

EFD/EFDB and EDS Series Factory Sealed Control Stations

Explosionproof, Dust-Ignitionproof

NEC:

Class I, Division 1 and 2, Groups B*, C, D

Class II, Division 1 and 2, Groups E, F, G

Class III

NEMA 3, 7CD, 9EFG

Applications

- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or local location.
- EFD/EFDB and EDS factory sealed control stations confine arcing of device within the enclosure, preventing ignition of ignitable atmospheres during control operation of motors and other equipment.
- Used in classified areas where flammable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries, and other process industries.

Features

- EFD/EFDB Push Buttons and Selector Switches
 - Eliminate need for adding sealing fittings and compound at each conduit entrance.
 - Heavy-duty push buttons, 10 Amp, 600 Vac rated.
 - Dozens of possible combinations of push buttons, pilot lights and selector switches.
 - Smooth, rounded integral bushing in each EFD/EFDB hub protects conductor insulation.
 - Accurately tapped, tapered hubs for tight, rigid joints and ground continuity.
 - Stainless steel push button shaft operates within stainless steel bushing assuring long, maintenance free operation.
 - Push button and selector switch contacts are silver cadmium oxide which are "sealed" in lower phenolic chamber isolated from corrosive elements. Assures positive contact and long, trouble-free operation.
 - Enclosed stainless steel helper spring prevents accidental operation of push button in severe vibration installations.
 - Push button models also available with dust cap for use in areas where excessive dust, moisture or corrosive conditions are encountered.
 - Corrosion resistant captive stainless steel hex head cap screws hold EFKB covers to body.
 - All EFD/EFDB momentary push buttons are supplied with lockout type guards as standard. Hole in guard will accept locks with up to 1/4" hasp. Permits locking of push button to prevent unauthorized operation.
 - Clearly marked terminals with brass screws assure quick, easy wiring.
- EFD/EFDB Pilot Lights
 - Factory sealed pilot lights supplied with red jewel/guard assembly and 120 Vac/Vdc, 50/60 Hz, 6 Watt, Type 6S6 lamp.
 - Models also available in combination with factory sealed push buttons and selector switches.
- EFD/EFDB Selector Switches
 - Factory sealed selector switches furnished with nylon cam-operated, heavy-duty push buttons for either 2-position or 3-position maintained contact operation.
 - High thermal and arc resistance, high dielectric strength.
- EDS Push Buttons
 - Factory sealed — eliminates need for adding sealing fittings and compound at each conduit entrance.
 - Heavy duty, 10 Amp, 600 Vac.
 - Switch is enclosed in separate sealing chamber.



EFD/EFDB Push Button



EFD/EFDB Photocontrol



EFD Combination Pilot Light and Push Buttons



EDS Rocker Arm Push Button



EFD/EFDB Push Button with Dust Cap



EFD/EFDB Pilot Light



EFD/EFDB Selector Switch



EFD/EFDB Maintained Push Button

- Sealing chamber has smooth, double flanges that mate both to cover and mounting enclosure to provide flame-tight joints.
- Pigtail leads from push buttons are factory sealed in sealing well.
- Stainless steel hex head screws attach sealing chamber to cover and mounting enclosure.
- Side rocker arm push button has lockout holes.
- EFD/EFDB backbox supplied with internal ground screw.

Standard Materials

- EFD/EFDB control stations: malleable iron body with copperfree (4/10 of 1% max.) aluminum cover
- SPBB push button: copperfree (4/10 of 1% max.) aluminum upper barrel and phenolic lower barrel with nylon plastic button (dust cap models have neoprene buttons)
- SPLN/SPLS pilot light: copperfree (4/10 of 1% max.) aluminum guard and body assembly; steel clamping ring; and tempered glass jewel
- SSBA selector switch: copperfree (4/10 of 1% max.) aluminum operator mechanism, nylon cam, and sealed phenolic contact block
- EDS control stations: malleable iron body and cover; copperfree (4/10 of 1% max.) aluminum sealing chamber; and nylon operating handle

♦ Select items suitable for Class I, Division 1 and 2, Groups B, C and D; Class II, Groups E, F and G and Class III. See product selection pages for suitable items.

EFD/EFDB and EDS Series Factory Sealed Control Stations

Explosionproof, Dust-Ignitionproof

NEC/CEC:

Class I, Division 1 and 2, Groups B*, C, D

Class II, Division 1 and 2, Groups E, F, G

Class III

NEMA 3, 7CD, 9EFG

Standard Finishes

- EFD/EFDB control stations: body, triple-coat—(1) zinc electroplate, (2) chromate, and (3) epoxy powder coat
- SPBB push button, SPLN/SPLS pilot light and SSBA selector switch: natural finish
- EDS control stations: body and cover: triple-coat—(1) zinc electroplate, (2) chromate, and (3) epoxy powder coat sealing chamber, natural finish

Options

- 1- or 2-gang copperfree (4/10 of 1% max.) aluminum bodies and covers available. Add suffix — **A**.
- Three position selector switches with modified operation.
 - Momentary contact right position, spring return to center, maintained contact left position. Add suffix — **SRC**.
 - Momentary contact left position, spring return to center, maintained contact right position. Add suffix — **SLC**.
 - Alternate contacts add suffix — **ALT**.
- EFD/EFDB selector switch lockout locks two or three position handle in any position. Add suffix — **LD**.
- Push button front operated mushroom head (momentary contact): Order by suffixes for desired color as follows:
 - Red — **NMRBRE**
 - Green — **NMRBGR**
 - Black — **NMRBBL**
- EFD/EFDB pilot light jewel/guard assembly. Order by suffixes if color desired is other than red, as follows:
 - Amber — **JGBA**
 - Blue — **JGBB**
 - Clear — **JGBC**
 - Green — **JGBG**;
 - Opal — **JGBO**
- For colored LED jewel/guard assembly, order by suffixes:
 - Red — **LEDR**
 - Green — **LEDG**
 - Amber — **LEDA**
- EFD/EFDB pilot light transformers for single pilot light per gang. Order by suffix:

Primary Voltage	Lamp Voltage	Suffix
220	120	-TR-2
277	120	-TR-3
440	120	-TR-4
550	120	-TR-5

- EFD and EDS units may be supplied with brazed hubs as 3-, 4-, and 5-gang in a variety of hub configurations. See Ordering Information page for how to order these and other "custom" units by adding suffixes to mounting body catalog numbers.
- Securing Rod for EFD/EFDB Push Button Lockout Guard. Add suffix — **SR**.
- NPBRKT** Nameplate Mounting Bracket to make circuit description/identification easy.
 - Pre-drilled holes in bottom of bracket allow direct mounting to control stations with existing cover bolts.
 - Pre-drilled holes in middle of bracket allow mounting of customer's circuit identification nameplate; epoxy glue may also be used for mounting (phenolic nameplate not included).
 - Bracket eliminates costly field installation of drilling and tapping to accommodate circuit identification nameplate.
 - Brackets fit side-by-side on 2-, 3- and 4-gang boxes and 3-devices.

NEC Certifications and Compliances

- UL Standards: UL 508, UL 698, UL 1203
- cULus Listed: E10449, E81751

Related Products

- For Hazardous Location Photocontrols, see *Lighting Section*.

Illustrated Features



EDS factory sealed rocker arm push button control station — shows separate sealing chamber and device construction. Rocker arm has holes for lock.

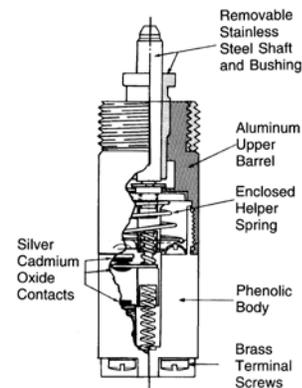


Securing Rod for EFD/EFDB Push Button Lockout Guard — available as an optional item as catalog number NBL-SR (single guard only) or add Suffix — SR to push button catalog number. Lockout Guard, furnished as standard with the EFD/EFDB push button, may also be padlocked.

SPBB factory sealed push button used in EFD/EFDB Series — standard type and unit with dust cap.



SPBB Design Features



APPLETON™

CONTROLS: NEC/CEC EXPLOSIONPROOF CONTROL STATIONS AND SWITCHES

◆ Select items suitable for Class I, Division 1 and 2, Groups B, C and D; Class II, Groups E, F and G and Class III. See product selection pages for suitable items.

EDS Series Factory Sealed Control Stations

Push Button. With Rocker Arm Handle. Explosionproof, Dust-Ignitionproof

10 Amp, 600 Vac Max. for Heavy Duty Use. Furnished with Internal Ground Screw.

NEC/CEC:

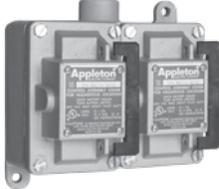
Class I, Division 1 and 2, Groups B♦, C, D

Class II, Division 1 and 2, Groups E, F, G

Class III

NEMA 3, 7CD, 9EFG

		Hub Size (Inches)	Description	Nameplate Marking	Catalog Number		
					Dead-End	Feed-Thru	
1-Gang ♦ – Malleable Iron Body and Cover ① – Momentary Contact							
 <p>1 Circuit</p>	 <p>2 Circuit</p>	1/2	1 Circuit Universal		Specify	EDS150-RU1	EDSC150-RU1
		3/4				EDS175-RU1	EDSC175-RU1
		1				EDS110-RU1	EDSC110-RU1
<hr/>							
		1/2	2 Circuits Universal		Specify	—	EDSC150-RU2
		3/4				EDS175-RU2	EDSC175-RU2
		1				EDS110-RU2	EDSC110-RU2

2-Gang – Malleable Iron Body and Cover ① – Momentary Contact								
 <p>2 Circuit</p>		1/2	2 Circuits Universal		Specify	—	EDSC250-RU1	
						3/4	EDS275-RU1	EDSC275-RU1
						1	EDS210-RU1	EDSC210-RU1
<hr/>								
 <p>4 Circuit</p>		1/2	4 Circuits Universal		Specify	—	EDSC250-RU2	
						3/4	EDS275-RU2	EDSC275-RU2
						1	EDS210-RU2	EDSC210-RU2

		Description	Nameplate Marking	Catalog Number		
				Cover Assembly	Switch Only	
Cover and Chamber with Device – Momentary Contact						
	When installed on a 1/2" or 3/4" single gang box the cover assembly is suitable for use in Group B environments but will not be marked Group B.					
		1 Circuit Universal		Specify	EFK-RU1-Q	EFSR-U1Q
		2 Circuits Universal		Specify	EFK-RU2-Q	EFSR-U2Q

① For aluminum body add suffix –A (Not suitable for Class I, Group B).

♦ Shaded area indicates items suitable for Class I, Group B, in addition to Class I, Groups C and D; Class II, Groups E, F, and G; and Class III.

EFD/EFDB and EDS Series Factory Sealed Control Stations

EFD/EFDB 1- and 2-Gang

NEC/CEC:

Class I, Division 1 and 2, Groups C, D

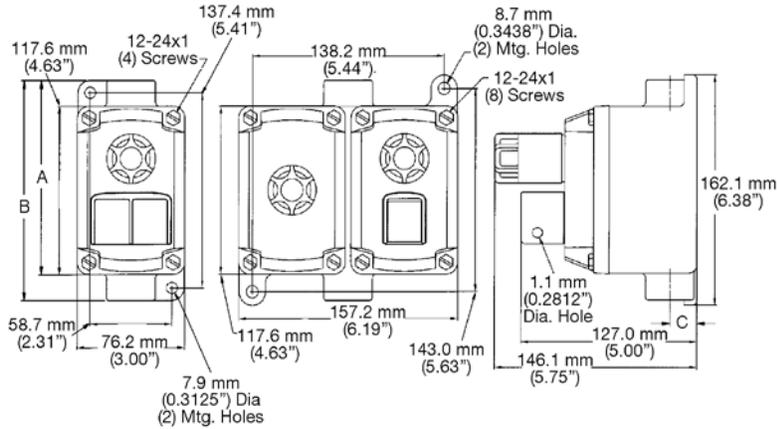
Class II, Division 1 and 2, Groups E, F, G

Class III

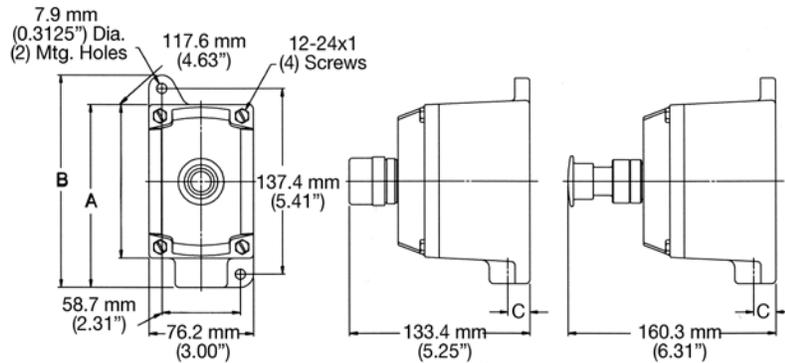
NEMA 7CD, 9EFG

Dimensions in Millimeters (Inches)

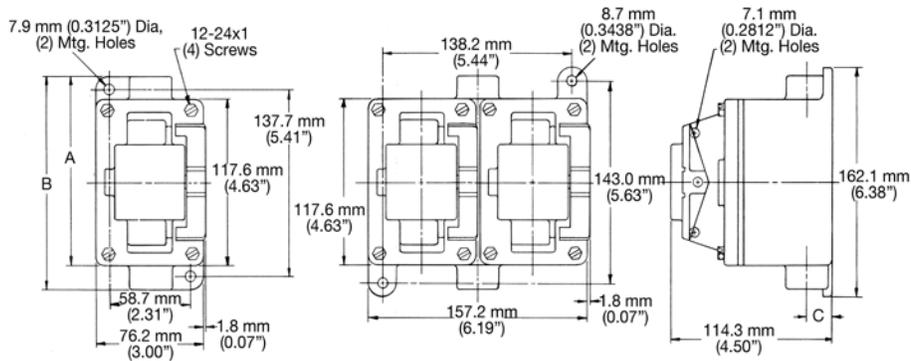
EFD/EFDB – 1- and 2-Gang Combination Pilot Light and Push Buttons



EFD/EFDB – 1-Gang Dust Cap Push Button and 1-Gang Maintained Contact Push Button



EDS – 1- and 2-Gang Rocker Arm Push Button



Hub Size (Inches)	Dimensions in Millimeters (Inches)		
	A	B	C
1/2 and 3/4	136.7 (5.38)	155.7 (6.13)	19.8 (0.78)
1	139.7 (5.50)	160.3 (6.31)	23.9 (0.94)