# SW.RMOM.1801

# IR series

Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version



#### **DISTINCTIVE FEATURES**

Screw version up to 4 A
Tactile feedback
Sealed to IP67
Illuminated or non-illuminated
Flat round actuator for optional marking



#### **ENVIRONMENTAL SPECIFICATIONS**

- Front panel sealing: IP67 according to IEC 60529
- Shock resistance: 100 g according to IEC 512-4, test 6c
- Vibration resistance: 10-500Hz 10 g according to IEC 512-4, test 6d
- Salt spray : IEC 512-6, test 11f
- Operating temperature : -40°C to +85°C (-40 °F to +185 °F)



#### **ELECTRICAL SPECIFICATIONS**

- Max. current/voltage rating with resistive load :
- Gold plated contacts: Code 4 : 200 mA 48 VDC, 500,000 cycles Code 7 : 5 A 28 VDC, 70,000 cycles
- Silver contacts (code 2) screw terminals: 4 A 48 VDC, 500,000 cycles
- Initial contact resistance : 100 m $\Omega$  max.
- Insulation resistance : 1  $\text{G}\Omega$  min. at 500 VDC
- Dielectric strength: 1,500 Vrms





|                   |                 | LED COMPO                  | NENT SPECIFICATIONS  |
|-------------------|-----------------|----------------------------|----------------------|
| LED color         | Forward current | Typ. forward voltage       | Max. forward voltage |
| Super red (0S)    | 20 mA           | 2.1 V                      | 2.3 V                |
| Yellow (0Y)       | 20 mA           | 2.1 V                      | 2.3 V                |
| Green (0G)        | 20 mA           | 2.1 V                      | 2.3 V                |
| Blue (0B)         | 20 mA           | 3.2 V                      | 3.8 V                |
| White (0W)        | 20 mA           | 3.35 V                     | 4.25 V               |
| Red/Green (SG)    | 20 mA           | Red: 1.95 V / green: 2.1 V | 2.5 V                |
| Yellow/green (YG) | 20 mA           | Yellow: 2 V / green: 2.1 V | 2.5 V                |

A resistor must be series-connected by the user.

Resistor value = supply voltage - LED forward voltage

LED forward current

On flying lead versions, the LED resistor can be integrated by APEM on request.

The company reserves the right to change specifications without notice.

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#### **GENERAL SPECIFICATIONS**

- Panel thickness: 8 mm (.314) max.
- Total travel : 1.6 mm (.062) ± 0.3 mm
- Typical operating force : 4 N ± 2 N
- Low level or mechanical life: 1,000,000 cycles
- Torque: 0.8 Nm max. applied to nut
- Soldering: 320 °C (608 °F) max. for 3 sec.



#### **MATERIALS**

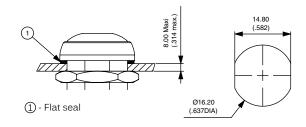
- Case: thermoplastic UL94-V0
- Actuator : polyamide 6/6
- Bushing/bezel : polyamide 6/6
- Contacts: 4 and 7: silver, gold plated
  - 2: silver (screw terminals)
- Multi-wire lead AWG20, section 0.6 mm2
- LED wire: AWG26, section 0.12 mm2
- Lens: polycarbonate
- Terminal seal : epoxy

 $\ensuremath{\mathsf{APEM}}$  products may be recycled at end-of-life for the re-claiming of valuable metal components.

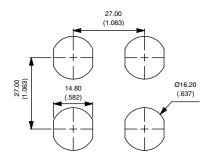


#### **MOUNTING**

PANEL CUT-OUT



MATRIX MOUNTING



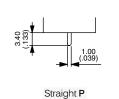


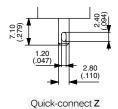
#### **TERMINALS**

ILLUMINATED MODELS



#### NON-ILLUMINATED MODELS



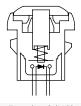


NON-ILLUMINATED MODELS



#### **ELECTRICAL FUNCTIONS**

ILLUMINATED MODELS





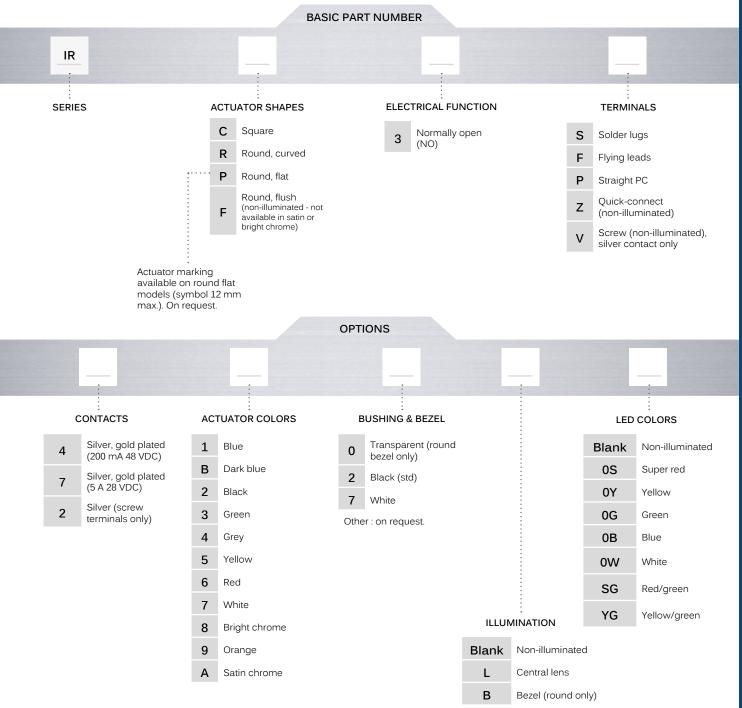
Function 3 (NO)

Function 3 (NO)

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### **(£3)**

#### **BUILD YOUR PART NUMBER**





#### **ABOUT THIS SERIES**

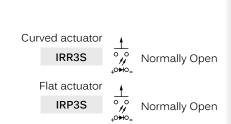
On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

- Notice: please note that not all combinations of above numbers are available. Refer to the following pages for further information.
- A sealing boot is available to protect the switches against frost and sand (P/N U7125). Round models only. See "Sealing Boot" section of website.
- Mounting accessories: Standard hardware supplied: 1 hex nut 19 mm (.748) across flats and 1 flat seal. Hex nut P/N U6715.

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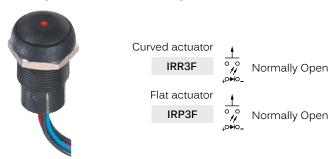
### ROUND - ILLUMINATED SOLDER LUG TERMINALS





Also available with straight PC terminals: IR•3P. LED color is indicated by the bottom of the switch.

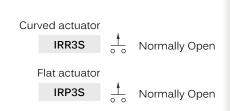
### ROUND - ILLUMINATED FLYING LEAD TERMINALS



Wire colors: black: NO contact, red: LED anode (+), blue: LED cathode (-)

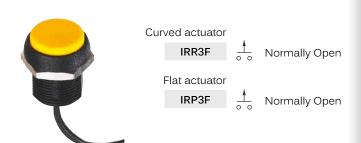
### ROUND - NON-LLUMINATED SOLDER LUG TERMINALS

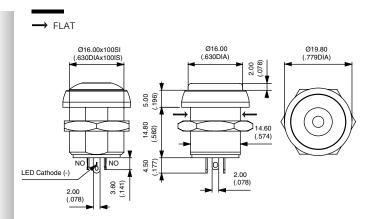


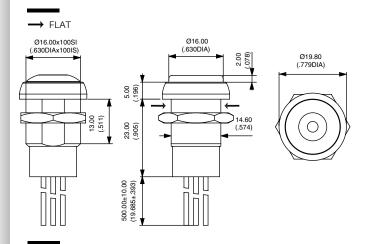


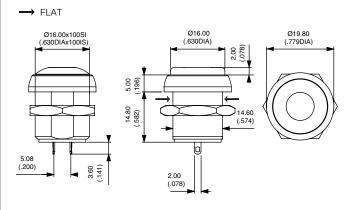
Also available with straight PC terminals: IR•3P and quick-connect terminals: IR•3Z.

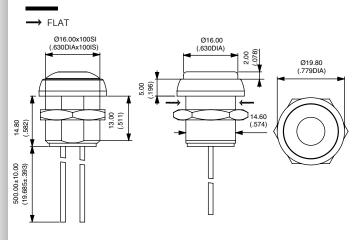
### ROUND - NON-LLUMINATED FLYING LEAD TERMINALS





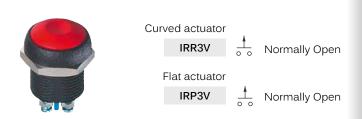






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### ROUND - NON-LLUMINATED SCREW TERMINALS



### SQUARE - ILLUMINATED SOLDER LUG TERMINALS



Also available with straight PC terminals: IRC3P. LED color is indicated by the bottom of the switch.

### SQUARE - ILLUMINATED FLYING LEAD TERMINALS

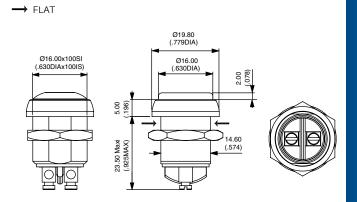


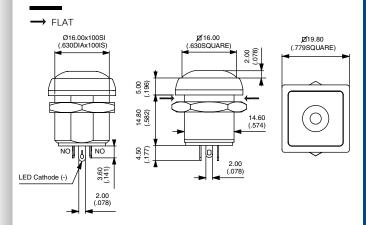
 $\textbf{Wire colors}: \texttt{black}: \texttt{NO} \ \texttt{contact}, \texttt{red}: \texttt{LED} \ \texttt{anode} \ \textbf{(+)}, \texttt{blue}: \texttt{LED} \ \texttt{cathode} \ \textbf{(-)}$ 

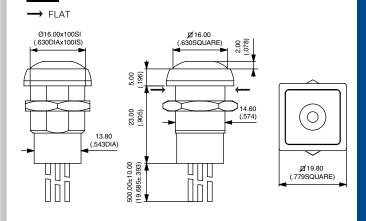
### SQUARE - NON-ILLUMINATED SOLDER LUG TERMINALS

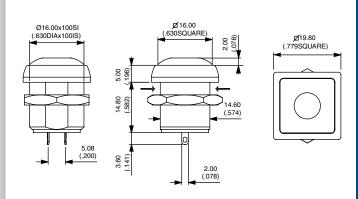


Also available with straight PC terminals: IRC3P and quick-connect terminals: IRC3Z.



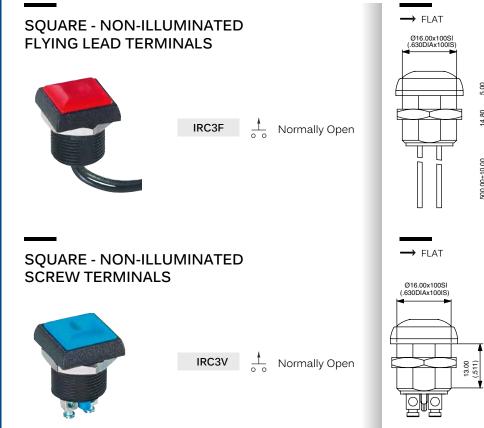


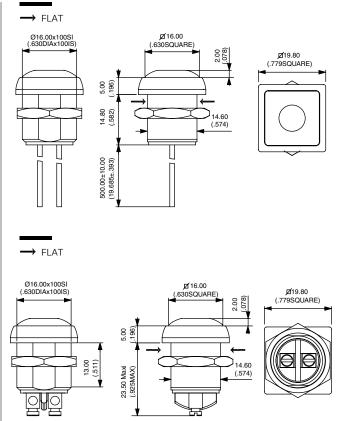




→ FLAT

Sealed pushbutton switches  $\bullet$  bushing  $\varnothing$  16 mm  $\bullet$  momentary  $\bullet$  standard version





#### CONTACTS

BASIC P/N

- 4 Silver, gold plated (200 mA 48 VDC)
- 7 Silver, gold plated (5 A 28 VDC)
- 2 Silver (screw terminals only)

#### **ACTUATOR COLORS**

BASIC P/N

- 1 Blue
- **B** Dark blue
- 2 Black
- **3** Green
- 4 Grey
- 5 Yellow
- 6 Red
- 7 White
- 8 Bright chrome
- 9 Orange
- A Satin chrome

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|  | BUSHING AND BEZEL  |  |  |  |
|--|--|--|--|--|
| BASIC                                  | P/N  |  |  |  |
| 2<br>7<br>0                            | Black (standard) White Transparent (round bezel only)    |  |  |  |
| ILLUMINATION                           |  |  |  |  |
| BASIC                                  | P/N  |  |  |  |
| L<br>B                                 | Central lens<br>Bezel (round only)                       |  |  |  |
| LED COLORS                             |  |  |  |  |
| BASIC                                  | P/N  |  |  |  |
| 0S<br>0Y<br>0G<br>0B<br>0W<br>SG<br>YG | Super red Yellow Green Blue White Red/green Yellow/green |  |  |  |

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