

A02 series

Pushbutton switches & indicators

Distinctive features and specifications

A02_AX1607USR2



- ❑ Panel Sealed to IP65
- ❑ Single pole to four pole changeover
- ❑ Engraving & film legends
- ❑ Captive screw & push on tab terminals
- ❑ 12A 250VAC

ELECTRICAL SPECIFICATIONS

- **Current/Voltage Rating** : 25mA 5VAC Min, 12A 250VAC max, 12A 12VDC max
- **Initial Contact Resistance** : 10mΩ max at 1A 4VDC
- **Insulation Resistance** : 50MΩ min
- **Dielectric Strength** : 2KV between open contacts, 4KV live to accessible
- **Electrical Life** : 50,000 cycles min
- **Contact Gap** : Double break 2 x 1,5mm (0.059)
- **Insulation** : Class 2
- **Lamp Life** : LED, 60,000 hours to 75% relative luminosity filament, approx. 5000 hours, neon, approx. 10,000 hours

MECHANICAL SPECIFICATIONS

- **Mechanical Life (operator)** : momentary, 1 million cycles, maintained 100,000 cycles
- **Lamp** : Midget grove T1 ¾ filament, neon or LED
- **Terminals** : M3 captive screw and push on tab terminal

GENERAL SPECIFICATIONS

- **Operating Temperature** : -20°C to +85°C
- **Sealing** : Panel sealed to IP65, rear of panel IP40

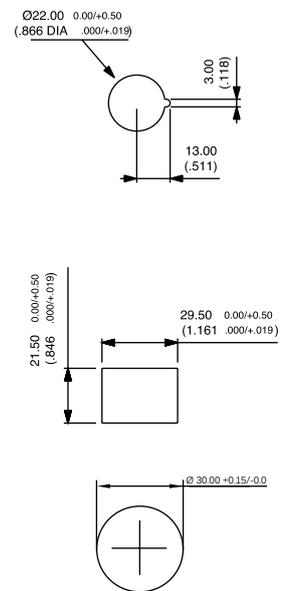
AGENCY APPROVALS



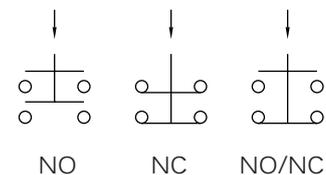
MATERIALS

- **Screens** : PC
- **Reflector Assembly** : PC
- **Optional Metal Bezel** : Nickel plated brass
- **Operator** : PBT
- **Nut** : ABS
- **Camtrack Momentary** : PPE
- **Camtrack Maintained** : PPSU
- **Switch Block 1 & 2 Pole** : PBT
- **Switch Block 3 & 4 Pole** : PEI
- **Contacts** : Gold plated silver

PANEL CUT OUT



CIRCUIT



Dimensions : first dimensions are in mm while inches are shown in brackets. Refer to the following pages for further information.



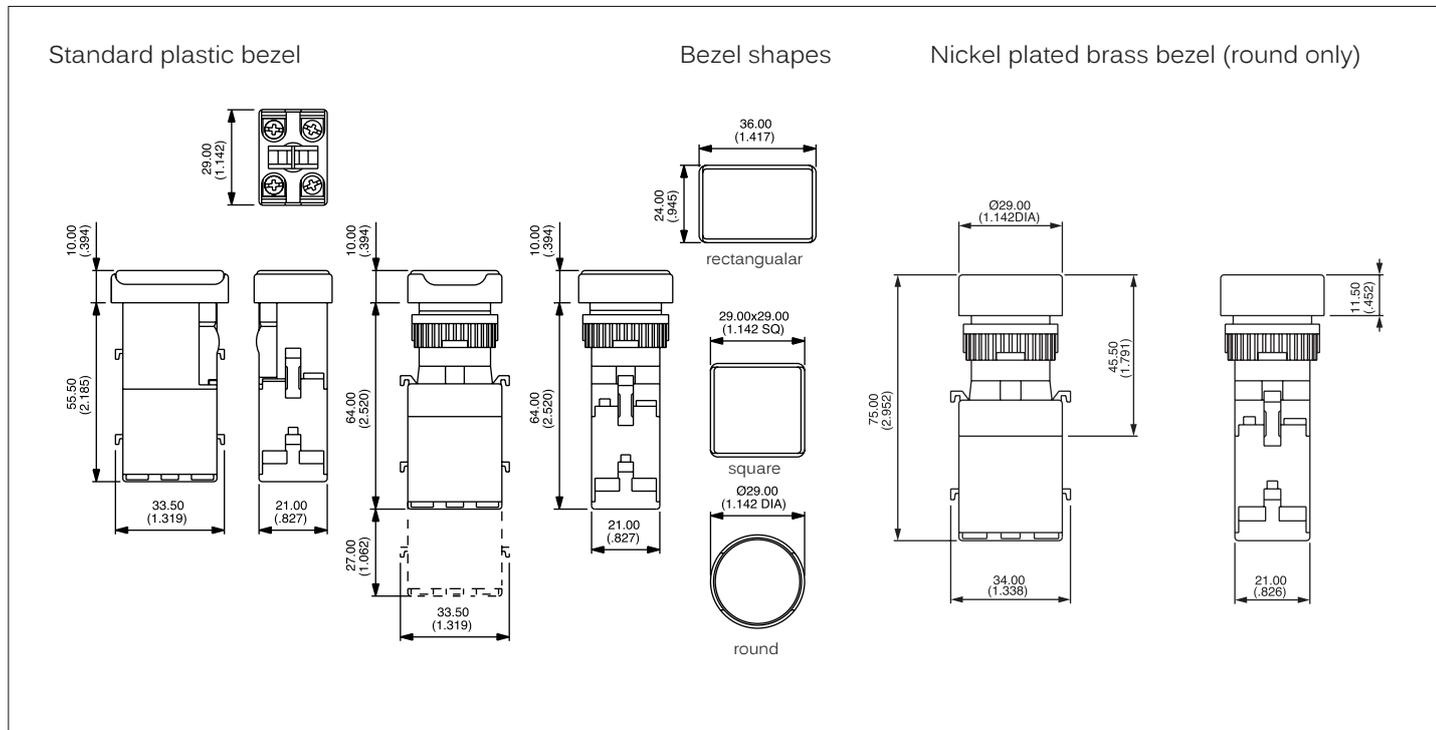
Mounting accessories : standard hardware 1 nut and 1 sealing washer.

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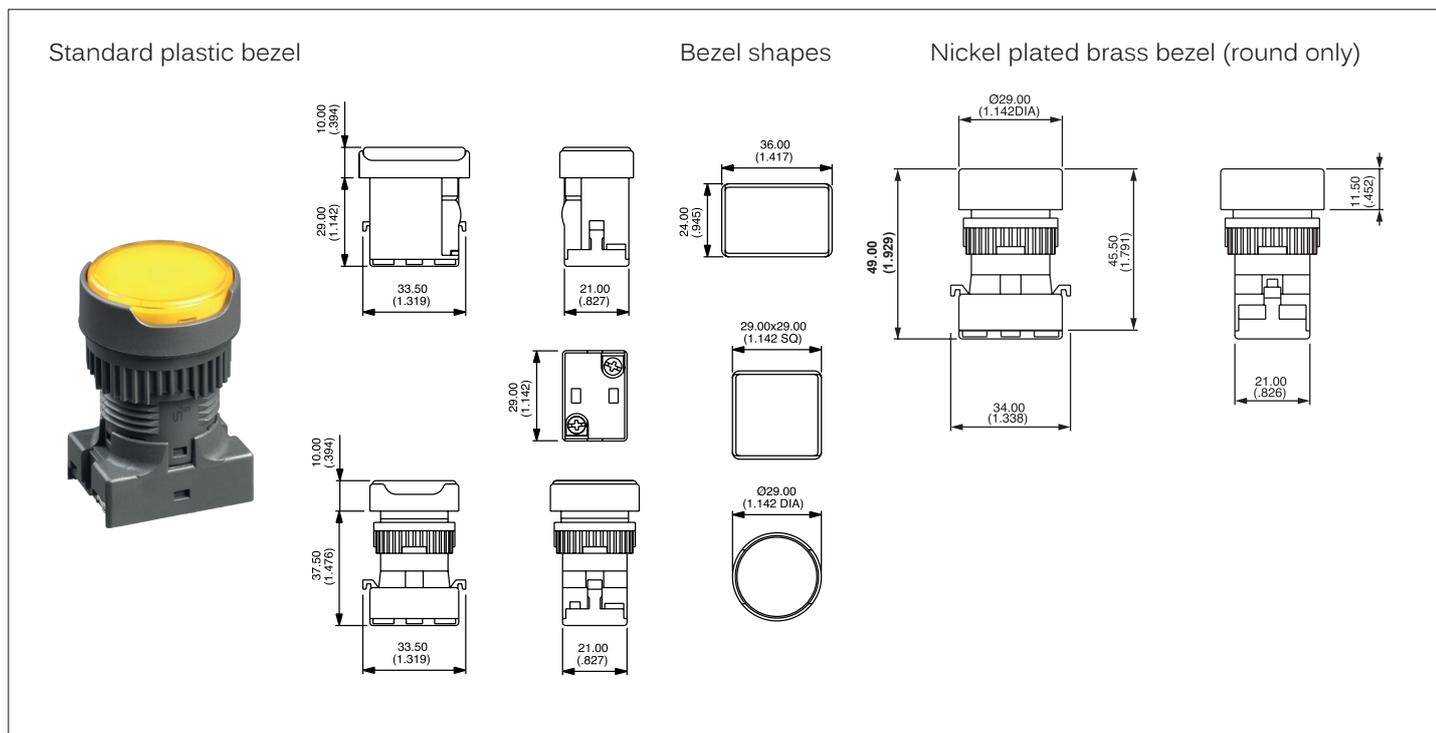
Pushbutton switches & indicators

Panel cut-out $\varnothing 22\text{mm}$ (0.866) or 29.5 (1.161) x 21.5(0.846)mm

$\varnothing 22\text{mm}$ or 29.5 x 21.5mm Surface mount pushbutton



$\varnothing 22\text{mm}$ or 29.5 x 21.5mm Surface mount indicator



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Pushbutton switches & indicators

Overview

Pushbutton

Screen			Lamp (if required)			Operator (with standard bezel)			Switch block		
Bezel	Colour	Part No	Lamp	Voltage	Part No	Bezel	Description	Lamp type	Part No	Contacts	Part No
	black	A0261A	Filament	6.3V	A0141A		Illum, momentary	Lamp/LED bulb	A0201Y	1 N.O.	A02501
	red	A0261B	Filament	14V	A0141B		Illum, maintained	Lamp/LED bulb	A0201X	1 N.C.	A02502
	amber	A0261C	Filament	28V	A0141C		Non-illum, momentary		A0203Y	2 N.O.	A02503
	yellow	A0261D	Filament	36V	A0141D		Non-illum, maintained		A0203X	2 N.C.	A02504
	green	A0261E	Filament	48V	A0141E		Illum, momentary	Lamp/LED bulb	A0204Y	1 N.O./1 N.C.	A02505
	blue	A0261F	Filament	60V	A0141F		Illum, maintained	Lamp/LED bulb	A0204X		
	clear	A0261G	Neon	110V	A0143G		Non-illum, momentary		A0206Y		
	white	A0261J	Neon	220V	A0143H		Non-illum, maintained		A0206X		
	black	A0262A	LED	6V red	A0142L1		Illum, momentary	Lamp/LED bulb	A0207Y		
	red	A0262B	LED	6V green	A0142L2		Illum, maintained	Lamp/LED bulb	A0207X		
	amber	A0262C	LED	6V amber	A0142L3		Non-illum, momentary		A0209Y	1 N.O.	A02506
	yellow	A0262D	LED	12V red	A0142M1		Non-illum, maintained		A0209X	1 N.C.	A02507
	green	A0262E	LED	12V green	A0142M2					2 N.O.	A02508
	blue	A0262F	LED	12V amber	A0142M3					2 N.C.	A02509
	clear	A0262G	LED	12V blue	A0142M4					1 N.O./1 N.C.	A02510
	white	A0262J	LED	12V white	A0142M5						
	black	A0263A	LED	24V red	A0142N1		Illum, momentary	Lamp/LED bulb	A0210Y		
	red	A0263B	LED	24V green	A0142N2		Illum, maintained	Lamp/LED bulb	A0210X		
	amber	A0263C	LED	24V amber	A0142N3		Non-illum, momentary		A0212Y		
	yellow	A0263D	LED	24V blue	A0142N4		Non-illum, maintained		A0212X		
	green	A0263E	LED	24V white	A0142N5						
	blue	A0263F	LED	48V red	A0142P1						
	clear	A0263G	LED	48V green	A0142P2						
	white	A0263J	LED	48V amber	A0142P3						

Bezel: rectangular square round. 'Illum' - illuminated, 'Non-illum' - non illuminated

Operator (with nickel bezel)

Bezel	Description	Lamp type	Part No
	Illum, momentary	Lamp/LED bulb	A0210Y
	Illum, maintained	Lamp/LED bulb	A0210X
	Non-illum, momentary		A0212Y
	Non-illum, maintained		A0212X

Std bezel material : nickel plated brass
For optional black finish, add 'G' to the end of operator model number.

Second switch block

Contacts	Part No
1 N.O.	A02506
1 N.C.	A02507
2 N.O.	A02508
2 N.C.	A02509
1 N.O./1 N.C.	A02510

To achieve 3 or 4 pole switching, add second switch block from above table.

Indicator

Screen			Lamp			Operator (with standard bezel)			
Bezel	Colour	Part No	Lamp	Voltage	Part No	Bezel	Description	Lamp type	Part No
	black	A0261A	Filament	6.3V	A0141A		Indicator	Lamp/LED bulb	A0271
	red	A0261B	Filament	14V	A0141B		Indicator	Lamp/LED bulb	A0273
	amber	A0261C	Filament	28V	A0141C		Indicator	Lamp/LED bulb	A0275
	yellow	A0261D	Filament	36V	A0141D				
	green	A0261E	Filament	48V	A0141E				
	blue	A0261F	Filament	60V	A0141F				
	clear	A0261G	Neon	110V	A0143G		Illum, indicator	Lamp/LED bulb	A0277
	white	A0261J	Neon	220V	A0143H				
	black	A0262A	LED	6V red	A0142L1				
	red	A0262B	LED	6V green	A0142L2				
	amber	A0262C	LED	6V amber	A0142L3				
	yellow	A0262D	LED	12V red	A0142M1				
	green	A0262E	LED	12V green	A0142M2				
	blue	A0262F	LED	12V amber	A0142M3				
	clear	A0262G	LED	12V blue	A0142M4				
	white	A0262J	LED	12V white	A0142M5				
	black	A0263A	LED	24V red	A0142N1				
	red	A0263B	LED	24V green	A0142N2				
	amber	A0263C	LED	24V amber	A0142N3				
	yellow	A0263D	LED	24V blue	A0142N4				
	green	A0263E	LED	24V white	A0142N5				
	blue	A0263F	LED	48V red	A0142P1				
	clear	A0263G	LED	48V green	A0142P2				
	white	A0263J	LED	48V amber	A0142P3				

Bezel: rectangular square round. 'Illum' - illuminated, 'Non-illum' - non illuminated

Std bezel material : nickel plated brass
For optional black finish, add 'G' to the end of operator model number.



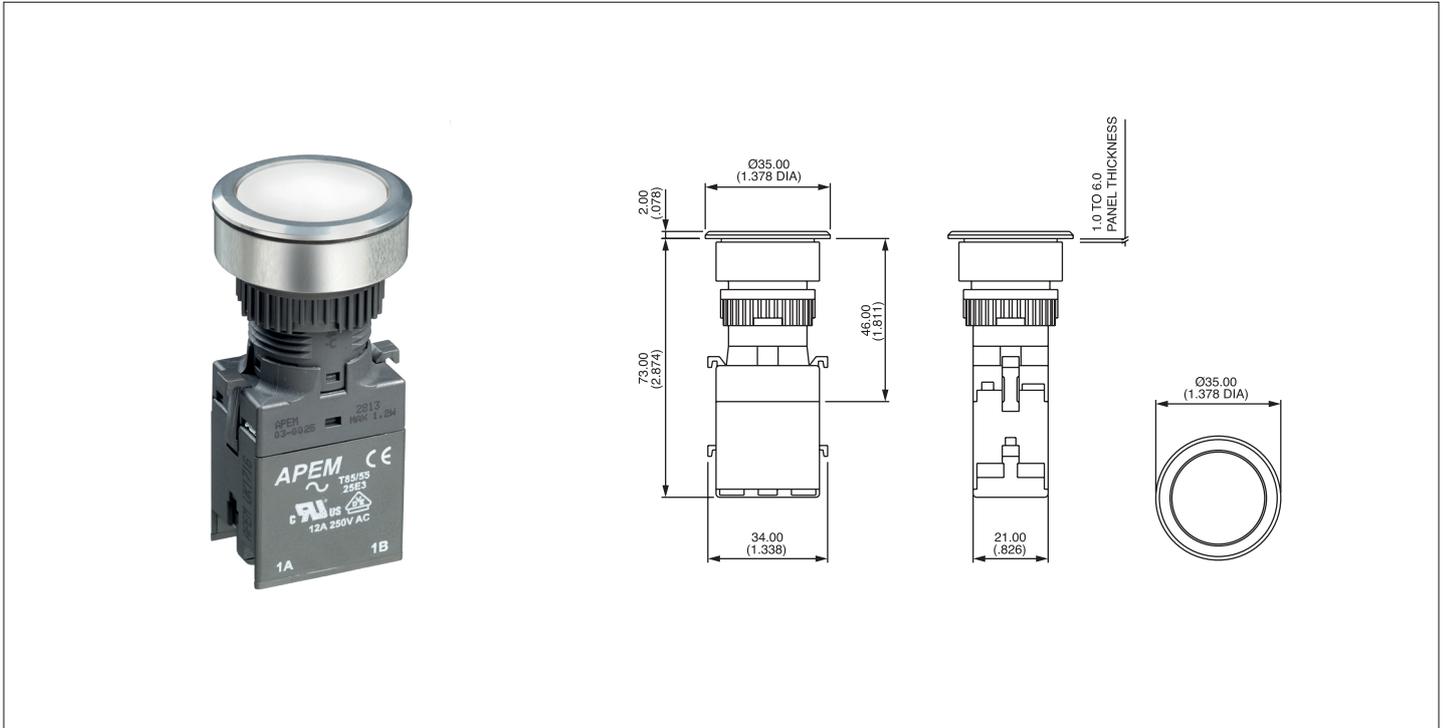
Unsealed switches & indicators (IP40) suffix 01 to the end of the part number.
Screen engraving insertable legends, & bi-color LED's please contact APEM
For 6.35mm push on tab terminals suffix the switch block part number with SP

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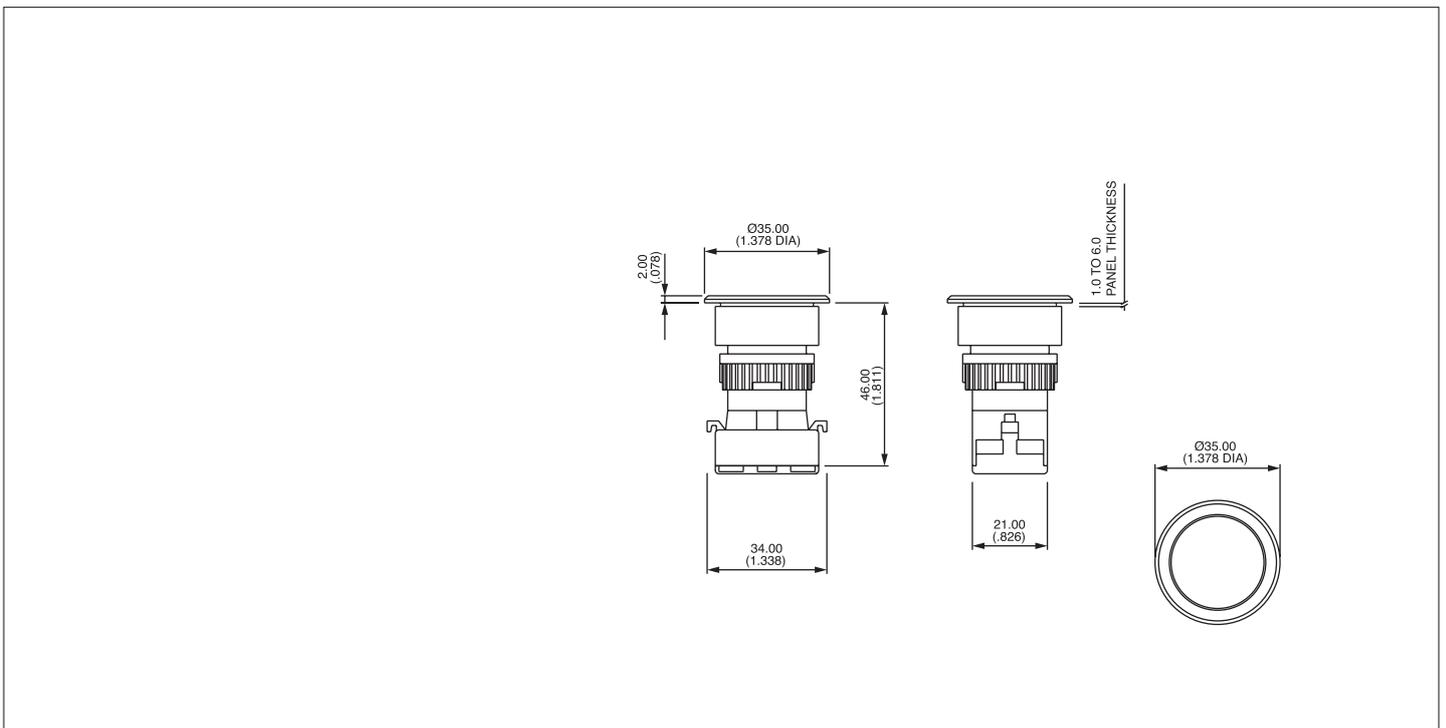
Flush mount pushbutton switches & indicators

Panel cut-out $\varnothing 30\text{mm}$

$\varnothing 30\text{mm}$ Flush mount pushbutton



$\varnothing 30\text{mm}$ Flush mount indicator



A02 series

Flush mount pushbutton switches & indicators

Overview

Pushbutton

Screen			Lamp <small>(if required)</small>			Operator			Switch block		
Bezel	Colour	Part No	Lamp	Voltage	Part No	Bezel	Description	Lamp type	Part No	Contacts	Part No
○	black	A0263A	Filament	6.3V	A0141A	○	Illum, momentary	Lamp/LED bulb	A0214Y	1 N.O.	A02501
○	red	A0263B	Filament	14V	A0141B	○	Illum, maintained	Lamp/LED bulb	A0214X	1 N.C.	A02502
○	amber	A0263C	Filament	28V	A0141C	○	Non-illum, momentary		A0215Y	2 N.O.	A02503
○	yellow	A0263D	Filament	36V	A0141D	○	Non-illum, maintained		A0215X	2 N.C.	A02504
○	green	A0263E	Filament	48V	A0141E	⌋	Illum, indicator	Lamp/LED bulb	A02791	1 N.O./1 N.C.	A02505
○	blue	A0263F	Filament	60V	A0141F	Std bezel material : silver anodised aluminium. For optional black anodised aluminium, add 'G' to the end of operator model number.					
○	clear	A0263G	Neon	110V	A0143G						
○	white	A0263J	Neon	220V	A0143H						
			LED	6V red	A0142L1						
			LED	6V green	A0142L2						
			LED	6V amber	A0142L3						
			LED	12V red	A0142M1						
			LED	12V green	A0142M2						
			LED	12V amber	A0142M3						
			LED	12V blue	A0142M4						
			LED	12V white	A0142M5						
			LED	24V red	A0142N1						
			LED	24V green	A0142N2						
			LED	24V amber	A0142N3						
			LED	24V blue	A0142N4						
			LED	24V white	A0142N5						
			LED	48V red	A0142P1						
			LED	48V green	A0142P2						
			LED	48V amber	A0142P3						

Bezel: rectangular square round. 'Illum' - illuminated, 'Non-illum' - non illuminated

Second switch block

Contacts	Part No
1 N.O.	A02506
1 N.C.	A02507
2 N.O.	A02508
2 N.C.	A02509
1 N.O./1 N.C.	A02510

To achieve 3 or 4 pole switching, add second switch block from above table.

Indicator

Screen			Lamp			Operator			
Bezel	Colour	Part No	Lamp	Voltage	Part No	Bezel	Description	Lamp type	Part No
○	black	A0263A	Filament	6.3V	A0141A	○	Illum, indicator	Lamp/LED bulb	A02791
○	red	A0263B	Filament	14V	A0141B	Std bezel material : silver anodised aluminium. For optional black anodised aluminium, add 'G' to the end of operator model number.			
○	amber	A0263C	Filament	28V	A0141C				
○	yellow	A0263D	Filament	36V	A0141D				
○	green	A0263E	Filament	48V	A0141E				
○	blue	A0263F	Filament	60V	A0141F				
○	clear	A0263G	Neon	110V	A0143G				
○	white	A0263J	Neon	220V	A0143H				
			LED	6V red	A0142L1				
			LED	6V green	A0142L2				
			LED	6V amber	A0142L3				
			LED	12V red	A0142M1				
			LED	12V green	A0142M2				
			LED	12V amber	A0142M3				
			LED	12V blue	A0142M4				
			LED	12V white	A0142M5				
			LED	24V red	A0142N1				
			LED	24V green	A0142N2				
			LED	24V amber	A0142N3				
			LED	24V blue	A0142N4				
			LED	24V white	A0142N5				
			LED	48V red	A0142P1				
			LED	48V green	A0142P2				
			LED	48V amber	A0142P3				

Bezel: rectangular square round. 'Illum' - illuminated, 'Non-illum' - non illuminated



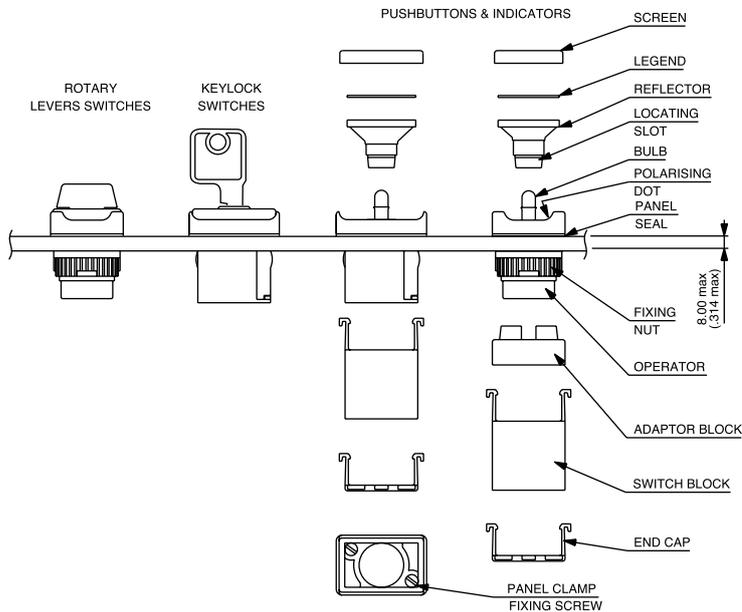
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Installation & tools

Installation guide



PANEL MOUNTING ASSEMBLY

- Drill/punch hole shaped as shown on page one.
- Assemble front operator through hole and
 - a) Round & square types, tighten nut to a maximum torque of 0.8Nm using tool no. 30-0001. Snap on the adaptor block fit fixing nut and tighten to a maximum
 - b) Rectangular types, tighten the two panel fixing screws in the front to a maximum torque of 6cNm
- Wire chosen switch block as required and snap onto back of operator with optional end cap
- Fit bulb if required using tool No. 30-0002.
- Snap screen onto reflector assembly with legend in between if required and snap onto front operator, take care to line up the locating slot with the polarising dot and not to damage the internal seal
- To place/remove the bulb use the bulb extractor 30-0002.

SWITCH BLOCK ASSEMBLY

The switch block snaps onto the adaptor block, to remove, lever out the latches using a small screwdriver taking care not to overbend, pull off the block from the adaptor block.

Tools

Nut fixing key



30-0001

Bulb remover



30-0002

Accessories

Switch block end cap, terminal guard



14-0005