## FP series

Fully illuminated pushbutton switches - momentary or latching

## Distinctive features and specifications



- Suited for integrated designs
- Large but lightweight

Pad printed or laser etched symbols
Full actuator or symbol illumination, adaptable to design requirements


## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 200mA 12VDC
- Initial contact resistance : $50 \mathrm{~m} \Omega$ max.
- Insulation resistance : $1 \mathrm{G} \Omega \mathrm{min}$. at 500VDC
- Dielectric strength : 1.000 Vrms 50 Hz min.
- Electrical life at full load : 300.000 cycles


## GENERAL SPECIFICATIONS

- Panel thickness : $1(.039$ ) to $18 \mathrm{~mm}(.708)$ max.
- Total travel : $2,8 \mathrm{~mm} \pm 0,5 \mathrm{~mm}$
- Typical operating force: $8 \mathrm{~N} \pm 2 \mathrm{~N}$
- Mechanical life : 1 million cycles
- Torque : 3 Nm max. applied to nut
- Operating temperature : $-40^{\circ} \mathrm{C}$ to $+75^{\circ} \mathrm{C}$

MATERIALS

- Case : stanyl PA46
- Actuator : PA12
- Bushing/ bezel : PA66
- Contacts : silver, gold plated (code 4)
- Multi-wire lead AWG22
- Terminal seal : epoxy or termelt overmolding

Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.
Tolerance : The general tolerance for dimensions in this brochure is $\pm 0,3$ (.012).
Dimensions, specifications and data shown in this brochure are subject to change without notice.

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Overview



| Actuator colour |  |
| :--- | :--- |
| 1 | Blue |
| 2 | Black |
| 3 | Green |
| 4 | Grey |
| 5 | Yellow |
| 6 | Red |
| 7 | White/natural |
| 9 | Orange |
| A | Maroon |
| B | Black lacquered |



| Bezel colour |  |
| :--- | :--- |
| 1 | Blue |
| 2 | Black |
| 3 | Green |
| 4 | Grey |
| 5 | Yellow |
| 6 | Red |
| 7 | White/natural |


| LED colour |  |
| :--- | :--- |
|  | Non-illum. |
| A | Blue |
| B | Green |
| C | Red |
| D | Yellow |
| E | White |
| F | Red/green |
| G | Red/blue |



2 24V resistor
348 V resistor

|  | Marking |
| :--- | :--- |
| $\mathbf{X}$ | No marking |
| $\mathbf{1}$ | Pad printing |
| 2 | Laser |

## 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 hex nut and 1 O-Ring

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

## FP series

Fully illuminated pushbutton switches - momentary or latching
Mounting by Ø 24 mm threaded bushing


- 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 he 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


## Straight cable terminals



Right angle cable terminals


## 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) |
| :---: | :---: | :---: |
| Non-illuminated one pole <br> A | $\bigcirc{ }^{\circ} \mathrm{O}$ | $\frac{4}{50}$ |
| Non-illuminated two poles <br> B | 「०ㄱㄱ $\bar{\square}$ | $\frac{1}{r^{0} 0_{7}} \frac{1}{r^{0} 07}$ |


|  | Function 1 (latching) | Function 3 (momentary) |
| :---: | :---: | :---: |
| Independent one pole <br> C |  | $\begin{gathered} \frac{1}{\Gamma_{0}^{0} 9} \\ \left.\Gamma^{0 \rightarrow+\square-0}\right] \end{gathered}$ |
| Independent two poles <br> D |  |  |

## CONTACT MATERIALS



4 Silver, gold plated
Silver : on request.

## ACTUATOR COLOUR



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

## BEZEL COLOUR



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

## LED COLOUR


$\mathbf{X}$ : non-illuminated
$\mathbf{A}$ : blue - B : green - C : red - D : yellow - E : white - F : red/green - G: red/blue

## FP series

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## Options

## LED RESISTOR



0 No resistor supplied
$1 \quad 12 \mathrm{~V}$ resistor
$2 \quad 24 \mathrm{~V}$ resistor
348 V resistor

## MARKING



X Nomarking
1 Pad printing
2 Laser

## SYMBOLS



XX No symbol

## Available symbols

## See following pages.

## 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.


# FP series 

Fully illuminated pushbutton switches－momentary or latching
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 | $\boldsymbol{\sim}$ | Emergency first aid vehicle （2565） |
| 01 | ON | － | 17 | $\infty$ | Rear ventilator | 33 | $a_{0}^{<}$ | Load tipping （1557） |
| 02 | OFF | － | 18 | $\boldsymbol{y}^{\boldsymbol{p}} \boldsymbol{y}$ | Heating （0637） | 34 | $\frac{\square}{0}$ | Loading light (2457) |
| 03 | $0$ | － | 19 |  | Door opening | 35 | $\underset{\sigma}{-6}$ | Tractor，rear－ward （1667） |
| 04 | 1 | － | 20 | $\stackrel{t i t}{y j}$ | Windshield demister／defroster （0635） | 36 | $4 \sqrt{4}$ | Combine， direction of movement（1678） |
| 05 | $\\|$ | － | 21 | $W$ | Windshield wiper （0086） | 37 | $3$ | Use no forks (2406) |
| 06 | STOP | － | 22 |  | Windshield washer （0088） | 38 | 3 | Transmission (1166) |
| 07 | A | Stop | 23 | $8$ | Ventilator fan （0089） | 39 |  | Working spot light （1145） |
| 08 | $M$ | Motion | 24 |  | Side mirror defroster | 40 |  | Engine （0640） |
| 09 | A | Up motion | 25 |  | Restarting pump | 41 |  | $\begin{aligned} & \text { Horn } \\ & (0244) \end{aligned}$ |
| 10 | V | Down motion | 26 | 支 | Front fog lights $(0633)$ | 42 | （1） | $\begin{aligned} & \text { Lock } \\ & (1656) \end{aligned}$ |
| 11 |  | Hot | 27 | へ声 | Rear fog lights （0634） | 43 | TAX | Taxi sign light (2551) |
| 12 | $M$ | Cold | 28 | $t$ | Propulsion system trim | 44 |  | Working light (1204) |
| 13 |  | Hazard warning （0085） | 29 | " | $\begin{aligned} & \text { Beacon } \\ & (1141) \end{aligned}$ | 45 |  | Working light symmetric （1204） |
| 14 | 㣨 | Traveller lighting | 30 |  | Anchor | 46 |  | － |
| 15 | $\pi$ | Driver lighting （1421 | 31 |  | Electric motor （0011） | 47 | ASM | － |

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## 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 | 5 5 | Front windshield heating |
| 49 |  | Differential lock (1662) | 65 | $\Leftrightarrow$ | Brake release | 81 | AUS | Aus |
| 50 | ED | - | 66 | $-$ | Baggage room left door | 82 | $\frac{88}{20}$ | Radiator fan |
| 51 |  | - | 67 | $-$ | Baggage room right door | 83 |  | Remove retarder |
| 52 |  | - | 68 | $48$ | Power blinds | 84 | (\%) | Restricted speed |
| 53 | $\mathbf{N}$ | - | 69 |  | Engine idle control | 85 | $\infty$ | Preheater |
| 54 |  | Rear window wiper (0097) | 70 | $\begin{aligned} & \text { CRUISE } \\ & \text { RES/SET } \end{aligned}$ | Cruise res/set | 86 | (ABS) | ABS detection |
| 55 |  | Rear window washer (0099) | 71 |  | Driver windows up/down | 87 | (ECAS) | ECAS detection |
| 56 |  | Lower load (2223) | 72 | [ | Middle door opening | 88 |  | Engine stop |
| 57 | $\frac{1}{0}$ | Cab lock (1560) | 73 | $\square$ <br> 1 | Front door opening | 89 | CRUISE RES/CAN | Cruise res/cancel |
| 58 | $\text { \&8 } \Rightarrow$ | Extraction | 74 | b | Lighting in baggage room | 90 |  | ECAS reset |
| 59 | $88:$ | Pumping in | 75 | CRUISE <br> ON/OFF | Cruise on/off | 91 | $\square$ | Driver windows heating |
| 60 |  | Rear PTO (1572) | 76 | $T V$ | TV | 92 | $\begin{gathered} \text { CRUISE } \\ \text { SET+/SET- } \end{gathered}$ | 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 | $-\infty$ | Lighting main switch |

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## Legend scale :

Depending on space available on the product (see "Symbols" section).
$\left.\begin{array}{|c|c|c|}\hline \text { CODE } & \text { SYMBOL } & \text { DESCRIPTION } \\ \hline 96 & \begin{array}{c}\text { Heating } \\ \text { using water }\end{array} \\ \hline 97 & \text { A8 } & \text { Low beam }\end{array}\right]$

| CODE | SYMBOL | DESCRIPTION |
| :---: | :---: | :---: |
| AD |  | - |
| AE |  | - |
| AF | $8$ | - |
| AG |  | Battery charging condition (0247) |
| AH | $\langle\Rightarrow$ | Turn signals (0084) |
| AJ | $\bar{\equiv} 0$ | High beam (0082) |
| AK | $\begin{gathered} H \\ \underset{H}{+} \end{gathered}$ | Differential lock, bogie (2600) |
| AL | 08: | Brushing with a rotating brush (0070) |
| AM | $\begin{aligned} & \text { - } \\ & H \end{aligned}$ | Differential lock, transfer case $4 \times 4$ (2475) |
| AN | $\mathscr{S}$ | Loader bucket, float (1441) |
| AP | $\infty$ | Loader bucket (1437) |
| AQ |  | Rear window washer \& wiper (0098) |
| AR | $1$ | Header Header drive (1579) |
| AS |  | Excavator/backhoe boom side shift (2091) |
| AT |  | Chemical water treatment (1851) |
| AU | $\sqrt{6}$ | Grapple skidder, single funct ${ }^{\circ}$ boom (1762) |


| CODE | SYMBOL | DESCRIPTION |
| :---: | :---: | :---: |
| AV | $\stackrel{\leftrightarrow}{\dot{L}}_{x}^{4}$ | - |
| AW | (-) | - |
| AY | (®) I | - |
| AZ | (ㅇ) | - |
| B1 | HIGH | - |
| B2 | LOW | - |
| B3 | $\Delta_{1}^{2}$ | - |

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