

# FP series

Fully illuminated pushbutton switches - bushing Ø 30 mm - momentary or latching

*Distinctive features and specifications*

UG1410-A-R3



- Full actuator or symbol illumination
- Snap-in and threaded bushing models
- Large but lightweight
- Pad printed or laser etched symbols



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

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## 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 mΩ max.
- Insulation resistance : 1 GΩ 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

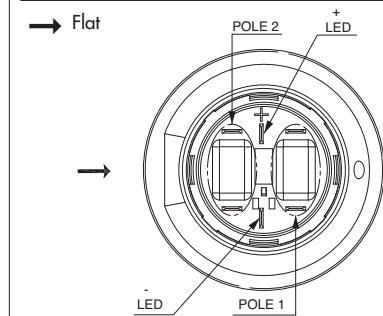
## MATERIALS

- Case : PA46
- Actuator : PA12, gloss finish
- Bushing/ bezel : ABS, gloss finish
- Contacts :
  - Silver (code 2)
  - or silver, gold plated (code 4)

## GENERAL SPECIFICATIONS

- Panel thickness :
  - Snap-in version : 1,5 (.059) to 2 mm (.078) with panel gasket  
2 (.078) to 2,5 mm (.885) without panel gasket
  - Threaded bushing version : 1(.039) to 9 mm (.354) max.
- Total travel : 2,8 mm ± 0,5 mm
- Typical operating force : 8N ± 2N
- Low level or mechanical life :
  - Momentary models : 1 million cycles
  - Latching models : 200.000 cycles
- Torque : 2 Nm max. applied to nut
- Operating temperature : -40°C to +75°C

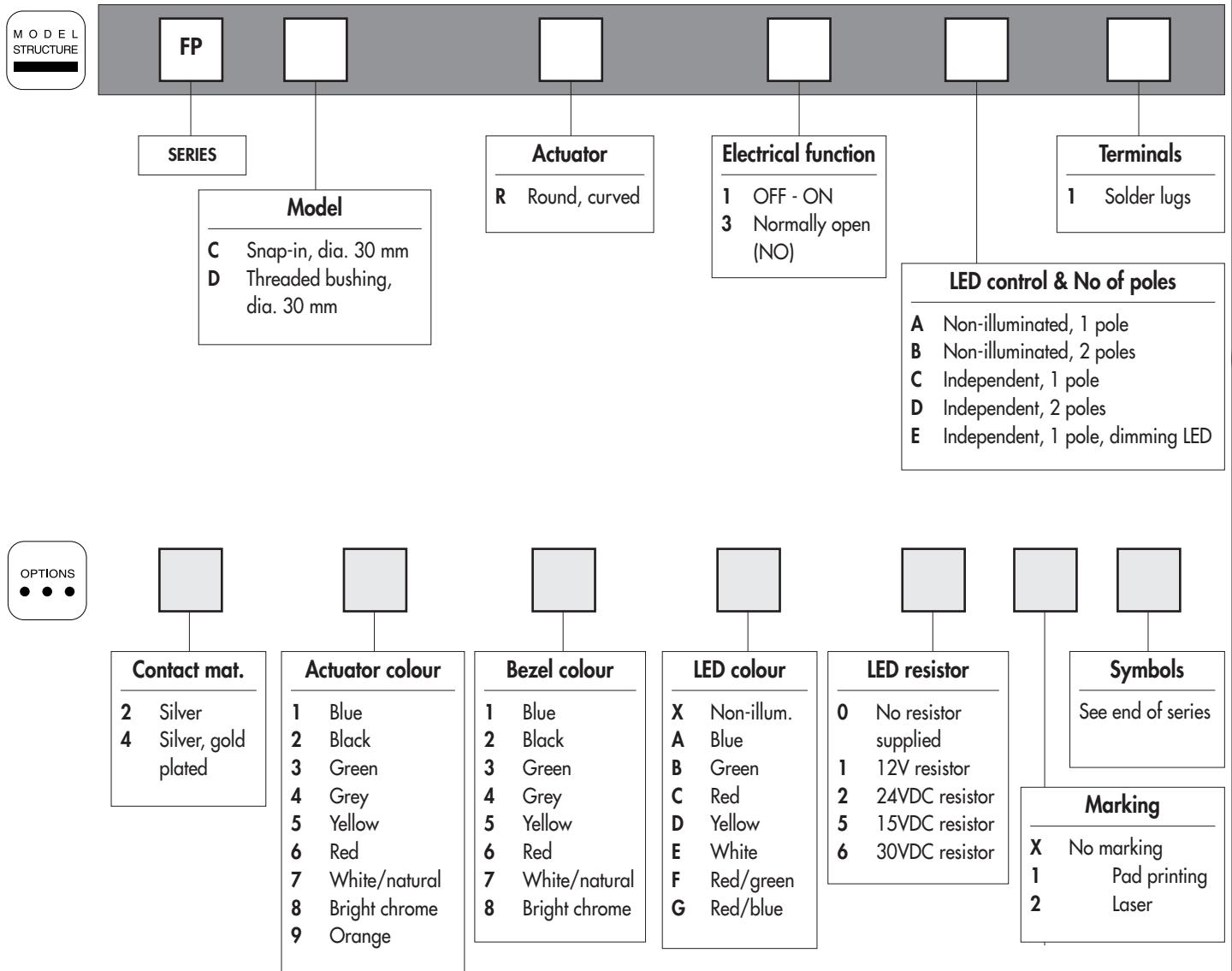
## WIRING DIAGRAM



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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.



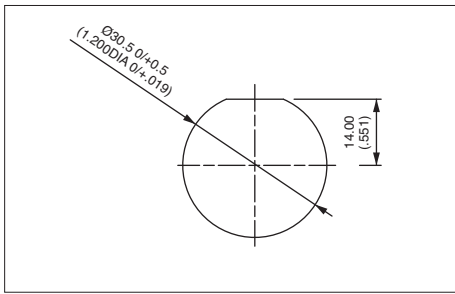
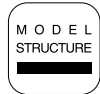
**Mounting accessories** : Standard hardware supplied : 1 panel gasket (snap-in versions)  
1 plastic hex nut and 1 panel gasket (threaded bushing versions)



**Packaging unit** : 20 pieces

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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



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## Snap-in mounting - solder lug terminals



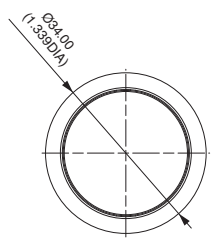
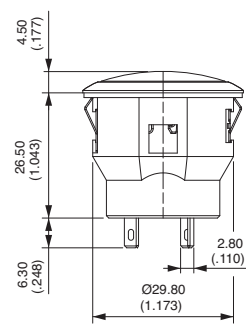
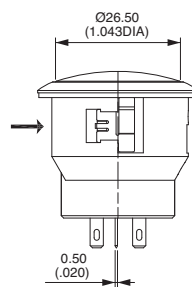
LATCHING  
FPCR1•1

MOMENTARY (NO)  
FPCR3•1

OFF - ON



→ Flat



## Mounting by threaded bushing - solder lug terminals



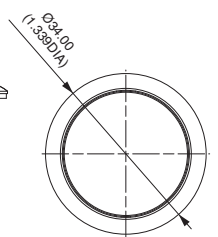
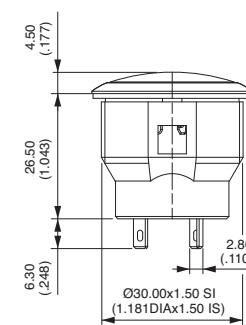
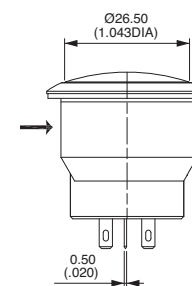
LATCHING  
FPDR1•1

MOMENTARY (NO)  
FPDR3•1

OFF - ON



→ Flat





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Options

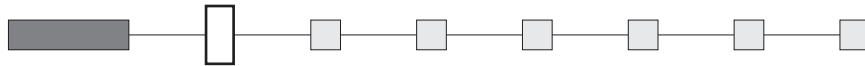
## LED CONTROL AND NUMBER OF POLES

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<br><b>A</b>  |                       |                        | Independent one pole<br><b>C</b>             |                       |  |
| Non-illuminated two poles<br><b>B</b> |                       |                        | Independent two poles<br><b>D</b>            |                       |  |
|                                       |                       |                        | Independent one pole Dimming LED<br><b>E</b> |                       | dotted line = jumper to be wired by the user. LED- has to be wired to one pin of pole 2. |

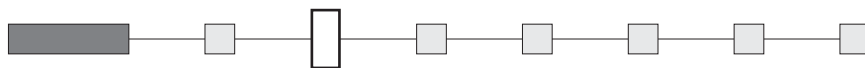
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## CONTACT MATERIALS



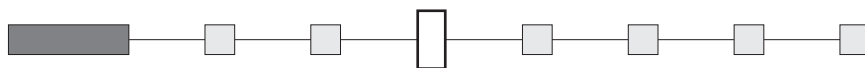
- 2 Silver
- 4 Silver, gold plated

## ACTUATOR COLOUR



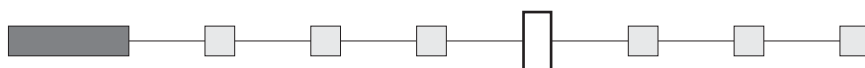
- 1 : blue - 2 : black - 3 : green - 4 : grey - 5 : yellow - 6 : red - 7 : white/natural - 8 : bright chrome - 9 : orange

## BEZEL COLOUR



- 1 : blue - 2 : black - 3 : green - 4 : grey - 5 : yellow - 6 : red - 7 : white/natural - 8 : bright chrome

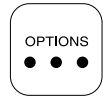
## LED COLOUR



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

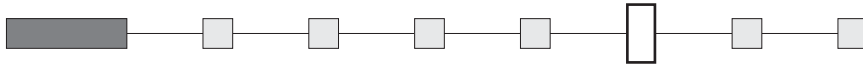
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## Options

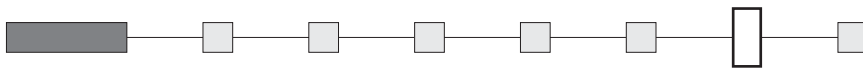
### LED RESISTOR



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

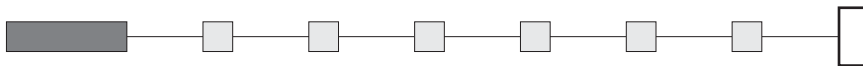
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### MARKING



- X No marking
- 1 Pad printing
- 2 Laser

### SYMBOLS



Blank No symbol

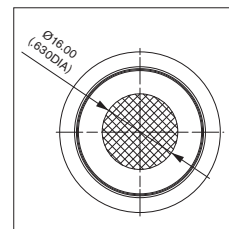
**Available symbols**  
See end of K-range, section D.

#### Marking colour

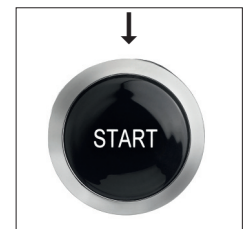
White marking for illuminated actuators (laser etching) and non-illuminated black actuators (pad printing). Black marking for non-illuminated colour actuators (pad printing). Other : on request.

#### Marking area

The symbol will be included in the hatched area.  
(this is the optimal area, larger symbols can be made on request)



→ 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            | CODE | SYMBOL  | DESCRIPTION                          | CODE | SYMBOL  | DESCRIPTION                           |
|------|---|------------------------|------|---|--------------------------------------|------|---|---------------------------------------|
| XX   | None  | -                      | 16   |    | Revolving light                      | 32   |    | Emergency first aid vehicle (2565)    |
| 01   | ON  | -                      | 17   |    | Rear ventilator                      | 33   |    | Load tipping (1557)                   |
| 02   | OFF   | -                      | 18   |    | Heating (0637)                       | 34   |    | Loading light (2457)                  |
| 03   | ○   | -                      | 19   |    | Door opening                         | 35   |    | Tractor, rear-ward (1667)             |
| 04   | I   | -                      | 20   |  | Windshield demister/defroster (0635) | 36   |  | Combine, direction of movement (1678) |
| 05   | II  | -                      | 21   |  | Windshield wiper (0086)              | 37   |  | Use no forks (2406)                   |
| 06   | STOP  | -                      | 22   |  | Windshield washer (0088)             | 38   |  | Transmission (1166)                   |
| 07   | A   | Stop                   | 23   |  | Ventilator fan (0089)                | 39   |  | Working spot light (1145)             |
| 08   | M   | Motion                 | 24   |  | Side mirror defroster                | 40   |  | Engine (0640)                         |
| 09   |  | Up motion              | 25   |  | Restarting pump                      | 41   |  | Horn (0244)                           |
| 10   |  | Down motion            | 26   |  | Front fog lights (0633)              | 42   |  | Lock (1656)                           |
| 11   |  | Hot                    | 27   |  | Rear fog lights (0634)               | 43   |  | Taxi sign light (2551)                |
| 12   |  | Cold                   | 28   |  | Propulsion system trim               | 44   |  | Working light (1204)                  |
| 13   |  | Hazard warning (0085)  | 29   |  | Beacon (1141)                        | 45   |  | Working light symmetric (1204)        |
| 14   |  | Traveller lighting     | 30   |  | Anchor                               | 46   |  | -                                     |
| 15   |  | Driver lighting (1421) | 31   |  | Electric motor (0011)                | 47   | ASM   | -                                     |

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







































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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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




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                  |
|------|---|------------------------------|
| 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   |  | -           |

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