

FP series

Fully illuminated pushbutton switches - bushing \varnothing 24 mm - momentary or latching

Distinctive features and specifications

UG1410-A-R2



- Threaded bushing
- Full actuator or symbol illumination
- Large but lightweight
- Sealed to IP69K
- Pad printed or laser etched symbols

| | Pad printing | Laser |
|-----------------|--------------|-------|
| Non-illuminated | | |
| Illuminated | | |

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
 - silver contacts (code 2) : 4A 12VDC
 - gold plated contacts (code 4) : 200mA 12VDC
- Initial contact resistance : 50 m Ω max.
- Insulation resistance : 1 G Ω min. at 500VDC
- Dielectric strength : 1.000 Vrms 50 Hz min.
- Electrical life at full load :
 - Momentary models : 1 million cycles (gold plated contacts)
 - 400.000 cycles (silver contacts)
 - Latching models : 200.000 cycles

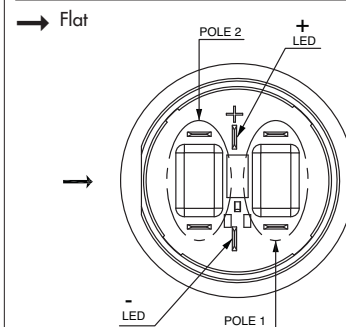
MATERIALS

- Case : PA46
- Actuator : PA12
- Bushing/ bezel : PA66
- Contacts : silver (code 2) or silver, gold plated (code 4)
- Cable : length 300 mm, section depending on switch model
- Terminal seal : epoxy or overmolding

GENERAL SPECIFICATIONS

- Front panel sealing : IP69K according to DIN 40050-9
- Panel thickness : 1(.039) to 18 mm (.708) max.
- Total travel : 2,5 mm \pm 0,5 mm
- Typical operating force : 8N \pm 2N
- Low level or mechanical life :
 - Momentary models : 1 million cycles
 - Latching models : 200.000 cycles
- Torque : 3 Nm max. applied to nut
- Operating temperature : -40°C to +75°C

WIRING DIAGRAM

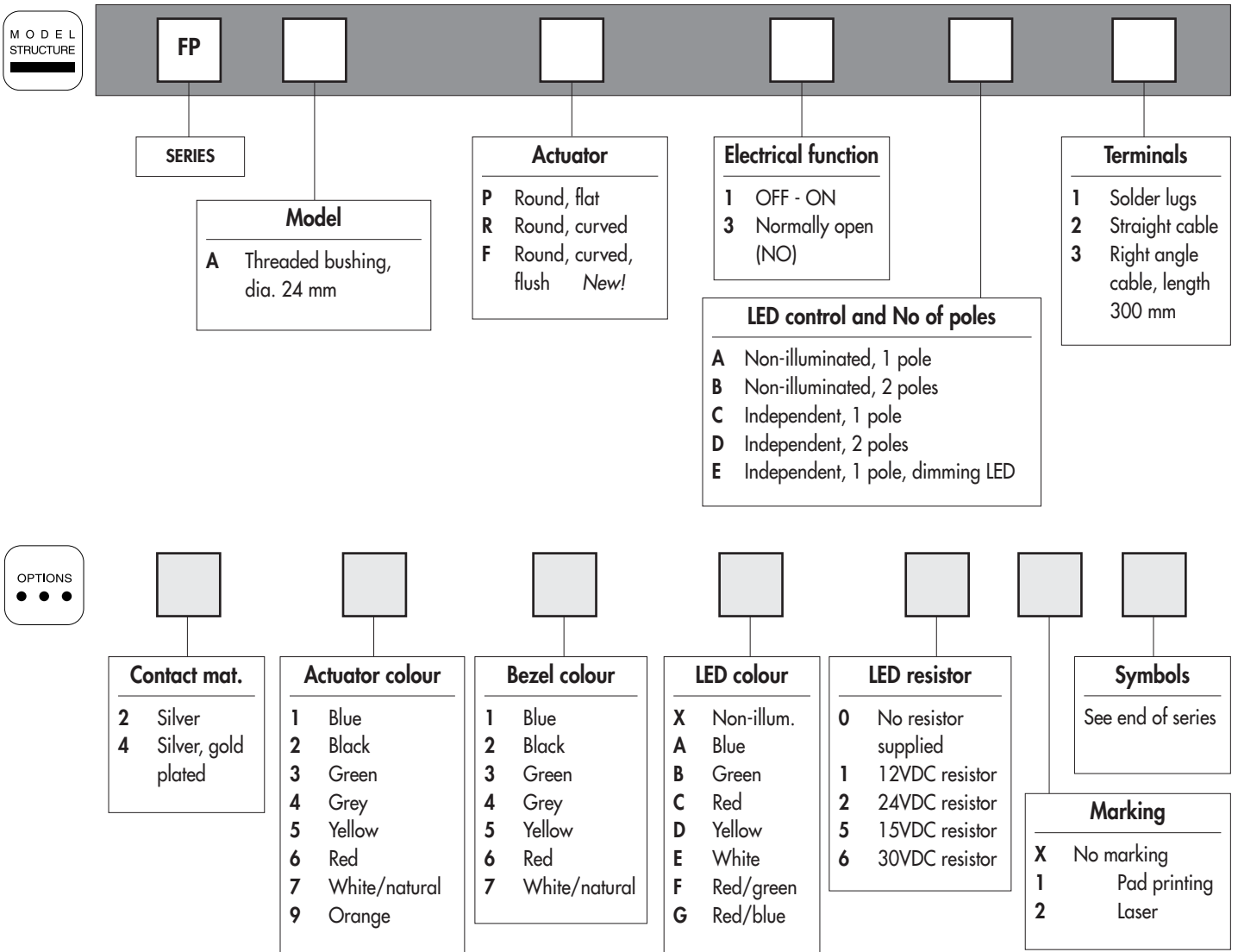


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Overview

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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 hex nut and 1 O-Ring

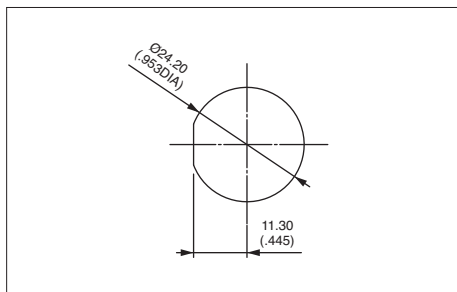


Packaging unit : solder lug versions : 20 pieces - cable versions : 1 piece



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- Three terminal types
- Curved or flat actuator

To order a product, replace • with one of the codes selected under "LED control and number of poles" on next page, then add the desired options.

MODEL STRUCTURE



Solder lug terminals



LATCHING
Curved actuator
FPAR1•1
Flat actuator
FPAP1•1

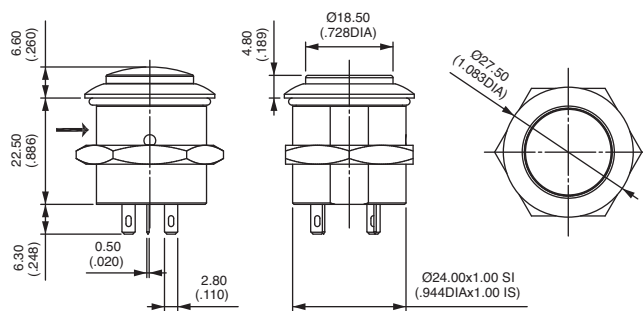
MOMENTARY (NO)
Curved actuator
FPAR3•1
Flat actuator
FPAP3•1

OFF - ON

OFF ON



→ Flat



Straight cable terminals



LATCHING
Curved actuator
FPAR1•2
Flat actuator
FPAP1•2

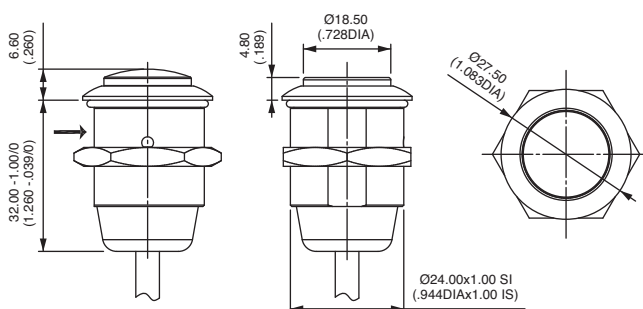
MOMENTARY (NO)
Curved actuator
FPAR3•2
Flat actuator
FPAP3•2

OFF - ON

OFF ON



→ Flat



Right angle cable terminals



LATCHING
Curved actuator
FPAR1•3
Flat actuator
FPAP1•3

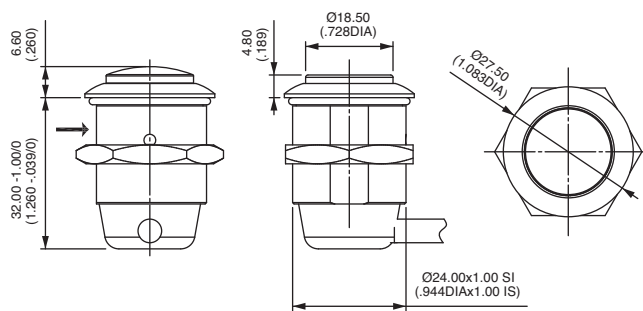
MOMENTARY (NO)
Curved actuator
FPAR3•3
Flat actuator
FPAP3•3

OFF - ON

OFF ON

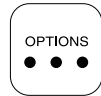


→ Flat



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Options

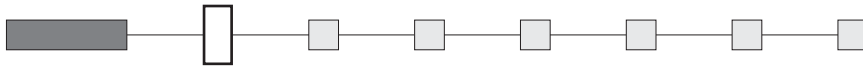
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LED CONTROL AND NUMBER OF POLES

Complete the model numbers on previous pages with one of the following codes.

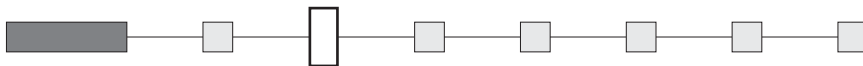
| | Function 1 (latching) | Function 3 (momentary) | | Function 1 (latching) | Function 3 (momentary) |
|---------------------------------------|-----------------------|------------------------|--|-----------------------|--|
| Non-illuminated one pole A | | | Independent one pole C | | |
| Non-illuminated two poles B | | | Independent two poles D | | |
| | | | Independent one pole Dimming LED E | | dotted line = jumper to be wired by the user. LED- has to be wired to one pin of pole 2. |

CONTACT MATERIALS



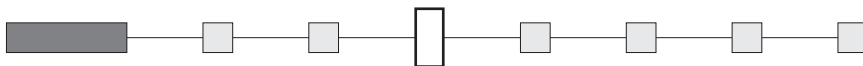
- 2 Silver
- 4 Silver, gold plated

ACTUATOR COLOUR



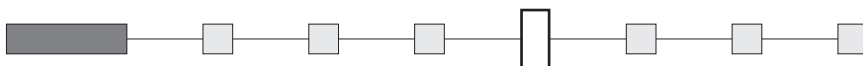
- 1 : blue - 2 : black - 3 : green - 4 : grey - 5 : yellow - 6 : red - 7 : white/natural - 9 : orange

BEZEL COLOUR



- 1 : blue - 2 : black - 3 : green - 4 : grey - 5 : yellow - 6 : red - 7 : white/natural

LED COLOUR



- X : non-illuminated
- A : blue - B : green - C : red - D : yellow - E : white - F : red/green - G : red/blue

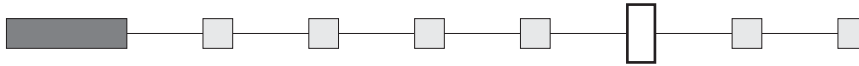


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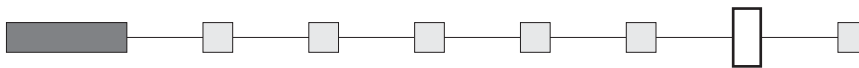
Options

LED RESISTOR



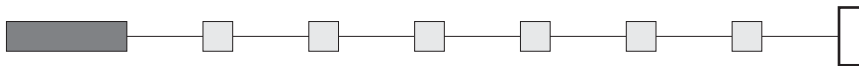
- 0 No resistor supplied
- 1 12VDC resistor
- 2 24VDC resistor
- 5 15VDC resistor
- 6 30VDC resistor

MARKING



- X No marking
- 1 Pad printing
- 2 Laser

SYMBOLS



Blank No symbol

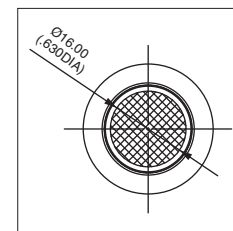
Available symbols
See end of K-range, section D.

Marking colour

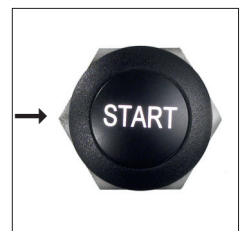
White marking for illuminated actuators (laser etching) and non-illuminated black actuators (pad printing). Black marking for non-illuminated colour actuators (pad printing). Other : on request.

Marking area

The symbol will be included in the hatched area.



→ Flat



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Symbols
















Most symbols meet the ISO 7000 standard "graphical symbols for use on equipments" (code given in bracket in the description). Contact us for symbols not featured in the following tables.

Legend scale :

Depending on space available on the product (see "Symbols" section).

| CODE | SYMBOL | DESCRIPTION |
|------|---|------------------------|
| XX | None | - |
| 01 | ON | - |
| 02 | OFF | - |
| 03 | ○ | - |
| 04 | I | - |
| 05 | II | - |
| 06 | STOP | - |
| 07 | A | Stop |
| 08 | M | Motion |
| 09 | ▲ | Up motion |
| 10 | ▼ | Down motion |
| 11 |  | Hot |
| 12 |  | Cold |
| 13 |  | Hazard warning (0085) |
| 14 |  | Traveller lighting |
| 15 |  | Driver lighting (1421) |

| CODE | SYMBOL | DESCRIPTION |
|------|---|--------------------------------------|
| 16 |  | Revolving light |
| 17 |  | Rear ventilator |
| 18 |  | Heating (0637) |
| 19 |  | Door opening |
| 20 |  | Windshield demister/defroster (0635) |
| 21 |  | Windshield wiper (0086) |
| 22 |  | Windshield washer (0088) |
| 23 |  | Ventilator fan (0089) |
| 24 |  | Side mirror defroster |
| 25 |  | Restarting pump |
| 26 |  | Front fog lights (0633) |
| 27 |  | Rear fog lights (0634) |
| 28 |  | Propulsion system trim |
| 29 |  | Beacon (1141) |
| 30 |  | Anchor |
| 31 |  | Electric motor (0011) |

| CODE | SYMBOL | DESCRIPTION |
|------|---|---------------------------------------|
| 32 |  | Emergency first aid vehicle (2565) |
| 33 |  | Load tipping (1557) |
| 34 |  | Loading light (2457) |
| 35 |  | Tractor, rear-ward (1667) |
| 36 |  | Combine, direction of movement (1678) |
| 37 |  | Use no forks (2406) |
| 38 |  | Transmission (1166) |
| 39 |  | Working spot light (1145) |
| 40 |  | Engine (0640) |
| 41 |  | Horn (0244) |
| 42 |  | Lock (1656) |
| 43 |  | Taxi sign light (2551) |
| 44 |  | Working light (1204) |
| 45 |  | Working light symmetric (1204) |
| 46 |  | - |
| 47 | ASM | - |

FP series









































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Symbols

Most symbols meet the ISO 7000 standard "graphical symbols for use on equipments" (code given in bracket in the description). Contact us for symbols not featured in the following tables.

Legend scale :

Depending on space available on the product (see "Symbols" section).

| CODE | SYMBOL | DESCRIPTION | CODE | SYMBOL | DESCRIPTION | CODE | SYMBOL | DESCRIPTION |
|------|---|---------------------------|------|---|--------------------------|------|---|--------------------------|
| 48 |  | All wheel drive | 64 |  | Indicator | 80 |  | Front windshield heating |
| 49 |  | Differential lock (1662) | 65 |  | Brake release | 81 | AUS | Aus |
| 50 |  | - | 66 |  | Baggage room left door | 82 |  | Radiator fan |
| 51 |  | - | 67 |  | Baggage room right door | 83 |  | Remove retarder |
| 52 |  | - | 68 |  | Power blinds | 84 |  | Restricted speed |
| 53 | N | - | 69 |  | Engine idle control | 85 |  | Preheater |
| 54 |  | Rear window wiper (0097) | 70 | CRUISE RES/SET | Cruise res/set | 86 |  | ABS detection |
| 55 |  | Rear window washer (0099) | 71 |  | Driver windows up/down | 87 |  | ECAS detection |
| 56 |  | Lower load (2223) | 72 |  | Middle door opening | 88 |  | Engine stop |
| 57 |  | Cab lock (1560) | 73 |  | Front door opening | 89 | CRUISE RES/CAN | Cruise res/cancel |
| 58 |  | Extraction | 74 |  | Lighting in baggage room | 90 |  | ECAS reset |
| 59 |  | Pumping in | 75 | CRUISE ON/OFF | Cruise on/off | 91 |  | Driver windows heating |
| 60 |  | Rear PTO (1572) | 76 | TV | TV | 92 | CRUISE SET+/SET- | Cruise set |
| 61 |  | Front PTO | 77 |  | Pump | 93 |  | Air bag up/down |
| 62 |  | Rockshaft down | 78 | WC | Toilet | 94 |  | Read lighting |
| 63 |  | Rockshaft up | 79 |  | Toilet decontamination | 95 |  | Lighting main switch |

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Legend scale :

Depending on space available on the product (see "Symbols" section).

| CODE | SYMBOL | DESCRIPTION |
|------|--------|------------------------------|
| 96 | | Heating using water |
| 97 | | Low beam |
| 98 | | Position lights |
| 99 | | Diesel acceleration |
| A1 | | Manual mode |
| A2 | | Clockwise cabin rotation |
| A3 | | Anticlockwise cabin rotation |
| A4 | | - |
| A5 | | - |
| A6 | | Parking brake |
| A7 | | - |
| A8 | | - |
| A9 | | - |
| AA | | - |
| AB | | - |
| AC | | - |

| CODE | SYMBOL | DESCRIPTION |
|------|--------|---|
| AD | | - |
| AE | | - |
| AF | | - |
| AG | | Battery charging condition (0247) |
| AH | | Turn signals (0084) |
| AJ | | High beam (0082) |
| AK | | Differential lock, bogie (2600) |
| AL | | Brushing with a rotating brush (0070) |
| AM | | Differential lock, transfer case 4x4 (2475) |
| AN | | Loader bucket, float (1441) |
| AP | | Loader bucket (1437) |
| AQ | | Rear window washer & wiper (0098) |
| AR | | Header Header drive (1579) |
| AS | | Excavator/backhoe boom side shift (2091) |
| AT | | Chemical water treatment (1851) |
| AU | | Grapple skidder, single funct° boom (1762) |

| CODE | SYMBOL | DESCRIPTION |
|------|--------|-------------|
| AV | | - |
| AW | | - |
| AY | | - |
| AZ | | - |
| B1 | HIGH | - |
| B2 | LOW | - |
| B3 | | - |