

22.5 mm Monolithic Push Buttons

Product Selection

Pilot Light Devices — LED



Lens & LED Color	Pkg. Quantity	Voltage		
		24V AC/DC	120V AC	240V AC
		Cat. No.	Cat. No.	Cat. No.
Green	1	800FD-P3N3	800FD-P3N5	800FD-P3N7
Red		800FD-P4N3	800FD-P4N5	800FD-P4N7
Yellow		800FD-P5N3	800FD-P5N5	800FD-P5N7

$$800\text{FD} - \text{P} \quad \frac{3}{a} \quad \text{N} \quad \frac{7}{b} \quad \frac{}{c}$$

a

Lens Cap	
Code	Color
0	Amber
3	Green
4	Red
5	Yellow
6	Blue
7	Clear

Voltage	
Code	Type
3	24V AC/DC
5	120V AC
7	240V AC

Termination Style	
Code	Description
Blank	Standard screw
R	Ring lug

Pilot Light Devices — Incandescent

Lens & LED Color	Pkg. Quantity	Voltage	
		24V AC/DC	120V AC
		Cat. No.	Cat. No.
Green	1	800FD-P3D3	800FD-P3D5
Red		800FD-P4D3	800FD-P4D5
Yellow		800FD-P5D3	800FD-P5D5

$$800\text{FD} - \text{P} \quad \frac{3}{a} \quad \text{D} \quad \frac{5}{b} \quad \frac{}{c}$$

Lens Cap	
Code	Color
0	Amber
3	Green
4	Red
5	Yellow
6	Blue
7	Clear
9	No lens*

Voltage	
Code	Type
0	No Bulb❄
1	6V AC/DC
2	12V AC/DC
3	24V AC/DC
4	48V AC/DC
5	120V AC/DC

Termination Style	
Code	Description
Blank	Standard screw
R	Ring lug

- * Only valid with "no bulb" option.
- ❄ Only valid with "no lens" option.

Bulletin 800FD

22.5 mm Monolithic Push Buttons

Specifications

Specifications*

Mechanical Ratings				
Vibration (assembled to panel)		Tested at 10...2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. for 3 hr duration, no damage		
Shock		Tested at 1/2 cycle sine wave for 11 ms; no damage at 100 G		
Degree of protection		IP66 (Type 3/3R/4/4X/12/13)		
Mechanical durability per EN 60947-5-1 (Annex C)	300 000 cycles	Selector switch		
	2 000 000 cycles	Push-pull/twist-to-release E-stop		
		Momentary push buttons		
Operating forces		E-stop = 36 N		
Operating torque (typical application with one contact block)		Selector switch = 0.25 N•m		
Contact operation	N.O.	Slow double make and break		
	N.C.	Slow double make and break - positive opening 		
Push button travel to change electrical state	N.O.	2.5 mm (0.1 in.)		
	N.C.	1.5 mm (0.060 in.)		
Environmental				
Temperature range (operating)		-25...+60 °C (-13...+140 °F)*		
Temperature range (short term storage)		-40...+85 °C (-40...+185 °F)		
Humidity		50...95% RH from 25...60 °C (77...140 °F)		
Electrical Ratings				
Standard contact block ratings		B300, R300 AC 15, DC 13 300 VAC EN/IEC 60947-5-1 and UL 508, 17V, 5 mA min.		
	Nominal Voltage	Range	Current Draw	Frequency
LED module ratings	24V AC	20...26V AC	32 mA	50/60 Hz
	24V DC	18...30V DC	24 mA	DC
	120V AC	102...132V AC	22 mA	50/60 Hz
	240V AC	204...264V AC	22 mA	50/60 Hz
Thermal current		5 A max. enclosed (40 °C ambient) to UL 508, EN/IEC 60947-5-1		
Insulation voltage (U _i)		300V		
Wire capacity (screw terminal)		#18...14 AWG (0.75...2.5 mm ²) Max. (2) #14 AWG, uses same size wire only		
Recommendations for ring lug termination option‡		6.35 mm (0.250 in.) Max. outer diameter with 3.8 mm (0.148 in.) hole diameter		
Recommended tightening torque on screw terminals		0.7...0.9 N•m (6...8 lb•in)		
Dielectric strength (minimum)		2500V for one minute		
External short circuit protection		5 A Type gL/gG cartridge fuse to EN 60269-2-1 or gN (Class J to UL 248-8 or Class CC to UL 248-4)		
Electrical shock protection		Finger-safe conforming to IP2X		
Illumination				
LED dominant wavelength	Green	525 nm		
	Red	629 nm		
	Yellow	590 nm		
	Blue	470 nm		
	White	—		
LED luminous intensity	Green	780 mcd		
	Red	780 mcd		
	Yellow	600 mcd		
	Blue	168 mcd		
	White	360 mcd		
Incandescent maximum wattage		2.6 W		

* Performance Data — see page Important-3 of the Industrial Controls catalog.

* Operating temperatures below 0 °C (32 °F) are based on the absence of freezing moisture and liquids.

† 3M MV018-R/S (#22...18 AWG) or 3M MVU14-6R/S (#16...14 AWG)

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Specifications, Approximate Dimensions, and Instruction Sheet Information

Specifications, Continued*

Materials			
Springs	Stainless steel and zinc coated music wire	Lens (pilot light)	Acrylic
Electrical contacts	Brass with silver-nickel contacts	Bezel/bushing, housing	Glass-filled polyester
Terminals	Brass and phosphor bronze	Legend frames	Glass-filled polyamide
Panel gasket	Nitrile and polyester-based TPE	Mounting ring	Glass-filled polyamide
Seal	Nitrile	Terminal screws	Zinc-plated steel with chromate
Button cap/mushroom head	Polyester/polycarbonate blend	Lamp socket	Brass and Phosphor bronze

* Performance Data — see page Important-3 of the Industrial Controls catalog.

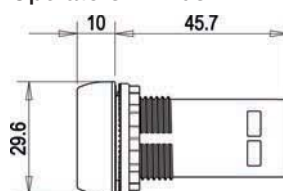
Product Certifications

Certifications	UL, CSA, CCC, CE
Conformity to standards — CE Marked	UL 508, EN/ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5
Terminal identification	EN/IEC 60947-1

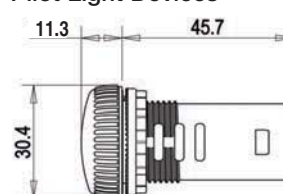
Approximate Dimensions

Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes. Refer to RAISE software for additional dimensional information.

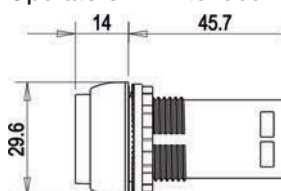
Momentary Push Button Operators — Flush



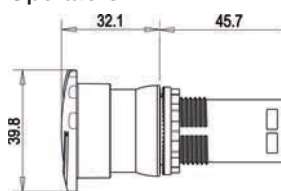
Pilot Light Devices



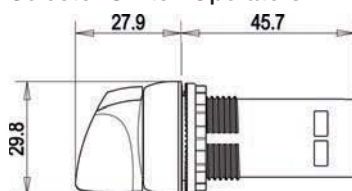
Momentary Push Button Operators — Extended



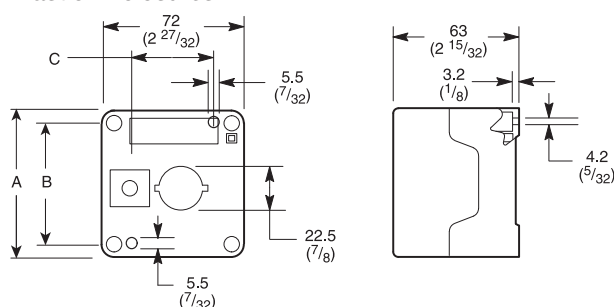
2-Position Push-Pull/Twist-to-Release Mushroom Operators



Selector Switch Operators



Plastic Enclosures



Plastic Enclosures

Cat. No.	No. of Units (Holes)	A	B	C	Weight
800FD-1P	1	72	59	41	95 g
800FD-1PY		(2-27/32)	(2-5/16)	(1-5/8)	(3.5 oz)

Instruction Sheet

