## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - momentary

Distinctive features and specifications



☐ Rear mounting for easier installation

UG1006-A

- Momentary metal models
- ☐ Fixed or variable panel thickness
- Screw version available up to 4A
- ☐ Sealed to IP67
- Illuminated or non-illuminated
- ☐ Flat 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

#### **ELECTRICAL SPECIFICATIONS**

Max. current/voltage rating with resistive load :

Gold plated silver contacts (code 4): 200mA 48VDC - 200mA 250VAC

Silver contacts (code 2) - screw terminals : 2A 250VAC - 4A 48VDC

• Electrical life at full load : 500.000 cycles • Initial contact resistance : 100 m $\Omega$  max.

• Insulation resistance : 1 G $\Omega$  min. at 500VDC

Dielectric strength: 1.000 Vrms 50 Hz

LED COMPONENT SPECIFICATIONS					
LED colour	Forward current	Typ. forward voltage	Max. forward voltage		
Super red (LOS)	20mA	2,1V	2,3V		
Yellow (LOY)	20mA	2,1V	2,3V		
Green (LOG)	20mA	2,1V	2,3V		
Blue (LOB)	20mA	3,2V	3,8V		
White (LOW)	20mA	3,35V	4,25V		

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.

#### **GENERAL SPECIFICATIONS**

Panel thickness :

- IZM : 3 mm (.118) max.

- IZN : 4 mm (.157) max.

• Total travel : 1,8 mm (.070) +/- 0,3 mm

• Typical operating force : 6N +/- 2N

• Mechanical life: 1.000.000 cycles

• Torque : IZN : 1 Nm max.

IZM: 0,7 Nm max. applied to nut

Soldering: 320°C max. for 3 sec.

#### **MATERIALS**

• Case: thermoplastic UL94-V0

• Plunger : polyamide

• Bushing/bezel: brass, nickel plated

Contacts:

4 : silver, gold plated

2 : silver (screw terminals)

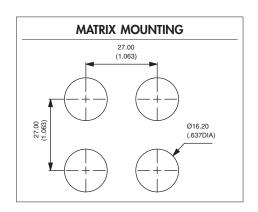
 Multi-wire lead AWG20, section 0.6 mm<sup>2</sup>

• LED wire: AWG26,

section 0,12 mm<sup>2</sup>
• Lens : polycarbonate

Terminal seal : epoxy

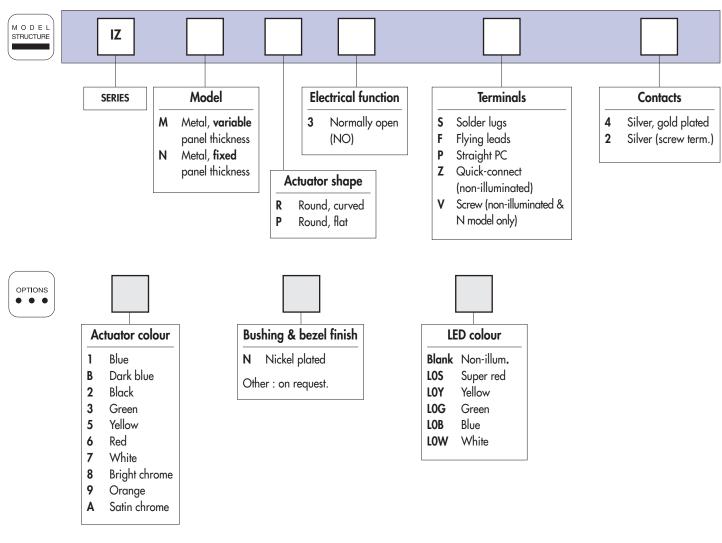
## PANEL CUT-OUT 1 Flat seal 2 O-ring (.637DIA) .118MAX (.157MAX 3.00 Maxi 1.00 Maxi IZM (adjustable hex nut) IZN (fixed hex nut)



# **IZ** series

# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - momentary

**Overview** 



### **ABOUT THIS SERIES**

On the following pages, you will find successively: model structure of switches and options in the same order as in above chart

Dimensions: first dimensions are in mm while inches are shown as bracketted numbers.



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:

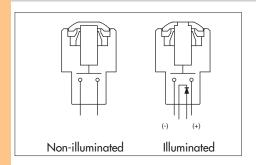
- IZM: 1 castellated nickel plated brass nut U6915 + 1 silicone flat seal + 1 hex nut 19 mm (.748) across flats U4116.
- IZN: 1 castellated nickel plated brass nut U6915 + 1 O-ring



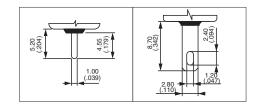
### New!

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - momentary

For variable panel thickness: IZM



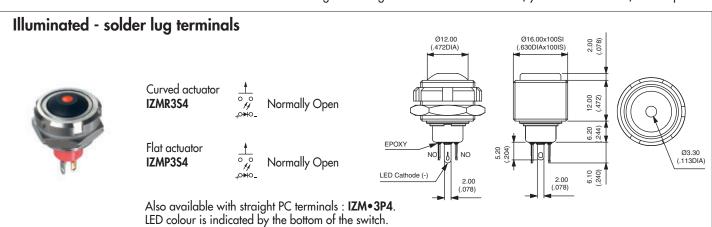
- Five LED colours
- Tin plated LED terminals
- Gold plated contacts

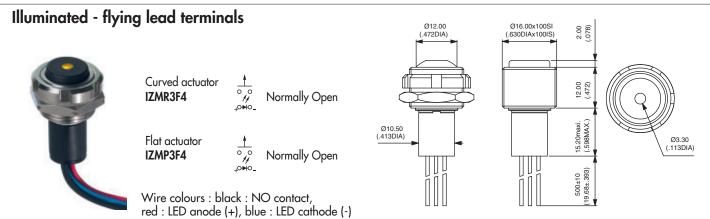


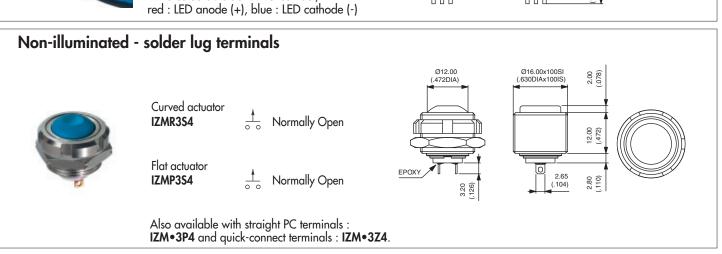
MODEL STRUCTURE



Plunger marking available on IZMP models (symbol 10 mm max.). On request.





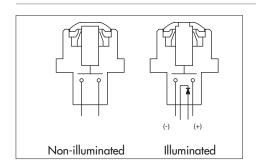


For non-illuminated FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.

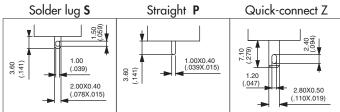
# **IZ** series

# Rear mounted sealed pushbutton switches - bushing $\emptyset$ 16 mm - metal - momentary

For fixed panel thickness: IZN



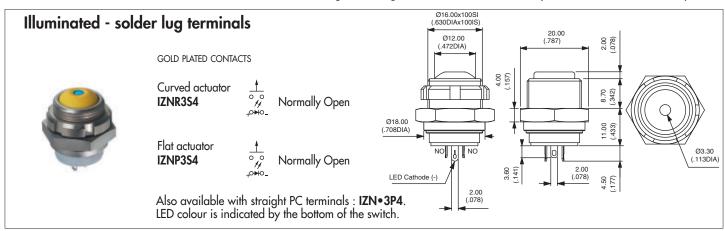
- Five LED colours
- Tin plated LED terminals

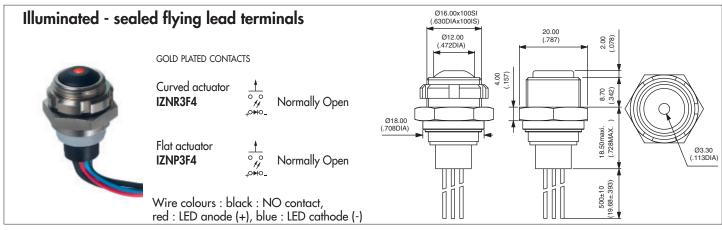


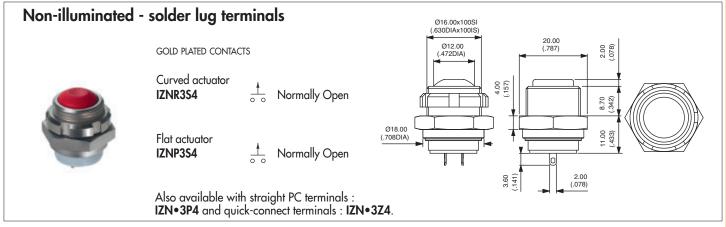




Plunger marking available on IZNP models (symbol 10 mm max.). On request.



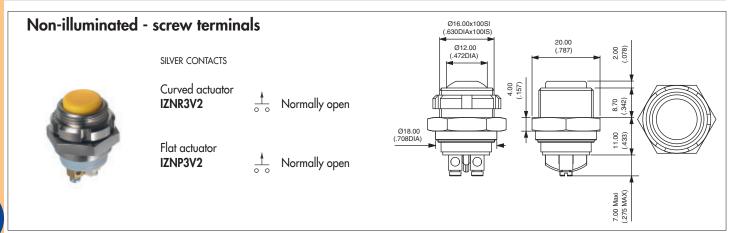




For non-illuminated FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.

# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - momentary

For fixed panel thickness: IZN - options



### **ACTUATOR COLOUR**



1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange A: satin chrome

### **BUSHING AND BEZEL COLOUR**



N: nickel plated (standard) Other: on request.

### **LED COLOUR**



**Blank**: non-illuminated

LOS: super red - LOY: yellow - LOG: green

LOB: blue - LOW: white

# **IZ** series

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - latching

Distinctive features and specifications



Rear mounting for easier installation

UG1006-A

- Latching action metal models
- ☐ Fixed or variable panel thickness
- ☐ Sealed to IP67
- ☐ Illuminated or non-illuminated
- ☐ Flat 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
- Robustness (non-illuminated): IKO6 according to EN 50102 (1 joule)
- Operating temperature : -40°C to +85°C

#### **ELECTRICAL SPECIFICATIONS**

- Max. current/voltage rating with resistive load : 100mA 24VDC - 200.000 cycles
- Initial contact resistance :  $100 \text{ m}\Omega$  max.
- Insulation resistance : 1  $G\Omega$  min. at 500VDC
- Dielectric strength: 1.500 Vrms between terminals 1.000 Vrms between terminals and frame

LED COMPONENT SPECIFICATIONS					
LED colour	Forward current	Typ. forward voltage	Max. forward voltage		
Super red (LOS)	20mA	1,95V	1,95V		
Yellow (LOY)	20mA	2V	2,05V		
Green (LOG)	20mA	3,2V	3,70V		
Blue (LOB)	20mA	3,2V	4V		

A resistor must be series-connected by the user. Resistor value = <u>supply voltage - LED forward voltage</u>

LED forward current

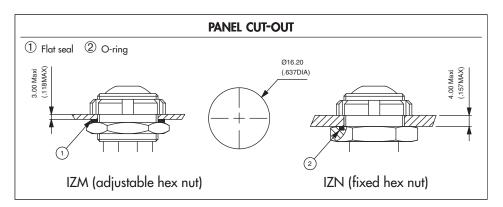
On flying lead versions, the LED resistor can be integrated by APEM on request.

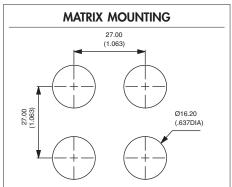
#### **GENERAL SPECIFICATIONS**

- Panel thickness :
- IZM : 3 mm (.118) max.
- IZN : 4 mm (.157) max.
- Total travel : 2,5 mm (.098) +/-0,3 mm
- Typical operating force : 5N +/- 2N
- Mechanical life: 200.000 cycles
- Torque : IZN : 1 Nm max. IZM: 0,7 Nm max. applied to nut
- Soldering: 320°C max. for 3 sec.

#### **MATERIALS**

- Case: thermoplastic UL94-V0
- Plunger : polyamideBushing/bezel : brass, nickel plated
- Contacts: silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm<sup>2</sup>
- LED wire: AWG26, section 0,12 mm<sup>2</sup>
  • Lens : polycarbonate
- Terminal seal : epoxy

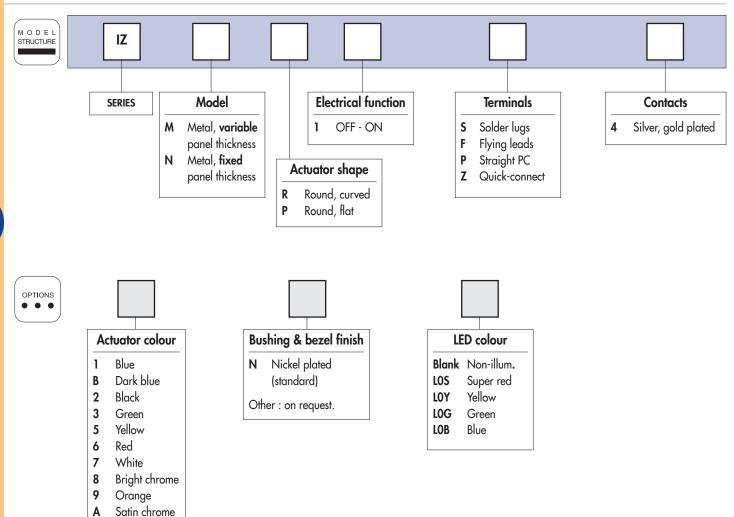




## New!

# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - latching

### **Overview**



### **ABOUT THIS SERIES**

On the following pages, you will find successively: model structure of switches and options in the same order as in above chart

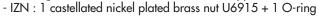
**Dimensions:** first dimensions are in mm while inches are shown as bracketted numbers.



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:



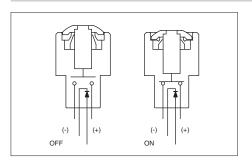
- IZM: 1 castellated nickel plated brass nut U6915 + 1 silicone flat seal + 1 hex nut 19 mm (.748) across flats U4116.



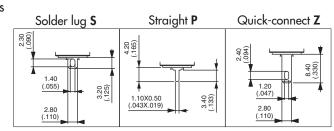
# **IZ** series

# Rear mounted sealed pushbutton switches - bushing $\emptyset$ 16 mm - metal - latching

For variable panel thickness: IZM



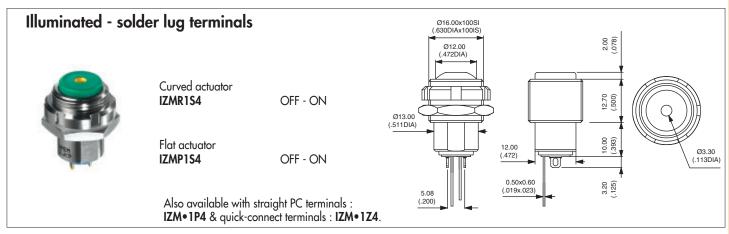
- Four LED colours
- Tin plated LED terminals
- Gold plated contacts

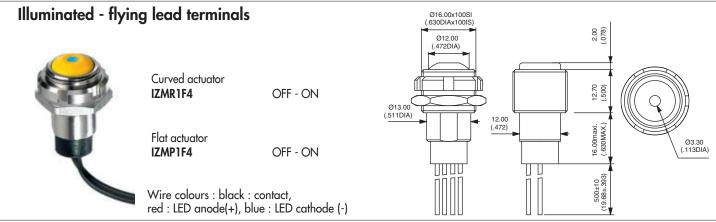


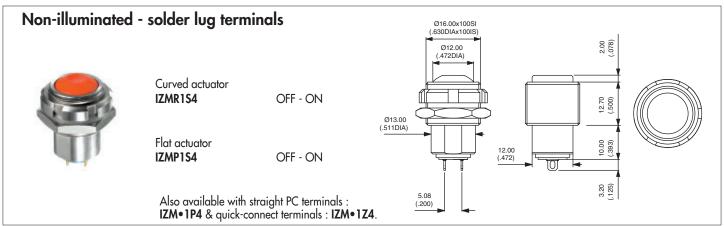




Plunger marking available on IZMP models (symbol 10 mm max.). On request.





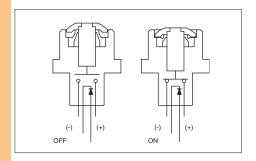


For FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.

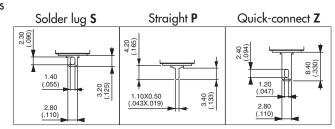
## New!

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - latching

For fixed panel thickness: IZN



- Four LED colours
- Tin plated LED terminals
- Gold plated contacts

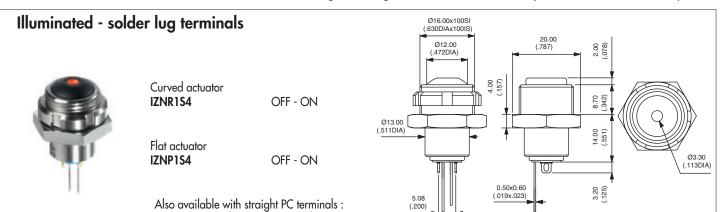


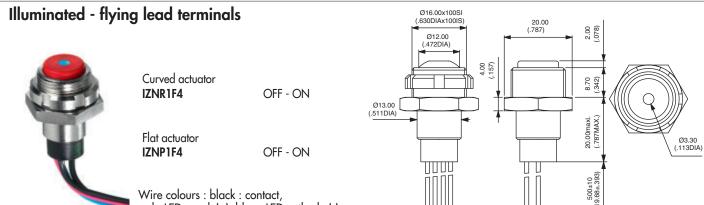
**MODEL STRUCTURE** 

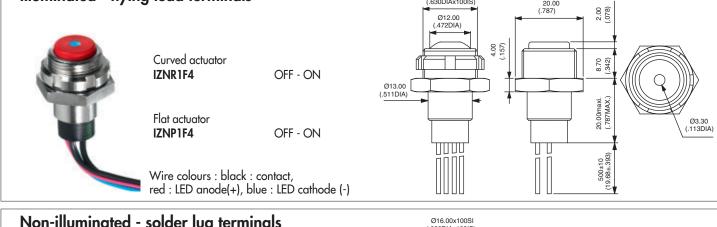


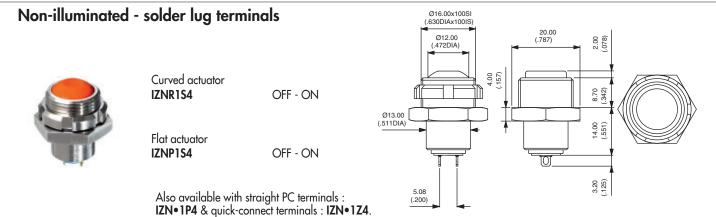
IZN•1P4 & quick-connect terminals: IZN•1Z4.

Plunger marking available on IZNP models (symbol 10 mm max.). On request.









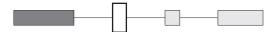
For FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.



# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - metal - latching

**Options** 

### **ACTUATOR COLOUR**



1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange

A: satin chrome

### **BUSHING AND BEZEL COLOUR**



N: nickel plated (standard)

Other: on request.

### **LED COLOUR**



Blank: non-illuminated

LOS: super red - LOY: yellow - LOG: green LOB: blue

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - momentary

Distinctive features and specifications



Rear mounting for easier installation

UG1006-A

■ Momentary models

Screw version available up to 4A

☐ Sealed to IP67

□ Illuminated or non-illuminated

☐ Flat 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

#### **ELECTRICAL SPECIFICATIONS**

Max. current/voltage rating with resistive load :

Gold plated silver contacts (code 4): 200mA 48VDC - 200mA 250VAC

Silver contacts (code 2) - screw terminals : 2A 250VAC - 4A 48VDC

• Electrical life at full load : 500.000 cycles

• Initial contact resistance :  $100 \text{ m}\Omega$  max.

Insulation resistance: 1 GΩ min. at 500VDC

Dielectric strength: 1.000 Vrms 50 Hz

LED COMPONENT SPECIFICATIONS					
LED colour	Forward current	Typ. forward voltage	Max. forward voltage		
Super red (LOS)	20mA	2,1V	2,3V		
Yellow (LOY)	20mA	2,1V	2,3V		
Green (LOG)	20mA	2,1V	2,3V		
Blue (LOB)	20mA	3,2V	3,8V		
White (LOW)	20mA	3,35V	4,25V		

A resistor must be series-connected by the user. Resistor value = <u>supply voltage - LED forward voltage</u>

LED forward current

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

#### **GENERAL SPECIFICATIONS**

Panel thickness: 3 mm (.118) max.

• Total travel : 1,8 mm (.070) +/- 0,3 mm

Typical operating force: 6N +/- 2N

• Mechanical life: 1.000.000 cycles

• Torque: 0,7 Nm max. applied to nut

Soldering: 320°C max. for 3 sec.

#### **MATERIALS**

Case: thermoplastic UL94-V0

Plunger : polyamideBushing/bezel : polyamide

• Contacts :

4 : silver, gold plated

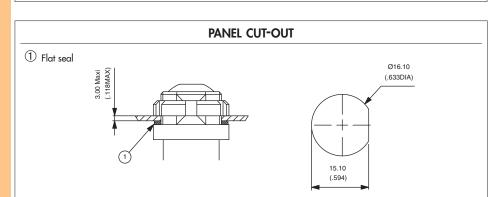
2: silver (screw terminals)

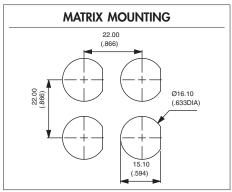
 Multi-wire lead AWG20, section 0.6 mm<sup>2</sup>

• LED wire: AWG26, section 0,12 mm<sup>2</sup>

• Lens: polycarbonate

Terminal seal : epoxy

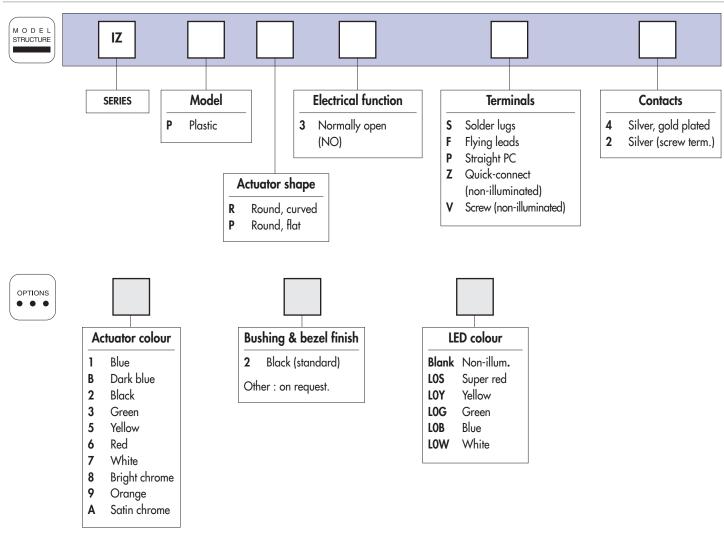




# **IZ** series

# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - momentary

**Overview** 



### **ABOUT THIS SERIES**

On the following pages, you will find successively: model structure of switches and options in the same order as in above chart

Dimensions: first dimensions are in mm while inches are shown as bracketted numbers.



NOTICE: please note that not all combinations of above numbers are available. Refer to the following pages for further information.

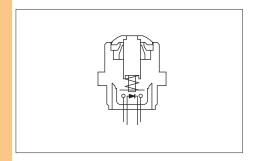


Mounting accessories: Standard hardware supplied: 1 castellated black plastic nut U4249 and 1 silicone flat seal.

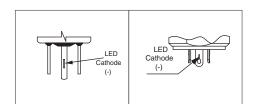


# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - momentary

Illuminated



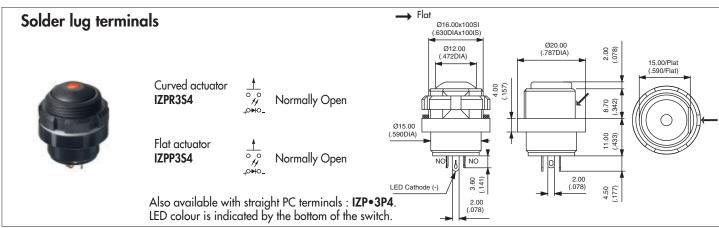
- Five LED colours
- Tin plated LED terminals
- Gold plated contacts

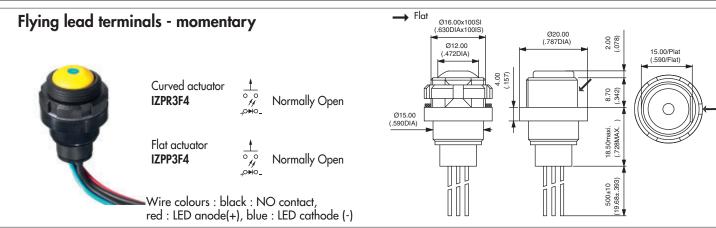


MODEL STRUCTURE

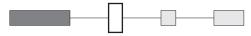


Plunger marking available on IZPP models (symbol 10 mm max.). On request.



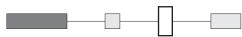


### **ACTUATOR COLOUR**



1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange A : satin chrome

### **BUSHING AND BEZEL COLOUR**



2 : black (standard) Other : on request.

### **LED COLOUR**



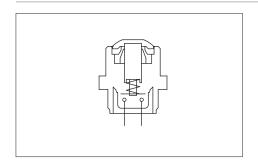
LOS: super red - LOY: yellow - LOG: green

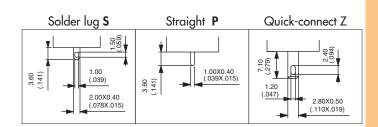
LOB: blue - LOW: white

# **IZ** series

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - momentary

Non-illuminated

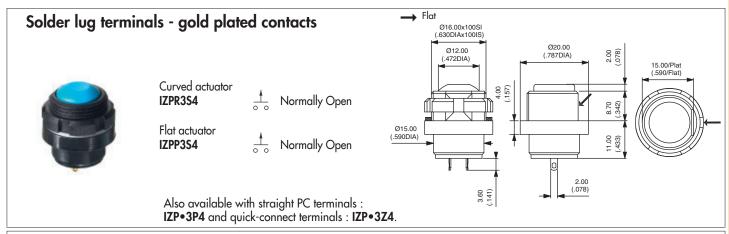


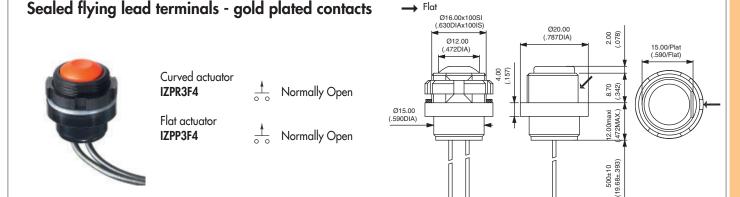


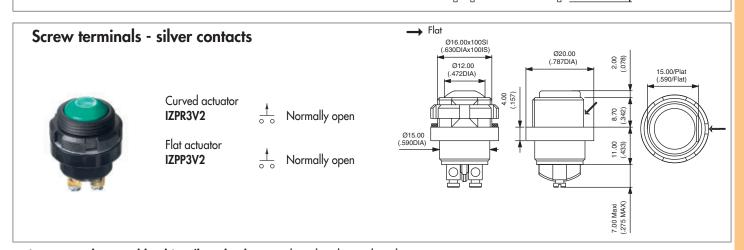
MODEL STRUCTURE



Plunger marking available on IZPP models (symbol 12 mm max.). On request.







Actuator colour and bushing/bezel colour: select the desired codes on previous page.

## Rear mounted sealed pushbutton switches - bushing Ø 16 mm - latching

Distinctive features and specifications

UG1006-A





- ☐ Rear mounting for easier installation
- Latching action models
- □ Sealed to IP67
- Illuminated or non-illuminated
- ☐ Flat 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

### **ELECTRICAL SPECIFICATIONS**

- Max. current/voltage rating with resistive load : 100mA 24VDC - 200.000 cycles
- Initial contact resistance :  $100 \text{ m}\Omega$  max.
- Insulation resistance : 1 G $\Omega$  min. at 500VDC
- Dielectric strength: 1.500 Vrms between terminals

LED COMPONENT SPECIFICATIONS					
LED colour	Forward current	Typ. forward voltage	Max. forward voltage		
Super red (LOS)	20mA	1,95V	1,95V		
Yellow (LOY)	20mA	2V	2,05V		
Green (L0G)	20mA	3,2V	3,70V		
Blue (LOB)	20mA	3,2V	4V		

A resistor must be series-connected by the user. Resistor value = <u>supply voltage - LED forward voltage</u>

LED forward current

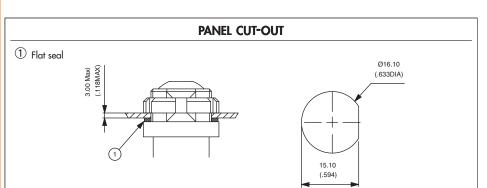
On flying lead versions, the LED resistor can be integrated by APEM on request.

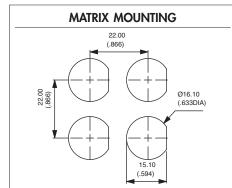
#### **GENERAL SPECIFICATIONS**

- Panel thickness: 3 mm (.118) max.
- Total travel : 2,5 mm (.098) +/- 0,3 mm
- Typical operating force: 5N +/- 2N
- Mechanical life: 200.000 cycles
- Torque: 0,7 Nm max. applied to nut
- Soldering: 320°C max. for 3 sec.

#### **MATERIALS**

- Case: thermoplastic UL94-V0
- Plunger : polyamideBushing/bezel : polyamide
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm<sup>2</sup>
- LED wire: AWG26, section 0,12 mm<sup>2</sup>
- Lens: polycarbonate
- Terminal seal : epoxy

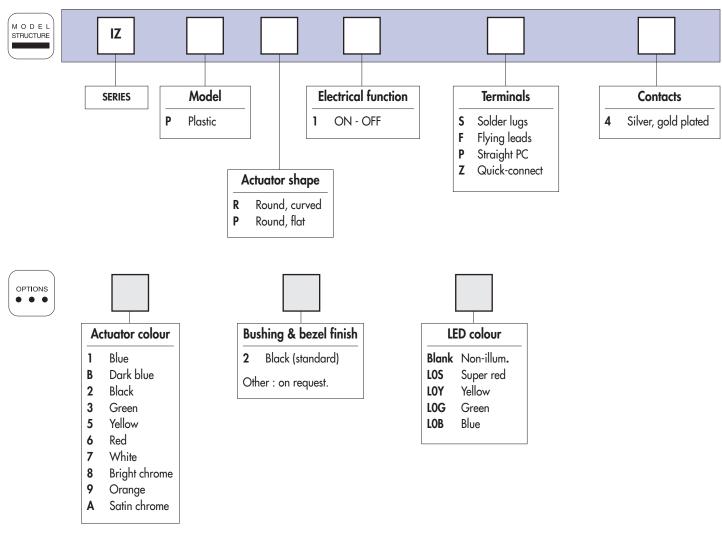




# **IZ** series

# Rear mounted sealed pushbutton switches - bushing $\emptyset$ 16 mm - latching

Distinctive features and specifications



### **ABOUT THIS SERIES**

On the following pages, you will find successively : model structure of switches and options in the same order as in above chart

Dimensions: first dimensions are in mm while inches are shown as bracketted numbers.



NOTICE: please note that not all combinations of above numbers are available. Refer to the following pages for further information.



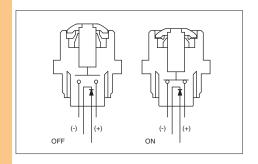
Mounting accessories: Standard hardware supplied: 1 castellated black plastic nut U4249 and 1 silicone flat seal.



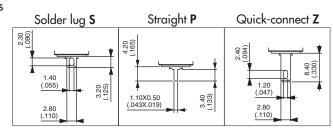
## New!

# Rear mounted sealed pushbutton switches - bushing Ø 16 mm - latching

Illuminated



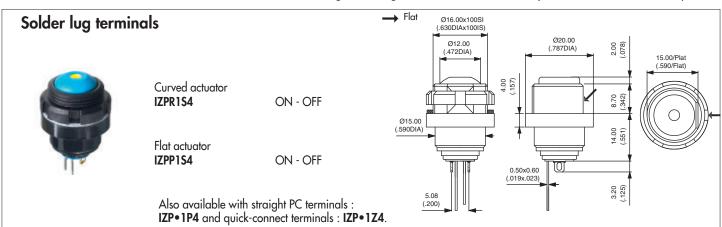
- Four LED colours
- Tin plated LED terminals
- Gold plated contacts

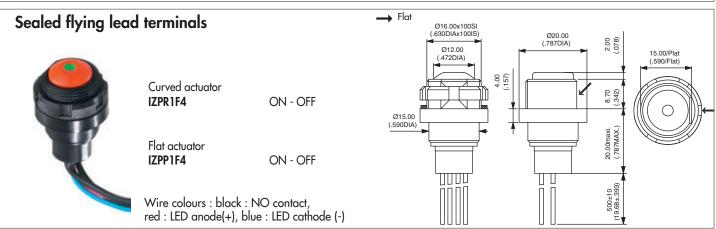


MODEL STRUCTURE

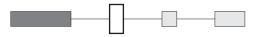


Plunger marking available on IZPP models (symbol 10 mm max.). On request.





### **ACTUATOR COLOUR**



1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange A : satin chrome

# BUSHING AND BEZEL COLOUR

2 : black (standard) Other : on request.

### **LED COLOUR**



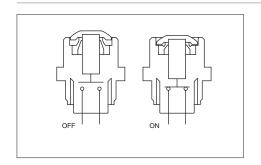
LOS: super red - LOY: yellow - LOG: green

LOB: blue

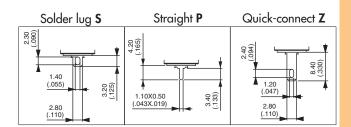
# **IZ** series

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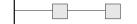
Non-illuminated



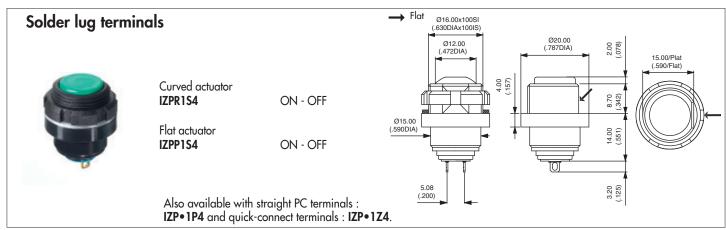
Gold plated contacts

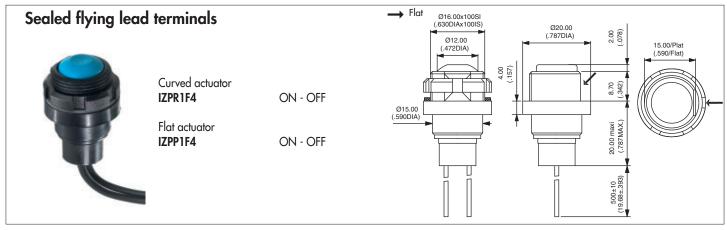






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