Specifications—22.5mm

Front of Panel (Operators)

Description	Plastic (800EP/ES)	Metal (800EM/EB)
Mechanical Ratings		
Vibration (assembled to panel)	10 to 2000Hz, 1.52mm displacement (peak-to-peak) max./10g max.	
Shock	1/2 cycle sine wave for 11ms and no damage at 100g	
Degree of protection	IP66 (NEMA Type 3, 3R, 4, 4X, 12, 13)	IP66 (NEMA Type 3, 3R, 4, 12, 13)
Mechanical design life (typical)	500,000 cycles: 100,000 cycles: 50,000 cycles:	mushroom operators mushroom key operators (plastic), push-pull/twist operators mushroom key operators (metal)
Environmental		
Temperature range (operating): per IEC 947-1	-25°C to +55°C (-13°F to +131°F) ❷	
Temperature range (short term storage): per IEC 947-1	-40°C to +70°C (85°C max. for 24 hours) -40°F to +158°F (185°F max. for 24 hours)	
Materials		
Bushings, mounting rings	Glass-filled thermoplastic polyester, rated UL94 V-O	Die-cast zinc; dark olive chromate finish
Bezels	Glass-filled thermoplastic polyester, rated UL94 V-O	Anodized aluminum (EB, EM, ES line)
Seals: diaphragm style	Silicone rubber	
Seals: lip and flat gasket styles	Nitrile rubber	
Illuminated lenses	Transparent nylon Type 12	

❶ See Performance Data: refer to page Important-2 of the A113 *Industrial Controls* catalogue.
❷ Operating temperature below 0°C (32°F) are based on the absence of freezing moisture and liquids.
❸ Per IEC 947-1.
❹ UL File & Guide Number E14840.

Back of Panel Components

Description	2-Across Style	3-Across Style
Electrical Ratings		
Standard contact block ratings❷	NEMA, EEMAC A600, Q600, VDE 0660; AC15, DC 13 to IEC 947	NEMA, A600, Q600, 600V AC; AC15, DC 13 to IEC 947
Thermal current	10A max. continuous current to UL508, CSA22.2 #14, IEC 947, VDE 0660, part 200	10A max. without enclosure (40°C (104°F) ambient) 6A with enclosure (60°C (140°F))
Terminal marking	Conforming to CENELEC EN50013	
Wire capacity (screw terminal)	Min of (1) #20AWG Max of (2) #14AWG or (1) #12AWG	#18 to #12AWG (0.75 to 2.5mm^2) Max (2) #14AWG or (1) #12 AWG
Dielectric strength (min)	2,200V for one minute	
Electrical design life cycles	1,000,000 at 2A	
Electrical shock protection: Per IEC 529	Finger-safe conforming to IP2X	
Mechanical Ratings		
Vibration	10 to 2000Hz 1.52mm displacement (peak-to-peak) max./10g max. 6hr	10 to 150Hz 0.15mm displacement (peak-to-peak) max./2g max. 6hr
Shock	1/2 cycle sine wave for 11ms and no damage at 100g min	1/2 cycle sine wave for 11ms and no damage at 50g max
Contact block mechanical design	5,000,000 cycles	
Contact operation	N.C. slow make, double break (positive opening); N.C.L.B. late break, double break (positive opening)	
Operating forces (typical)	2.78N: all contact blocks	2.6N: each N.C. contact block
Environmental		
Temperature range Operating ❷❸ Short term storage ❸	 -25°C to +55°C (-13°F to +131°F) -25°C to +55°C (70°C max for 24 hrs) (-13°F to +131°F (158°F max for 24 hrs))	
Materials		
Springs	Stainless steel and zinc coated music wire	
Electrical contacts: Standard Low voltage	 Silver nickel alloy Palladium silver alloy: spanner; gold-plated silver nickel: stationary contacts	 Fine silver Gold-plated over silver
Terminals: Screw type Push-on type	Plated steel	
Agency approvals		
Approvals	UL listed ❹/CSA certified	
Standard conformity	UL508, UL486E CSA22.2 #14, NEMA ICS-1 and ICS-2 (1983), IEC 144, IEC 947-1, IEC 947-5, VDE 0550, VDE 0660, Part 200	NEMA ICS-1 and ICS-2 IEC 204-1, 947; SEV 1005, 1093; VDE 0113, 0660 Part 201; BS 4794; CEE 24; UL 486E, UL 508, CSA22.2 #14

Product Selection—22.5mm

2-Position Push-Pull Operators, Non Illuminated—Twist-to-Release, Push-Pull

40mm Trigger Action Twist-to-Release Mushroom

40mm Twist-to-Release Mushroom

40mm Push-Pull Mushroom

800E-15YE112 Legend Plate for 40mm C

Colour	Operator Material	40mm Mushroom Operator	Catalogue Number
Red	Plastic	Twist-to-Release — Round (Trigger Action) ❶	**800EP-MTS44**
	Metal		**800EM-MTS44**
	Plastic	Push-Pull Twist-to-Release — Round ❷	**800EP-MT4**
	Metal		**800EM-MT4**
	Plastic	Push-Pull — Round ❷	**800ES-MP24**
	Metal		**800EM-MP24**

2-Position Trigger Action Operators, Non Illuminated—Key Release ❸

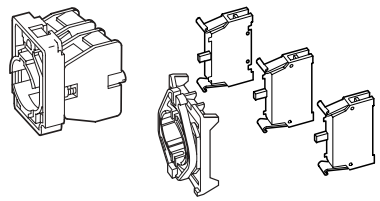
40mm Key Release Mushroom

60mm Key Release Mushroom

800E-16YE112 Legend Plate for 60mm Cap

Colour	2 Position Trigger Action ❶ Mushroom Operator	Size	Catalogue Number
Red	Ronis Key Lock	40mm—Round	**800EP-MKR44**
		60mm—Round	**800EP-MKR64**
	Zadi Key Lock	40mm—Round	**800EP-MKZ44**
		60mm—Round	**800EP-MKZ64**

Back-of-Panel Components, Non Illuminated Operators

Mounting Latch and Contact Block Combination	Mounting	Contact ❶❷	Catalogue Number
2-Across 3-Across 	2-Across	1 N.C. Late break	**800E-2LX01L**
		1 N.O. - 1 N.C. Late break	**800E-2LX11L**
	3-Across	1 N.C. Late break	**800E-3LX01L**
		1 N.O. - 1 N.C. Late break	**800E-3LX11L**
	2-Across	1 N.C. Self-monitoring	**800E-2LX01LS**
	3-Across		**800E-3LX01S**

❶ Trigger action operators are compliant with EN418 standards using standard N.C., N.C. Late Break, or N.C. Self-Monitoring contact blocks. Key Release operators are IP66, Type 4/13.
❷ Emergency stop push buttons are compliant with EN 418 standard when using N.C. Late break (N.C.L.B.) contact blocks.
❸ Key release operators are IP66, Type 4 and 13.

Product Selection—22.5mm

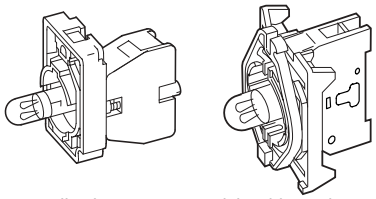
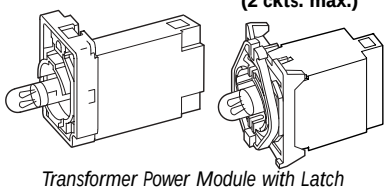
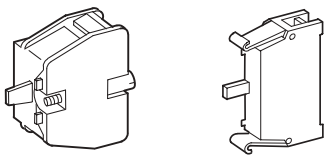
2-Position Red Push-Pull Operators, Illuminated —Mushroom ❶

40mm Mushroom Push-Pull

60mm Jumbo Mushroom Push-Pull

800E-15YE112
Legend Plate for 40mm Cap

Operator Material	Size	Catalogue Number
Plastic	40mm	**800ES-LMP24**
	60mm	**800ES-LMJP24**
Metal	40mm	**800EM-LMP24**
	60mm	**800EM-LMJP24**

Back-of-Panel Components, Illuminated Operators	Mounting	Type	Volts	Catalogue Number
2-Across (5 ckts. max.) **3-Across (4 ckts. max.)**  *Full Voltage Power Module with Latch*	2-Across	Incandescent	24 AC/DC	**800E-2DL3**
			120 AC/DC	**800E-2DL5**
		LED (red)	24 AC/DC	**800E-2DL3R**
			120 AC	**800E-2DL5R**
	3-Across	Incandescent	24 AC/DC	**800E-3DL3**
			120 AC/DC	**800E-3DL5**
		LED (red)	24 AC/DC	**800E-3DL3R**
			120 AC	**800E-3DL5R**
2-Across (3 ckts. max.) **3-Across (2 ckts. max.)**  *Transformer Power Module with Latch*	2-Across	Incandescent	24 AC/DC	**800E-2TL5**
			120 AC/DC	**800E-2TL7**
		LED (red)	24 AC/DC	**800E-2TL5R**
			120 AC	**800E-2TL7R**
	3-Across	Incandescent	24 AC/DC	**800E-3TL5**
			120 AC/DC	**800E-3TL7**
		LED (red)	24 AC/DC	**800E-3TL5R**
			120 AC	**800E-3TL7R**
2-Across **3-Across**  *Contact Blocks*	2-Across	Late Break ❶	1 N.C. Late break	**800E-2X01L**
	3-Across			**800E-3X01L**

❶ Emergency stop push buttons are compliant with EN 418 standard when using N.C.L.B. contact blocks.

Specifications—30.5mm

Electrical Ratings	
Dielectric strength	2200V for one minute
Electrical design life cycles	1,000,000 at max. rated load
Mechanical Ratings	
Vibration	10 to 2000Hz 1.52mm displacement (peak-to-peak) max./10g max. (except Logic Reed)
Shock	1/2 cycle sine wave for 11ms ≥25g (contact fragility) and no damage at 100g
Degree of protection	Type 1, 4, 4X, 12, 13; watertight/oiltight IEC 529 IP66/65
Mechanical design life cycles (Push-pull/twist-to-release)	250,000 min.
Contact operation	Shallow, mini, and low voltage contact blocks: Slow, double make and break.
Typical operating forces 2-position push-pull	7.5lbs max. push or pull
Environment	
Temperature range Operating❷ Storage	 -40°C to +55°C (-40°F to +131°F) -40°C to +85°C (-40°F to +185°F)

Standard Contact Ratings

Maximum thermal continuous current I_{th} 10A AC/2.5A DC. Bulletin 800T units with 800T-XA contacts have ratings as follows:

Max. Opertnl. Volts Ue	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts Ue	Make	Break
AC 600	AC-15	A600	120 to 600	7200VA	720VA
			72 to 120	60A	720VA
			24 to 72	60A	10A
DC 600	DC-13	Q600	28 to 600	69VA	
			24 to 28 ❸	2.5A	

❶ Performance Data: see publication A113, page Important-2.

❷ Operating temperatures below freezing are based on the absence of moisture and liquids.

❸ For applications below 24V/24mA, Pen*TUFF*™ contacts are recommended.

Product Selection—30.5mm

Emergency Stop Operators — 2-Position Red Non Illuminated

2-Position Push-Pull

2-Position Push-Pull/Twist

Operator Position Contacts Maintained Out Maintained In	Enclosure Protection	Release	Catalogue Number
N.C.L.B. ❶ Closed Open	Type 4 & 13	Push-Pull	**800T-FX6D4**
		Push-Pull/Twist	**800T-FXT6D4**
	Type 4, 4X & 13		**800H-FRXT6D4**
N.O. Open Closed N.C.L.B. ❶ Closed Open	Type 4 & 13	Push-Pull	**800T-FX6A1**
		Push-Pull/Twist	**800T-FXT6A1**
	Type 4, 4X & 13		**800H-FRXT6A1**
N.C.L.B.❶ Closed Open N.C.L.B.❶ Closed Open	Type 4 & 13	Push-Pull	**800T-FX6A5**
		Push-Pull/Twist	**800T-FXT6A5**
	Type 4, 4X & 13		**800H-FRXT6A5**
S.M.C.B. ❶❷ Closed Open	Type 4 & 13	Push-Pull	**800TC-FX6D4S**
		Push-Pull/Twist	**800TC-FXT6D4S**
	Type 4, 4X & 13		**800HC-FRXT6D4S**
N.O. Open Closed S.M.C.B. ❶❷ Closed Open	Type 4 & 13	Push-Pull	**800TC-FX6A1S**
		Push-Pull/Twist	**800TC-FXT6A1S**
	Type 4, 4X & 13		**800HC-FRXT6A1S**
S.M.C.B. Closed Open S.M.C.B.❶❷ Closed Open	Type 4 & 13	Push-Pull	**800TC-FX6A5S**
		Push-Pull/Twist	**800TC-FXT6A5S**
	Type 4, 4X & 13		**800HC-FRXT6A5S**

Note: Emergency stop push buttons are compliant with EN-418 and IEC 60947-5-5 Standards when using N.C.L.B. contact blocks.

❶ Normally closed late break contact. When button is pushed from the OUT to IN position, the mechanical detent action of the operator occurs before electrical contacts change state. When the button is pulled from the IN to the OUT position, the electrical contacts change state before the mechanical detent occurs.

❷ The Self-Monitoring Contact Block (S.M.C.B.) is composed of a N.C.L.B. contact wired in series with a N.O. monitoring contact. The N.O. monitoring contact automatically closes when the S.M.C.B. is properly installed onto the E-Stop operator. If the S.M.C.B. is separated from the E-Stop operator, the N.O. monitoring contact will automatically open.

Product Selection—30.5mm

2-Position Red Illuminated, Push-Pull and Push-Pull/Twist Release Units

Illuminated 2-Position Push-Pull

Illuminated 2-Position Push-Pull/Twist

Operator Position									
Contacts		Maintained Out	Maintained In	Type	Lamp	Volts	Enclosure Protection	Release	Catalogue Number
	N.O. N.C.L.B.❶❷								
								Push-Pull	**800T-FXQ10RA1**
							Type 4 & 13	Push-Pull/ Twist	**800T-FXTQ10RA1**
						120 AC/DC	Type 4, 4X & 13		**800H-FRXTQ10RA1**
					Incan-descent			Push-Pull	**800T-FXQ24RA1**
							Type 4 & 13	Push-Pull/ Twist	**800T-FXTQ24RA1**
						24 AC/DC	Type 4, 4X & 13		**800H-FRXTQ24RA1**
								Push-Pull	**800T-FXQH10RA1**
							Type 4 & 13	Push-Pull/ Twist	**800T-FXTQH10RA1**
						120 AC	Type 4, 4X & 13		**800H-FRXTQH10RA1**
					LED			Push-Pull	**800T-FXQH24RA1**
							Type 4 & 13	Push-Pull/ Twist	**800T-FXTQH24RA1**
						24 AC/DC	Type 4, 4X & 13		**800H-FRXTQH24RA1**
								Push-Pull	**800T-FXP16RA1**
							Type 4 & 13	Push-Pull/ Twist	**800T-FXTP16RA1**
						120 AC	Type 4, 4X & 13		**800H-FRXTP16RA1**
					Incan-descent			Push-Pull	**800T-FXP26RA1**
						240 AC	Type 4 & 13		**800T-FXTP26RA1**
							Type 4, 4X & 13	Push-Pull/ Twist	**800H-FRXTP26RA1**
				Trans-former					
								Push-Pull	**800T-FXPH16RA1**
							Type 4 & 13		**800T-FXTPH16RA1**
						120 AC	Type 4, 4X & 13	Push-Pull/ Twist	**800H-FRXTPH16RA1**
					LED			Push-Pull	**800T-FXPH26RA1**
						240 AC	Type 4 & 13		**800T-FXTPH26RA1**
							Type 4, 4X & 13	Push-Pull/ Twist	**800H-FRXTPH26RA1**
		Open Closed	Closed Open						

Note: A jumbo or large legend plate is recommended if space allows.
Note: Emergency stop push buttons are compliant with EN-418 and IEC 60947-5-5 Standards when using N.C.L.B. contact blocks.
❶ Normally closed late break contact. When button is pushed from the OUT to IN position, the mechanical detent action of the operator occurs before electrical contacts change state. When the button is pulled from the IN to the OUT position, the electrical contacts change state before the mechanical detent occurs.
❷ Consult your local Allen-Bradley sales office for availability of illuminated E-Stops with Self Monitoring Contact Blocks (S.M.C.B.s).

Accessories

	Type	Style	Colour	Catalogue Number
	Enclosure Plastic (IP66, NEMA 4/4X/13 Base Mount For use with 22.5mm Push Buttons	1 Hole	Yellow	**800E-1PY**
		2 Hole		**800E-2PY**
		3 Hole		**800E-3PY**
		5 Hole		**800E-5PY**
	Square Legend Plate	For 800E Buttons Aluminum	Aluminum, Blank	**800E-19AE100**
	40mm Circular Legend Plate	For 800 E Buttons	Yellow, Emergency Stop	**800E-15YE112**
	60mm Circular Legend Plate			**800E-16YE112**
	Circular Legend Plate	For 800T Buttons	Yellow, Blank	**800T-X646**
			Yellow, Emergency Stop	**800T-X646EM**
		For 800H	Yellow, Blank	**800H-W690**