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 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 (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.

$$\text{Resistor value} = \frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$$

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 : 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
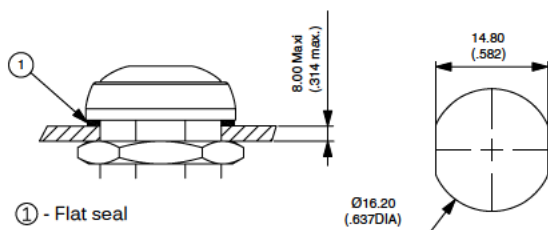- Soldering : 320 °C (608 °F) max. for 3 sec.

▷ 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
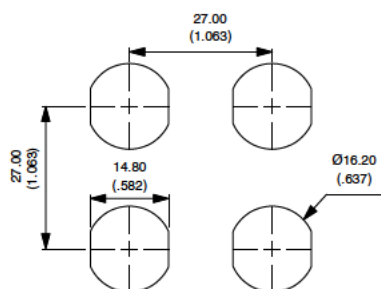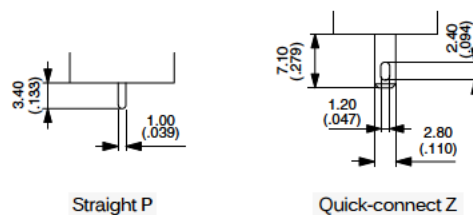- Terminal seal : epoxy

MOUNTING

PANEL CUT-OUT

① - Flat seal

Ø16.20
(.637DIA)

8.00 Maxi
(.314 max.)

14.80
(.582)

MATRIX MOUNTING

27.00
(1.063)

27.00
(1.063)

14.80
(.582)

Ø16.20
(.637)

🎧 TERMINALS

ILLUMINATED MODELS

LED
Cathode
(-)

NON-ILLUMINATED MODELS

3.40
(.133)

1.00
(.039)

Straight P

7.10
(.279)

2.40
(.094)

1.20
(.047)

2.80
(.110)

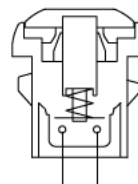Quick-connect Z

⚡ ELECTRICAL FUNCTIONS
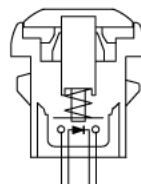
ILLUMINATED MODELS   NON-ILLUMINATED MODELS

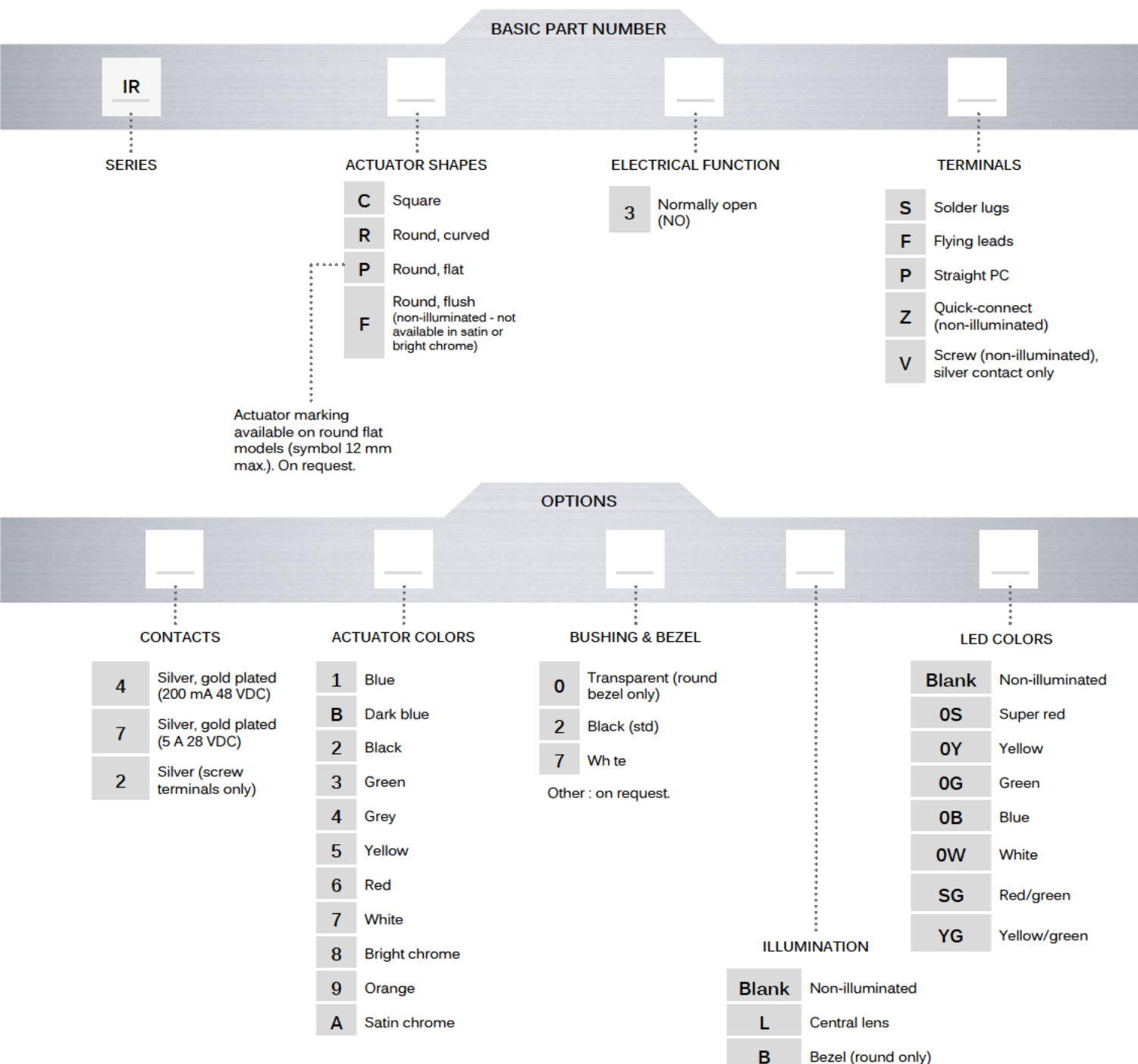Function 3 (NO)   Function 3 (NO)

IR series

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

BUILD YOUR PART NUMBER

BASIC PART NUMBER

| IR | | | |

SERIES

ACTUATOR SHAPES

C	Square
R	Round, curved
P	Round, flat
F	Round, flush (non-illuminated - not available in satin or bright chrome)

Actuator marking available on round flat models (symbol 12 mm max.). On request.

ELECTRICAL FUNCTION

| 3 | Normally open (NO) |

TERMINALS

S	Solder lugs
F	Flying leads
P	Straight PC
Z	Quick-connect (non-illuminated)
V	Screw (non-illuminated), silver contact only

OPTIONS

CONTACTS

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

ACTUATOR COLORS

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

BUSHING & BEZEL

0	Transparent (round bezel only)
2	Black (std)
7	Wh te

Other : on request.

ILLUMINATION

Blank	Non-illuminated
L	Central lens
B	Bezel (round only)

LED COLORS

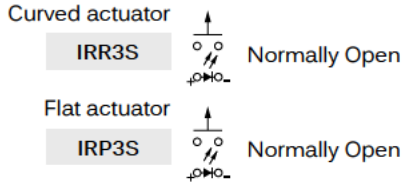| Blank | Non-illuminated |
0S	Super red
0Y	Yellow
0G	Green
0B	Blue
0W	White
SG	Red/green
YG	Yellow/green

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.
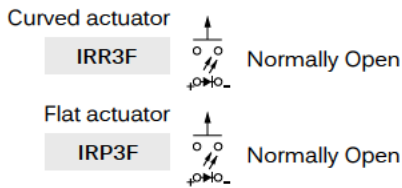
IR series

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

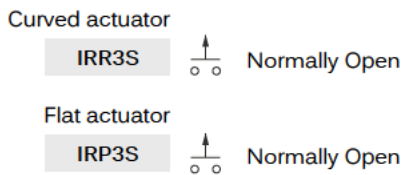## ROUND - ILLUMINATED SOLDER LUG TERMINALS

Curved actuator

| IRR3S | Normally Open |

Flat actuator

| IRP3S | Normally Open |

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

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
14.80 (.582)
14.60 (.574)
4.50 (.177)
LED Cathode (-)
NO   NO
2.00 (.078)
3.60 (.141)
2.00 (.078)

ROUND - ILLUMINATED FLYING LEAD TERMINALS

Curved actuator

| IRR3F | Normally Open |

Flat actuator

| IRP3F | Normally Open |

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

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
13.00 (.511)
23.00 (.905)
14.60 (.574)
500.00±10.00 (19.685±.393)

ROUND - NON-LLUMINATED SOLDER LUG TERMINALS

Curved actuator

| IRR3S | Normally Open |

Flat actuator

| IRP3S | Normally Open |

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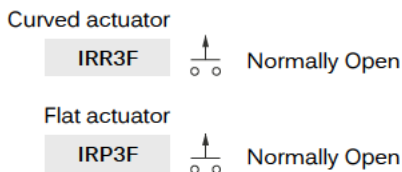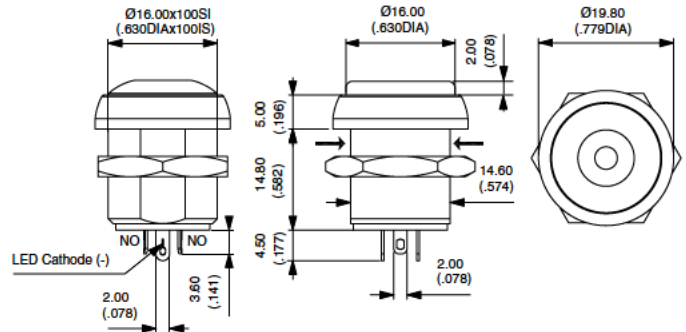
→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
14.80 (.582)
14.60 (.574)
5.08 (.200)
3.60 (.141)
2.00 (.078)

ROUND - NON-LLUMINATED FLYING LEAD TERMINALS

Curved actuator

| IRR3F | Normally Open |

Flat actuator

| IRP3F | Normally Open |

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
13.00 (.511)
14.80 (.582)
14.60 (.574)
500.00±10.00 (19.685±.393)

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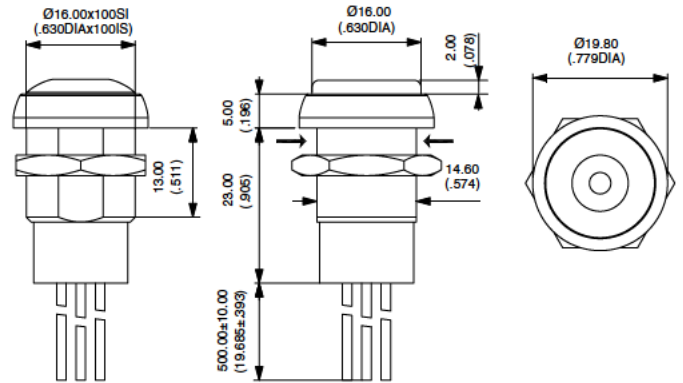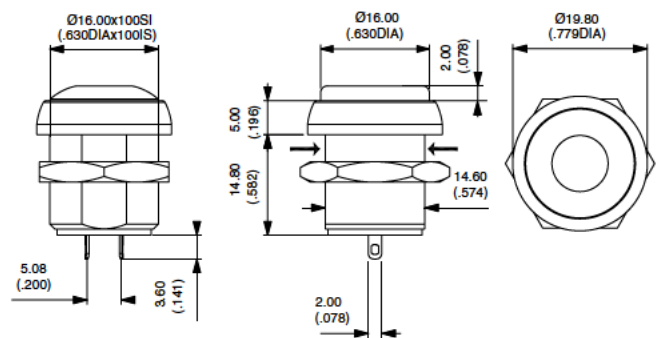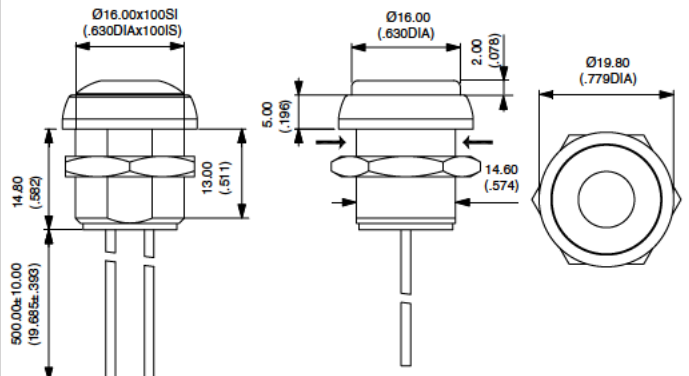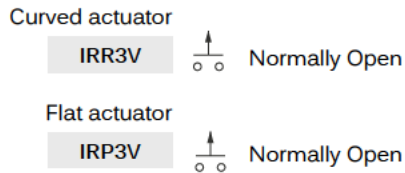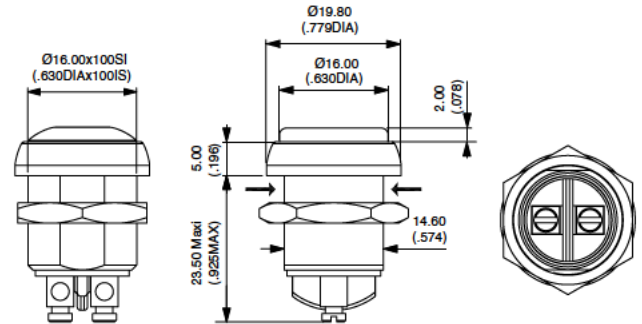
Sealed pushbutton switches • bushing Ø 16 mm •
momentary • standard version

ROUND - NON-ILLUMINATED SCREW TERMINALS

Curved actuator

| IRR3V | Normally Open |

Flat actuator

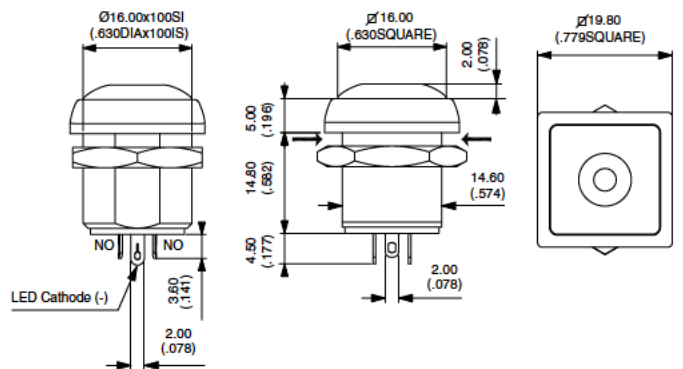| IRP3V | Normally Open |

→ FLAT

SQUARE - ILLUMINATED SOLDER LUG TERMINALS
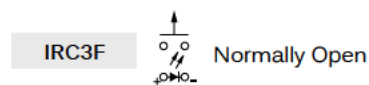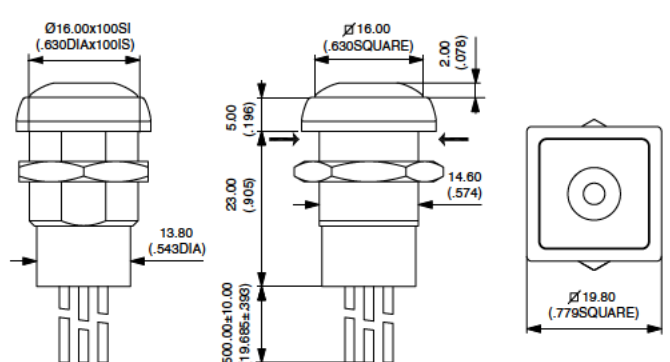
| IRC3S | Normally Open |
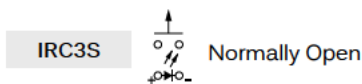
Also available with straight PC terminals : IRC3P.
LED color is indicated by the bottom of the switch.

→ FLAT
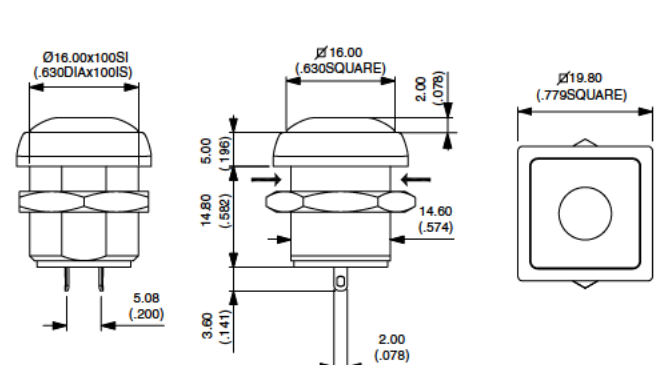
SQUARE - ILLUMINATED FLYING LEAD TERMINALS

| IRC3F | Normally Open |

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

→ FLAT

SQUARE - NON-ILLUMINATED SOLDER LUG TERMINALS

| IRC3S | Normally Open |

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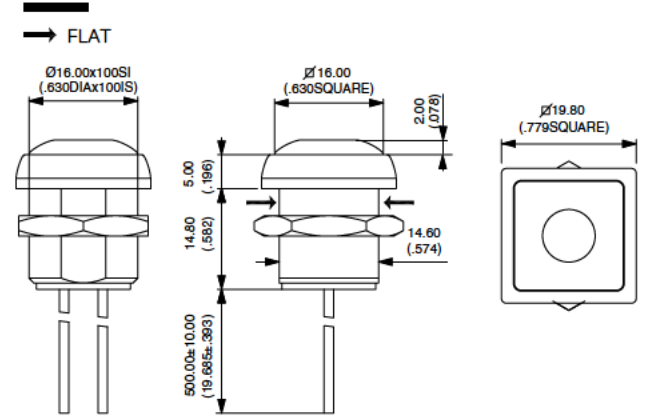and quick-connect terminals : IRC3Z.

→ FLAT

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IR series

Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version
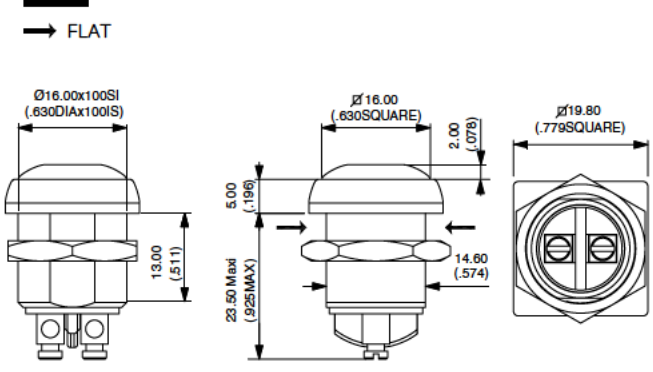
SQUARE - NON-ILLUMINATED FLYING LEAD TERMINALS

| IRC3F | Normally Open |

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630SQUARE)
2.00 (.078)
5.00 (.196)
14.80 (.582)
14.60 (.574)
500.00±10.00 (19.685±.393)
Ø19.80 (.779SQUARE)

SQUARE - NON-ILLUMINATED SCREW TERMINALS

| IRC3V | Normally Open |

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630SQUARE)
2.00 (.078)
5.00 (.196)
13.00 (.511)
23.50 Maxi (.925MAX)
14.60 (.574)
Ø19.80 (.779SQUARE)

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

IR series

Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version
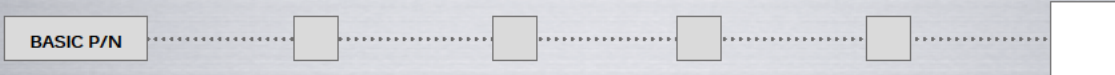
BUSHING AND BEZEL

BASIC P/N						

2	Black (standard)
7	White
0	Transparent (round bezel only)

ILLUMINATION

BASIC P/N						

L	Central lens
B	Bezel (round only)

LED COLORS

BASIC P/N						

0S	Super red
0Y	Yellow
0G	Green
0B	Blue
0W	White
SG	Red/green
YG	Yellow/green