

# A01 series

## Pushbutton switches & indicators

Distinctive features and specifications

A01\_AX1607USR1



- ❑ Panel Sealed to IP65
- ❑ Single pole to four pole changeover
- ❑ Custom engraving or film legends options
- ❑ Push on tab terminals
- ❑ 6A 250VAC

### ELECTRICAL SPECIFICATIONS

- **Current/Voltage Rating** : 10mA 5VAC min, 6A 250VAC, 6Amp 12VDC
- **Initial Contact Resistance** : 10mΩ max at 1A 4VDC
- **Insulation Resistance** : 50MΩ min
- **Dielectric Strength** : 750V between open contacts, 5KV live to accessible
- **Electrical Life** : 50,000 cycles min
- **Contact Gap** : >1mm (0.039)
- **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** : Solder/quick connect 2.8mm (0.110)

### GENERAL SPECIFICATIONS

- **Operating Temperature** : -20°C to +55°C
- **Solder Heat Resistance** : 350°C for 5 seconds
- **Sealing** : Panel sealed to IP65, rear of panel IP40

### AGENCY APPROVALS

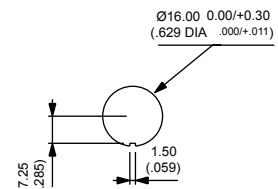


### MATERIALS

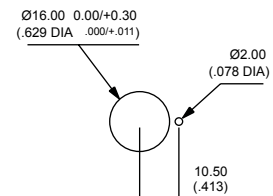
- **Screens** : PC
- **Reflector Assembly** : PC
- **Operator** : PBT
- **Nut** : ABS
- **Camtrack Momentary** : PPE
- **Camtrack Maintained** : PPSU
- **Switch Block 1 & 2 Pole** : PBT
- **Switch Block 3 & 4 Pole** : PEI
- **Contacts** : Gold plated silver

### PANEL CUT OUT

Round & Square bezel operators only

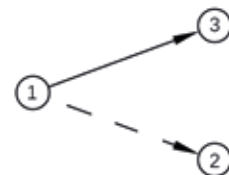


Rectangular bezel operators only



Max panel thickness 8mm (0.314)

### CIRCUIT



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



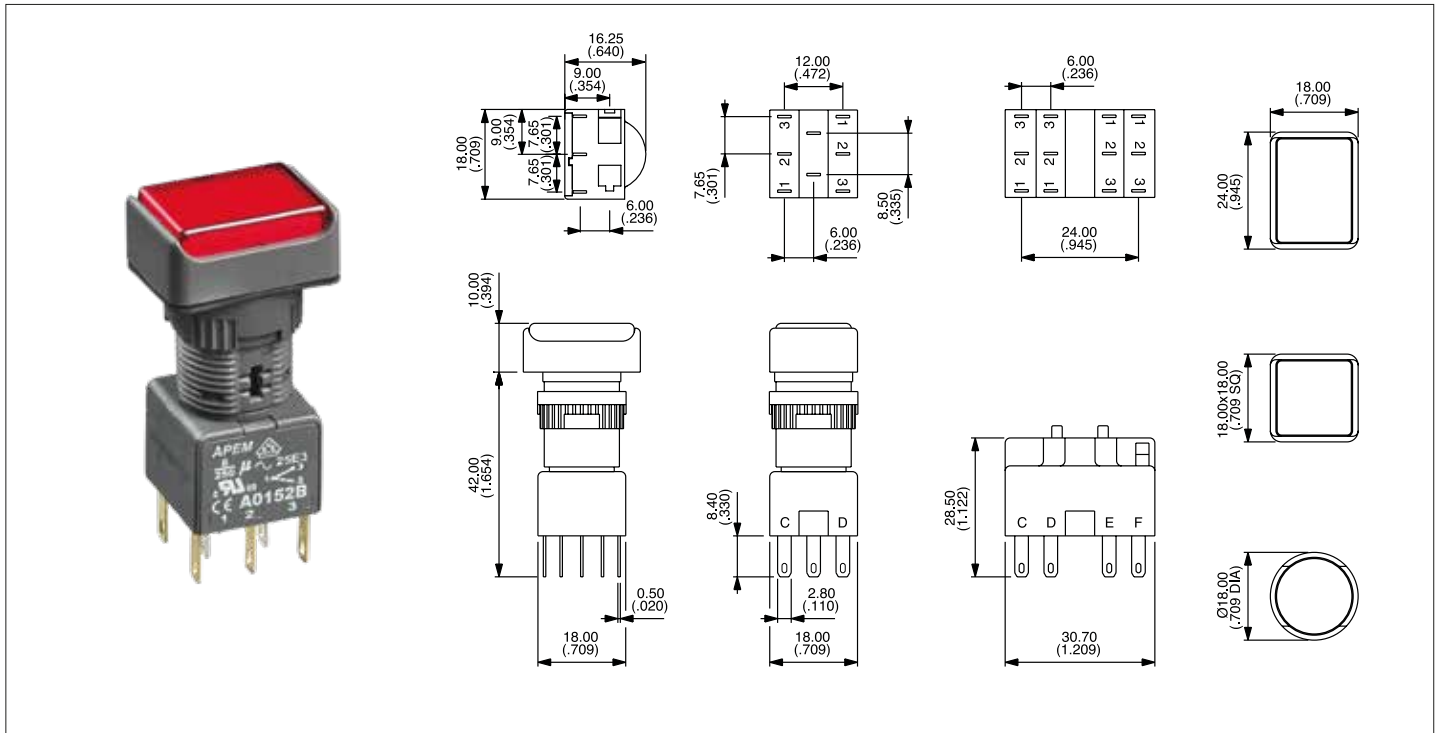
Mounting accessories : standard hardware 1 nut and 1 sealing washer.

# A01 series

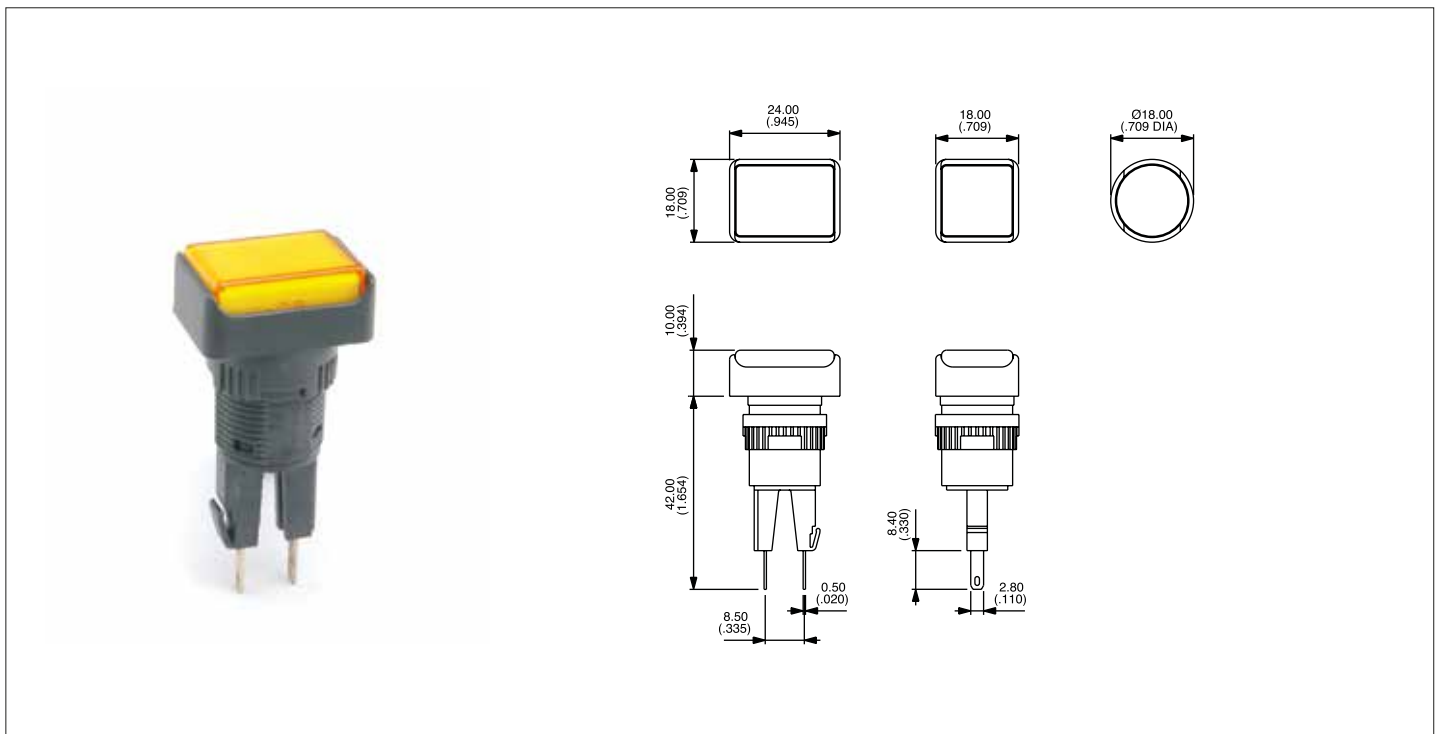
## Pushbutton switches & indicators

Panel cut-out  $\varnothing 16$  (0.755)

### Pushbutton



### Indicator



# A01 series

## Pushbutton switches & indicators

Overview

### Pushbutton

| Screen |        |         | +        | Lamp <small>(if required)</small> |         | +      | Operator |                       | +       | Switch block |         |
|--------|--------|---------|----------|-----------------------------------|---------|--------|----------|-----------------------|---------|--------------|---------|
| Bezel  | Colour | Part No | Lamp     | Voltage                           | Part No | Pole   | Bezel    | Description           | Part No | No of poles  | Part No |
|        | black  | A0161A  | Filament | 6.3V                              | A0141A  | 1 or 2 |          | Illum, momentary      | A0101Y  | Single pole  | A0151B  |
|        | red    | A0161B  | Filament | 14V                               | A0141B  | 1 or 2 |          | Illum, maintained     | A0101X  | Double pole  | A0152B  |
|        | amber  | A0161C  | Filament | 28V                               | A0141C  | 1 or 2 |          | Non-illum, momentary  | A0102Y  | Three pole   | A0155B  |
|        | yellow | A0161D  | Filament | 36V                               | A0141D  | 1 or 2 |          | Non-illum, maintained | A0102X  | Four pole    | A0153B  |
|        | green  | A0161E  | Filament | 48V                               | A0141E  | 3 or 4 |          | Illum, momentary      | A0103Y  |              |         |
|        | blue   | A0161F  | Filament | 60V                               | A0141F  | 3 or 4 |          | Illum, maintained     | A0103X  |              |         |
|        | clear  | A0161G  | Neon     | 110V                              | A0143G  | 3 or 4 |          | Non-illum, momentary  | A0104Y  |              |         |
|        | white  | A0161J  | Neon     | 220V                              | A0143H  | 3 or 4 |          | Non-illum, maintained | A0104X  |              |         |
|        | black  | A0162A  | LED      | 6V red                            | A0142L1 | 1 or 2 |          | Illum, momentary      | A0105Y  |              |         |
|        | red    | A0162B  | LED      | 6V green                          | A0142L2 | 1 or 2 |          | Illum, maintained     | A0105X  |              |         |
|        | amber  | A0162C  | LED      | 6V amber                          | A0142L3 | 1 or 2 |          | Non-illum, momentary  | A0106Y  |              |         |
|        | yellow | A0162D  | LED      | 12V red                           | A0142M1 | 1 or 2 |          | Non-illum, maintained | A0106X  |              |         |
|        | green  | A0162E  | LED      | 12V green                         | A0142M2 | 3 or 4 |          | Illum, momentary      | A0107Y  |              |         |
|        | blue   | A0162F  | LED      | 12V amber                         | A0142M3 | 3 or 4 |          | Illum, maintained     | A0107X  |              |         |
|        | clear  | A0162G  | LED      | 12V blue                          | A0142M4 | 3 or 4 |          | Non-illum, momentary  | A0108Y  |              |         |
|        | white  | A0162J  | LED      | 12V white                         | A0142M5 | 3 or 4 |          | Non-illum, maintained | A0108X  |              |         |
|        | black  | A0163A  | LED      | 24V red                           | A0142N1 | 1 or 2 |          | Illum, momentary      | A0109Y  |              |         |
|        | red    | A0163B  | LED      | 24V green                         | A0142N2 | 1 or 2 |          | Illum, maintained     | A0109X  |              |         |
|        | amber  | A0163C  | LED      | 24V amber                         | A0142N3 | 1 or 2 |          | Non-illum, momentary  | A0110Y  |              |         |
|        | yellow | A0163D  | LED      | 24V blue                          | A0142N4 | 1 or 2 |          | Non-illum, maintained | A0110X  |              |         |
|        | green  | A0163E  | LED      | 24V white                         | A0142N5 | 3 or 4 |          | Illum, momentary      | A0111Y  |              |         |
|        | blue   | A0163F  | LED      | 48V red                           | A0142P1 | 3 or 4 |          | Illum, maintained     | A0111X  |              |         |
|        | clear  | A0163G  | LED      | 48V green                         | A0142P2 | 3 or 4 |          | Non-illum, momentary  | A0112Y  |              |         |
|        | white  | A0163J  | LED      | 48V amber                         | A0142P3 | 3 or 4 |          | Non-illum, maintained | A0112X  |              |         |

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

### Indicator

| Screen |        |         | +        | Lamp      |         | +     | Operator    |         |
|--------|--------|---------|----------|-----------|---------|-------|-------------|---------|
| Bezel  | Colour | Part No | Lamp     | Voltage   | Part No | Bezel | Description | Part No |
|        | black  | A0161A  | Filament | 6.3V      | A0141A  |       | Indicator   | A0171   |
|        | red    | A0161B  | Filament | 14V       | A0141B  |       | Indicator   | A0172   |
|        | amber  | A0161C  | Filament | 28V       | A0141C  |       | Indicator   | A0173   |
|        | yellow | A0161D  | Filament | 36V       | A0141D  |       |             |         |
|        | green  | A0161E  | Filament | 48V       | A0141E  |       |             |         |
|        | blue   | A0161F  | Filament | 60V       | A0141F  |       |             |         |
|        | clear  | A0161G  | Neon     | 110V      | A0143G  |       |             |         |
|        | white  | A0161J  | Neon     | 220V      | A0143H  |       |             |         |
|        | black  | A0162A  | LED      | 6V red    | A0142L1 |       |             |         |
|        | red    | A0162B  | LED      | 6V green  | A0142L2 |       |             |         |
|        | amber  | A0162C  | LED      | 6V amber  | A0142L3 |       |             |         |
|        | yellow | A0162D  | LED      | 12V red   | A0142M1 |       |             |         |
|        | green  | A0162E  | LED      | 12V green | A0142M2 |       |             |         |
|        | blue   | A0162F  | LED      | 12V amber | A0142M3 |       |             |         |
|        | clear  | A0162G  | LED      | 12V blue  | A0142M4 |       |             |         |
|        | white  | A0162J  | LED      | 12V white | A0142M5 |       |             |         |
|        | black  | A0163A  | LED      | 24V red   | A0142N1 |       |             |         |
|        | red    | A0163B  | LED      | 24V green | A0142N2 |       |             |         |
|        | amber  | A0163C  | LED      | 24V amber | A0142N3 |       |             |         |
|        | yellow | A0163D  | LED      | 24V blue  | A0142N4 |       |             |         |
|        | green  | A0163E  | LED      | 24V white | A0142N5 |       |             |         |
|        | blue   | A0163F  | LED      | 48V red   | A0142P1 |       |             |         |
|        | clear  | A0163G  | LED      | 48V green | A0142P2 |       |             |         |
|        | white  | A0163J  | LED      | 48V amber | A0142P3 |       |             |         |

Bezel: rectangular square round.



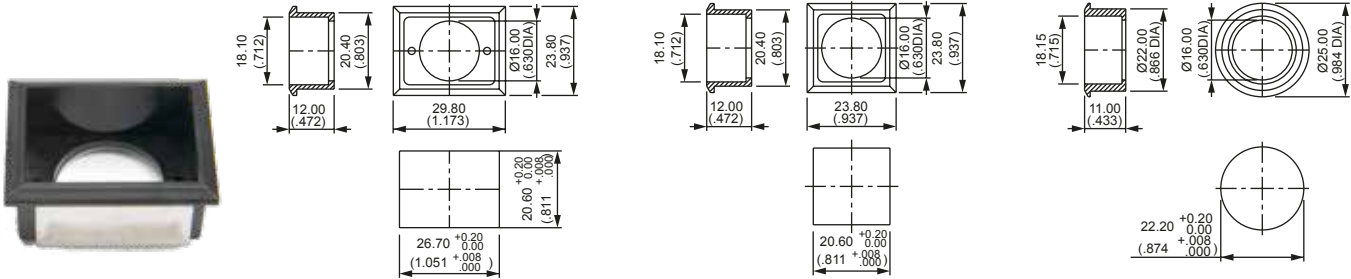
Unsealed switches & indicators (IP40) suffix 01 to the end of the part number.  
Screen engraving insertable legends, & bi-color LED's please contact APEM

# A01 series Pushbutton switches & indicators

Accessories

## Flush mount bezels

Dark grey plastic material – supplied with sealing washer

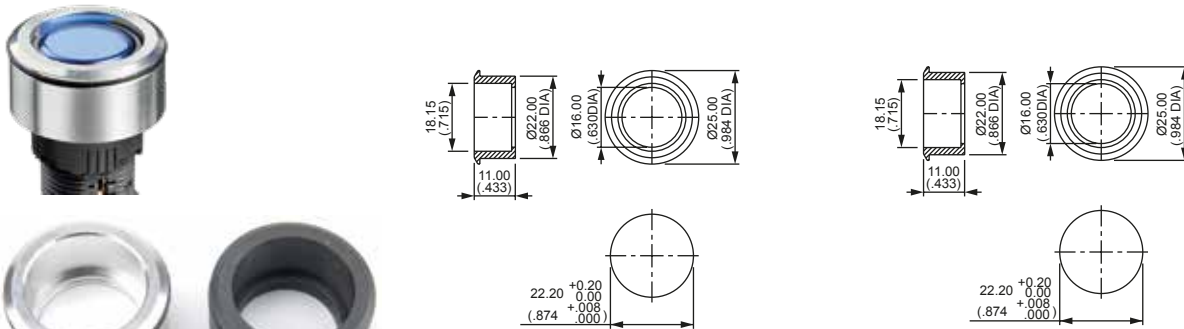


Rectangular : A01FM1

Square : A01FM

Round : A01FM2

Anodised aluminium/matt black



Round natural anodised : A01FMM

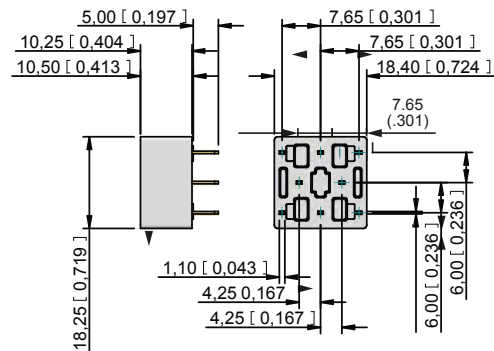
Round matt black : A01FMMG

## PCB Sockets

Number of Poles

Part No.

|                                |        |
|--------------------------------|--------|
| Single pole, non illuminated : | A01PC1 |
| Double pole, non illuminated : | A01PC2 |
| Single pole, illuminated :     | A01PC3 |
| Double pole, illuminated :     | A01PC4 |
| Indicator :                    | A01PC5 |



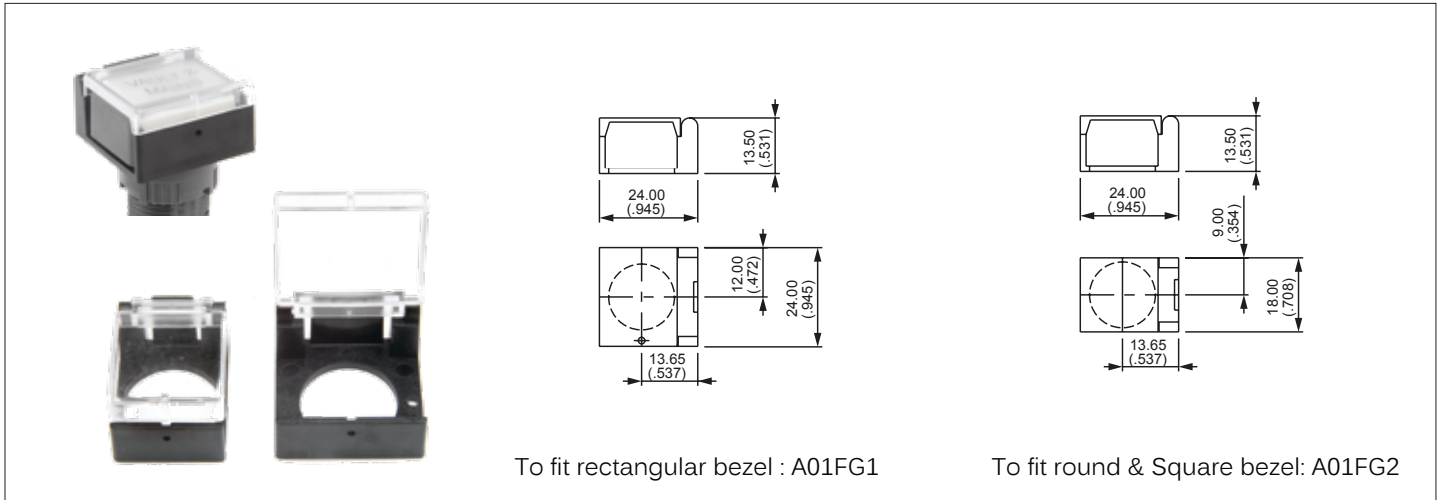
Dimensions : first dimensions are in mm while inches are shown in brackets.  
Refer to the following pages for further information.

# A01 series

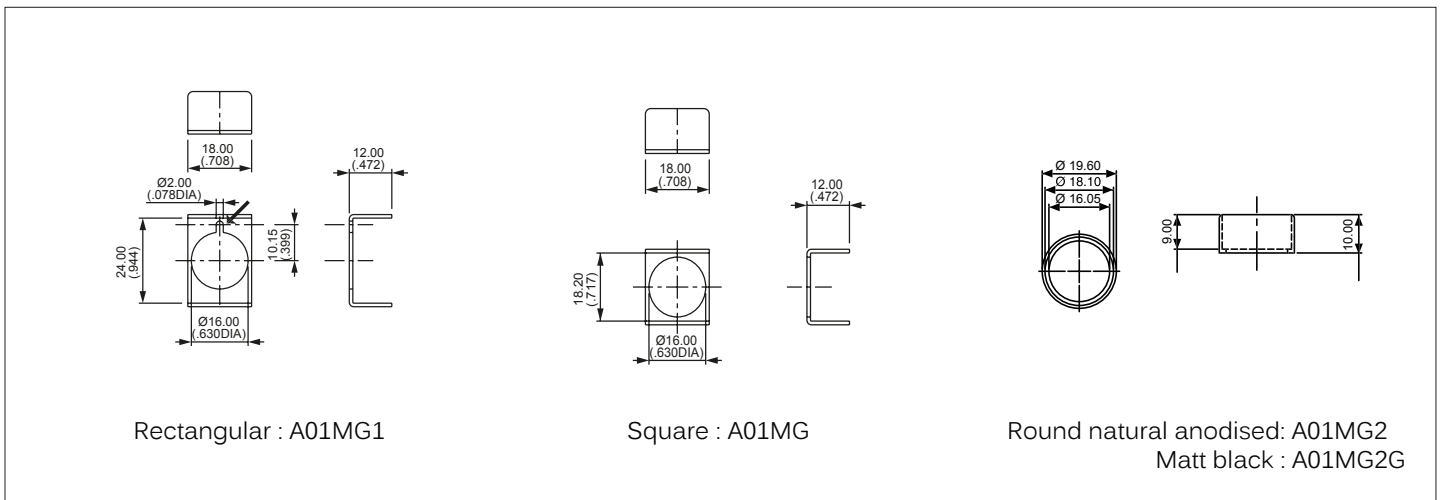
## Pushbutton switches & indicators

### Accessories

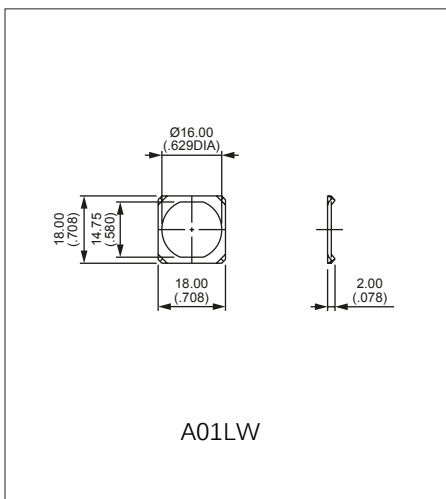
#### Flap guards



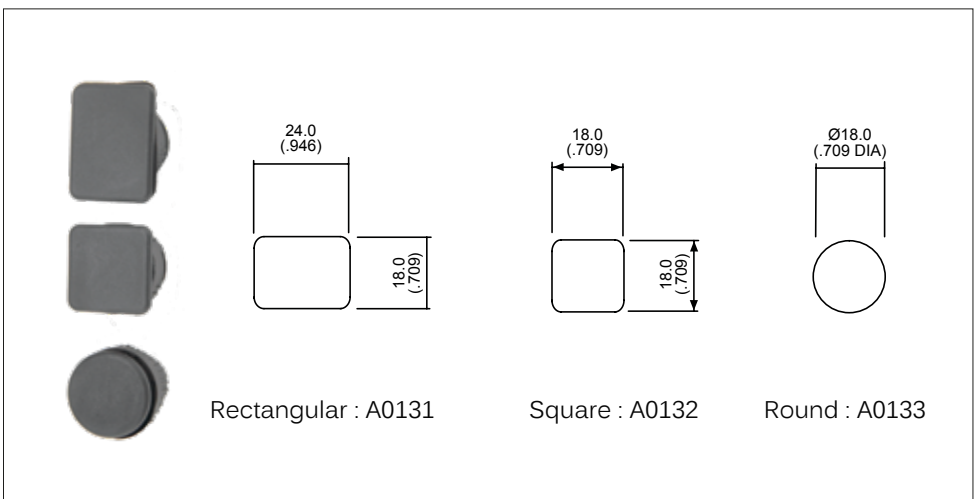
#### Aluminium bezel protection guards



#### Anti rotation ring



#### Blanking plugs



# A01 series

## Pushbutton switches & indicators

Installation & tools

### Installation guide

The diagrams illustrate the assembly of the switch block and the panel mounting assembly. On the left, 'ROTARY LEVER SWITCHES' and 'KEYLOCK SWITCHES' are shown. The central diagram shows the 'PUSHBUTTONS & INDICATORS' assembly with components labeled: SCREEN, LEGEND, REFLECTOR, LOCATING SLOT, BULB, POLARISING DOT, PANEL SEAL, FIXING NUT, OPERATOR, LATCH, and SWITCH BLOCK. A dimension line indicates a distance of 8.00 max (31.4 max) between the top of the operator and the bottom of the latch. Below the main diagram is a separate view of the 'SWITCH BLOCK ASSEMBLY'.



#### PANEL MOUNTING ASSEMBLY

- Drill/punch hole shaped as shown on page one.
- Assemble front operator through hole, fit fixing nut and tighten to a maximum torque of 0.8Nm using tool No. 30-0001.
- Wire chosen switch block as required and slide onto operator until latch engages.
- 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**

To assemble switch block to the operator, firstly, take care to line up the switch block with the back of the operator. Once in position slide on to the back of the operator. N.B. Ensure latch is fully engaged correctly onto the switch block. To remove switch block, depress the latch and slide the switch block off the operator.

### Tools

|  |  |
|--|--|
| <p>Nut fixing key</p>  <p>30-0001</p> | <p>Bulb remover</p>  <p>30-0002</p> |
|--|--|

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