

# 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  

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

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



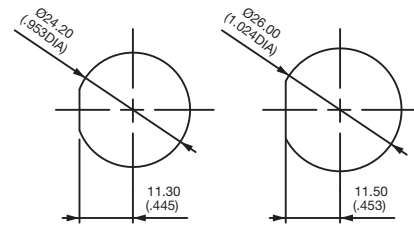
## MATERIALS

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

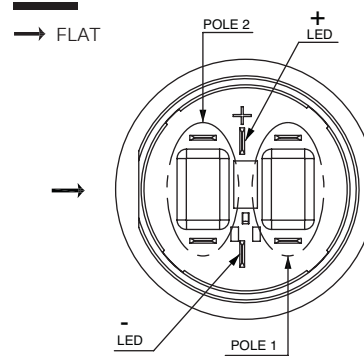
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.



## PANEL CUT-OUT



## WIRING DIAGRAM

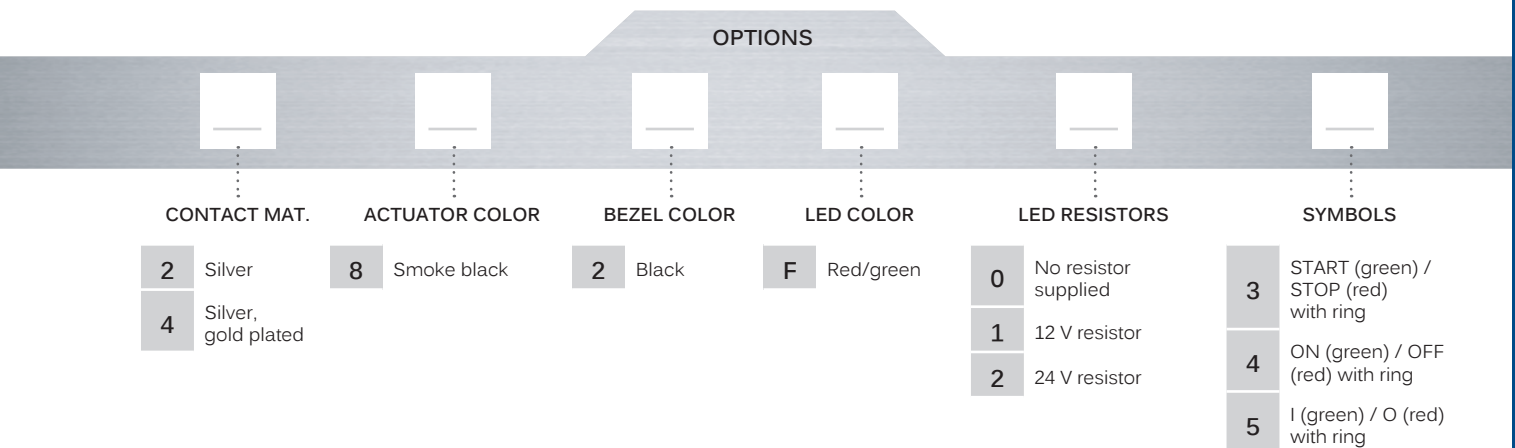
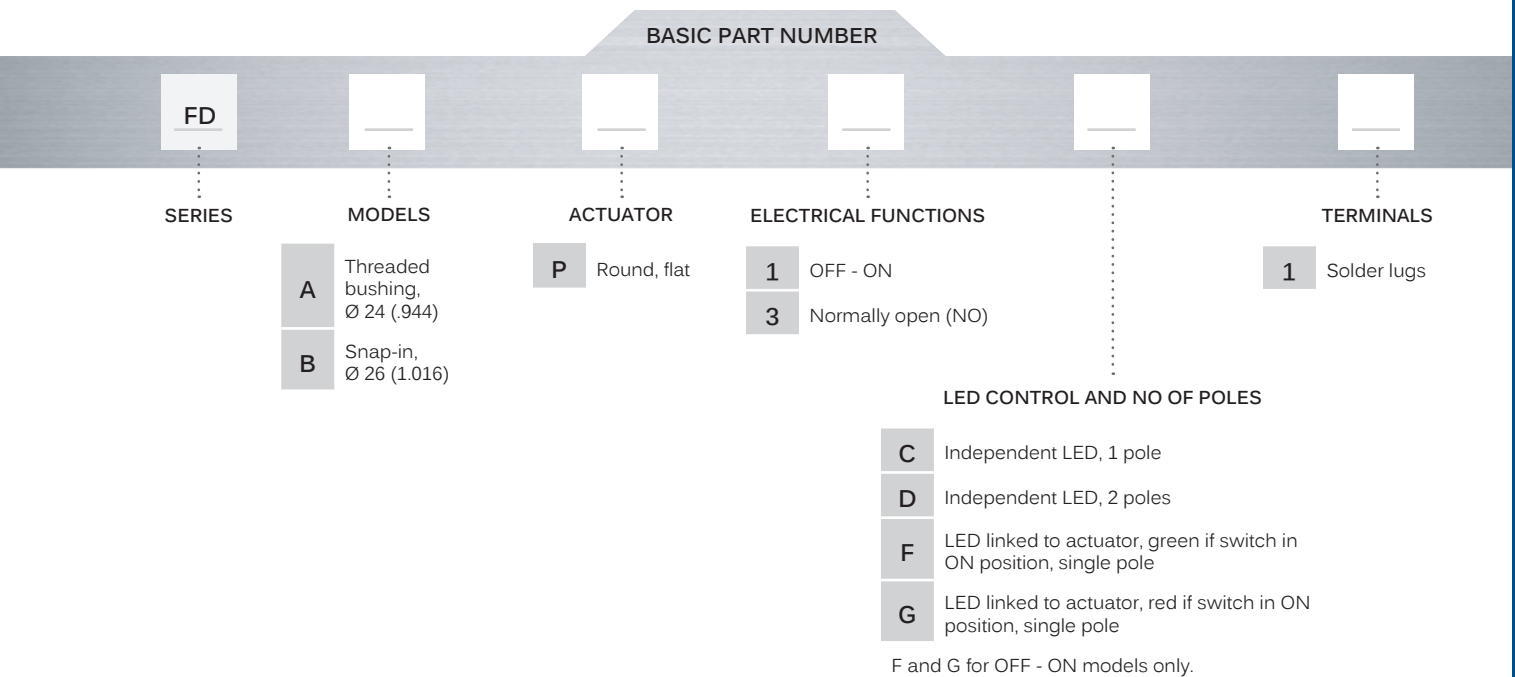


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## BUILD YOUR PART NUMBER



## 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.

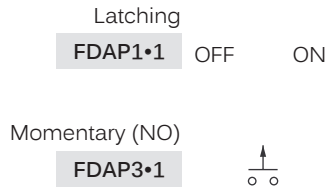
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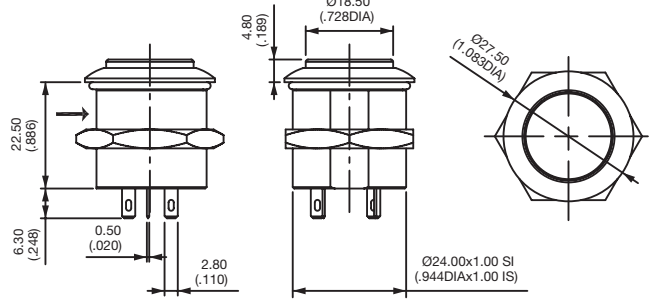
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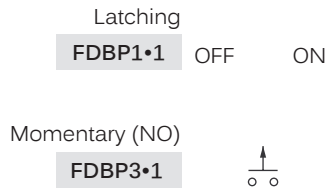
## MOUNTING BY THREADED BUSHING Ø 24 (.944)



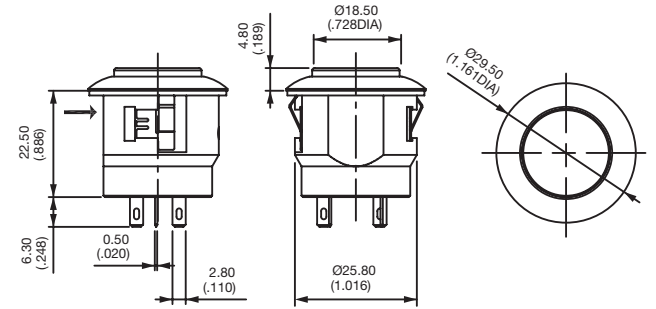
→ FLAT



## SNAP-IN MOUNTING Ø 26 (1.024)



→ FLAT



## LED CONTROL AND NUMBER OF POLES

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

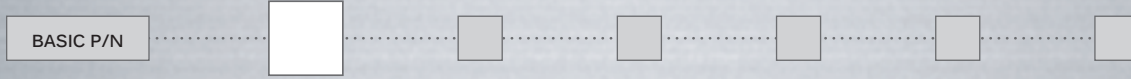
	Function 1 (latching)	Function 3 (momentary)
Independent LED single pole C		
Independent LED double pole D		
Green LED in ON position single pole F		-
Red LED in ON position single pole G		-

dotted line = jumper to be wired by the user. LED- has to be wired to one pin of pole 2.

# FD series

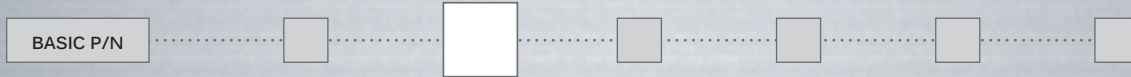
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### CONTACT MATERIALS



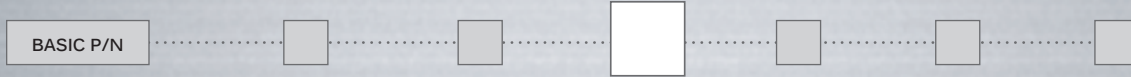
- 2 Silver
- 4 Silver, gold plated

### ACTUATOR COLOR



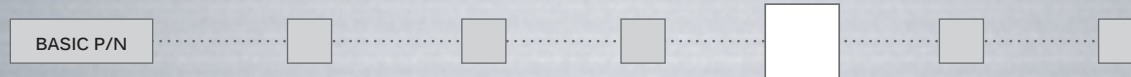
- 8 Smoke black

### BEZEL COLOR



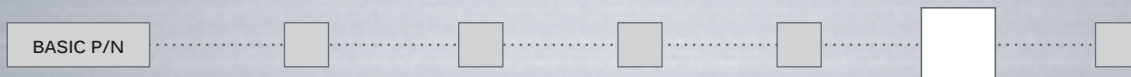
- 2 Black

### LED COLOR



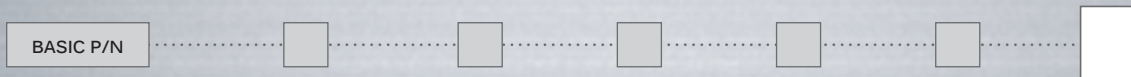
- F Red/green

### LED RESISTOR



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

### SYMBOLS



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

→ FLAT



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