

# 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



EDS Rocker Arm Push Button



EFD/EFDB Push Button with Dust Cap



EFD Combination Pilot Light and Push Buttons



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.

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## 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.

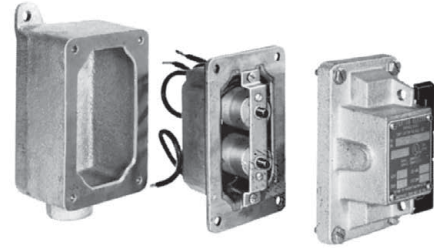
## NEC Certifications and Compliances

- UL Standards: UL 508, UL 698, UL 1203
- UL 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.

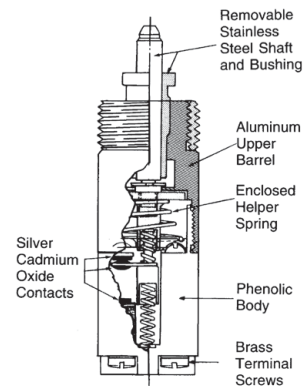


Securing Rod for EFD/EFDB Push Button Lockout Guard — available as an optional item as catalog number NBL-SR (single guard only) or add Suffix — SR to push button catalog number. Lockout Guard, furnished as standard with the EFD/EFDB push button, may also be padlocked.



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

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# EFD/EFDB and EDS Series Factory Sealed Control Stations

## EFD/EFDB Push Button Accessories and Parts

NEC:  
 Class I, Division 1 and 2, Groups B, C, D  
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 Class III

Description		Catalog Number	
<b>Push Button, Factory Sealed — Momentary Contact</b>			
<i>10 Amp 600 Vac Heavy Duty 1/2" thread size (NPSM). Furnished with 1/2" to 3/4" enlarger; Weather Boot, Guard, Start, Stop and Blank Nameplates.</i>			
	Single Push Button	Universal	 <b>SPBB-U1-Q</b>
	Double Push Button	Universal	 <b>SPBB-U2DBL</b>
<b>Push Button, Red, Factory Sealed — Maintained Contact</b>			
<i>10 Amp 600 Vac Heavy Duty 1/2" thread size (NPSM). Furnished with 1/2" to 3/4" enlarger and Emergency Stop Nameplate (guard not furnished).</i>			
	Single Push Button	Universal	 <b>SMPB-U1-Q</b>
<b>Rectangular Button with Weather Boot</b>			
	Furnished with Start, Stop and Blank Nameplates		<b>NBN-WB</b>
Description		Nameplate Marking	Catalog Number
<b>Push Button and Replacement Cap</b>			
<i>Has 1/2 - 14 thread size (NPSM). Supplied with 1/2" to 3/4" enlarger.</i>			
	Dust Cap - Push Button	 STOP-START-BLANK	<b>SPBB-DU1-Q</b>
	Replacement Dust Cap Only	STOP-START-BLANK	<b>DC-Q</b>
		STOP-START-BLANK	<b>DU-NP-Q</b>
<b>Covers Complete with Pilot Lights, Push Buttons — Factory Sealed</b>			
<i>When installed on a single gang box the cover assembly is suitable for use in Group B environments but will not be marked Group B.</i>			
	1 Circuit Universal	 Specify	<b>EFKB-DU1</b>
	2 Circuits Universal	 Specify	<b>EFKB-DU2</b>
	2 Circuits Universal and 1 Pilot Light	 Specify	<b>EFKL-J1DU2</b> ①

① For use with three device mounting bodies.