

IZ series

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

Distinctive features and specifications



- ☐ Rear mounting for easier installation
- ☐ 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
 - Silver contacts (code 2) - screw terminals : 4A 48VDC
- Electrical life at full load : 500.000 cycles
- Initial contact resistance : 100 mΩ 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 = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

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

GENERAL SPECIFICATIONS

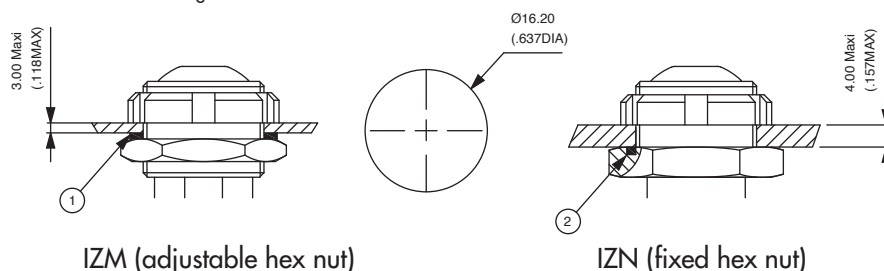
- Panel thickness :
 - IZM : 3 mm (.118) max.
 - IZN : 4 mm (.157) max.
- Total travel : 1,8 mm (.070) +/- 0,3 mm
- Typical operating force : 6N +/- 2N
- Low level or mechanical life : 1.000.000 cycles
- Torque : IZN : 1 Nm max.
IZM : 0,7 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

MATERIALS

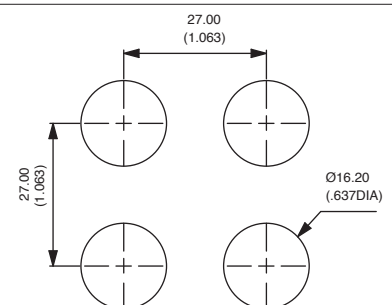
- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : brass, nickel plated
- Contacts :
 - 4 : silver, gold plated
 - 2 : silver (screw terminals)
- Multi-wire lead AWG20, section 0,6 mm²
- LED wire : AWG26, section 0,12 mm²
- Lens : polycarbonate
- Terminal seal : epoxy (except screw terminals)

PANEL CUT-OUT

- ① Flat seal ② O-ring



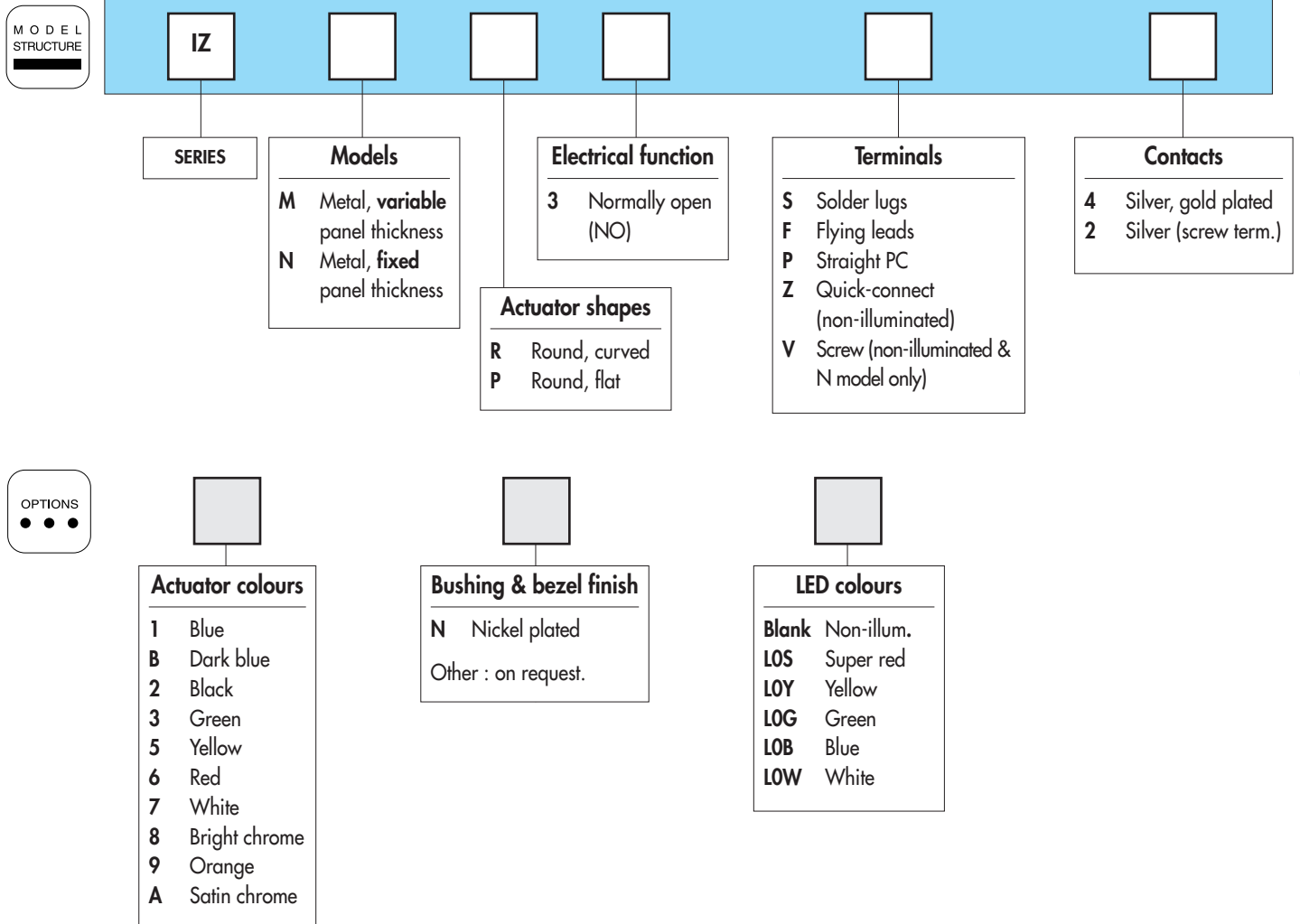
MATRIX MOUNTING



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 bracketed 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

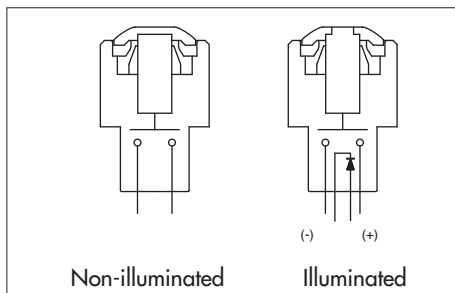


Packaging unit : 25 pieces for flying lead models - 40 pieces for other models

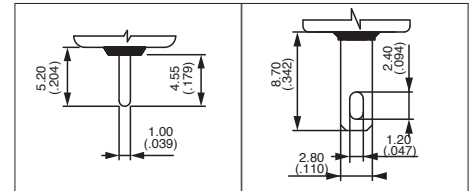
IZ series

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

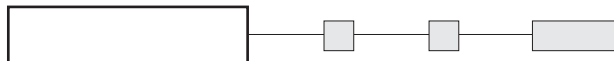
For variable panel thickness : IZM



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



MODEL STRUCTURE



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

Illuminated - solder lug terminals

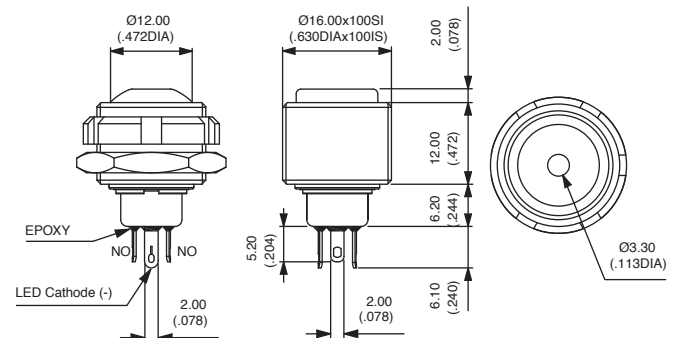


Curved actuator
IZMR3S4

Normally Open

Flat actuator
IZMP3S4

Normally Open



Also available with straight PC terminals : **IZM•3P4**.
LED colour is indicated by the bottom of the switch.

Illuminated - flying lead terminals

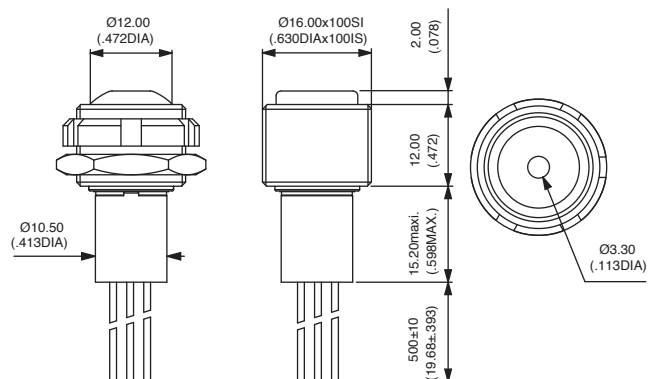


Curved actuator
IZMR3F4

Normally Open

Flat actuator
IZMP3F4

Normally Open



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

Non-illuminated - solder lug terminals

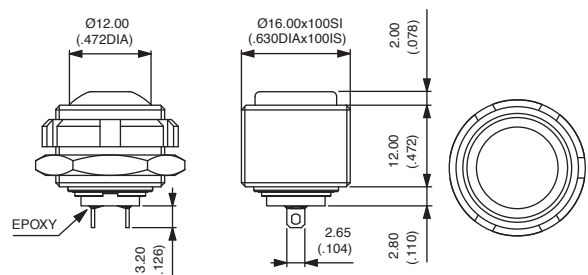


Curved actuator
IZMR3S4

Normally Open

Flat actuator
IZMP3S4

Normally Open



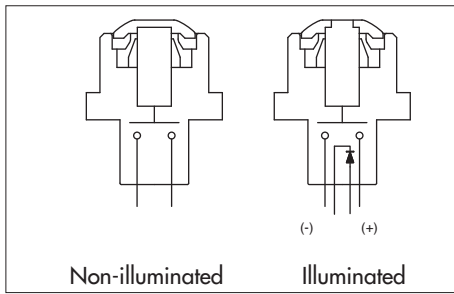
Also available with straight PC terminals :
IZM•3P4 and quick-connect terminals : **IZM•3Z4**.

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

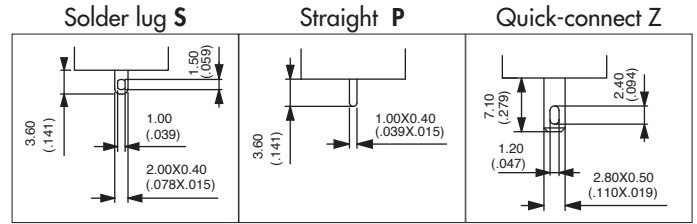
IZ series

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

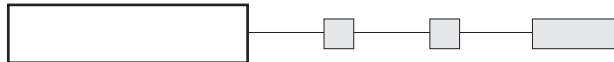
For fixed panel thickness : IZN



- Five LED colours
- Tin plated LED terminals



MODEL STRUCTURE



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

Illuminated - solder lug terminals



GOLD PLATED CONTACTS

Curved actuator
IZNR3S4



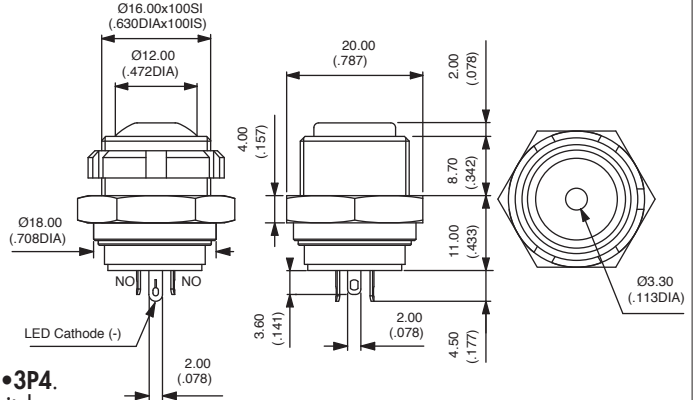
Normally Open

Flat actuator
IZNP3S4



Normally Open

Also available with straight PC terminals : **IZN•3P4**.
LED colour is indicated by the bottom of the switch.



Illuminated - sealed flying lead terminals



GOLD PLATED CONTACTS

Curved actuator
IZNR3F4



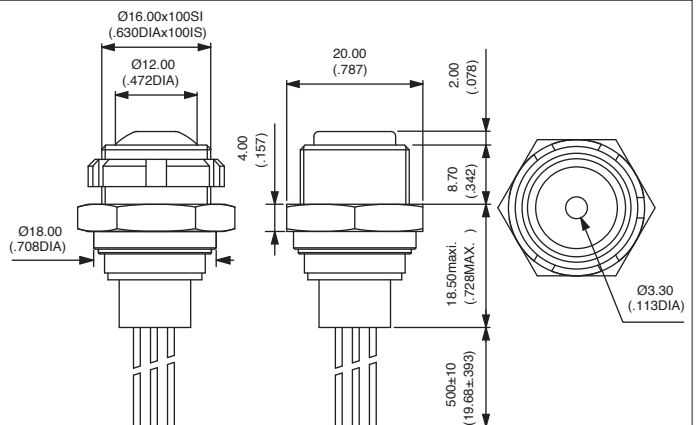
Normally Open

Flat actuator
IZNP3F4



Normally Open

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



Non-illuminated - solder lug terminals



GOLD PLATED CONTACTS

Curved actuator
IZNR3S4



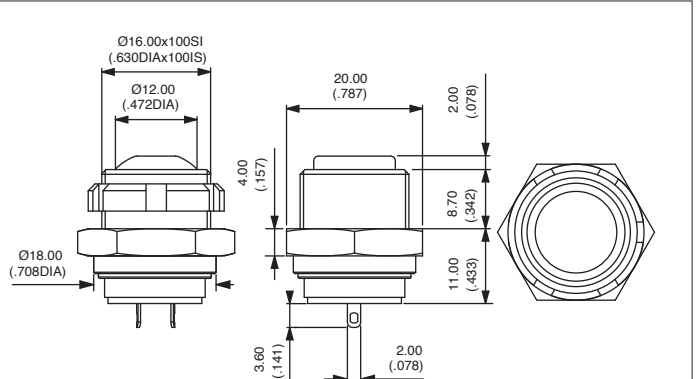
Normally Open

Flat actuator
IZNP3S4



Normally Open

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



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

I^Z series

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

For fixed panel thickness : IZN - options

Non-illuminated - screw terminals



SILVER CONTACTS

Curved actuator
IZNR3V2

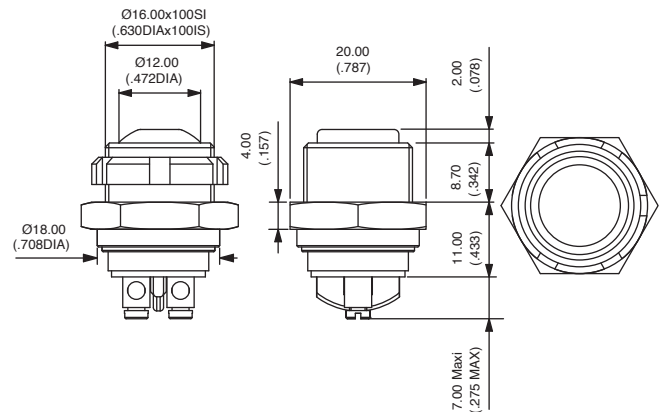


Normally open

Flat actuator
IZNP3V2



Normally open

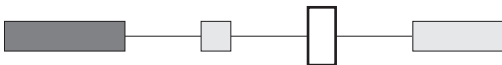


ACTUATOR COLOURS



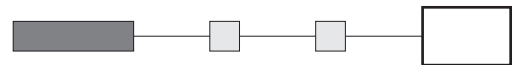
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange
A : satin chrome

BUSHING AND BEZEL COLOURS



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

LED COLOURS



Blank : non-illuminated
LOS : super red - LOY : yellow - LOG : green
LOB : blue - LOW : white



- ☐ Rear mounting for easier installation
- ☐ 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) : IK06 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 mΩ max.
- Insulation resistance : 1 GΩ 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	2,1V	2,5V
Blue (LOB)	20mA	3,2V	4V

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.

GENERAL SPECIFICATIONS

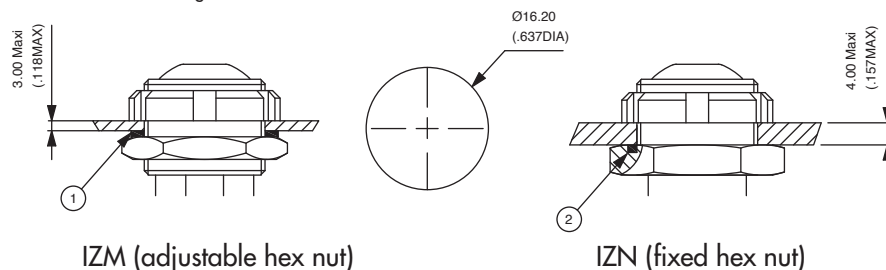
- Panel thickness :
 - IZM : 3 mm (.118) max.
 - IZN : 4 mm (.157) max.
- Total travel : 2,5 mm (.098) +/- 0,3 mm
- Typical operating force : 5N +/- 2N
- Low level or mechanical life : 200.000 cycles
- Torque : IZN : 1 Nm max.
IZM : 0,7 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

MATERIALS

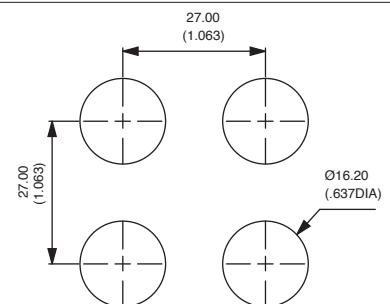
- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : brass, nickel plated
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm²
- LED wire : AWG26, section 0,12 mm²
- Lens : polycarbonate
- Terminal seal : epoxy

PANEL CUT-OUT

- ① Flat seal ② O-ring



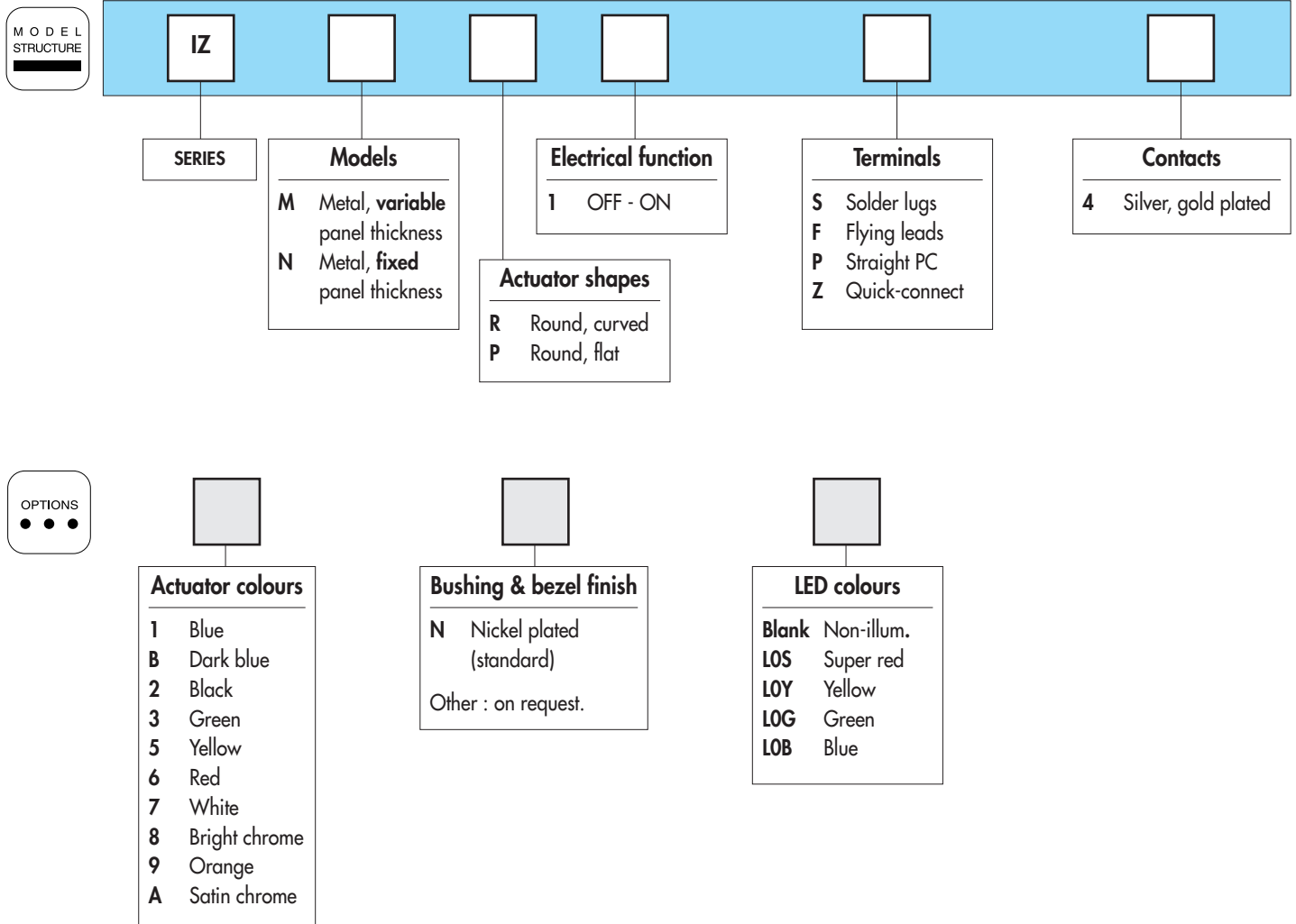
MATRIX MOUNTING



IZ series

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 bracketed 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 :

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

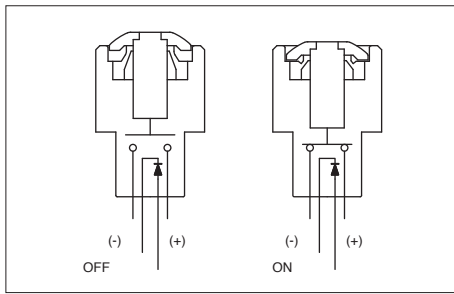


Packaging unit : 25 pieces for flying lead models - 40 pieces for other models

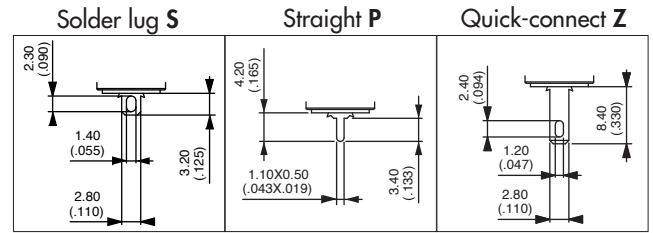
IZ series

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

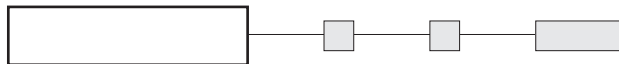
For variable panel thickness : IZM



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



MODEL STRUCTURE



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

Illuminated - solder lug terminals



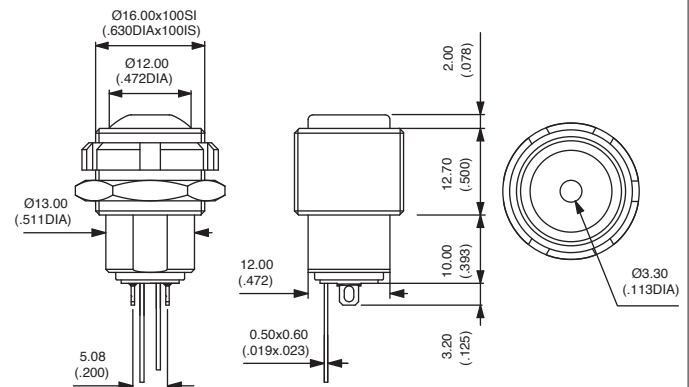
Curved actuator
IZMR1S4

OFF - ON

Flat actuator
IZMP1S4

OFF - ON

Also available with straight PC terminals :
IZM•1P4 & quick-connect terminals : **IZM•1Z4**.



Illuminated - flying lead terminals



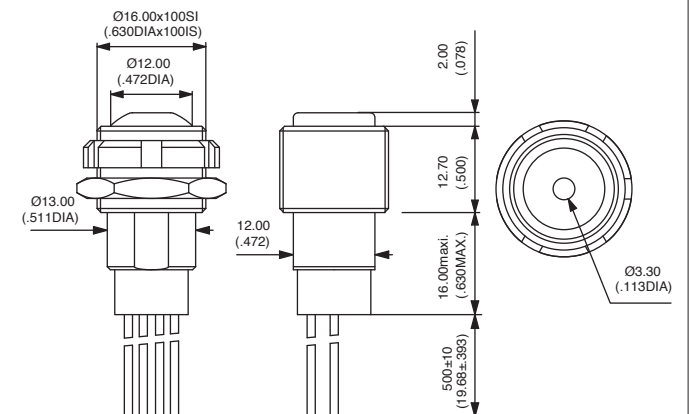
Curved actuator
IZMR1F4

OFF - ON

Flat actuator
IZMP1F4

OFF - ON

Wire colours : black : contact,
red : LED anode(+), blue : LED cathode (-)



Non-illuminated - solder lug terminals



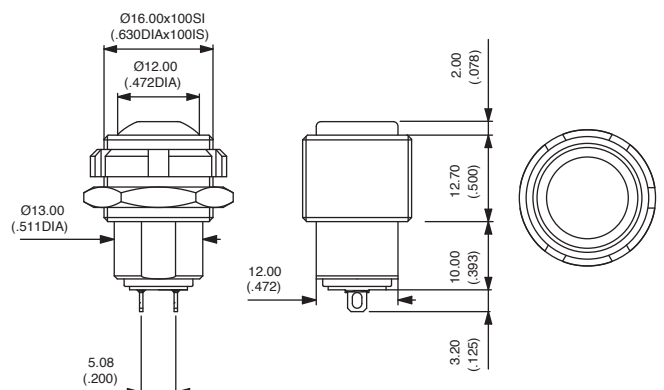
Curved actuator
IZMR1S4

OFF - ON

Flat actuator
IZMP1S4

OFF - ON

Also available with straight PC terminals :
IZM•1P4 & quick-connect terminals : **IZM•1Z4**.

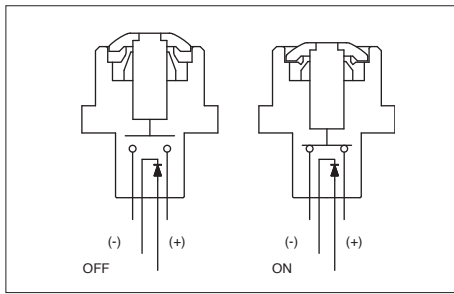


For non-illuminated FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.

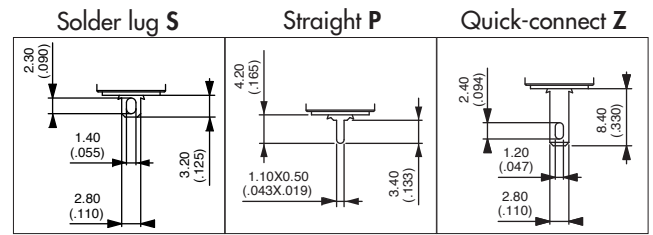
IZ series

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

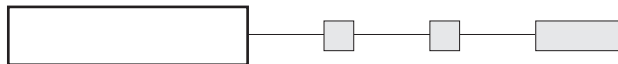
For fixed panel thickness : IZN



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



MODEL STRUCTURE



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

Illuminated - solder lug terminals



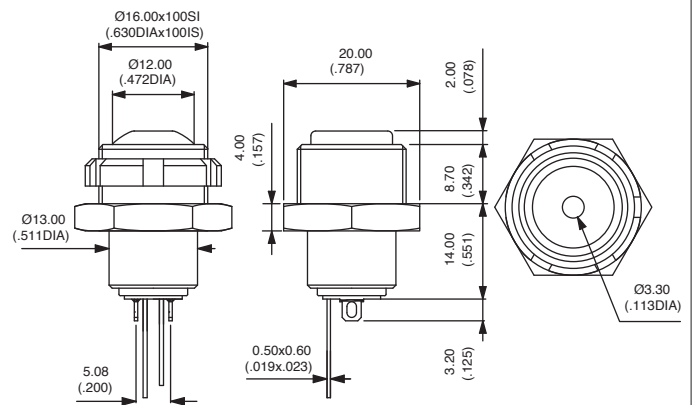
Curved actuator
IZNR1S4

OFF - ON

Flat actuator
IZNP1S4

OFF - ON

Also available with straight PC terminals :
IZN•1P4 & quick-connect terminals : **IZN•1Z4**.



Illuminated - flying lead terminals



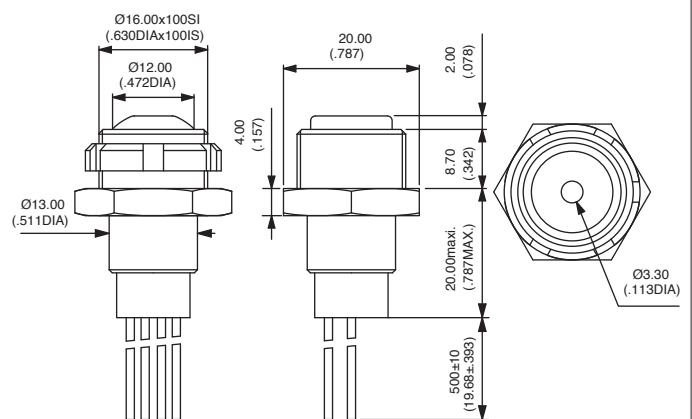
Curved actuator
IZNR1F4

OFF - ON

Flat actuator
IZNP1F4

OFF - ON

Wire colours : black : contact,
red : LED anode(+), blue : LED cathode (-)



Non-illuminated - solder lug terminals



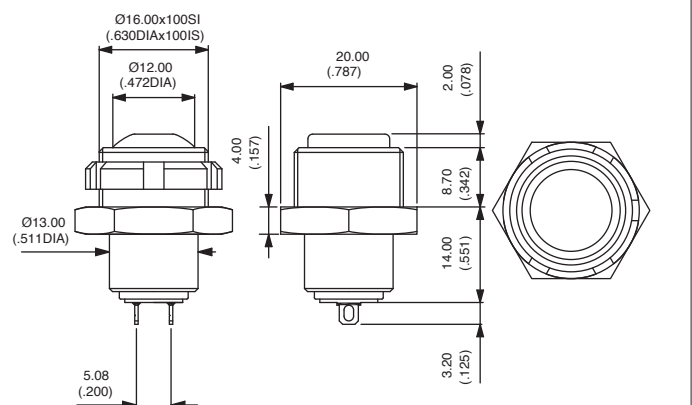
Curved actuator
IZNR1S4

OFF - ON

Flat actuator
IZNP1S4

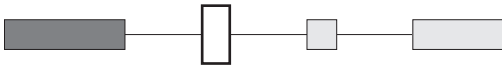
OFF - ON

Also available with straight PC terminals :
IZN•1P4 & quick-connect terminals : **IZN•1Z4**.



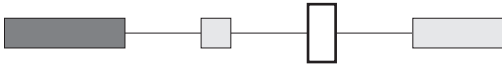
For non-illuminated FLYING LEAD versions, refer to illuminated models above. Non-illuminated have 2 wires only.

ACTUATOR COLOURS



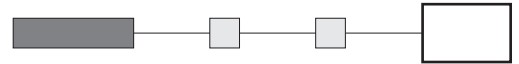
1 : blue - **B** : dark blue - **2** : black - **3** : green - **5** : yellow - **6** : red - **7** : white - **8** : bright chrome - **9** : orange
A : satin chrome

BUSHING AND BEZEL COLOURS



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

LED COLOURS



Blank : non-illuminated
LOS : super red - **LOY** : yellow - **LOG** : green
LOB : blue

I² series

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Distinctive features and specifications



- ☐ Rear mounting for easier installation
- ☐ 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
 - Silver contacts (code 2) - screw terminals : 4A 48VDC
- Electrical life at full load : 500.000 cycles
- Initial contact resistance : 100 mΩ 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 = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

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

GENERAL SPECIFICATIONS

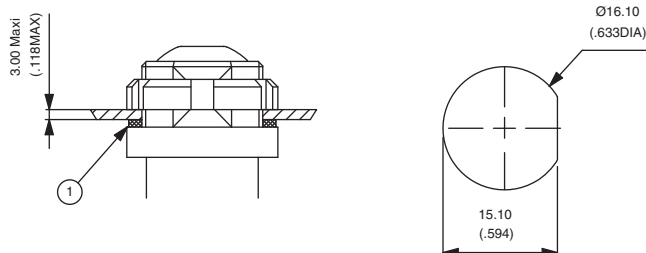
- Panel thickness : 3 mm (.118) max.
- Total travel : 1,8 mm (.070) +/- 0,3 mm
- Typical operating force : 6N +/- 2N
- Low level or mechanical life : 1.000.000 cycles
- Torque : 0,7 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

MATERIALS

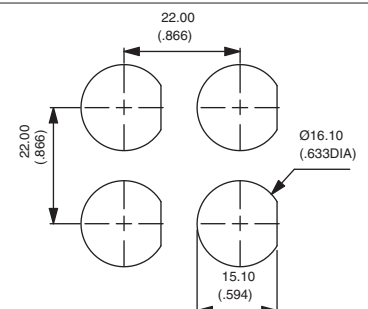
- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : polyamide
- Contacts :
 - 4 : silver, gold plated
 - 2 : silver (screw terminals)
- Multi-wire lead AWG20, section 0,6 mm²
- LED wire : AWG26, section 0,12 mm²
- Lens : polycarbonate
- Terminal seal : epoxy (except screw terminals)

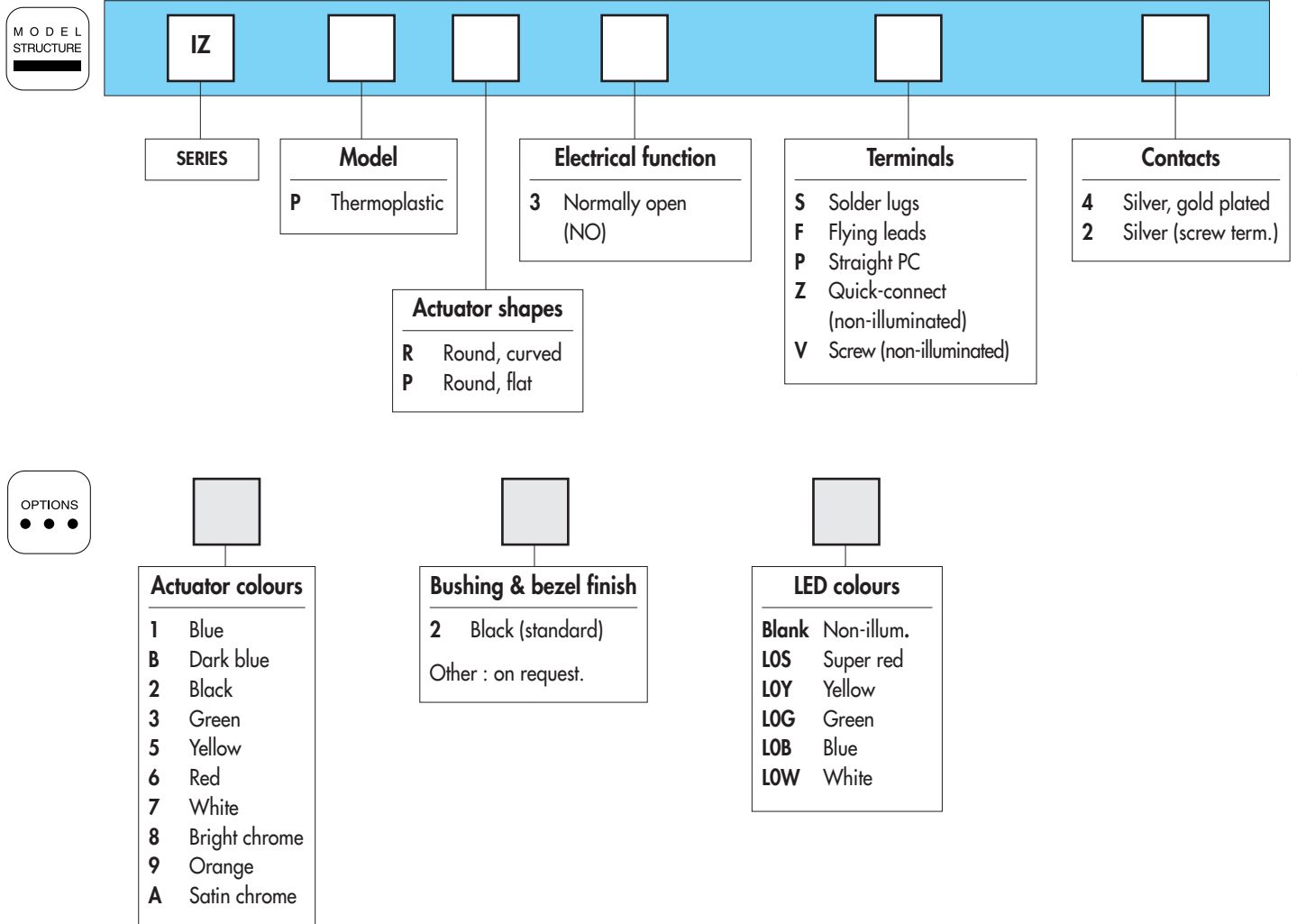
PANEL CUT-OUT

① Flat seal



MATRIX MOUNTING





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 bracketed 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.

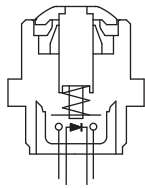


Packaging unit : 25 pieces for flying lead models - 40 pieces for other models

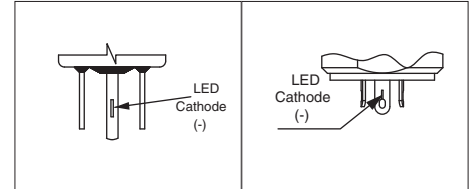
IZ series

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

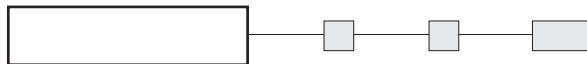
Illuminated



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



MODEL STRUCTURE



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

Solder lug terminals



Curved actuator
IZPR3S4



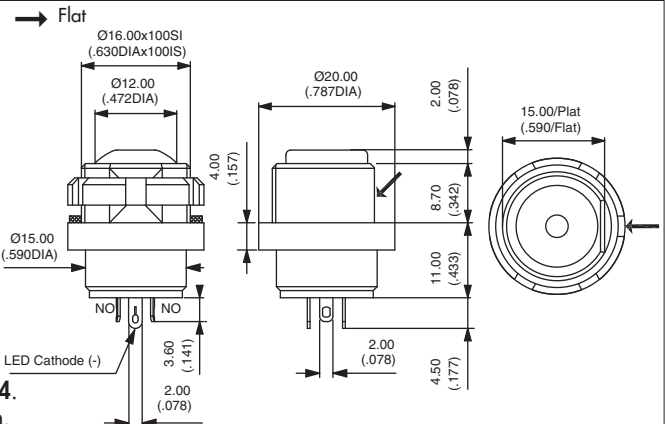
Normally Open

Flat actuator
IZPP3S4



Normally Open

Also available with straight PC terminals : **IZP•3P4**.
LED colour is indicated by the bottom of the switch.



Flying lead terminals - momentary



Curved actuator
IZPR3F4



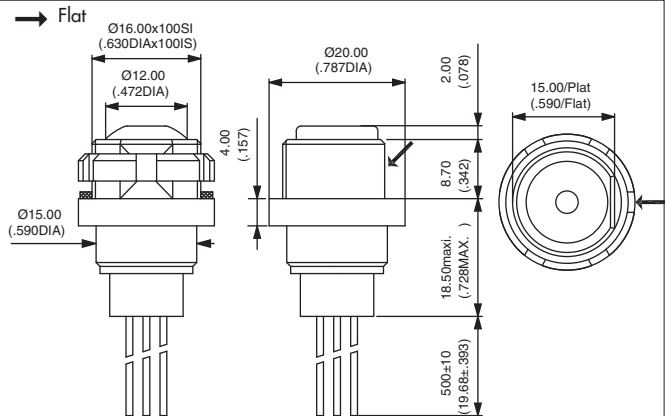
Normally Open

Flat actuator
IZPP3F4



Normally Open

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

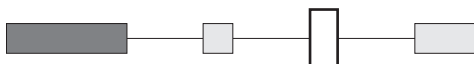


ACTUATOR COLOURS



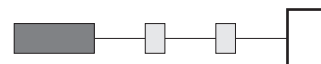
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange
A : satin chrome

BUSHING AND BEZEL COLOURS

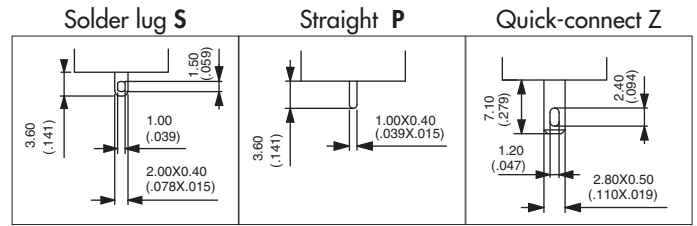
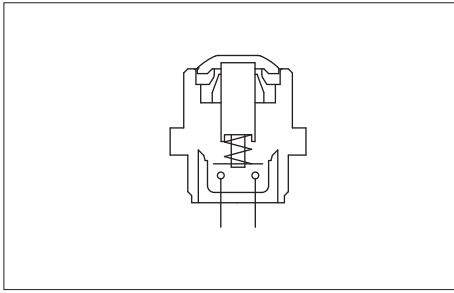


2 : black (standard)
Other : on request.

LED COLOURS



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



MODEL STRUCTURE



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

Solder lug terminals - gold plated contacts



Curved actuator
IZPR3S4



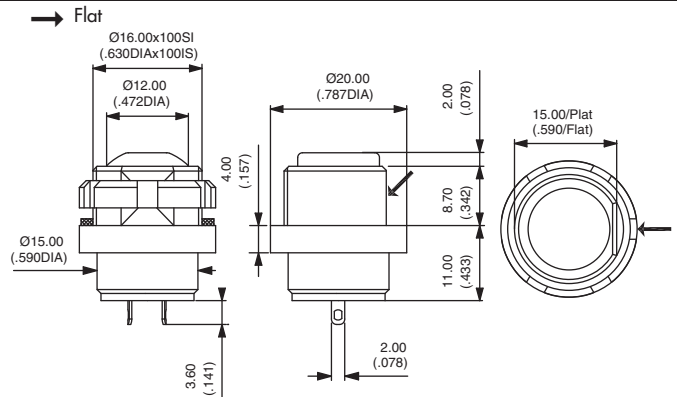
Normally Open

Flat actuator
IZPP3S4



Normally Open

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



Sealed flying lead terminals - gold plated contacts



Curved actuator
IZPR3F4

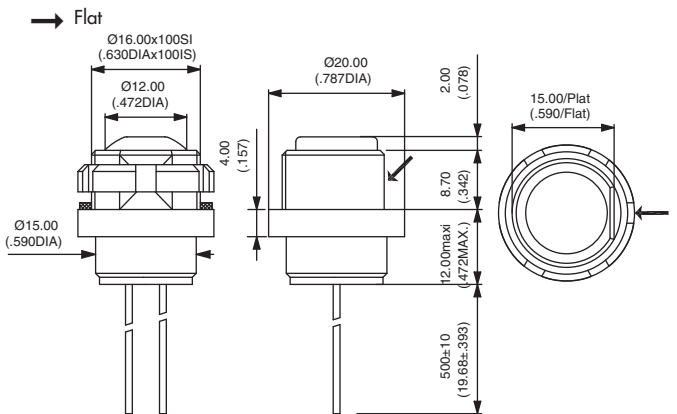


Normally Open

Flat actuator
IZPP3F4



Normally Open



Screw terminals - silver contacts



Curved actuator
IZPR3V2

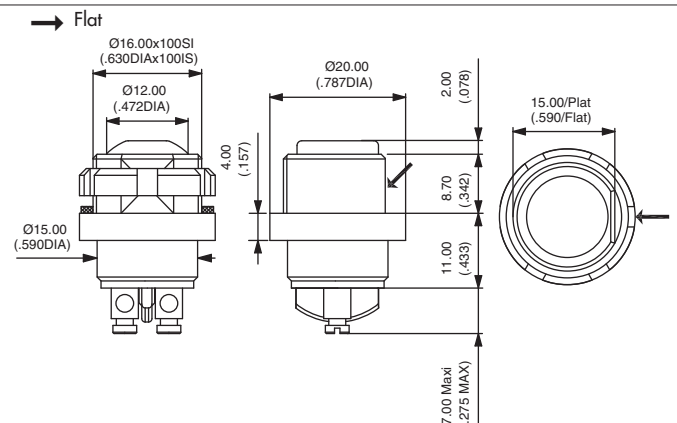


Normally open

Flat actuator
IZPP3V2



Normally open



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

I² series

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

Distinctive features and specifications



- ☐ 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 mΩ max.
- Insulation resistance : 1 GΩ 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 (LOG)	20mA	2,1V	2,5V
Blue (LOB)	20mA	3,2V	4V

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.

GENERAL SPECIFICATIONS

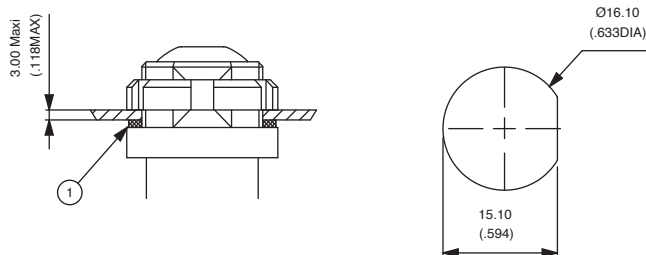
- Panel thickness : 3 mm (.118) max.
- Total travel : 2,5 mm (.098) +/- 0,3 mm
- Typical operating force : 5N +/- 2N
- Low level or mechanical life : 200.000 cycles
- Torque : 0,7 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

MATERIALS

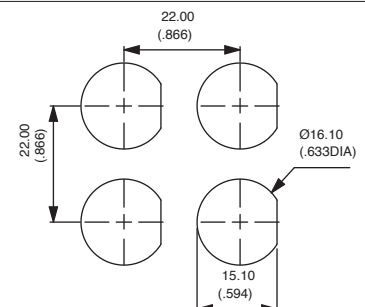
- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : polyamide
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm²
- LED wire : AWG26, section 0,12 mm²
- Lens : polycarbonate
- Terminal seal : epoxy

PANEL CUT-OUT

① Flat seal



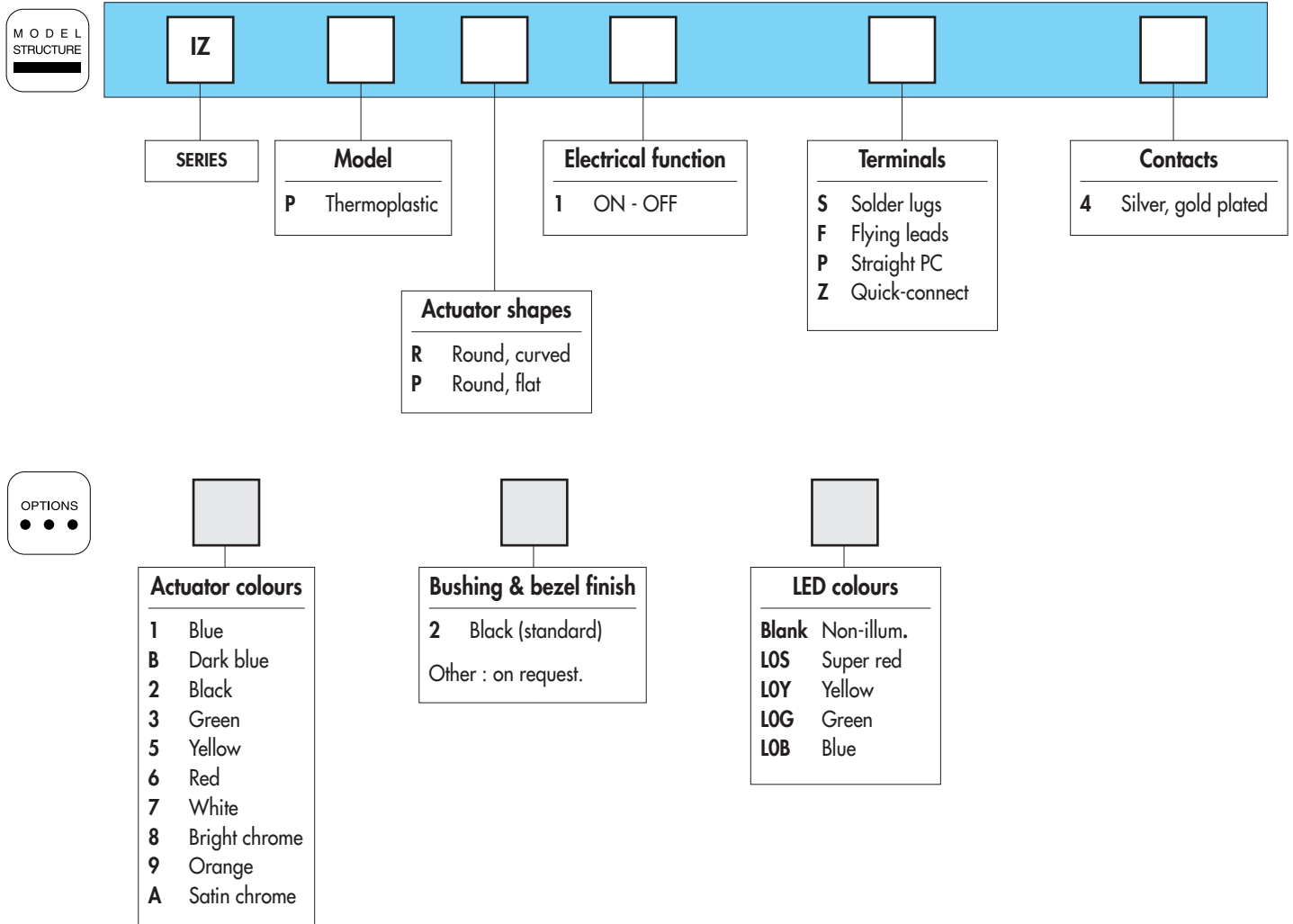
MATRIX MOUNTING



IZ series

Rear mounted sealed pushbutton switches - bushing Ø 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 bracketed 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.

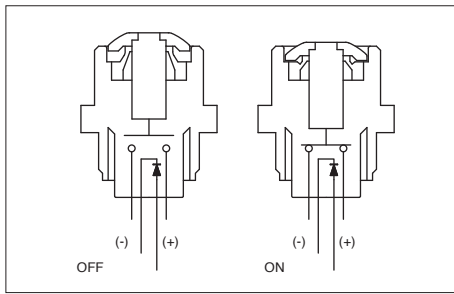


Packaging unit : 25 pieces for flying lead models - 40 pieces for other models

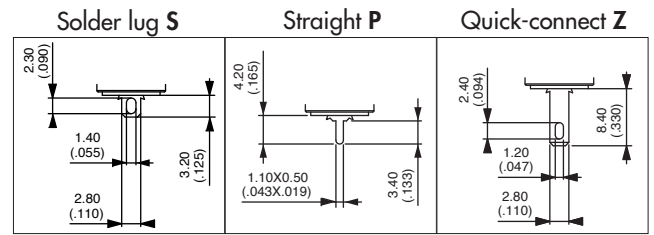
IZ series

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

Illuminated



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



MODEL STRUCTURE



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

Solder lug terminals



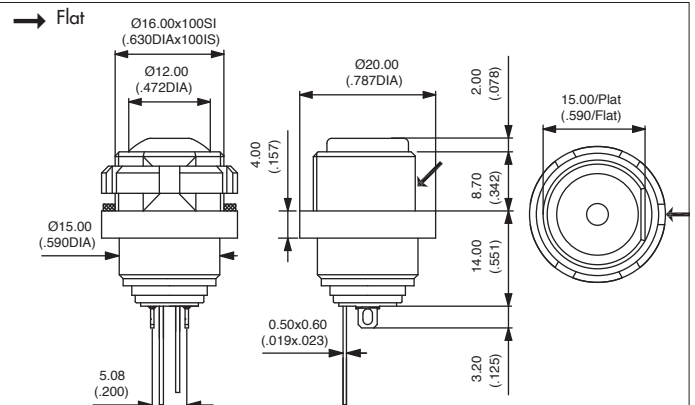
Curved actuator
IZPR1S4

ON - OFF

Flat actuator
IZPP1S4

ON - OFF

Also available with straight PC terminals :
IZP•1P4 and quick-connect terminals : **IZP•1Z4**.



Sealed flying lead terminals



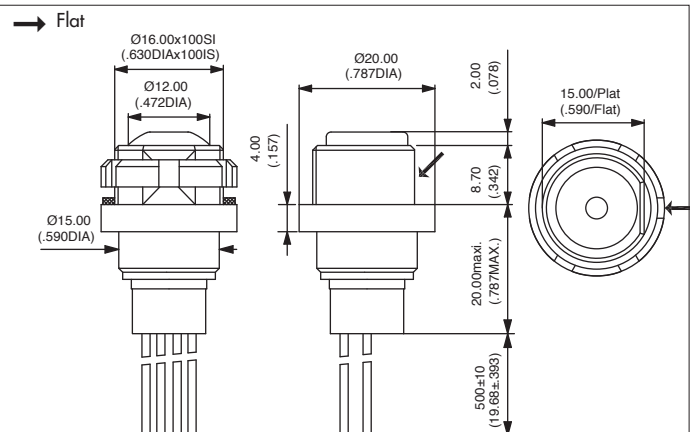
Curved actuator
IZPR1F4

ON - OFF

Flat actuator
IZPP1F4

ON - OFF

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

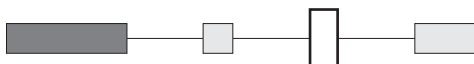


ACTUATOR COLOURS



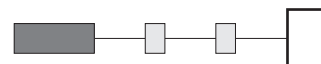
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange
A : satin chrome

BUSHING AND BEZEL COLOURS



2 : black (standard)
Other : on request.

LED COLOURS

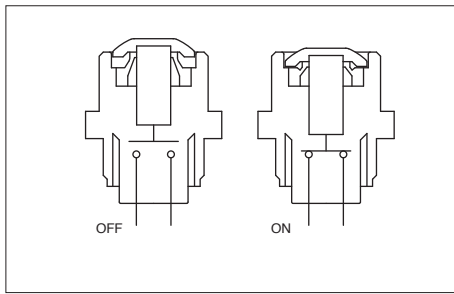


LOS : super red - LOY : yellow - LOG : green
LOB : blue

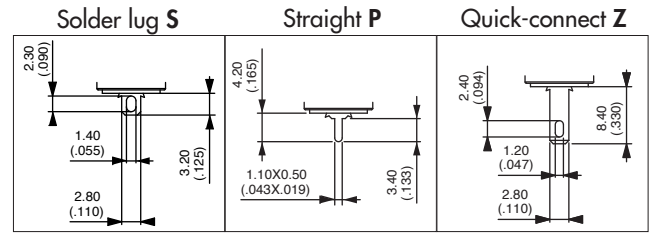
IZ series

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

Non-illuminated



- Gold plated contacts



MODEL STRUCTURE



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

Solder lug terminals



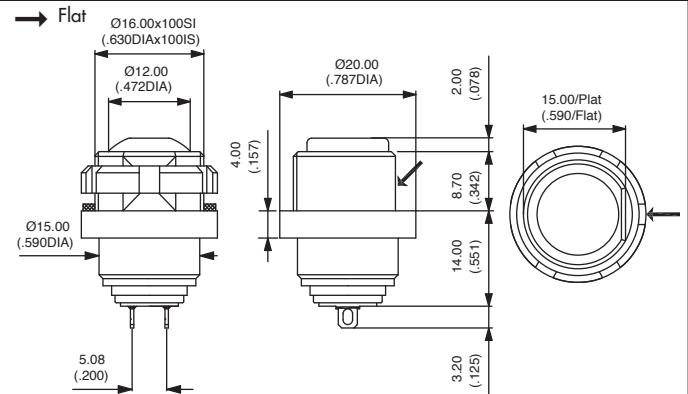
Curved actuator
IZPR1S4

ON - OFF

Flat actuator
IZPP1S4

ON - OFF

Also available with straight PC terminals :
IZP•1P4 and quick-connect terminals : **IZP•1Z4**.



Sealed flying lead terminals

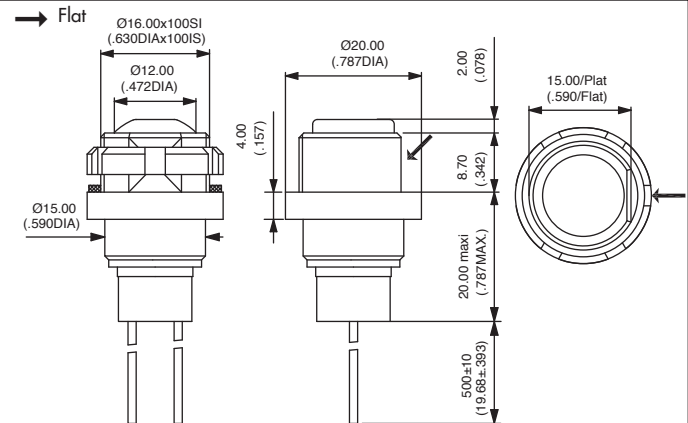


Curved actuator
IZPR1F4

ON - OFF

Flat actuator
IZPP1F4

ON - OFF



ACTUATOR COLOURS



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 COLOURS



2 : black (standard)
 Other : on request.