Specifications*

Front-of-Panel (Operators)

		Mechanical Ratings
Description		Plastic (Bulletin 800FP)
Vibration (assembled to panel)		Tested at 102000 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 4/4X/13)
Mechanical durability per EN 60947-5-1 (Annex C)	10 000 000 Cycles	Momentary push buttons
	1 000 000 Cycles	Multi-function, selector switch, key selector switch
	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
Operating torque (typical application with one contact block)		Selector switch = 0.25 N∙m (2.2 Ib∙in)
Mounting torque		1.7 N∙m (15 lb∙in)
		Environmental
Temperature range (operating)		–25+70 °C (-13158 °F)‡
Temperature range (short term storage)		–40…+85 °C (-40…185 °F)
Humidity		5095% RH from 2560 °C (77140 °F)

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

Plastic keyed operators are IP66, Type 4/13; not Type 4X.

‡ 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) - fully populated 9-hole pendant enclosure 45 °C (113 °F) with 75 °C wire.

Note: Use UL Listed type S or SJ cords, with a smooth outer jacket rated for wet locations use (marked W) and oil resistant outer covering (marked O) such as SOW or SJOW with copper wire, rated 75 °C min., 18...12 AWG, with an overall OD of 7.5...15 mm for the small cable sleeve (Cat. No. 800FC-AS3) and 9...22.5 mm for the large cable sleeve (Cat. No. 800FC-AS5).

Material Listing

Component	For Use with	Material Used
Panel gasket	All operators	Nitrile, TPE
Diaphragm seal	Illuminated push button, non-illuminated push button	Automotive industry acceptable silicone
K-seal	Selector switch, key selector switch, push/twist-to-release E-stop, key E-stop	Nitrile
Diaphragm retainer, return spring I	Illuminated push button, non-illuminated push button	Stainless steel
Return spring II	Selector switch, key selector switch, alternate action, push/twist-to-release E-stop, key E-stop	Zinc-coated music wire
Button cap	Non-illuminated push button, push/twist-to-release, E-stop, key E-stop, multi-function	PBT/polycarbonate blend
2-color molded button cap	Non-illuminated push button	PBT/polycarbonate blend
Lens	Multi-function	Acetal
Lens, knob	Illuminated push button	Polyamide
Knob	Non-illuminated selector switch	Glass-filled polyamide
Plastic bezel/bushing I	Non-illuminated push button, illuminated push button, selector switch, key selector switch, push/twist-to-release E-stop, key E-stop, multi-function	Glass-filled polyamide
Plastic bezel/bushing II	Pilot light	Glass-filled PBT
Diffuser	Illuminated push button, pilot light	Polycarbonate
Plastic mounting ring	All plastic operators	Glass-filled polyamide
Plastic latch	-	Glass-filled polyamide
Mechanical interlock latch	_	Glass-filled polyamide
Plastic enclosure	-	PBT/polycarbonate blend
Terminal screws	LED module, contact blocks	Zinc-plated steel with chromate
Terminals	LED module, contact blocks	Brass with silver-nickel contacts
Housing	LED module	Glass-filled polyamide
Low-voltage terminals	Contact blocks	Gold-plated silver-nickel contacts
Low-voltage spanner	Contact blocks	Gold-plated silver-nickel contacts
Spanner	Contact blocks	Brass with silver-nickel contacts
Boot	Illuminated push button, non-illuminated push button, multi-function illuminated and non-illuminated	Automotive industry acceptable silicone

