FD series

Double icon illuminated pushbuttons • bushing Ø 24 or 26 mm • momentary or latching



DISTINCTIVE FEATURES

Double icon actuator
Snap-in and threaded bushing models
Large but lightweight
Sealed to IP69K (threaded bushing version)



ENVIRONMENTAL SPECIFICATIONS

- Front panel sealing :
  - Threaded bushing version : IP69K according to DIN 40050-9
  - Snap-in version : IP54 according to IEC 60529 with panel gasket and 2 mm panel thickness
- Operating temperature : -40 °C to +75 °C (40 °F to +167 °F)

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - silver contacts (code 2) : 4 A 12 VDC
  - gold plated contacts (code 4) : 200 mA 12 VDC
- Initial contact resistance : 50 mΩ max.
- Insulation resistance : 1 GΩ min. at 500 VDC
- 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

LED COMPONENT SPECIFICATIONS			
LED color	Forward current	Typ. forward voltage	Max. forward voltage
Red/Green	20 mA / 20 mA	2.2 V / 3.2V	2.8 V / 4 V

A resistor must be series-connected by the user

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

The company reserves the right to change specifications without notice.

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GENERAL SPECIFICATIONS

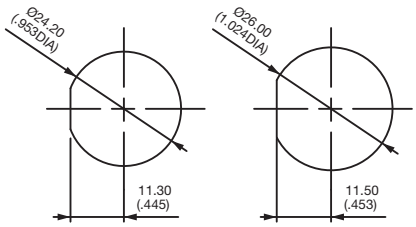
- Panel thickness :
  - Snap-in version :
  1.5 (.059) to 2 mm (.078) with panel gasket
  2 (.078) to 2.5 mm (.885) without panel gasket
  - Threaded bushing version :1(.039) to 18 mm (.708) max.
- Total travel : 2.5 mm ± 0.5 mm
- Typical operating force : 8 N ± 2 N
- Low level or mechanical life :
  - Momentary models : 1 million cycles
  - Latching models : 200,000 cycles
- Torque : 3 Nm max. applied to nut

MATERIALS

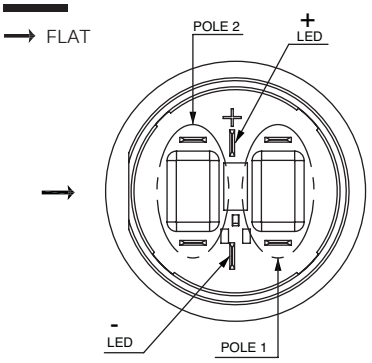
- Case : PA46
- Actuator : PA12
- Bushing/ bezel : PA66
- Contacts : silver (code 2) or silver, gold plated (code 4)

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

PANEL CUT-OUT



WIRING DIAGRAM



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BUILD YOUR PART NUMBER

BASIC PART NUMBER

FD _ _ _ _ _

SERIES

FD

MODELS

A	Threaded bushing, Ø 24 (.944)
B	Snap-in, Ø 26 (1.016)

ACTUATOR

P	Round, flat

ELECTRICAL FUNCTIONS

1	OFF - ON
3	Normally open (NO)

LED CONTROL AND NO OF POLES

C	Independent LED, 1 pole
D	Independent LED, 2 poles
F	LED linked to actuator, green if switch in ON position, single pole
G	LED linked to actuator, red if switch in ON position, single pole

F and G for OFF - ON models only.

TERMINALS

1	Solder lugs

OPTIONS

_ _ _ _ _ _

CONTACT MAT.

2	Silver
4	Silver, gold plated

ACTUATOR COLOR

8	Smoke black

BEZEL COLOR

2	Black

LED COLOR

F	Red/green

LED RESISTORS

0	No resistor supplied
1	12 V resistor
2	24 V resistor

SYMBOLS

3	START (green) / STOP (red) with ring
4	ON (green) / OFF (red) with ring
5	I (green) / O (red) with ring

ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

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 (threaded bushing version) and 1 panel gasket.

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MOUNTING BY THREADED BUSHING
Ø 24 (.944)

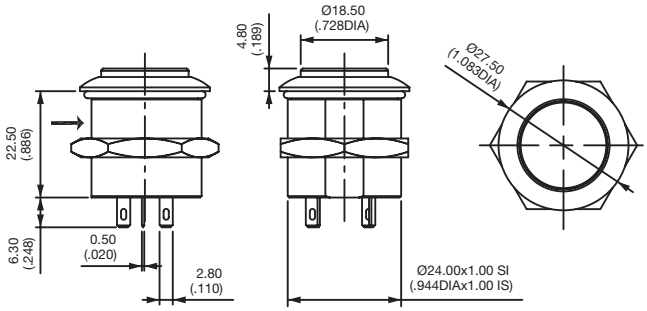


Latching
FDAP1•1 OFF ON

Momentary (NO)
FDAP3•1



→ FLAT



SNAP-IN MOUNTING
Ø 26 (1.024)

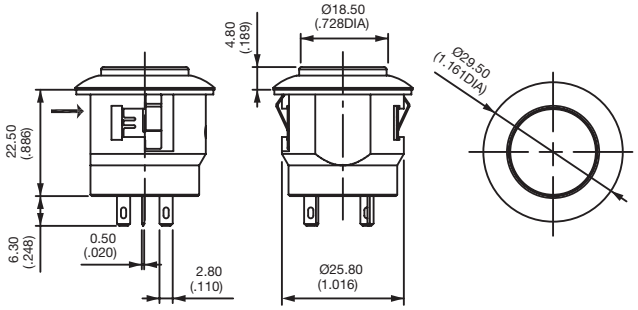


Latching
FDBP1•1 OFF ON

Momentary (NO)
FDBP3•1

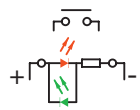
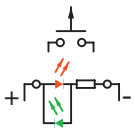
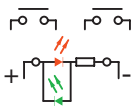
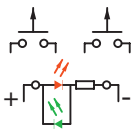
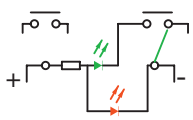
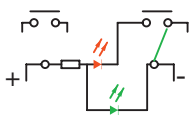


→ FLAT



LED CONTROL AND NUMBER OF POLES

To order a product, replace • with one of the following codes, then add the desired options.

	Function 1 (latching)	Function 3 (momentary)
Independent LED single pole **C**		
Independent LED double pole **D**		
Green LED in ON position single pole **F**		-
Red LED in ON position single pole **G**		-

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

BASIC P/N

2	Silver
4	Silver, gold plated

ACTUATOR COLOR

BASIC P/N

8	Smoke black

BEZEL COLOR

BASIC P/N

2	Black

LED COLOR

BASIC P/N

F	Red/green

LED RESISTOR

BASIC P/N

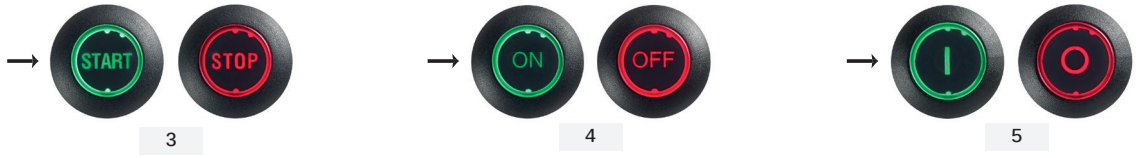
0	No resistor supplied
1	12 VDC resistor
2	24 VDC resistor
4	30 VDC resistor
5	15 VDC resistor

SYMBOLS

BASIC P/N

3	START (green) / STOP (red) with ring
4	ON (green) / OFF (red) with ring
5	I (green) / O (red) with ring

→ FLAT



3 4 5