

PRODUCT PROFILE

BULLETIN 800FD 22.5 MM MONOLITHIC PUSH BUTTON DEVICES

Rockwell Automation introduces a new line of 22.5 mm monolithic push buttons devices. With a single catalog number, you can now order a fully assembled product for easy stocking and installation. The 800FD family includes E-Stops, flush and extended push buttons, LED and incandescent pilot lights and two- and three-position selector switches.

ADVANTAGES

- One catalog number gets you a complete, assembled product
- Ease of installation
- Low back-of-panel profile (45.7 mm)
- Aesthetic design complements the 800F modular line
- Anti-rotation tab provides accurate alignment and can be easily removed for use in panels without notches
- Lowest cost of installation
- Made of industrial grade thermoplastic for superior chemical resistance
- Designed to meet worldwide standards
- Compatible with 800F accessories and enclosures
- Ring lug capability



APPLICATIONS

- Panel builders
- OEM customers
- Commercial and industrial applications

**ESSENTIAL COMPONENTS.
EXCEPTIONAL VALUE.**

PILOT LIGHT

DEVICES

- Optically enhanced lens style
- Available in six colors: amber, green, red, yellow, blue and clear
- UL Type 4/4X/13, IP 66

LED

- Superior shock and vibration rating
- Life rating of 100,000 hours
- Leakage current protection up to 3 mA
- Integrated LED

INCANDESCENT

- Device comes with bulb installed for quick set-up
- Bulb is front-replaceable



PILOT LIGHT DEVICES — LED

Lens & LED Color	Pkg. Quantity	Voltage		
		24V AC/DC	120V AC	240V
		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

800FD - P **3** N **7**

a *b* *c*

a

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

b

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

c

Screw Termination	
Code	Description
Blank	Standard
R	Ring Lug

PILOT LIGHT DEVICES — INCANDESCENT

Lens 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

800FD - P 3 D 5

a *b* *c*

a

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

b



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

c

Screw Termination	
Code	Description
Blank	Standard
R	Ring Lug

*only valid with "no bulb" option
[°] only valid with "no lens" option

REPLACEMENT LAMPS

Lamp	Type	Typical Current	Voltage	ANSI No.	Cat. No.	Pkg. Quantity
 Cat. No. 800F-N130	Full Voltage Incandescent	150 mA	6V AC/DC	755	800F-N65	10‡
		80 mA	12V AC/DC	756	800F-N141	
		70 mA	24V AC/DC	757	800F-N157	
		50 mA	48V AC/DC	1835	800F-N48	
		22 mA	130V AC/DC	949	800F-N130	
 Cat. No. 800F-N240	Neon	22 mA	240V AC	—	800F-N240	

REPLACEMENT LENSES

Color	Cat. No.	Pkg. Quantity
Amber	800FD-AP0	10‡
Green	800FD-AP3	
Red	800FD-AP4	
Yellow	800FD-AP5	
Blue	800FD-AP6	
Clear	800FD-AP7	

‡ Sold in multiples of 10. Order (quantity of) 10 to receive one package of 10 pieces.

E-STOP

PUSH-PULL/TWIST-TO-RELEASE DEVICES

- Push-pull and twist-to-release in one device
- Non-removable contacts promote safety in E-stop applications
- Arrows molded on cap indicate direction of release
- Trigger action anti-tease feature
- Externally tamperproof
- 40 mm mushroom cap
- Non-illuminated
- E-Stops meet the EN 418 and EN 60947-5-5 standards
- UL type 4/4x/13, IP 66



2-POSITION PUSH-PULL/TWIST-TO-RELEASE MUSHROOM DEVICES, NON-ILLUMINATED

Color	Contacts	Pkg. Quantity	Cat. No.
Red	1 N.C.	1	800FD-MT44X01
	2 N.C.		800FD-MT44X02

800FD – MT4

4

a

X

b

11

c

a

Color Cap	
Code	Description
4	Red
4E	Red - EMO

b

Screw Termination	
Code	Description
X	Standard
R	Ring Lug

c

Contacts*		
Code	Number of N.O.	Number of N.C.
01	0	1
11	1	1
02	0	2

* Not available without at least 1 N.C. contact block

SELECTOR SWITCH DEVICES



- Positive detent decreases the likelihood of hang-up between positions
- Constant energy solution means vibration or a slight bump should not cause a change in state
- Available in two- or three-position switches
- UL type 4/4X/13, IP 66

Target Table

2-position SS				
Knob Position (from front)	↙		↘	
	L	R	L	R
Contacts/Contact Position (from back)				
01	X	-	O	-
10	-	O	-	X
11	X	O	O	X
02	X	X	O	O
20	O	O	X	X

SELECTOR SWITCH DEVICES, NON-ILLUMINATED

Operator Type	Contact Configuration	Pkg. Quantity	2-Position	3-Position
			Cat. No.	Cat. No.
Maintained	1 N.O.	1	800FD-SM22X10	—
	1 N.C.		800FD-SM22X01	—
	2 N.O.		800FD-SM22X20	800FD-SM32X20
	2 N.C.		800FD-SM22X02	800FD-SM32X02
	1 N.O. & 1 N.C.		800FD-SM22X11	800FD-SM32X11
Spring Return From Both	2 N.O.	—	800FD-SB32X20	
	2 N.C.	—	800FD-SB32X02	
	1 N.O. & 1 N.C.	—	800FD-SB32X11	

3-position SS

Knob Position (from front)	↙		↑		↘	
	L	R	L	R	L	R
Contacts/Contact Position (from back)						
11	O	O	X	O	X	X
02	O	X	X	X	X	O
20	X	O	O	O	O	X

X = circuit closed O = circuit open

800FD – S **L** **3** **2** **X** **11**
a *b* *c* *d*

a

Operator Type	
Code	Description
M	Maintained
L	Return from Left
R	Return from Right
B*	Return from Both

b

Operator Function	
Code	Description
2	Two positions
3	Three positions

c

Screw Termination	
Code	Description
X	Standard
R	Ring Lug

d

Contacts		
Code	Number of N.O.	Number of N.C.
01°	0	1
10°	1	0
11	1	1
02	0	2
20	2	0

* Only available on 3-position selector switch.
 ° only valid for 2-position selector switch.

PUSH BUTTON

DEVICES

- Ease of installation
- Available with flush or extended cap
- Two-color molding and laser engraving options for cap
- UL Type 4/4X/13, IP 66



MOMENTARY PUSH BUTTON DEVICES, NON-ILLUMINATED

Operator Type	Cap Color	Pkg. Quantity	Contact Configuration		
			1 N.O.	1 N.C.	1 N.O. & 1 N.C.
			Cat. No.	Cat. No.	Cat. No.
Flush	Black	1	800FD-F2X10	800FD-F2X01	800FD-F2X11
	Green		800FD-F3X10	800FD-F3X01	800FD-F3X11
Extended	Red		-	800FD-E4X01	800FD-E4X11

800FD – **F** **3** **X** **11**

a *b* *c* *d* *e*

a

Operator Type	
Code	Description
F	Flush
E	Extended

b

Cap Color	
Code	Color
1	White
2	Black
3	Green
4	Red
5	Yellow
6	Blue

c

Legend Text *	
Code	Text
Blank	
01	START
02	STOP *
05	O *
06	I
08	→
09	FORWARD
10	REVERSE
11	R

d

Screw Termination	
Code	Description
X	Standard
R	Ring Lug

e

Contacts		
Code	Number of N.O.	Number of N.C.
01	0	1
10 *	1	0
11	1	1
02	0	2
20 *	2	0

* White and yellow caps have black text. All other color caps have white text. Valid color cap/legend text combinations are as follows:

Color	Text	
	Flush Caps	Extended Caps
White	Start, I, →, Forward, Reverse, R	→, R
Black	→, Forward, Reverse, R	Stop, O, →, R *
Green	Start, I, →, Forward, Reverse	→
Red	→, Forward, Reverse, Stop, O *	Stop, O, → *
Yellow	→, Forward, Reverse	→
Blue	→, Forward, Reverse, R	→, R

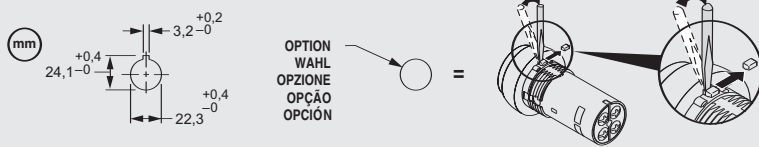
SPECIFICATIONS

BULLETIN 800FD 22.5 MM MONOLITHIC PUSH BUTTON DEVICES

APPROXIMATE DIMENSIONS

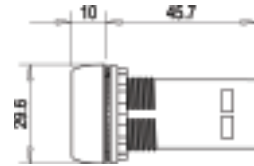
Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes.

PANEL HOLE SPACING

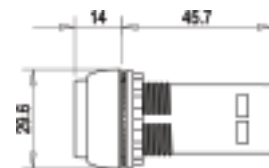


(A)						
(A)						
(B)						
	30	40	50	40	50	60, 90
	30		40			60/90

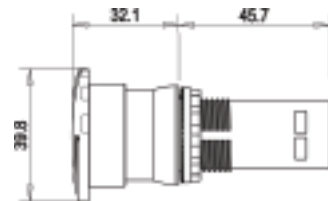
Momentary Push Button Devices – Flush



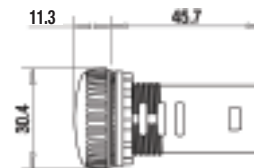
Momentary Push Button Devices – Extended



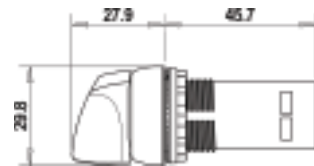
2-Position Push-Pull/Twist-to-Release Mushroom Devices



Pilot Light Devices



Selector Switch Devices



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	IP 66 (Type 3/3R/4/4X/12/13)
Mechanical durability per EN 60947-5-1 (Annex C)	2,000,000 Cycles Momentary Push Button
	300,000 Cycles Selector Switch
	300,000 Cycles E-Stop
Operating forces	Flush/extended = 9 N, 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)

* Performance Data — see page Important-2 of the Industrial Controls catalog (A115-CA001A-EN-P).

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

SPECIFICATIONS, CONTINUED *

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.		
LED Module Ratings	Nominal Voltage	Range	Nominal Current Draw	Frequency
	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 UL508, EN/IEC 60947-5-1		
Insulation voltage (Ui)		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	Red	Yellow	Blue	White
525 nm	629 nm	590 nm	470 nm	—
LED Luminous Intensity				
Green	Red	Yellow	Blue	White
890 mcd	890 mcd	690 mcd	193 mcd	412 mcd

Incandescent maximum wattage	2.6 W
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Materials	
Springs	Stainless steel and zinc coated music wire
Electrical contacts	Brass with silver-nickel contacts
Terminals	Brass and phosphor bronze
Panel gasket	Nitrile and polyester-based TPE
Seal	Nitrile
Button cap/mushroom head	Polyester/polycarbonate blend
Lens (pilot light)	Acrylic
Knob (selector switch)	Glass-filled polyamide
Bezel/bushing, housing	Glass-filled polyester
Legend frames	Glass-filled polyamide
Mounting ring	Glass-filled polyamide
Terminal screws	Zinc-plated steel with chromate
Lamp socket	Brass and Phosphor bronze

* Performance Data — see page Important-2 of the Industrial Controls catalog (A115-CA001A-EN-P).

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

Product Certifications	
Certifications	UL, CSA, CCC, CE
Conformity to standards - CE marked	UL 508, EN 60947-1, EN 60947-5-1, EN 60947-5-5
Terminal identification	EN/IEC 60947-1

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