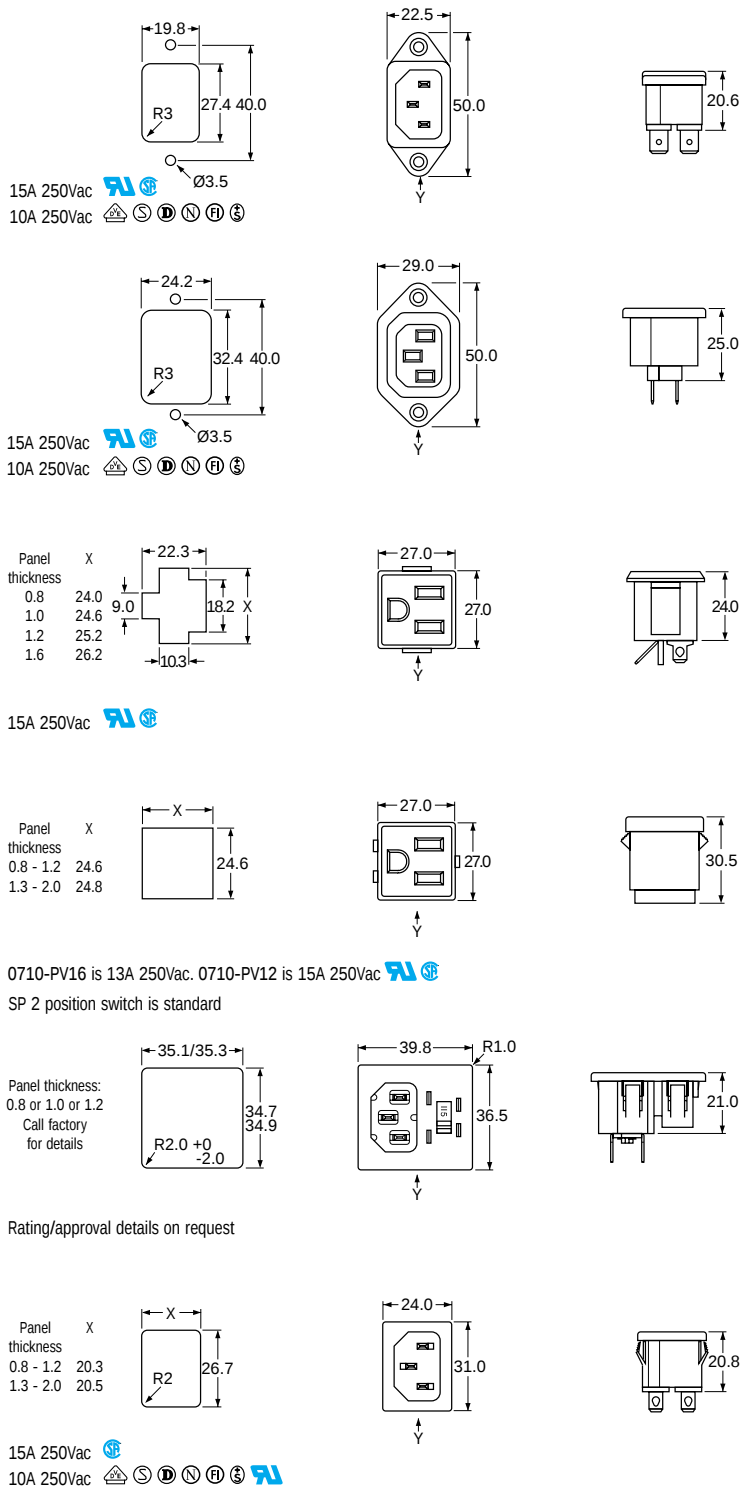
0711-1S LS K 1.0mm

TYPE TERMINAL (connector) TERMINAL (switch) PANEL thickness

DIMENSIONS (mm)

View below is at Y

TYPE	TERMINAL
0707-1-C (2k min order) Inlet	S 2.5 Solder N 4.0 Solder Q 4.8 Tab W 6.3 Tab
0708-1-C Outlet	N 4.0 Solder Q 4.8 Tab W 6.3 Tab P PCB
0709-P Outlet	L 4.0 Solder Q 4.8 Tab
0710-P Outlet	V12 Solid Wire V16 Solid Wire
0711-1S Inlet with Voltage Select	LS 2.8 Solder Connector Q 4.8 Tab/Solder Connector T 3.0 Solder Switch K 2.8 Solder Switch
0711-P (2k min order) Inlet	S 2.5 Solder N 4.0 Solder Q 4.8 Tab W 6.3 Tab



IEC Connectors & NEMA Receptacles



10A 250Vac

UL CSA 10A 250Vac UL 65°C

Terminal data shown at section end

For stock availability & additional options call the factory

To order:

State type number, connector terminal code, switch terminal code (if applicable), and for snap-in items, the panel thickness. Stocked items are for 1.0mm panels

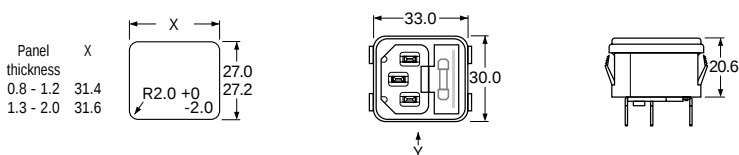
0717-1S Q T 1.0mm

TYPE TERMINAL (connector) TERMINAL (switch) PANEL thickness

DIMENSIONS (mm)

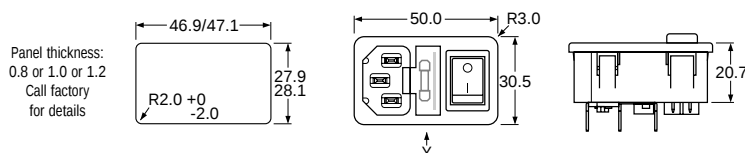
View below is at Y

TYPE	TERMINAL
0717-1-P Fused Inlet 5x20	S 2.5 Solder LS 2.8 Solder Q 4.8 Tab W 6.3 Tab
0717-1S State "Non Lit" Switched Fused Inlet 5x20	Q 4.8 Solder Connector T 4.8 Solder Switch
0717-1S State "Lit" Switched Fused Inlet 5x20	Q 4.8 Solder Connector T 4.8 Solder Switch
0717-C Fused Inlet 5x20	S 2.5 Solder LS 2.8 Solder Q 4.8 Tab W 6.3 Tab
0717-2-C (2k min order) Double Fused Inlet 5x20	S 2.5 Solder LS 2.8 Solder Q 4.8 Tab W 6.3 Tab
0717-2-P (2k min order) Double Fused Inlet 5x20	S 2.5 Solder LS 2.8 Solder Q 4.8 Tab W 6.3 Tab



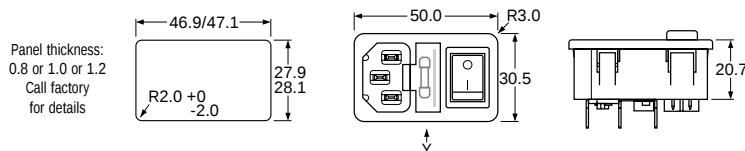
10A 250Vac

DP non-illuminated switch is standard



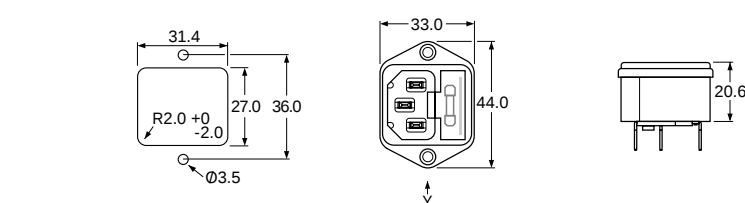
10A 250Vac

DP illuminated switch is standard



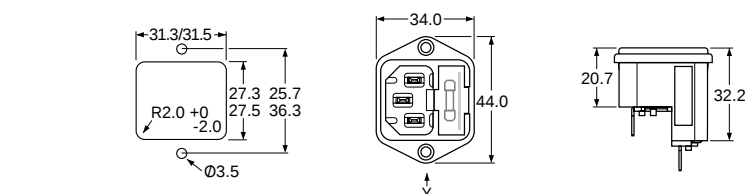
10A 250Vac

DP illuminated switch is standard



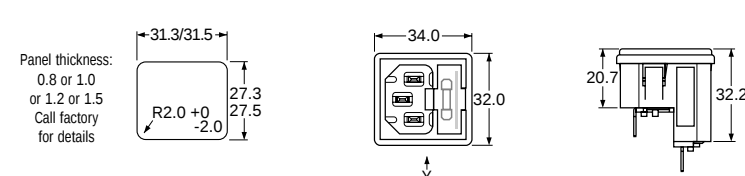
10A 250Vac

0717-2-C For applications (eg medical equipment) where both live & neutral feeds must be fused

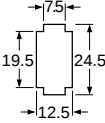
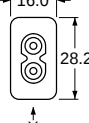
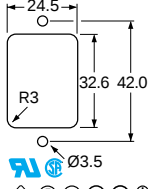
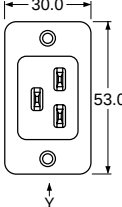
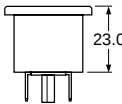
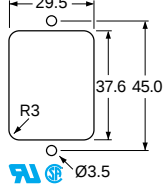
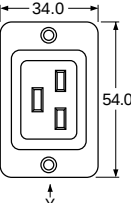
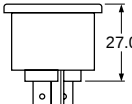


10A 250Vac

0717-2-P For applications (eg medical equipment) where both live & neutral feeds must be fused



10A 250Vac

TYPE	TERMINAL	DIMENSIONS (mm)			View below is at Y
0721-P (2k min order)  Inlet	S Solder	 2.5A 250Vac	 		
0722-C (2k min order)  Inlet	Q 4.8 Solder W 6.3 Tab	 20A 125Vac 16A 250Vac	 		
0723-C (2k min order)  Outlet	Q 4.8 Solder W 6.3 Tab	 20A 125Vac 16A 250Vac	 		

Technical data

Mouldings V2 (V0 option)
 Connectors Tin plated solid brass
 Terminals Silver plated

Terminal dimensions

For Connectors									For Switches		
S	N	Q	W	P	L	LS	V12	V16	Slide T	Slide K	Rocker T
2.5mm Solder	4mm Solder	4.8mm Solder/ Fast on	6.3 Fast on	PCB	Solder	2.8mm Solder	12-14 AWG Solid Wire	16 AWG Solid Wire	Solder	2.8mm Solder	4.8mm Solder
											
1.5x2.5 4.5	2.0x3.2 5.5	2.8x3.3 6.5	Ø1.7 8.0	1.7x3.0 5.5	Ø3.0x6.0	1.5x3.0 10.0	1.35	0.8	2.5 6.0 1.6	2.5 7.0 1.3	R1.0 R0.8 3.5 8.5

Note: Designated solder terminals should not be fitted with "Push on", "QD" or "Fast on" type cable connectors

Fuseholders 5 x 20 mm



6.3A 250Vac (max fuse rating*) T-55 to T+70 (ambient)

Maximum dissipation wattage: 1.5W

UL 94V2 UL file E92075 CSA file LR44770

These products comply with safety category PC2

*Users should be aware of the de-rating factors published by specialist manufacturers of fuses

These fuseholders are fitted with combination (solder / 2.8) mid-body terminals

It has not been possible to show both views here

T 0332 RA -----
 TERMINAL BODY & CAP PANEL HOLE OPTIONS



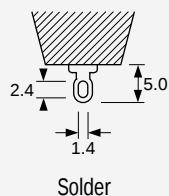
M520
Terminal Cover



A0033 00
In-line 5 x 20 fuseholder
Call factory for rating details

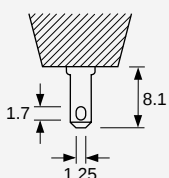
TERMINAL

T



Solder

B



2.8 x 0.5

BODY AND CAP

0332

Finger release



0333

Tool release



0340

Tool release



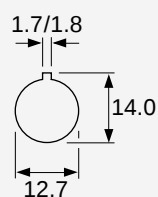
0341

Tool release

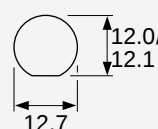


PANEL HOLE

RA

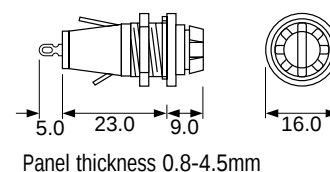


RD



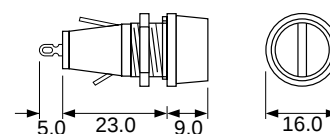
DIMENSIONS (mm)

0332 (T terminal shown)



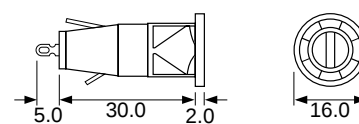
Panel thickness 0.8-4.5mm

0333 (T terminal shown)



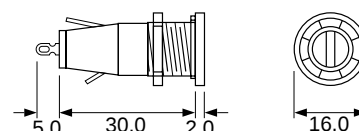
Panel thickness 0.8-4.5mm

0340 (T terminal shown)



Panel thickness 0.8-2.0mm

0341 (T terminal shown)



Panel thickness 0.8-4.5mm

Fuseholders 6 x 30 mm (1¼"x¼")



16A 250Vac (max fuse rating*) T-55 to T+70 (ambient)

Maximum dissipation wattage: 2.5W

UL 94V2 UL file E92075 CSA file LR44770

These products comply with safety category PC2

*Users should be aware of the de-rating factors published by specialist manufacturers of fuses

Fuseholders with in-line termination have combination (4.8 / 6.3) terminals. It has not been possible to show both views here. Units with right angle terminals have user specified end terminals and combination mid-body terminals



M873

Cover for C & T terminals



A0035 00

In-line 6 x 30 1¼ x ¼ fuseholder
Call factory for rating details

T 0347 RA -----
TERMINAL BODY & CAP PANEL HOLE OPTIONS

▶ TERMINAL	▶ BODY AND CAP	▶ PANEL HOLE	DIMENSIONS (mm)
C 6.3 x 0.8	0345 (C terminal shown) 	RA Panel thickness 0.8 - 2.0mm for snap-in 0.8 - 4.5mm for nut fixing	0345 (C terminal shown) 0345 (D terminal shown)
D 6.3 x 0.8 Right angle	0345 (D terminal shown) 	RD Panel thickness 0.8 - 2.0mm for snap-in 0.8 - 4.5mm for nut fixing	0347 (C terminal shown) 0347 (D terminal shown)
T 4.8 x 0.8 Solder	0347 (T terminal shown) 		
U 4.8 x 0.8 Right angle solder	0347 (U terminal shown) 		

Index

Cat No.	PAGE
0005	61,65
0023	78
0024	78
0033	82
0035	83
0042	23,25,27,29
0046	19,21,23
0055	54
0056	54
0061	75
0062	75
0063	75
0067 Lampholder	75
0067 Neon	71
0081	70
0092	61,65
0095	75
0145	67
0167 Cover	11,13,14,35
0177	71
0180 Neon	71
0180 Cover	13,14
0188 Cover	16,17
0195	67,72
0196	72
0232	63,65
0233	72
0234	72
0245	67
0273	68,69
0275	69
0276	69
0277	69
0278	68
0279	61,65
0305	53
0306	53
0307	53
0308	53
0320	52
0323	42
0327	47
0331	61,65
0332	82
0333	82
0340	82
0341	82
0345	83
0347	83
0413	78
0430	20,73
0430 Twin units	28
0434	21,23
0441	27
0445	78
0480	26,73
0494	23,27,29
0506	61,65
0520	82
0539	61,63,65
0568	68
0569	68
0579	71
0581	72
0582	72
0586	70
0589	70
0600	61
0602	61
0616	27
0707	79
0708	79
0709	79
0710	79
0711	79
0717	80
0721	81
0722	81
0723	81
0873	83
0910	42
0911	42,45
0911 Vandal	42,45
0916	41
0917	41
0918	41

Cat No.	PAGE
0919	41
0920	41
0936	47
0938	47
992B	17,73
1041	67
1045	67
1047	76
1048	76,77
1050	76,77
1067	25
1080	61,63,65
1090	78
1091	78
1100	40
1101	40
1250	15
1300	20
13 112	16,17
13 208	16
13 211	17
1350	26
1353	26
1484	26
1487	26
1500	20
1500 Twin units	28
1501	20
1502	20
1510	20,28
1511	20
1520	20,28
1521	20
1522	20
1550	26
1551	26
1552	26
1553	26
1560	26
1561	26
1562	26
1570	26
1571	26
1572	26
1700	64
1710	64
1710 Guard	63
1720	64
1721	64
1722	64
1750	64
1760	64
1770	64
1911	43
1961	43
22--	30-33
23--	30-33
24--	30-31
25--	30-31
2760	69
2820	70
2821	70
2870	70
290-- Snap action	48
2950	67
2951	68
3005	55
3006	55
3101	56
3102	56
3111	56
3130	74
3141	57
3145	57
3146	57
3147	57
3160	74
3161	74
3221	74
340- Snap action	50
390- Snap action	50
3900 Series	62
3950 Series	62
4102	46
5500	22
5500 Twin units	23

Cat No.	PAGE
5503	22
5508	22
6000	18
6000 Twin units	25
6001	18
6002	18
6003	18
6008	18
6009	18
6010	18
6011	18
6030	18,73
6050	24
6051	24
6052	24
6053	24
6054	24
6055	24
6056	24
6057	24
6058	24
6059	24
6060	24
6061	24
6062	24
6066	24
6067	24
6068	24
6090	24
6091	24
6092	24
7000	38
7001	38
7003	38
7004	38
7030	38,73
7050	38
7051	38
7053	38
7054	38
8200	36
8201	36
8250	36
8251	36
8300	34
8300 Vandal	44
8301	34
8301 Vandal	44
8303	34
8304	34
8350	34
8350 Vandal	44
8351	34
8351 Vandal	44
8353	34
8354	34
8500	10
8500 Push	35
8503	10
8550	10
8550 Semi Rotary	11
8553	10
8580	10,73
8600	12
8601	12
8602	12
8610	12
8611	12
8620	14
8630	12,73
8634	13
8650	12
8651	12
8652	12
8653	12
8660	12
8661	12
8670	14
8800	8
8800 Twin units	8
8801	8
8802	8
9000	60
9100	58

Conditions of sale

For the purposes of the following Conditions of Sale, the words "The Company" refer to Arcoelectric Switches plc.

CATALOGUES Catalogues, price lists and other advertising matter are an indication of the type of goods offered and no prices or other particulars contained therein shall be binding.

PRICES Quotations are open for acceptance within 30 days. Prices on orders issued within that period are guaranteed firm for three months from the date of formal acknowledgement. Deliveries extending beyond the initial six months will be invoiced at the prices shown in the Company's then current price list.

Notwithstanding any clauses attached to Customers' orders, the Company's formal acceptance of the order is made on the understanding that this clause applies and is accepted by the Customer unless expressly waived, in writing, by the Company.

PAYMENT Unless otherwise agreed in writing, payment in full is due immediately in respect of any goods delivered. Until payment is made in full, the goods shall remain the property of the Company, but the risk therein and all liability to third parties in respect thereof shall pass to the customer on delivery.

SETTLEMENT Credit terms can be arranged for customers taking regular deliveries of goods, such payment terms are 30 days from date of invoice, or such other terms as agreed and are strictly nett. For infrequent purchases and/or low value orders payment against a pro-forma invoice is required.

No discount is allowed for early payment or payment against a pro-forma invoice. Failure to pay in accordance with these terms will result in the Company instructing a third party to obtain settlement. Any costs incurred thereby will be charged to the Customer. The Company reserves the right to charge interest on overdue debts at a rate of 4% above HSBC Bank base rate.

DESPATCH Any times quoted for despatch are to be treated as estimates only and the Company shall not be liable for failure to despatch within such time. In all cases, whether a time for despatch be quoted or not, the time for despatch shall be extended by a reasonable period if delay in despatch is caused by instructions or lack of instructions from the Customer or by industrial dispute, or by any cause whatsoever beyond the reasonable control of the Company.

MINIMUM ORDER QUANTITY Please discuss your likely batch quantity requirements with our Sales department prior to ordering. On some items, ie coloured switches or special printing, MOQ's of 1000 or more may apply.

CARRIAGE The Company reserves the right to make nominal charges for handling, packaging and carriage on all orders.

DAMAGE OR LOSS IN TRANSIT If the Customer wishes the Company to make a claim on the carriers for a parcel damaged in transit, the Customer must notify the carriers and the Company within 3 working days of receipt. If a consignment fails to arrive within ten working days of the Customers' receipt of an advice note and invoice from the Company, the Customer should immediately notify the carrier and the Company. Claims can only be considered if made within this period. Shortage claims on consignments not damaged in transit should be made within seven working days.

REJECTION Unless otherwise agreed, goods rejected by the Customer as not complying with the contract must be advised within 7 working days of receipt.

DEFECTS AFTER DELIVERY The Company will make good by repair, or at the Company's option, by the supply of a replacement, defects which under proper use, appear in the goods within a period of twelve calendar months after the goods have been delivered, and arise solely from faulty design, workmanship or materials, always provided that the defective parts have been returned to the Company if it be so required.

The liability of the Company under this clause shall be in lieu of any warranty or condition implied by the law as to the quality or fitness for any particular purpose of the goods, and save as provided in this clause the Company shall not be under any liability, whether in contract, tort or otherwise, in respect of defects in goods delivered or for any injury (other than personal injury caused by the Company's negligence as defined in Section 1 of the Unfair Contract Terms Act 1977), damage or loss resulting from such defect or from any work done in connection therewith. Provided however, that nothing in this clause shall operate to exclude any warranty or condition implied by law as to the quality of the goods in the event that the goods when sold by the Customer or when sold by any person or persons to whom the Customer may sell the goods shall become the subject of a consumer sale as defined in the Supply of Goods (Implied Terms) Act 1973, except to the extent that any claim under such warranty or condition shall have arisen from any act or omission by the Customer or by any other person or persons selling the goods by way of a consumer sale.

UK HEALTH AND SAFETY ACT 1974 Detailed approval information is available on application. Approvals do not always cover every version of a component. Switches with metal levers (or metal fixing systems) do not comply with the latest standards on safety unless the fixing plate is reliably earthed. Product descriptions are, of necessity, abridged and users should always give full details of electrical load and environmental conditions so that a check can be made that the component is suitable for the application. Switch ratings are, unless otherwise stated, resistive at 250 Vac, T55. Transparent lenses on signal lamps, neon indicators and lit switches are moulded in polycarbonate, a material which is attacked by hydrocarbons.

ARBITRATION If at any time any question, dispute or difference whatsoever shall arise between the Customer and the Company in relation to or in connection with the contract, either party may give to the other party notice in writing of the existence of such question, dispute or difference and the same shall be referred to the arbitration of a third party to be mutually agreed upon, or failing agreement within 14 days of receipt of such notice, a party appointed by the president, at the time, of the UK organisation known as the Federation of British Electrotechnical and Allied Manufacturers' Associations. Any legal recourse requiring judiciary judgement shall take place through the courts and country of the Company's choice.

LEGAL CONSTRUCTION Unless otherwise agreed in writing, the contract shall in all aspects be construed and operate as an English contract and in conformity with English law.

STATUTORY AND OTHER REGULATIONS If the cost to the Company of performing its obligations under the contract, be increased or reduced by reason of the making or amendment after the date of tender of any law or of any order, regulation, or bye-law having the force of law that shall affect the performance of the Company's obligations under the contract, the amount of such increase or reduction shall be added to or deducted from the contract price as the case may be.

OVER RUNS Where products are manufactured as special for a Customer, for instance colour, marking or circuit, the Company reserves the right to despatch up to a maximum of 5% excess at the end of the order or at the completion of the schedule.

Arcoelectric Agents

ARGENTINA - Buenos Aires
Cristina Rogers
 e: crisrogers@fibertel.com.ar
 t: +54 11 4797 5480 f: +54 11 4797 5480

AUSTRALIA - Sydney
Beal Pritchett Pty Limited
 e: BealPritchett@bigpond.com
 t: +612 9437 6124 f: +612 9438 3379

AUSTRIA - Hörsching
Höllinger Industrie Vertrieb
 e: gerhard.hoellinger@aon.at
 t: +43 7221 74622 f: +43 7221 74622 21

BELGIUM - Brussels
Sprl Usitec Bvba
 e: usitec@skynet.be
 t: +32 2 343 70 52 f: +32 2 343 53 34

CANADA
Arcoelectric Corporation (Los Angeles)
 e: info@arcoelectric.com
 t: +1 818 700 1933 f: +1 818 700 9541

CHINA (Northern) - Qingdao
Widline Industrial Supply Co. Ltd
 e: landw@public.qd.sd.cn
 t: +86 532 607 1971/1981 f: +86 532 607 1991

HUNGARY - Budapest
Lomex KFT
 e: info@lomex.hu
 t: +361 349 5906 f: +361 320 3292

INDIA - Mumbai
Importex
 e: importex@vsnl.net
 t: +91 22 2361 2592 f: +91 22 2361 5097

REPUBLIC OF IRELAND - Dublin
Flynn Equipment Limited
 e: flynn.equipment@indigo.ie
 t: +353 1289 8727 f: +353 1289 8726

ISRAEL - Tel Aviv
A.S.R. (Avi Sasson Representatives)
 e: asr@isdnet.il
 t: +97 2350 15322 f: +97 2350 31986

ITALY - Milan
Fusit Srl
 e: fusit@fusit.it
 t: +3902 26 68 00 53 f: +3902 26 68 02 97

KOREA - Seoul
electroCOM
 e: electrocom@empal.com
 t: +82 2473 0840-2 f: +82 2486 1609

SINGAPORE - Singapore
Hitachi High-Technologies (S) Pte Ltd
 e: bernard-tan@hitachi-hitec.com.sg
 t: +65 6733 2787 f: +65 6737 8187

SINGAPORE - Singapore
Jelco Private Limited (Stockist)
 e: jelco@cyberway.com.sg
 t: +65 6561 1988 f: +65 6567 6242

SLOVAKIA - Skalica
Amicus sk.spol.sr.o
 e: amicus@ba.psg.sk
 t: +421 801 664 8644 f: +421 801 664 8530

SLOVENIA - Postojna
Ventes d.o.o.
 e: ventes@siol.net
 t: +386 1 709 7250 f: +386 1 709 7251

SOUTH AFRICA - Johannesburg
O & C Alexander Sales (Pty) Limited
 e: ocalex@nwweb.co.za
 t: +27 11 403 3332 f: +27 11 403 1026

SPAIN - Barcelona
Ermec
 e: ermec@ermec.com
 t: +34 93 450 1600 f: +34 93 433 0885



CYPRUS - Nicosia
Solmatic Ltd
 e: SOLMATIC@cytanet.com.cy
 t: +357 249 7907 f: +357 231 4844

CZECH REPUBLIC - Prague
Ampra CZ s.r.o.
 e: ampracz@ampra.cz
 t: +420 2 8393 1122/2244 f: +420 2 8393 3344

DENMARK - Hvidovre
Chemo Electric A/S
 e: info@chemolec.dk
 t: +45 36 77 30 44 f: +45 36 77 30 88

FINLAND - Turku
OEM Automatic OY
 e: jouni.joutsio@fi.oem.se
 t: +358 2 4120 400 f: +358 2 4120 496

FRANCE - Champs sur Marne
B.R.N. Composants
 e: brn.composants@libertysurf.fr
 t: +33 1 45 16 12 32 f: +33 1 45 16 12 38

GERMANY - Fulda
Maluska Elektronik GmbH
 e: info@maluska.de
 t: +49 661 9475-0 f: +49 661 9475-30

GREECE - Athens
Extant Limited
 e: interep@otenet.gr
 t: +30 210 861 6334 f: +30 210 861 7622

MEXICO
Arcoelectric Corporation (Los Angeles)
 e: info@arcoelectric.com
 t: +1 818 700 1933 f: +1 818 700 9541

NETHERLANDS - Achterveld
Calpe BV
 e: info@calpe.nl
 t: +31 342 45 15 44 f: +31 342 45 13 64

NORWAY - Drammen
OEM Automatic A/S
 e: info@no.oem.se
 t: +47 3289 7270 f: +47 3289 7280

PHILIPPINES - Makati City
Pylon International Trading Corporation
 e: pylontesting@yahoo.com
 t: +632 892 8458 f: +632 812 8703

POLAND - Warsaw
Elemco Jacek Piskorski
 e: elemco@medianet.pl
 t: +48 22 877 3773 f: +48 22 877 3773

PORTUGAL - Cascais
Hotelec Equipamentos Electricos Lda
 e: hotelec@netcabo.pt
 t: +351 214 832 681 f: +351 214 831 550

ROMANIA - Bucharest
LS Electronic Components
 e: constantin.savu@ecas.ro
 t: +40 21 230 2550 f: +40 21 231 2173

RUSSIA - St Petersburg
ElectroMir
 e: erk@electromir.com
 t: +7 812 320 6488 f: +7 812 320 6490

SWEDEN - Tranås
OEM Component AB
 e: info@comp.oem.se
 t: +46 140 360 600 f: +46 140 360 699

SWITZERLAND - Lausanne
Orlamp SA
 e: info@orlamp.ch
 t: +41 21 323 1434 f: +41 21 323 4214

TAIWAN - Taipei
Inalways Corporation
 e: inalways@mail.inalways.com.tw
 t: +886 22 299 6370 f: +886 22 299 7053

THAILAND - Bangkok
Vutipong Electronic Co. Ltd
 e: vutipong5@hotmail.com
 t: +662 226 6496-9 f: +662 623 8617

TURKEY - Izmir
Metot Sanayi Ve Ticaret Limited Sti
 e: metot@superonline.com
 t: +90 232 252 4824 f: +90 232 252 4825

USA - Los Angeles
Arcoelectric Corporation
 e: info@arcoelectric.com
 t: +1 818 700 1933 f: +1 818 700 9541

UK Stockists

Arrow Catalogue
Essex
 t: 01279 626777 f: 01279 441687
 e: sales@arrowuk.com

Farnell Electronic Components Ltd
Yorkshire
 t: 0870 1200 200 f: 0870 1200 201
 e: sales@farnell.com

E Preston Electrical Ltd
Cheshire
 t: 0161 339 5177 f: 0161 343 1935
 e: sales@epreston.co.uk

R S Components
Northants
 t: 01536 201201 f: 01536 201501
 e: general@rswww.com

Arcoelectric Switches plc,
 Central Avenue,
 West Molesey, Surrey
 England KT8 2RF

tel: +44 (0)20 8979 3232
 fax: +44 (0)20 8979 2565
 info@arcoswitch.co.uk
 www.arcoelectric.co.uk