M-4

**Class I, Div. 1 and 2,
Groups B◆, C,D
Class II, Div. 1 and 2,
Groups E,F,G
Class III
NEMA 3,7CD,9EFG**

EFDB Factory Sealed Push Button Stations: Explosion-Proof, Dust Ignition-Proof

UNILETS® for Use with Threaded Metal Conduit.
10 Ampere, 600V A.C. Max. for Heavy Duty Use.
Furnished with Internal Ground Screw.

U.S. Pat. 3,699,276
Patented Canada 1974

Hub Size, Inches	Description	Nameplate Marking	Catalog Number Dead-End	Feed-Thru
Single Gang*◆				
Momentary Contact				
1/2	1 Circuit	Specify	EFDB150-U1	EFDCB150-U1
3/4	Universal		EFDB175-U1	EFDCB175-U1
1			EFDB110-U1	EFDCB110-U1
1/2	2 Circuits	Specify	EFDB150-U2	EFDCB150-U2
3/4	Universal		EFDB175-U2	EFDCB175-U2
1			EFDB110-U2	EFDCB110-U2
1/2	2 Circuits	START	EFDB150-OC	EFDCB150-OC
3/4	1 Open—A	STOP	EFDB175-OC	EFDCB175-OC
1	1 Closed—B		EFDB110-OC	EFDCB110-OC
	Start-Stop			
Maintained Contact				
1/2	1 Circuit		EFDB150-UM1	EFDCB150-UM1
3/4	Universal		EFDB175-UM1	EFDCB175-UM1
1			EFDB110-UM1	EFDCB110-UM1
Two Gang*				
Momentary Contact				
1/2	2 Circuits	Specify	EFD250-U1	EFDC250-U1
3/4	Universal		EFD275-U1	EFDC275-U1
1			EFD210-U1	EFDC210-U1
1/2	4 Circuits	Specify	EFD250-U2	EFDC250-U2
3/4	Universal		EFD275-U2	EFDC275-U2
1			EFD210-U2	EFDC210-U2
1/2	4 Circuits	START	EFD250-OC	EFDC250-OC
3/4	2 Open—A	STOP	EFD275-OC	EFDC275-OC
1	2 Closed—B		EFD210-OC	EFDC210-OC
	Start-Stop			
Three Device‡				
Momentary Contact				
1/2	3 Circuits	Specify	EFDL50-U3	EFDCL50-U3
3/4	Universal		EFDL75-U3	EFDCL75-U3
1			EFDL10-U3	EFDCL10-U3
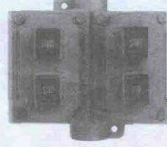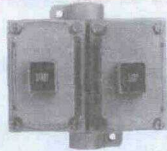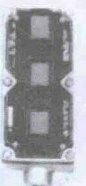
* Malleable iron body and aluminum cover. For aluminum body, add suffix **-A.**   ‡Aluminum body not available.
◆ Shaded area indicates items suitable for Class I, Div. 1 and 2, Groups B,C and D; Class II, Groups E,F and G and Class III. For Class I, Group B, external seals must be installed at each conduit entrance.
See page 10 for push button accessories and parts. Dimensions on pages 16 and 17.

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Appleton ELECTRIC COMPANY

1701 West Wellington Avenue
Chicago, Illinois 60657

Factory Sealed Control Stations and Pilot Lights: EFD and EDS Series. Explosion-Proof, Dust Ignition-Proof
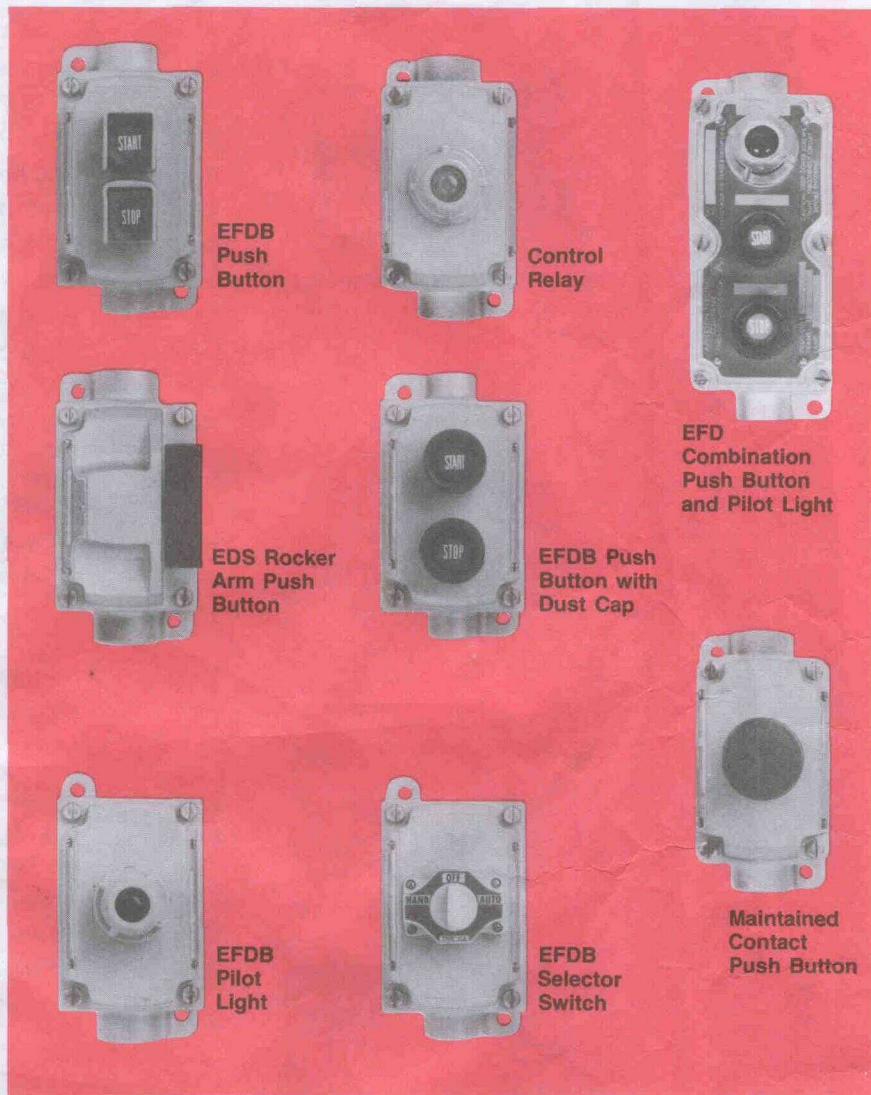
UNILETS® for Use with Threaded Metal Conduit.

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 Factory Sealed Push Buttons and Selector Switches

- Eliminate need for adding sealing fittings and compound at each conduit entrance.
- Heavy-duty, 10 ampere 600V rated.
- Dozens of possible combinations of push buttons, pilot lights and selector switches.
- Smooth, rounded integral bushing in each 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

EFDB Push Button

Control Relay

EFD Combination Push Button and Pilot Light

EDS Rocker Arm Push Button

EFDB Push Button with Dust Cap

EFDB Pilot Light

EFDB Selector Switch

Maintained Contact Push Button

steel hex-head cap screws hold EFKB covers to body.

- All EFDB front-operated 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.

Features: EFD/EFDB Pilot Lights

- Factory sealed pilot lights supplied with jewel/guard assembly and 120V,

6W type 6S6 lamp.
- Models also available in combination with factory sealed push buttons and selector switches.

Features: EFD/EFDB Selector Switches

- Factory sealed selector switches furnished with nylon cam-operated, heavy-duty push buttons for either two-position or three-position maintained contact operation.
- High thermal and arc resistance, high dielectric strength.

Factory Sealed Control Stations and Pilot Lights: EFD and EDS Series. Explosion-Proof, Dust Ignition-Proof

UNILETS® for Use with Threaded Metal Conduit.

Features: EDS Push Buttons

- Factory sealed—eliminates need for adding sealing fittings and compound at each conduit entrance.
- Heavy duty, 10 ampere 600V rated.
- Switch is enclosed in separate sealing chamber.
- Sealing chamber has smooth, double flanges that mate both to cover and mounting enclosure to provide flametight joints.
- Pigtail leads from push buttons are factory sealed in sealing well.
- Stainless steel hex-head captive screws attach sealing chamber to cover and mounting enclosure.
- Side rocker arm push button has lockout holes.
- EFD back box supplied with internal ground screw.

Standard Materials

- *EFD control stations:* malleable iron body with aluminum cover.
- *SPB Push button:* aluminum upper barrel and phenolic lower barrel with lexan plastic button (Dust Cap models have neoprene buttons).
- *SPL pilot light:* aluminum guard and body assembly; steel clamping ring; and tempered glass jewel.
- *SSA selector switch:* aluminum operator mechanism, nylon cam, and sealed phenolic contact block.
- *EDS control stations:* malleable iron body and cover; aluminum sealing chamber; and nylon 6/6 operating handle.

Standard Finishes

- *EFD control stations:* body, triple-coat—(1) zinc electroplate, (2) dichromate, and (3) epoxy powder coat.
- *SPB push button, SPL pilot light and SSA selector switch:* natural finish.
- *EDS control stations:* body and cover, triple-coat—(1) zinc electroplate, (2) dichromate, and (3) epoxy powder coat sealing chamber, natural finish.

Options

- Three position selector switches with modified operation. Momentary contact right position, spring return to center, maintained contact left position. For description and switch diagram see page 33. Add suffix —SRC.

- EFD selector switch Lockout—locks two- or three-position handle in any position. Suffix —LD.
- EFD push button Emergency STOP—front-operated red mushroom button. Suffix —NMRB (momentary contact).
- EFD pilot light jewel/guard assembly. Order by suffixes if color desired is other than red, as follows: Amber, —JGB-A; Blue, —JGB-B; Clear, —JGB-C; Green, —JGB-G; Opal, —JGB-O.
- EFD 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 Push Button Lockout Guard. Suffix —SR.

Compliances

- UL Standard 698.
- Class I, Div. 1 and 2; Class II, Div. 1 and 2. See listing pages for specific groups.
- Appleton malleable iron products conform to ASTM A47-77, Grade 32510, which has the following properties: tensile strength, 50,000 psi; yield, 32,000 psi; and elongation, 10%.
- Appleton aluminum products are produced from a high strength copper-free (4/10 of 1% max.) alloy.
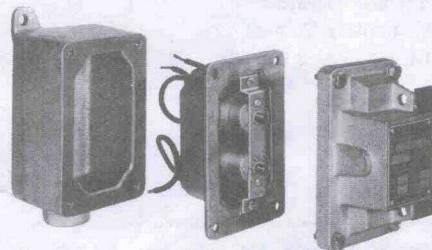
EDS factory sealed rocker arm push button control station—shows separate sealing chamber and device construction.

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

EDS Rocker Arm Push Button has Hole for Lock.

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

SPBB Design Features

Removable Stainless Steel Shaft and Bushing

Aluminum Upper Barrel

Enclosed Helper Spring

Silver Cadmium Oxide Contacts

Phenolic Body

Brass Terminal Screws

M

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