

# IQ series

Sealed pushbutton switches • bushing Ø 16 mm •  
snap-in mounting • momentary



## DISTINCTIVE FEATURES

- Snap-in mounting for easy installation
- Momentary models
- Illuminated or non-illuminated
- Flat round actuator for optional marking
- Sealed to IP54



## ENVIRONMENTAL SPECIFICATIONS

- Front panel sealing : IP54 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 mΩ max.
- Insulation resistance : 1 GΩ min. at 500 VDC
- Dielectric strength : 1,500 Vrms



### LED COMPONENT SPECIFICATIONS

LED color	Forward current	Typ. forward voltage	Max. forward voltage
Super red (LOS)	20 mA	2.1 V	2.3 V
Yellow (LOY)	20 mA	2.1 V	2.3 V
Green (LOG)	20 mA	2.1 V	2.3 V
Blue (LOB)	20 mA	3.2 V	3.8 V
White (LOW)	20 mA	3.35 V	4.25 V
Red/Green (LSG)	20 mA	Red: 1.95 V / Green: 2.1 V	2.5 V
Yellow/green (LYG)	20 mA	Yellow: 2 V / green: 2.1 V	2.5 V

A resistor must be series-connected by the user.  
Resistor value =  $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

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

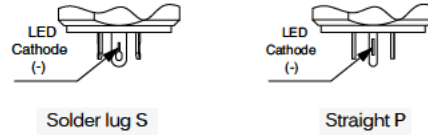
- Panel thickness :  
with flat seal : 2.20 mm (.088) max.  
without flat seal : 3 mm (.118) max.
- Total travel : 1.6 mm (.062) ± 0.3 mm
- Typical operating force : 4 N ± 2 N
- Low level or mechanical life : 1,000,000 cycles
- Soldering : 320 °C (608 °F) max. for 3 sec.

## MATERIALS

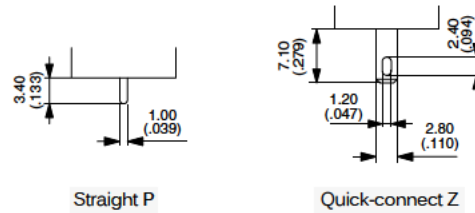
- Case : thermoplastic UL94-V0
- Actuator : polyamide 6/6
- Bushing/bezel : polyamide 6/6
- Contacts :  
4 and 7 : silver, gold plated  
2 : silver (screw terminals)
- Multi-wire leads AWG20, section 0.6 mm<sup>2</sup>
- LED wire : AWG26, section 0.12 mm<sup>2</sup>
- Lens : polycarbonate
- Terminal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

## TERMINALS

### ILLUMINATED MODELS

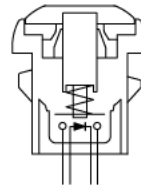


### NON-ILLUMINATED MODELS



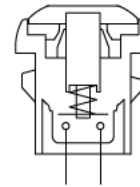
## ELECTRICAL FUNCTIONS

### ILLUMINATED MODELS



Function 3 (NO)

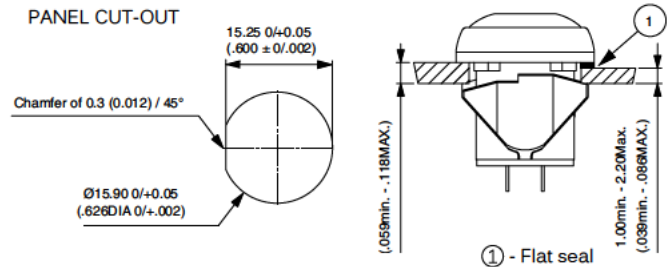
### NON-ILLUMINATED MODELS



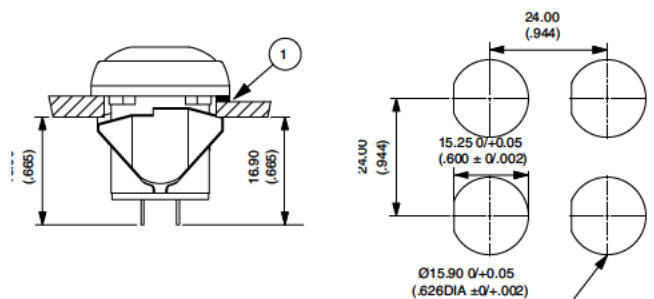
Function 3 (NO)

## MOUNTING

### PANEL CUT-OUT

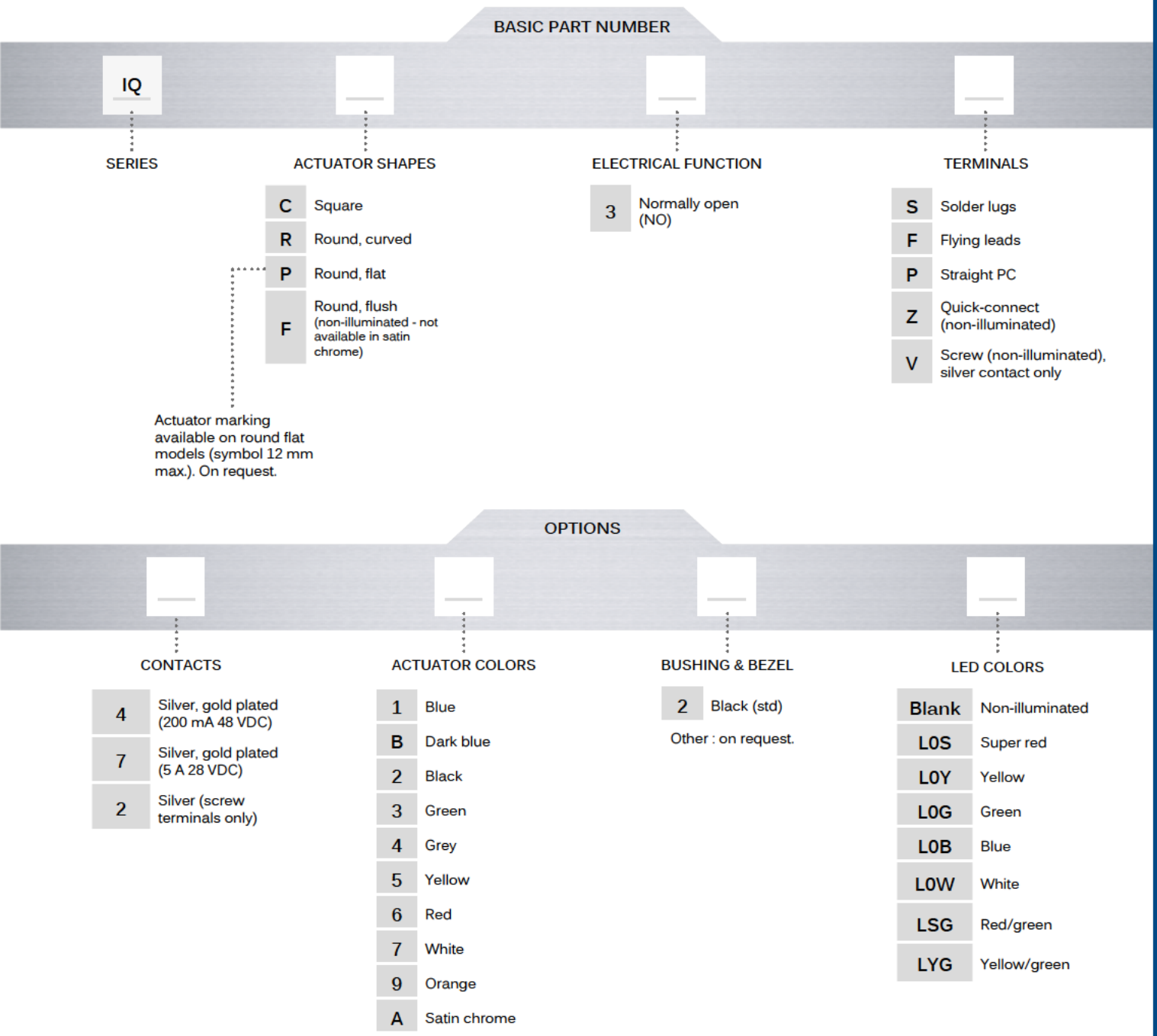


### BACK OF PANEL SPACE REQUIREMENT - MATRIX MOUNTING





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## BUILD YOUR PART NUMBER



## ABOUT THIS SERIES

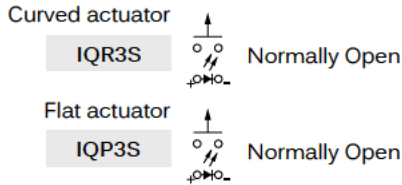
On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

-  **Notice** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.
-  **Mounting accessories** : Standard hardware supplied : 1 flat seal

# IQ series

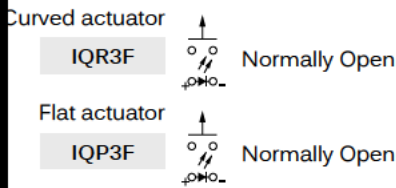
Sealed pushbutton switches • bushing Ø 16 mm • snap-in mounting • momentary

## ROUND - ILLUMINATED SOLDER LUG TERMINALS



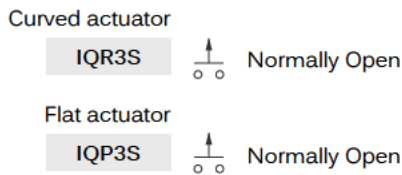
Also available with straight PC terminals : IQ•3P4.  
LED color is indicated by the bottom of the switch.

## ROUND - ILLUMINATED FLYING LEAD TERMINALS



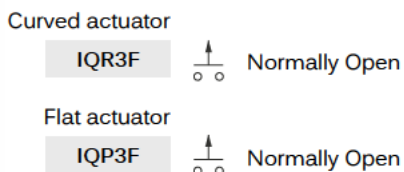
Wire colors : black : NO contact, red : LED anode (+), blue : LED cathode (-)

## ROUND - NON-ILLUMINATED SOLDER LUG TERMINALS

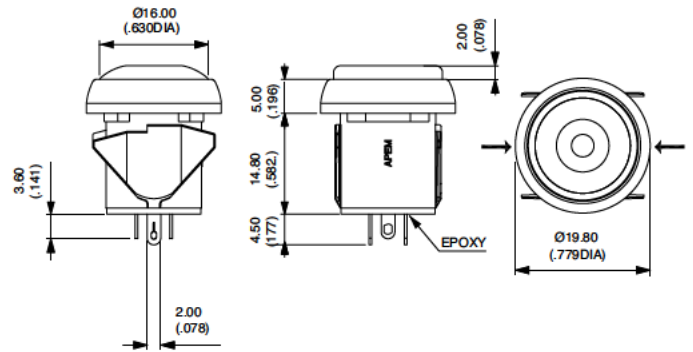


Also available with straight PC terminals : IQ•3P4  
and quick-connect terminals : IQ•3Z4.

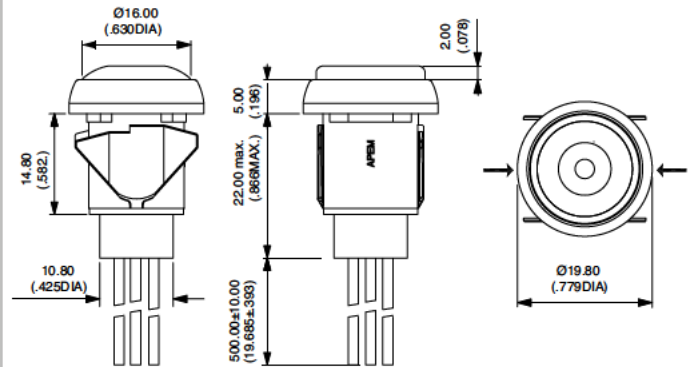
## ROUND - NON-ILLUMINATED FLYING LEAD TERMINALS



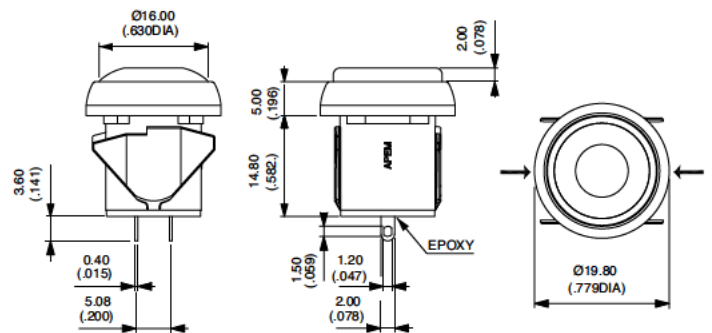
→ FLAT



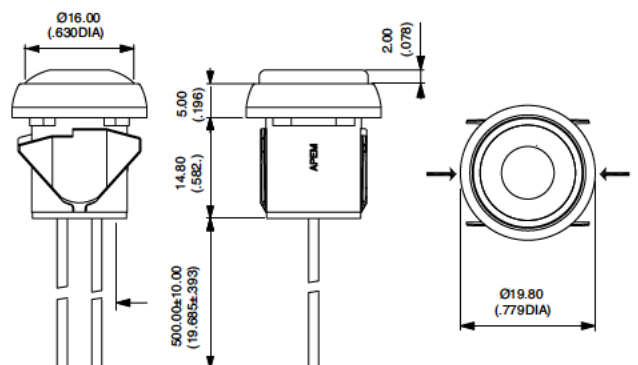
→ FLAT



→ FLAT



→ FLAT



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## ROUND - NON-ILLUMINATED SCREW TERMINALS



Curved actuator

IQR3V



Normally Open

Flat actuator

IQP3V



Normally Open

## SQUARE - ILLUMINATED SOLDER LUG TERMINALS



IQC3S



Normally Open

Also available with straight PC terminals : IQC3P.  
LED color is indicated by the bottom of the switch.

## SQUARE - ILLUMINATED FLYING LEAD TERMINALS



IQC3F



Normally Open

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

## SQUARE - NON-ILLUMINATED SOLDER LUG TERMINALS



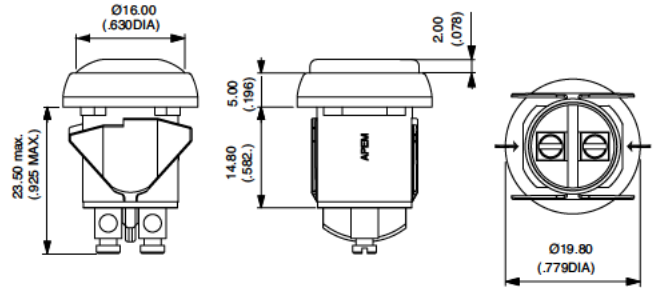
IQC3S



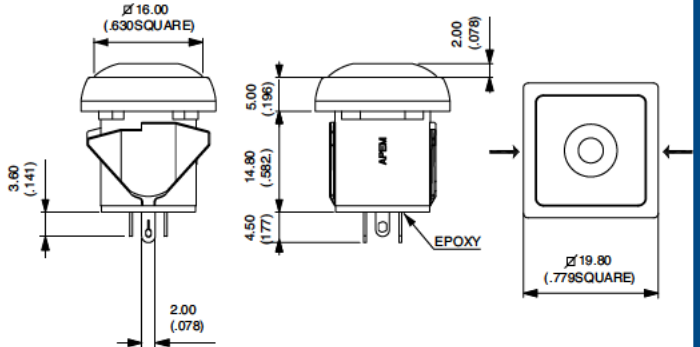
Normally Open

Also available with straight PC terminals : IQC3P  
or quick-connect terminals : IQC3Z.

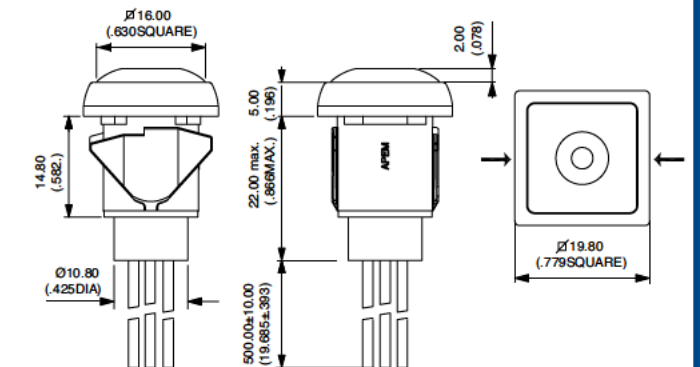
→ FLAT



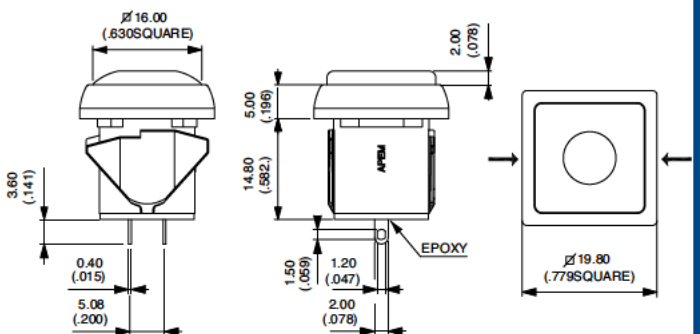
→ FLAT



→ FLAT



→ FLAT



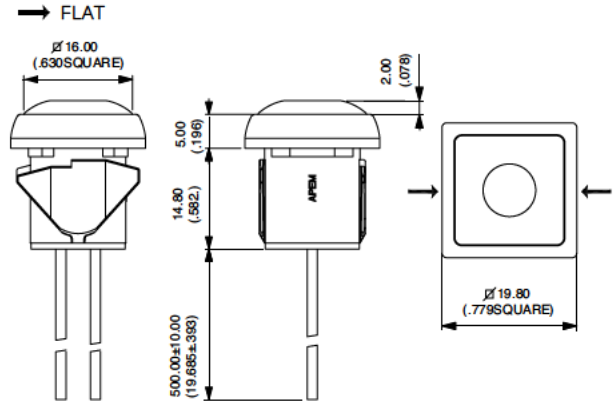
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## SQUARE - NON-ILLUMINATED FLYING LEAD TERMINALS




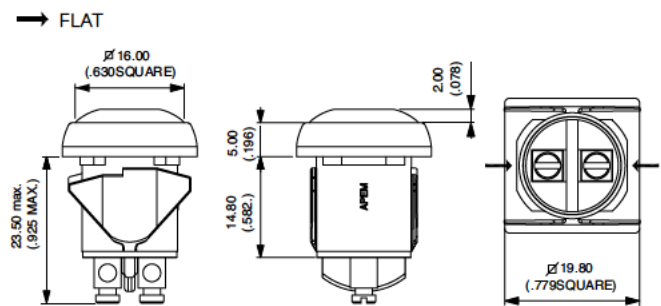
IQC3F  Normally Open



## SQUARE - NON-ILLUMINATED SCREW TERMINALS



IQC3V  Normally Open



### CONTACT MATERIALS

BASIC P/N



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

Contacts 4 and 7 only for solder lug and flying lead terminals.  
Contacts 2 only for screw terminals.

### ACTUATOR COLORS

BASIC P/N



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

# IQ series

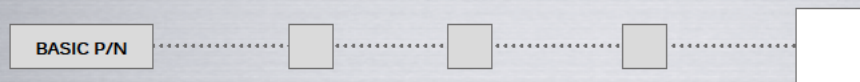
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## BUSHING AND BEZEL



2 Black (standard)

## LED COLORS



Blank	Non-illuminated
L0S	Super Red
L0Y	Yellow
L0G	Green
L0B	Blue
L0W	White
LSG	Red/green
LYG	Yellow/green