IZ series

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

Distinctive features and specifications

❑ **Rear mounting for easier installation**

❑ **Latching action metal models**

❑ **Fixed or variable panel thickness**

❑ **Illuminated or non-illuminated**

❑ **Flat actuator for optional marking**

❑ **Sealed to IP67**

ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 2,5 mm (.098)
- Mechanical life : 200.000 cycles

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 (L0S)	20mA	1,95V	1,95V
Yellow (L0Y)	20mA	2V	2,05V
Green (L0G)	20mA	3,2V	3,70V
Blue (L0B)	20mA	3,2V	4V

A resistor must be series-connected by the user.

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

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

MATERIALS

- Case : thermpoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : brass, nickel plated
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm^2
- LED wire : AWG26, section 0,12 mm^2
- Lens : polycarbonate
- Terminal seal : epoxy

Dimensions : First dimensions are im mm while inches are shown as bracketed numbers.
Tolerance : The general tolerance for dimensions in this brochure is ± 0,3 (.012).
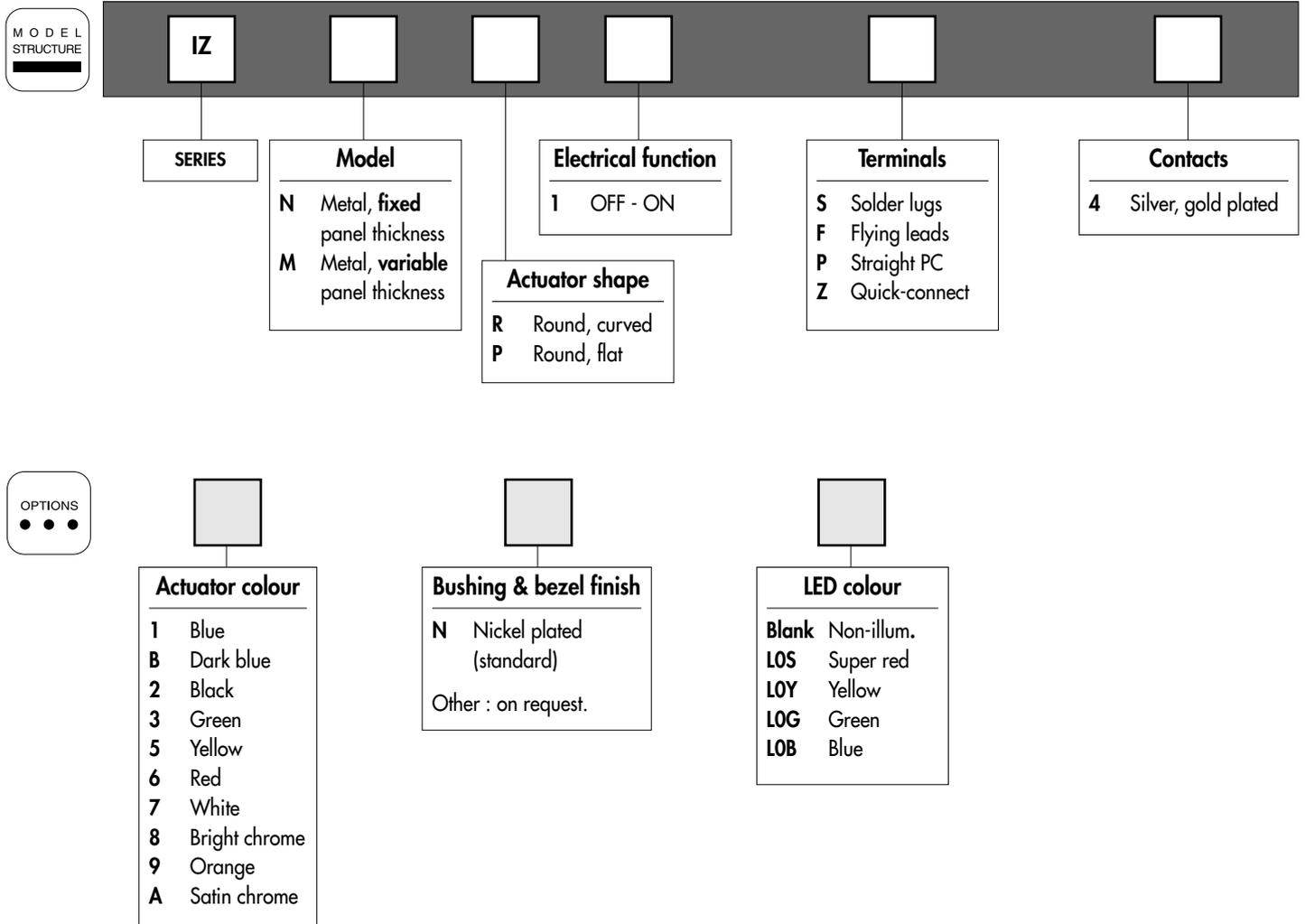Overall dimension tolerance is ± 0,5 (.020).

Dimensions, specifications and data shown in this catalogue are subject to change without notice.

IZ series

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

Overview

IZ

SERIES	Model		Electrical function	Terminals		Contacts

Model

N	Metal, **fixed** panel thickness
M	Metal, **variable** panel thickness

Actuator shape

R	Round, curved
P	Round, flat

Electrical function

1	OFF - ON

Terminals

S	Solder lugs
F	Flying leads
P	Straight PC
Z	Quick-connect

Contacts

4	Silver, gold plated

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 & bezel finish

N	Nickel plated (standard)

Other : on request.

LED colour

Blank	Non-illum**.**
L0S	Super red
L0Y	Yellow
L0G	Green
L0B	Blue

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.
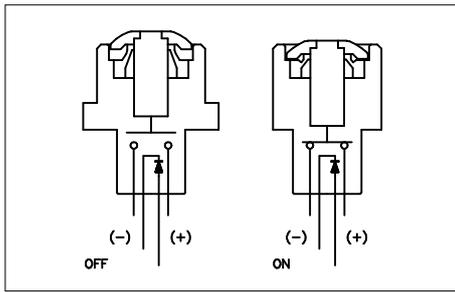Refer to the following pages for further information.

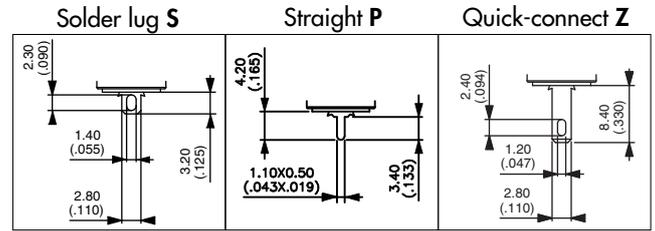**Mounting accessories** : Standard hardware supplied :
- IZN : 1 castellated nickel plated brass nut U6911 + 1 O-ring
- IZM : 1 castellated nickel plated brass nut U6911 + 1 silicone flat seal + 1 hex nut 19 mm (.748) across flats U4116.

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

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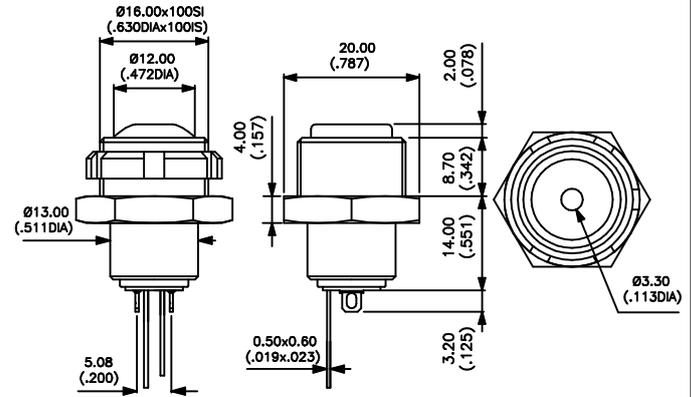- Tin plated LED terminals
- Gold plated contacts

(−) (+)
OFF

(−) (+)
ON

Solder lug **S**

2.30 (.090)
1.40 (.055)
2.80 (.110)
3.20 (.125)

Straight **P**

4.20 (.165)
1.10X0.50 (.043X.019)
3.40 (.133)

Quick-connect **Z**

2.40 (.094)
8.40 (.330)
1.20 (.047)
2.80 (.110)

MODEL STRUCTURE

Plunger marking available on IZ•P models (symbol 10 mm max.). On request.

Fixed panel thickness - solder lug terminals

Photo

Curved actuator
IZNR1S4   OFF - ON

Flat actuator
IZNP1S4   OFF - ON

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

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
4.00 (.157)
Ø13.00 (.511DIA)
20.00 (.787)
2.00 (.078)
8.70 (.342)
14.00 (.551)
3.20 (.125)
Ø3.30 (.113DIA)
0.50x0.60 (.019x.023)
5.08 (.200)

Fixed panel thickness - flying lead terminals

Photo

Curved actuator
IZNR1F4   OFF - ON

Flat actuator
IZNP1F4   OFF - ON
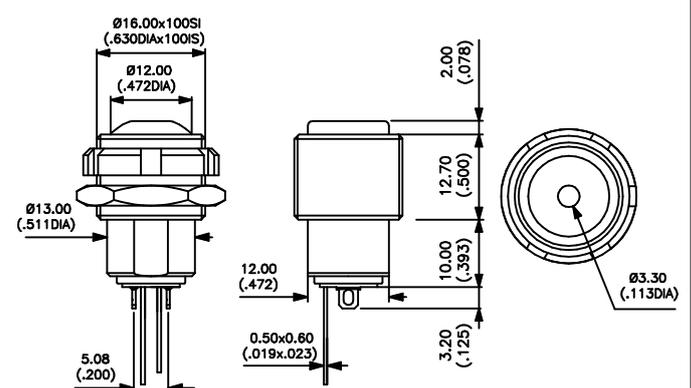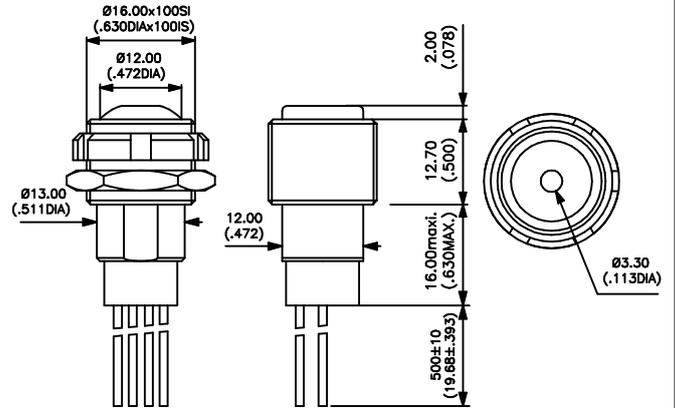
Wire colours : black : contact,
red : LED anode(+), blue : LED cathode (-)

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
4.00 (.157)
Ø13.00 (.511DIA)
20.00 (.787)
2.00 (.078)
8.70 (.342)
20.00maxi. (.787MAX.)
500±10 (19.68±.393)
Ø3.30 (.113DIA)

Variable panel thickness - solder lug terminals

Photo

Curved actuator
IZMR1S4   OFF - ON

Flat actuator
IZMP1S4   OFF - ON

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

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø13.00 (.511DIA)
2.00 (.078)
12.70 (.500)
10.00 (.393)
3.20 (.125)
12.00 (.472)
0.50x0.60 (.019x.023)
5.08 (.200)
Ø3.30 (.113DIA)

IZ series

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

Illuminated

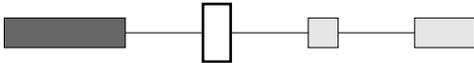
Variable panel thickness - flying lead terminals

| Photo |

Curved actuator
IZMR1F4   OFF - ON

Flat actuator
IZMP1F4   OFF - ON

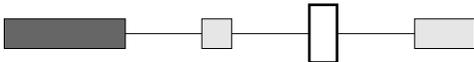Wire colours : black : contact,
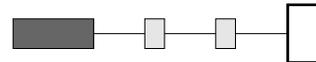red : LED anode(+), blue : LED cathode (-)

Ø16.00x100SI
(.630DIAx100IS)
Ø12.00
(.472DIA)
2.00
(.078)
12.70
(.500)
Ø13.00
(.511DIA)
12.00
(.472)
16.00maxi.
(.630MAX.)
Ø3.30
(.113DIA)
500±10
(19.68±.393)

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

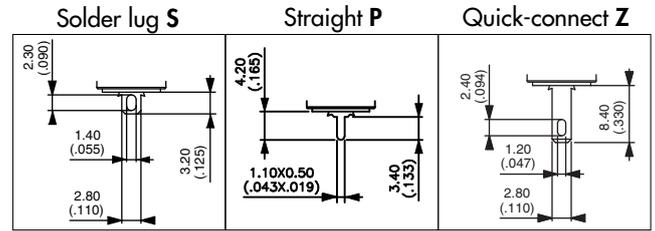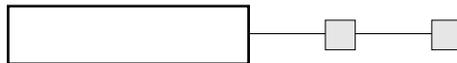**N** : nickel plated (standard)
Other : on request.

LED COLOUR

L0S : super red - **L0Y** : yellow - **L0G** : green
L0B : blue

OFF   ON

• Gold plated contacts

Solder lug **S**   Straight **P**   Quick-connect **Z**
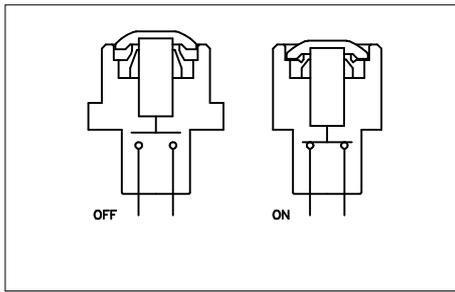
MODEL STRUCTURE

Plunger marking available on IZ•P models (symbol 10 mm max.). On request.

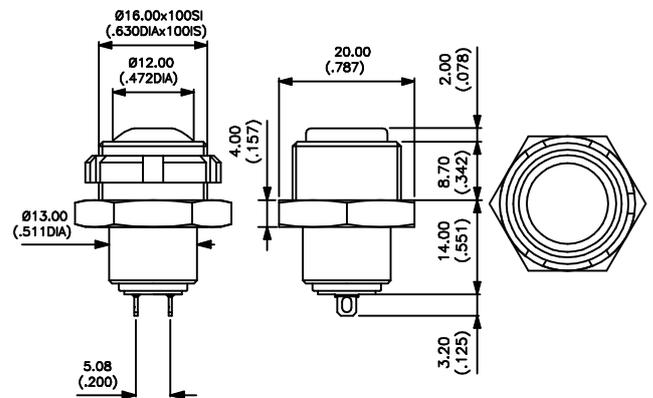## Fixed panel thickness - solder lug terminals

Curved actuator
IZNR1S4   OFF - ON

Flat actuator
IZNP1S4   OFF - ON

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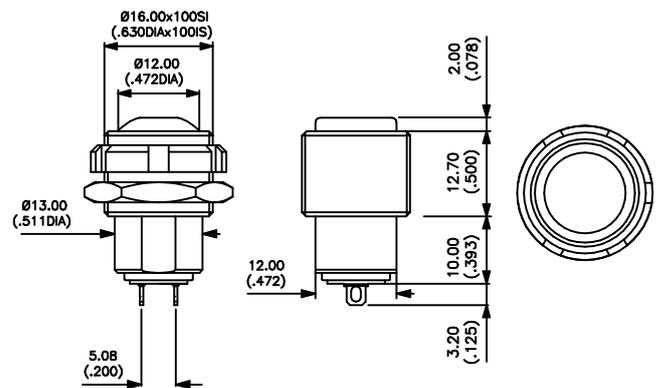

Variable panel thickness - solder lug terminals

Photo

Curved actuator
IZMR1S4   OFF - ON

Flat actuator
IZMP1S4   OFF - ON

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

For FLYING LEAD versions, refer to previous pages (illuminated models). Non-illuminated have 2 wires only.

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.

IZ series

Rear mounted sealed pushbutton switches - bushing Ø 16 - momentary

Distinctive features and specifications

Preliminary

❑ **Rear mounting for easier installation**

❑ **Momentary models**

❑ **Illuminated or non-illuminated**

❑ **Flat actuator for optional marking**

❑ **Sealed to IP67**

❑ **Screw version available up to 4A**

ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 1,7 mm (.067)
- Mechanical life : 1.000.000 cycles

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 mm^2
- LED wire : AWG26,
  section 0,12 mm^2
- Lens : polycarbonate
- Terminal seal : epoxy

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 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.000 Vrms 50 Hz

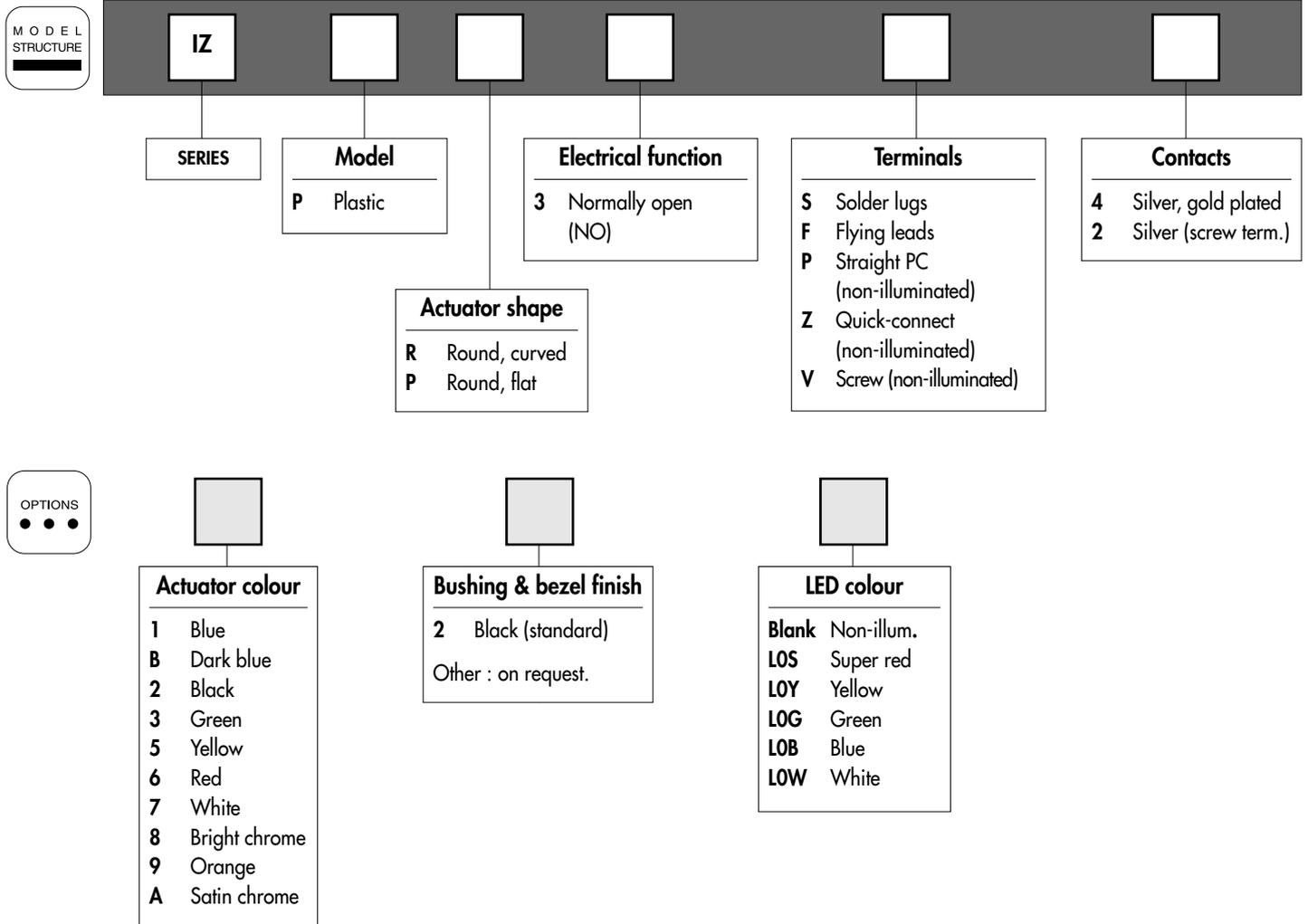| LED COMPONENT SPECIFICATIONS			
LED colour	Forward current	Typ. forward voltage	Max. forward voltage
Super red (L0S)	20mA	2,1V	2,3V
Yellow (L0Y)	20mA	2,1V	2,3V
Green (L0G)	20mA	2,1V	2,3V
Blue (L0B)	20mA	3,2V	3,8V
White (L0W)	20mA	3,35V	4,25V

A resistor must be series-connected by the user.

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

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

MODEL STRUCTURE

| IZ | | | | | |

SERIES

Model

| P | Plastic |

Actuator shape

| R | Round, curved |
| P | Round, flat |

Electrical function

| 3 | Normally open (NO) |

Terminals

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

Contacts

| 4 | Silver, gold plated |
| 2 | Silver (screw term.) |

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 & bezel finish

| 2 | Black (standard) |

Other : on request.

LED colour

Blank	Non-illum.
L0S	Super red
L0Y	Yellow
L0G	Green
L0B	Blue
L0W	White

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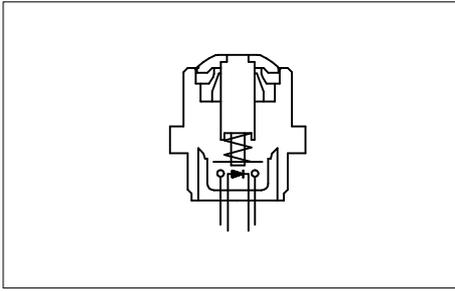
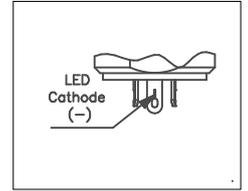**Packaging unit** : 25 pieces for flying lead models - 40 pieces for other models

IZ series

Rear mounted sealed pushbutton switches - bushing Ø 16 - momentary

Illuminated

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

LED Cathode (−)

MODEL STRUCTURE

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

Solder lug terminals

Curved actuator
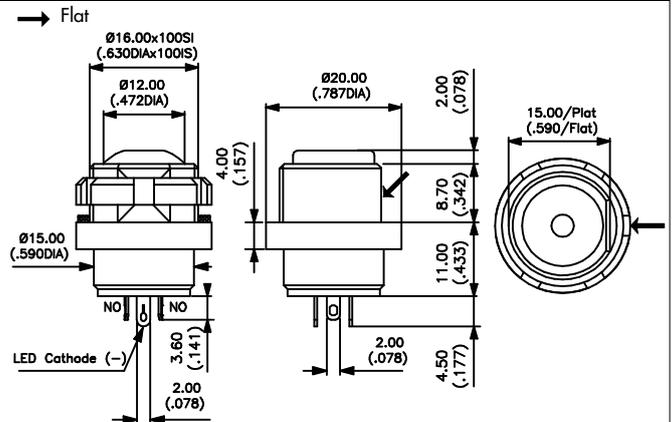**IZPR3S4**   Normally Open

Flat actuator
IZPP3S4   Normally Open

→ Flat

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
15.00/Flat (.590/Flat)
4.00 (.157)
Ø15.00 (.590DIA)
8.70 (.342)
11.00 (.433)
NO   NO
LED Cathode (−)
3.60 (.141)
2.00 (.078)
2.00 (.078)
4.50 (.177)

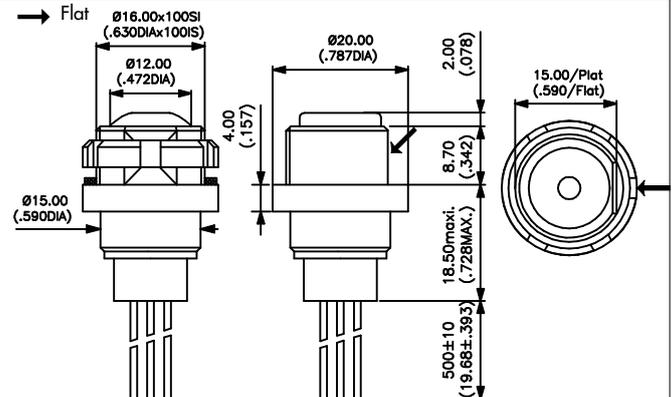### Flying lead terminals - momentary

Curved actuator
IZPR3F4   Normally Open

Flat actuator
IZPP3F4   Normally Open

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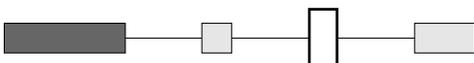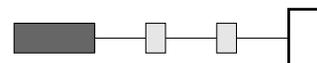red : LED anode(+), blue : LED cathode (-)

→ Flat

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
15.00/Flat (.590/Flat)
4.00 (.157)
Ø15.00 (.590DIA)
8.70 (.342)
18.50maxi. (.728MAX.)
500±10 (19.68±.393)

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

L0S : super red - **L0Y** : yellow - **L0G** : green
L0B : blue - **L0W** : white

Solder lug **S**   Straight **P**   Quick-connect **Z**

1.50 (.059)
3.60 (.141)
1.00 (.039)
2.00X0.40 (.078X.015)

3.40 (.133)
1.00X0.40 (.039X.015)

7.10 (.279)
2.40 (.094)
1.20 (.047)
2.80X0.50 (.110X.019)
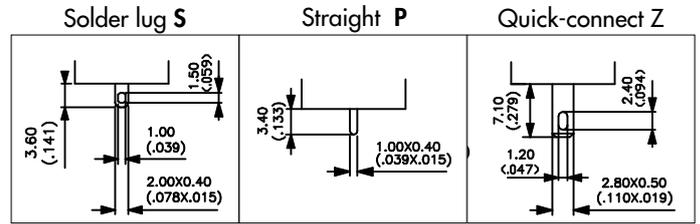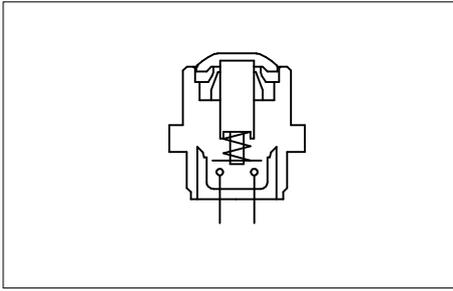
MODEL STRUCTURE
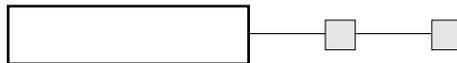
Plunger marking available on IZPP models (symbol 12 mm max.). On request.
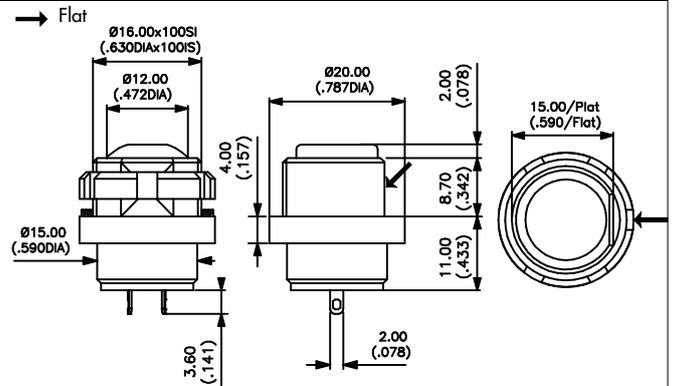
Solder lug terminals - gold plated contacts

→ Flat

Curved actuator
IZPR3S4   Normally Open

Flat actuator
IZPP3S4   Normally Open
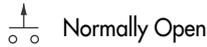
Also available with straight PC terminals :
IZP•3P4 and quick-connect terminals : **IZP•3Z4**.

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
4.00 (.157)
15.00/Flat (.590/Flat)
8.70 (.342)
Ø15.00 (.590DIA)
11.00 (.433)
3.60 (.141)
2.00 (.078)

Sealed flying lead terminals - gold plated contacts

→ Flat

Curved actuator
IZPR3F4   Normally Open

Flat actuator
IZPP3F4   Normally Open

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
4.00 (.157)
15.00/Flat (.590/Flat)
8.70 (.342)
Ø15.00 (.590DIA)
12.00maxi (.472MAX.)
500±10 (19.68±.393)
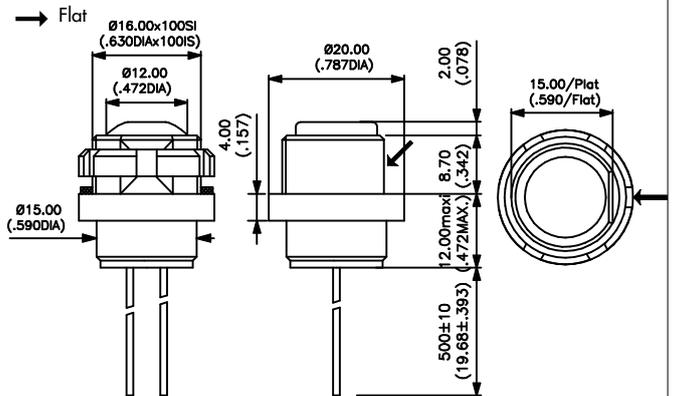
Screw terminals - silver contacts

→ Flat

Curved actuator
IZPR3V2   Normally open

Flat actuator
IZPP3V2   Normally open

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
4.00 (.157)
15.00/Flat (.590/Flat)
8.70 (.342)
Ø15.00 (.590DIA)
11.00 (.433)
7.00 Maxi (.275 MAX)
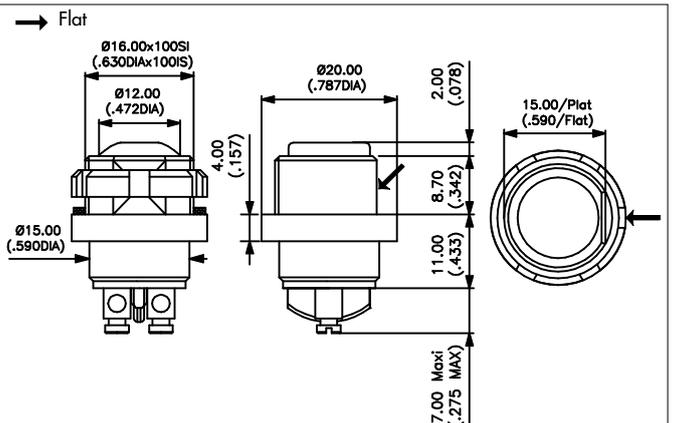
Actuator colour and bushing/bezel colour : select the desired codes on previous page.

IZ series

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

Distinctive features and specifications

- ❏ **Rear mounting for easier installation**
- ❏ **Latching action models**
- ❏ **Illuminated or non-illuminated**
- ❏ **Flat actuator for optional marking**
- ❏ **Sealed to IP67**

ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 2,5 mm (.098)
- Mechanical life : 200.000 cycles

MATERIALS

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

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

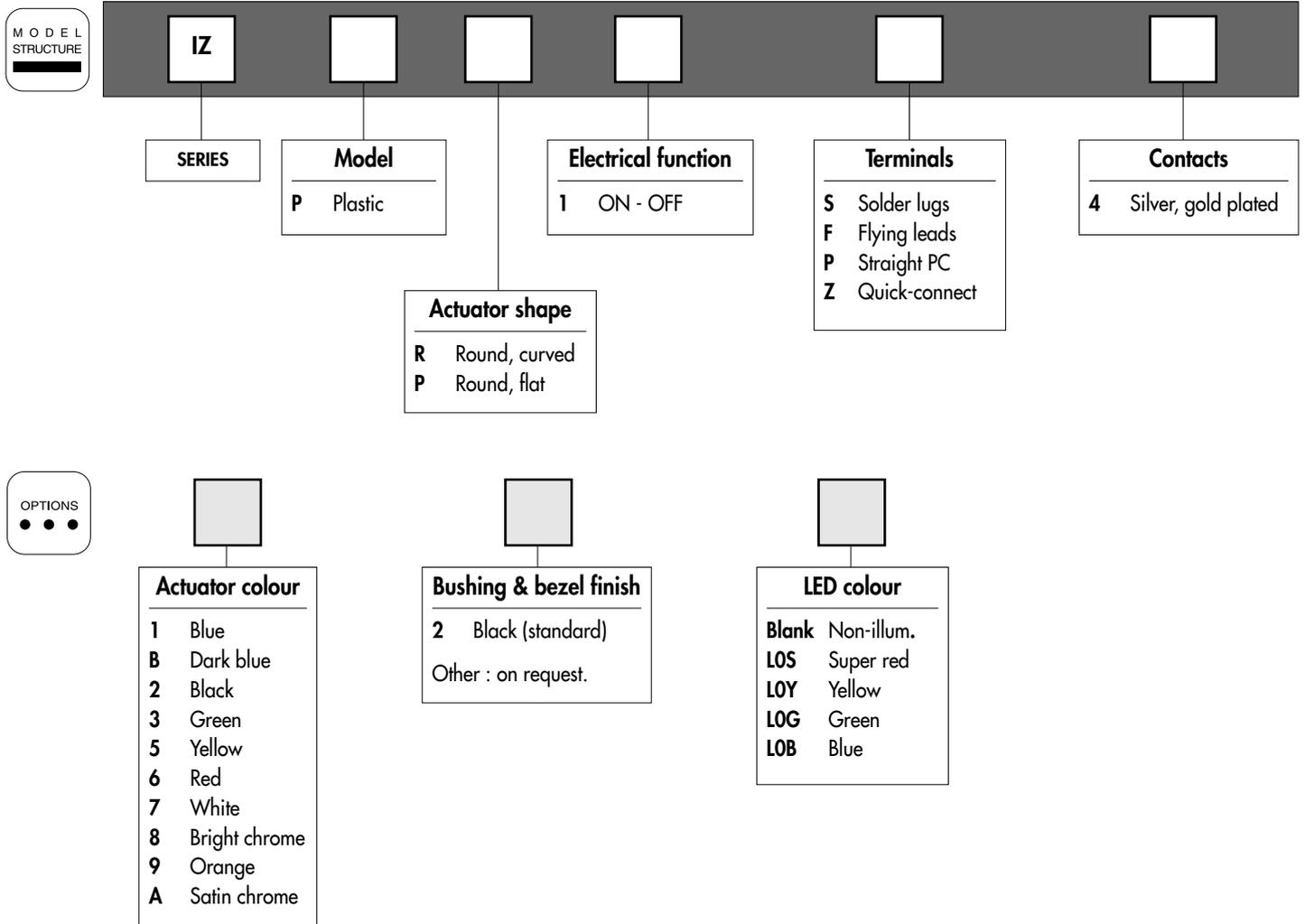| LED COMPONENT SPECIFICATIONS			
LED colour	Forward current	Typ. forward voltage	Max. forward voltage
Super red (L0S)	20mA	1,95V	1,95V
Yellow (L0Y)	20mA	2V	2,05V
Green (L0G)	20mA	3,2V	3,70V
Blue (L0B)	20mA	3,2V	4V

A resistor must be series-connected by the user.

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

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

MODEL STRUCTURE

| IZ | | | | | |

SERIES

Model

P	Plastic

Actuator shape

R	Round, curved
P	Round, flat

Electrical function

1	ON - OFF

Terminals

S	Solder lugs
F	Flying leads
P	Straight PC
Z	Quick-connect

Contacts

4	Silver, gold plated

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 & bezel finish

2	Black (standard)

Other : on request.

LED colour

Blank	Non-illum.
L0S	Super red
L0Y	Yellow
L0G	Green
L0B	Blue

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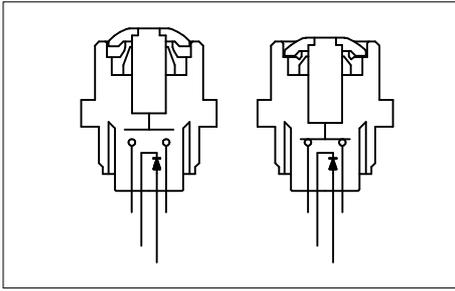
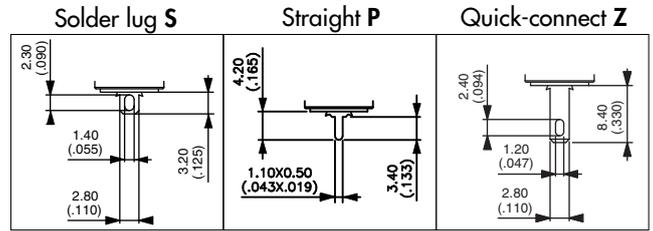**Packaging unit** : 25 pieces for flying lead models - 40 pieces for other models

IZ series

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

Illuminated

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

Solder lug **S** | Straight **P** | Quick-connect **Z**

2.30 (.090) | 4.20 (.165) | 2.40 (.094)
1.40 (.055) | 1.10X0.50 (.043X.019) | 8.40 (.330)
3.20 (.125) | 3.40 (.133) | 1.20 (.047)
2.80 (.110) | | 2.80 (.110)

MODEL STRUCTURE

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

Solder lug terminals

→ Flat

Curved actuator
IZPR1S4   ON - OFF

Flat actuator
IZPP1S4   ON - OFF

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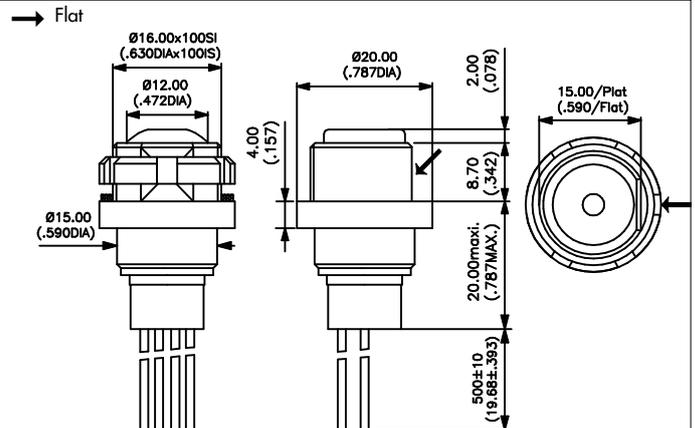**IZP•1P4** and quick-connect terminals : **IZP•1Z4**.

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
4.00 (.157)
15.00/Plat (.590/Flat)
Ø15.00 (.590DIA)
8.70 (.342)
14.00 (.551)
0.50x0.60 (.019x.023)
3.20 (.125)
5.08 (.200)
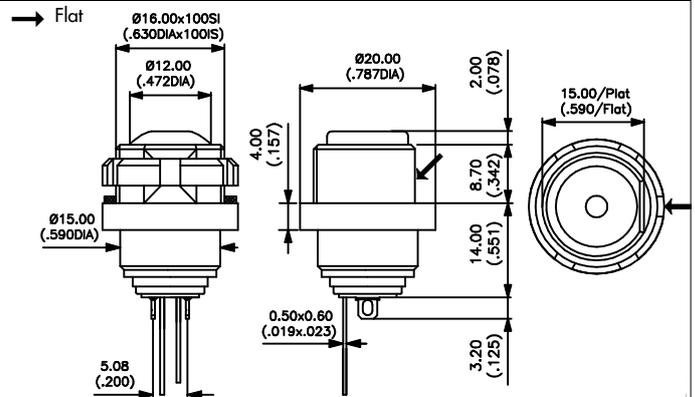
Sealed flying lead terminals

→ Flat

Curved actuator
IZPR1F4   ON - OFF

Flat actuator
IZPP1F4   ON - OFF

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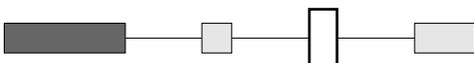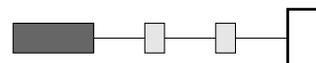red : LED anode(+), blue : LED cathode (-)

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
4.00 (.157)
15.00/Plat (.590/Flat)
Ø15.00 (.590DIA)
8.70 (.342)
20.00maxi. (.787MAX.)
500±10 (19.68±.393)

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

L0S : super red - **L0Y** : yellow - **L0G** : green
L0B : blue

• Gold plated contacts

Solder lug **S**   Straight **P**   Quick-connect **Z**

MODEL STRUCTURE

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

Solder lug terminals

→ Flat

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
15.00/Flat (.590/Flat)
4.00 (.157)
8.70 (.342)
Ø15.00 (.590DIA)
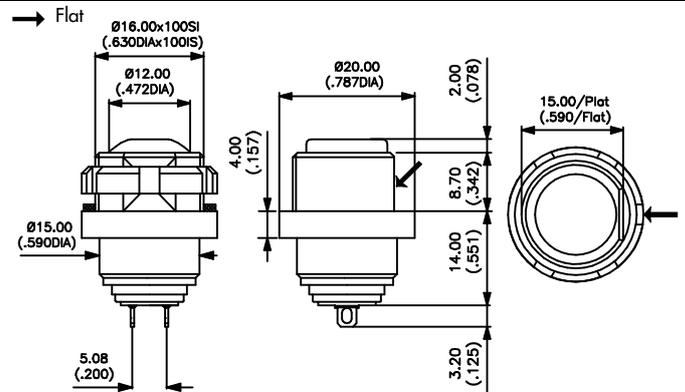14.00 (.551)
5.08 (.200)
3.20 (.125)
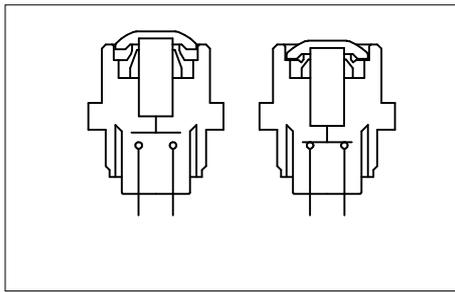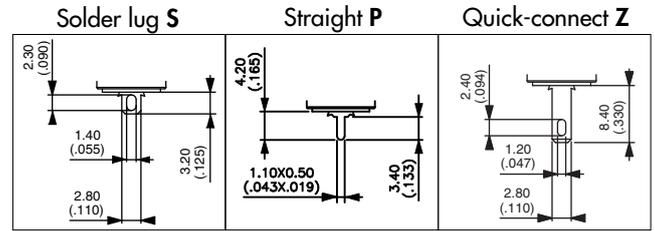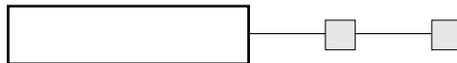
Curved actuator
IZPR1S4   ON - OFF

Flat actuator
IZPP1S4   ON - OFF

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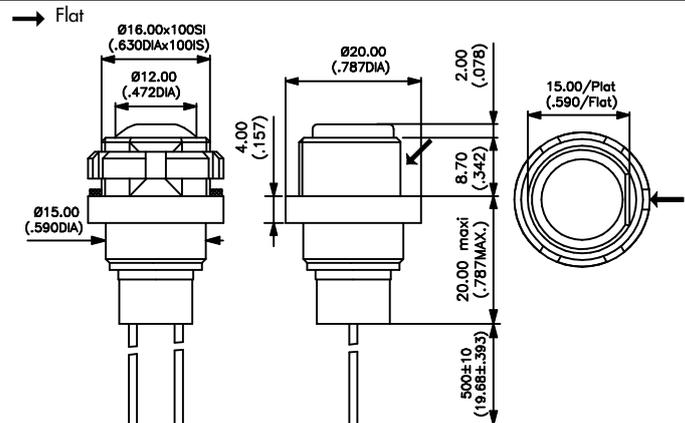
Sealed flying lead terminals

→ Flat

Ø16.00x100SI (.630DIAx100IS)
Ø12.00 (.472DIA)
Ø20.00 (.787DIA)
2.00 (.078)
15.00/Plat (.590/Flat)
4.00 (.157)
8.70 (.342)
Ø15.00 (.590DIA)
20.00 maxi (.787MAX.)
500±10 (19.68±.393)

Photo

Curved actuator
IZPR1F4   ON - OFF

Flat actuator
IZPP1F4   ON - OFF

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.