

# IEC Push Button Specifications

Bulletin Numbers 598, 800F, 800FC, 800FD, 800B, 800MB, and 800MR

Topic	Page
<b>800F 22.5 mm Push Buttons</b>	
Specifications	3
Momentary Push Buttons	6
Pilot Lights	10
Selector Switches	11
Key-Operated Selector Switches	16
Push-Pull Operators	18
Momentary Mushroom Push Buttons	22
Momentary Multi-Operators	23
Reset Operators	26
Selector Push Button Operators	27
Toggle Switch Operators	28
Back-of-Panel Components	29
Assembled Stations with DeviceNet	31
Legend Plates/Caps	32
Approximate Dimensions	33
Assembled Station Pinout Chart	39
<b>598 General Purpose Push Button Enclosures</b>	
<b>800FC 22.5 mm Configured Pendant Stations</b>	
Operator Mounting/Sequence	41
1-, 2-, and 3-Speed Operators	42
Configured Pendant Stations	43
Specifications	45
Approximate Dimensions	47

Topic	Page
<b>800FD 22.5 mm Monolithic Push Buttons</b>	
Momentary Push Button Operators	49
Pilot Light Devices	50
Selector Switch Operators	51
Push-Pull/Twist-to-Release Mushroom Operators	51
Specifications	52
Approximate Dimensions	53
<b>800B 16 mm Push Buttons</b>	
Specifications	54
Operator Assembly Sequence/Target Table and Operator Position	55
Approximate Dimensions	56
<b>800MR/800MB IEC Oiltight Operators</b>	
800MR Momentary Contact Push Buttons	57
800MR Push-Pull Operators	59
800MR Selector Switches	61
800MR Pilot Lights & Wobble Sticks	66
800MB Momentary Contact Push Buttons	67
800MB Pilot Lights	70
800MB/MR Specifications	71
800MB/MR Approximate Dimensions	72

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a>	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.



**Bulletin 800FP Plastic Operators**

- IP65/66, Type 4/4X/13
- Engineering grade thermoplastics
- Chemical-resistant for harsh environments



*Bul. 800FP Plastic Operators*

**Bulletin 800FM Metal Operators**

- IP65/66, Type 4/13
- Die-cast metal construction
- Chrome-plated



*Bul. 800FM Die-Cast Metal Operators*

**3-Across x 2-Deep Back-of-Panel (6 Circuits Max.)**

- Rugged snap-fit design for plastic or metal latch
- Stackable contact blocks
- Rotating collar for easy one-hand latch removal
- Color-coded contact block plungers for contact identification

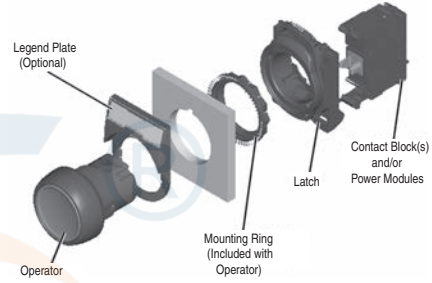


*Plastic Latch with Contact Block*



*Metal Latch with Contact Block*

**Assembly Overview**



## Specifications

## Front-of-Panel (Operators)★

Description		Mechanical Ratings	
		Plastic (Bulletin 800FP)	Metal (Bulletin 800FM)
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‡		IP65/66 (Type 3/3R/4/4X/12/13)	IP65/66 (Type 3/3R/4/12/13)
Mechanical durability per EN 60947-5-1 (Annex C)	10 000 000 Cycles	Momentary push buttons, momentary mushroom	
	1 000 000 Cycles	Multi-function, selector switch, key selector switch, selector jog, SensEject™ key selector switch	
	500 000 Cycles	Non-illuminated push-pull E-stop§	
	300 000 Cycles	Twist-to-release E-stop, illuminated push-pull E-stop§, alternate action push buttons	
	100 000 Cycles	Potentiometer, toggle switch	
Operating forces (typical with one contact block)		Flush/extended = 5 N, E-stop = 36 N Mushroom = 9 N	
Operating torque (typical application with one contact block)		Selector switch = 0.25 N•m (2.2 lb•in)	
Mounting torque	Plastic	1.7 N•m (15 lb•in)	
	Metal	4.4 N•m (40 lb•in)	
Environmental			
Temperature range (operating)		-25...+70 °C (-13...+158 °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** — Performance data given in this publication is provided only as a guide for the user in determining suitability and do not constitute a performance warranty of any kind. Such data may represent the results of accelerated testing at elevated stress levels, and the user is responsible for correlating the data to actual application requirements. ALL WARRANTIES AS TO ACTUAL PERFORMANCE, WHETHER EXPRESS OR IMPLIED, ARE EXPRESSLY DISCLAIMED.

‡ Momentary mushroom operators are IP65. Plastic keyed operators are IP66, Type 4/13; not Type 4X.

§ Limit of four contact blocks max. for these devices.

✦ Operating temperatures below 0 °C (32 °F) are based on the absence of freezing moisture and liquids, UL Recognized to 55 °C (131 °F) - Incandescent module max. 40 °C (104 °F).

## Standards Compliance and Certifications

Certifications	UR/UL, CSA, CCC, CE
Standards Compliance — CE Marked	NEMA ICS-5; UL 508, EN ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5
Terminal Identification	EN/IEC 60947-1
Shipping Approvals	ABS
RoHS	✓