



- ☐ Illuminated or non-illuminated
- ☐ Tactile feedback
- ☐ Wide variety of configurations
- ☐ Flat round actuator for optional marking
- ☐ Sealed to IP67

ENVIRONMENTAL SPECIFICATIONS

- Front panel sealing : IP67 according to IEC 60529
- IP69K according to DIN 40050-9 (non-illuminated) with cap U5125
- 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 (gold plated silver contacts):
5A 28VDC, 70.000 cycles
0,2A 48VDC, 500.000 cycles
0,5A 48VAC, 500.000 cycles
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.500 Vrms
- Contact bounce : 10 ms

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

GENERAL SPECIFICATIONS

- Panel thickness : 1,5 mm (.059) min. 4 mm (.157 max.)
- Total travel :
Funct. 3 : 1,7 mm (.067) +/- 0,3 mm
Funct. 5 : 1,3 mm (.051) +/- 0,3 mm
- Typical operating force : 6N +/- 2N
- Low level/mech. life : 1.000.000 cycles
- Torque : 1,5 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

MATERIALS

- Case : thermoplastic UL94-V0
- Actuator : polyamide 6/6
- Bushing/bezel : zinc die-cast (zamac), black painted
- Contacts : silver, gold plated (std) brass, gold plated (for option 104)
- Multi-wire lead AWG20, section 0,6 mm²
- LED wire : AWG26, section 0,12 mm²
- Lens : polycarbonate
- Terminal seal : epoxy

AGENCY APPROVAL



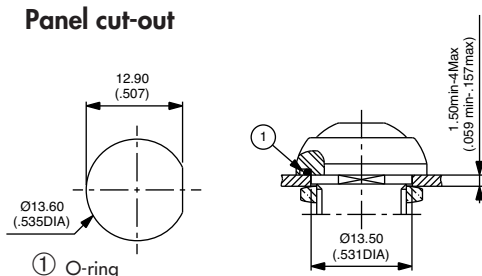
2A 125VAC/250VAC
File E83438

Availability : consult factory for details of approved models.

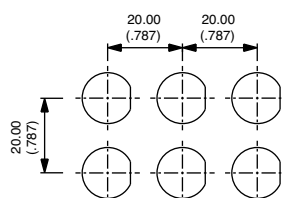
Marking : to order switches marked UL, complete ordering format.

MOUNTING

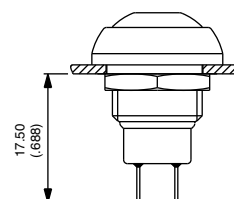
Panel cut-out



Matrix mounting



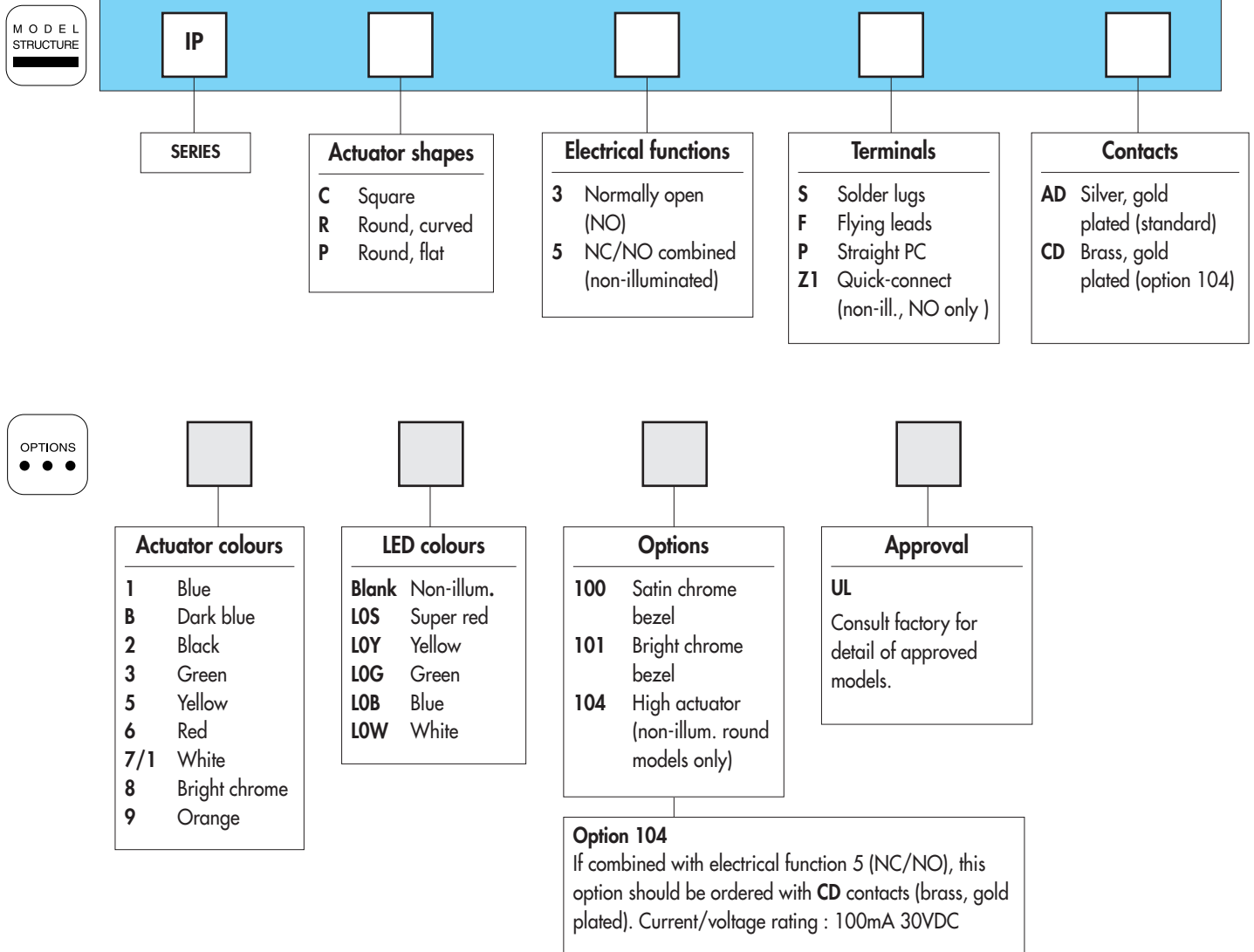
Back of panel space requirement



IP series

Pushbutton switches for harsh environments - bushing Ø 12 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 bracketed numbers.



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



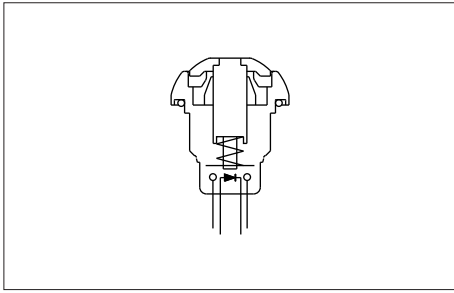
A sealing boot is available to protect the switches against frost and sand. It is presented after the IA series and in section H.



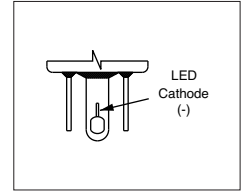
Mounting accessories : Standard hardware supplied : 1 hex nut 14 mm (.551) across flats and 1 O-ring. Hex nut part number U166.



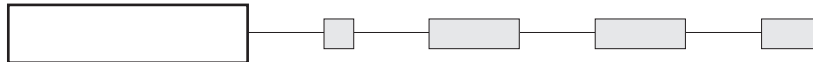
Packaging unit : 25 pieces



- High brightness illumination
- Five LED colours
- Tin plated LED terminals



MODEL STRUCTURE



Solder lug terminals



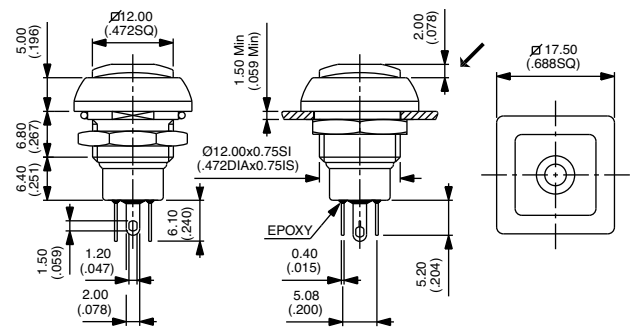
IPC3SAD



Normally Open

Also available with straight PC terminals : **IPC3PAD**
LED colour is indicated by the bottom of the switch.

→ Flat



Sealed flying lead terminals

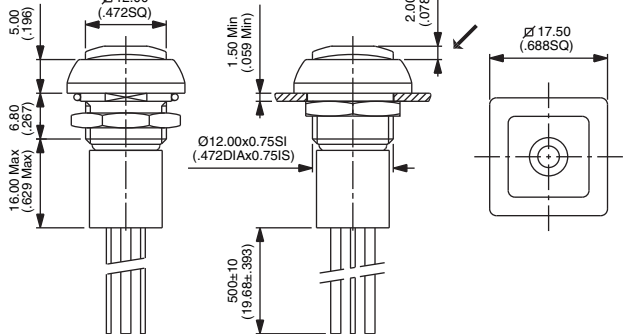


IPC3FAD



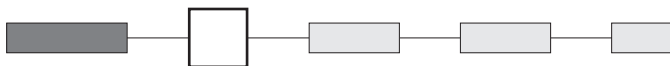
Normally Open

→ Flat



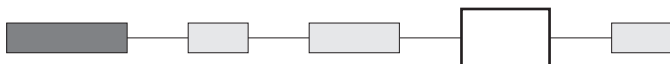
Wire colours : black : NO contact, red : LED anode(+), blue : LED cathode(-)

ACTUATOR COLOURS



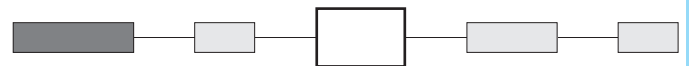
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow
6 : red - 7/1 : white - 8 : bright chrome - 9 : orange

OPTIONS



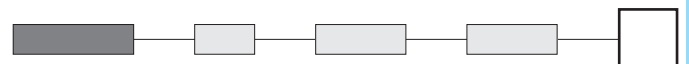
100 : Satin chrome bezel
101 : Bright chrome bezel

LED COLOURS



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

APPROVAL



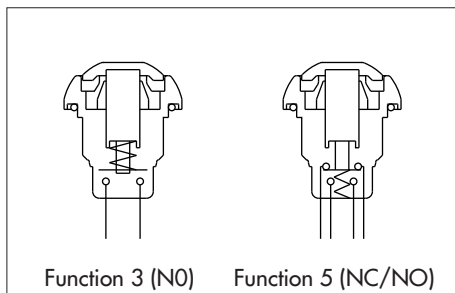
UL

Consult factory for details of approved models. To order switches marked UL, complete above box with "UL".

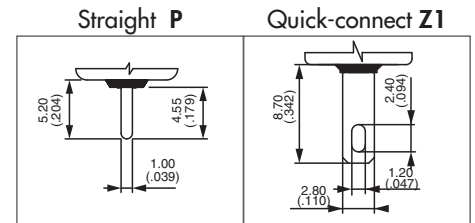
IP series

Pushbutton switches for harsh environments - bushing Ø 12 mm - momentary

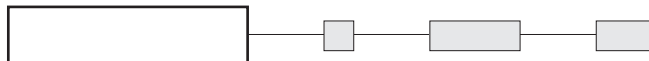
Square - non-illuminated



- Double function (NC/NO combined) with a short behind-panel depth



MODEL STRUCTURE



Solder lug terminals



IPC3SAD



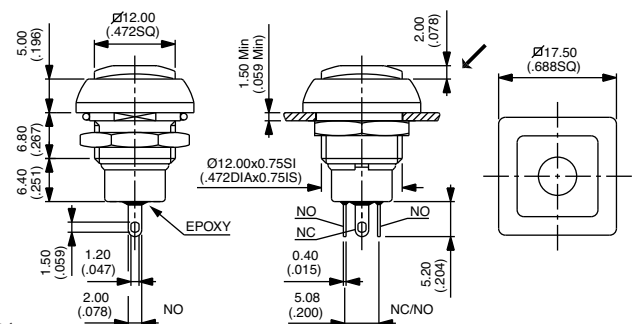
Normally Open

IPC5SAD



NC/NO combined

→ Flat



Also available with straight PC terminals : **IPC3PAD** (NO) or **IPC5PAD** (NC/NO) and quick-connect terminals : **IPC3Z1AD** (NO only)

Sealed flying lead terminals



IPC3FAD



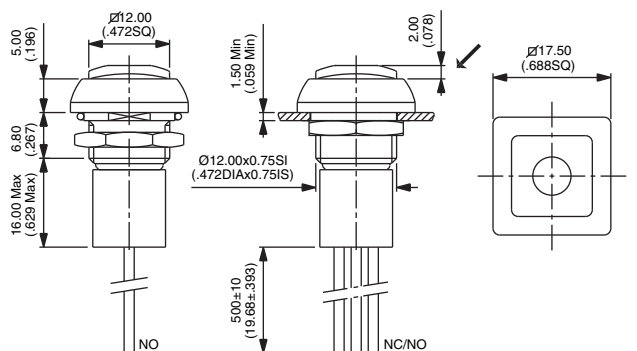
Normally Open

IPC5FAD



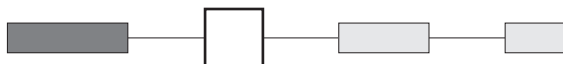
NC/NO combined

→ Flat



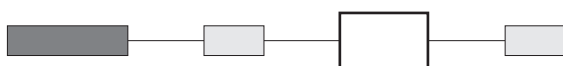
Wire colours (NC/NO) : black : NO, blue : NC

ACTUATOR COLOURS



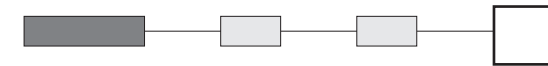
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7/1 : white - 8 : bright chrome - 9 : orange

OPTIONS



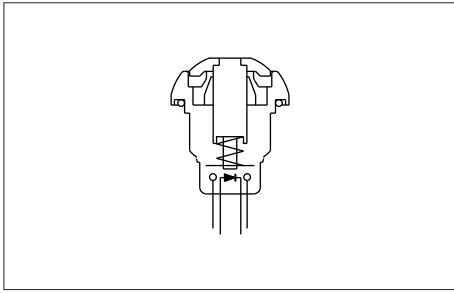
100 : Satin chrome bezel
101 : Bright chrome bezel

APPROVAL

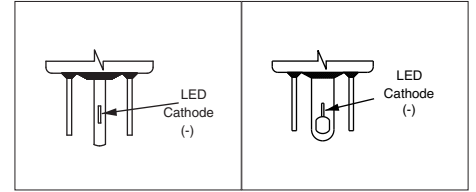


UL

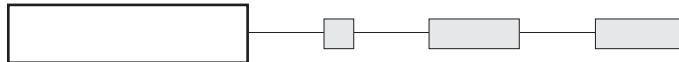
Consult factory for details of approved models. To order switches marked UL, complete above box with "UL".



- High brightness illumination
- Five LED colours
- Tin plated LED terminals



MODEL STRUCTURE



Solder lug terminals



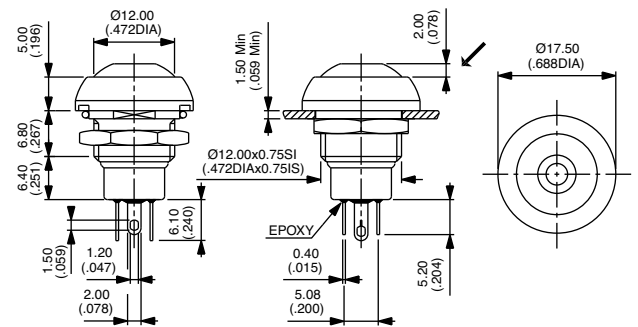
IPR3SAD



Normally Open

Also available with straight PC terminals : **IPR3PAD**
LED colour is indicated by the bottom of the switch.

→ Flat



Sealed flying lead terminals

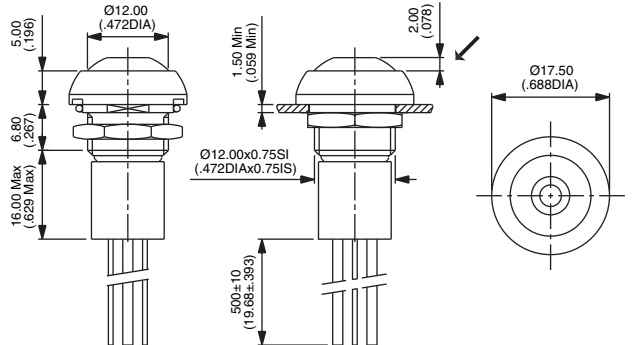


IPR3FAD



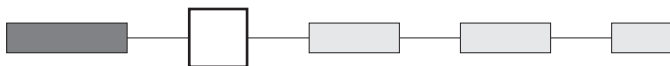
Normally Open

→ Flat



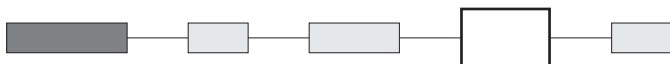
Wire colours : black : NO contact, red : LED anode(+), blue : LED cathode(-)

ACTUATOR COLOURS



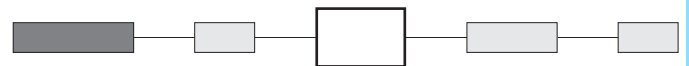
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow
6 : red - 7/1 : white - 8 : bright chrome - 9 : orange

OPTIONS



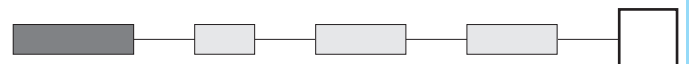
100 : Satin chrome bezel
101 : Bright chrome bezel

LED COLOURS



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

APPROVAL

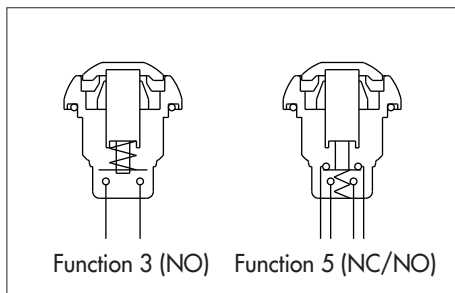


UL
Consult factory for details of approved models. To order switches marked UL, complete above box with "UL".

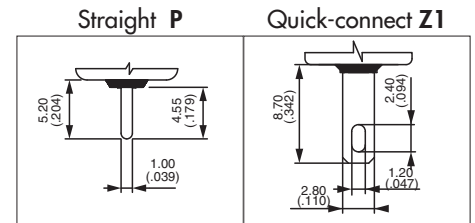
IP series

Pushbutton switches for harsh environments - bushing Ø 12 mm - momentary

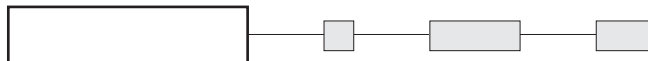
Round - non-illuminated



- Double function (NC/NO combined) with a short behind-panel depth



MODEL STRUCTURE



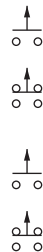
Actuator marking available on IPP models (symbol 10 mm max.). On request.

Solder lug terminals

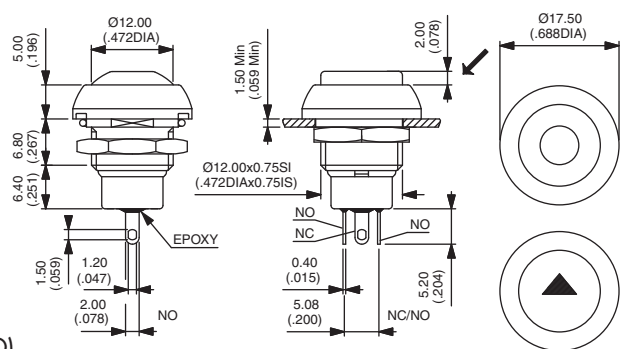


Curved actuator, NO
IPR3SAD
Curved actuator, NC/NO
IPR5SAD

Flat actuator, NO
IPP3SAD
Flat actuator, NC/NO
IPP5SAD



→ Flat



Also available with straight PC terminals : **IP•3PAD** (NO) or **IP•5PAD** (NC/NO) and quick-connect terminals : **IP•3Z1AD** (NO only)

Sealed flying lead terminals

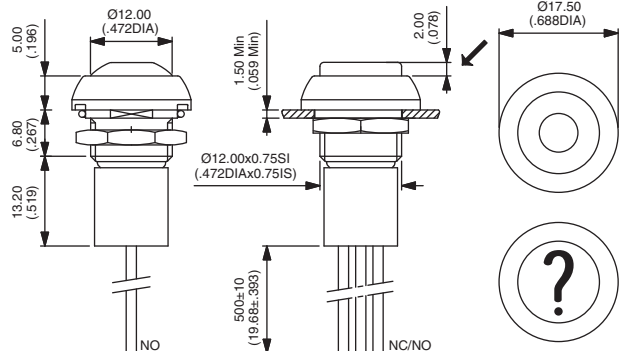


Curved actuator, NO
IPR3FAD
Curved actuator, NC/NO
IPR5FAD

Flat actuator, NO
IPP3FAD
Flat actuator, NC/NO
IPP5FAD



→ Flat



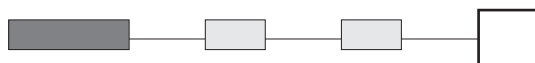
Wire colours (NC/NO) : black : NO, blue : NC

ACTUATOR COLOURS



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

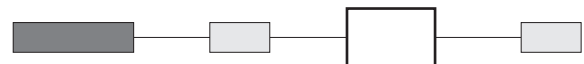
APPROVAL



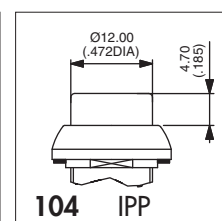
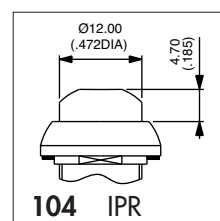
UL

Consult factory for details of approved models. To order switches marked UL, complete above box with "UL".

OPTIONS



100 : Satin chrome bezel
101 : Bright chrome bezel
104 : High actuator - If combined with function 5 (NC/NO), order with CD contacts (instead of AD contacts).





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.