	Bulletin 800F Plastic and Metal Operators <ul style="list-style-type: none">• 22.5 mm mounting hole• IP65/66, Type 4/4X/13• Internationally rated operators	Table of Contents See below.
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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



Overview, Continued

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

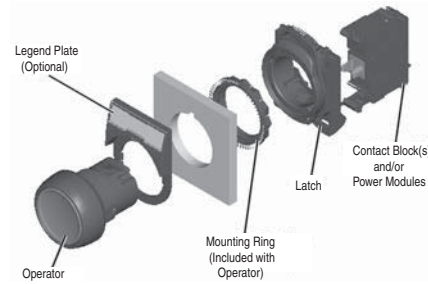


Plastic Latch with Contact Block



Metal Latch with Contact Block

Assembly Overview



Specifications*

Front-of-Panel (Operators)

Mechanical Ratings		
Description	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 — see page Important-3 of the Industrial Controls catalog.

⚡ 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).

Product 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	✓