

# EDS & DSD control stations and switches

Complete factory sealed control station offering for harsh and hazardous locations



Now available with  
**NEMA 4X protection and extended temperature ratings**

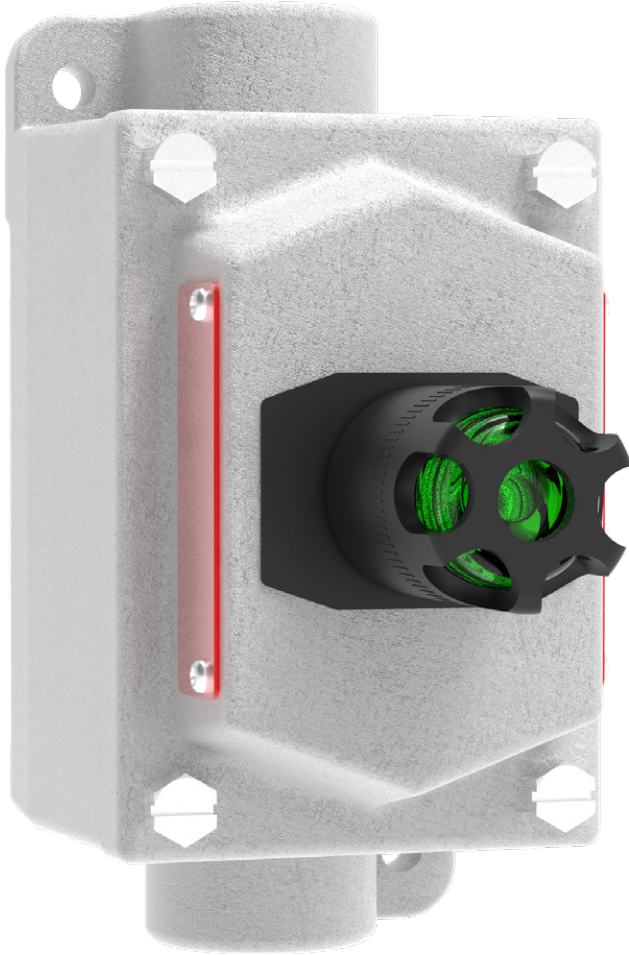
**EATON**

*Powering Business Worldwide*

# The next generation of Crouse-Hinds series hazardous area control stations and switches

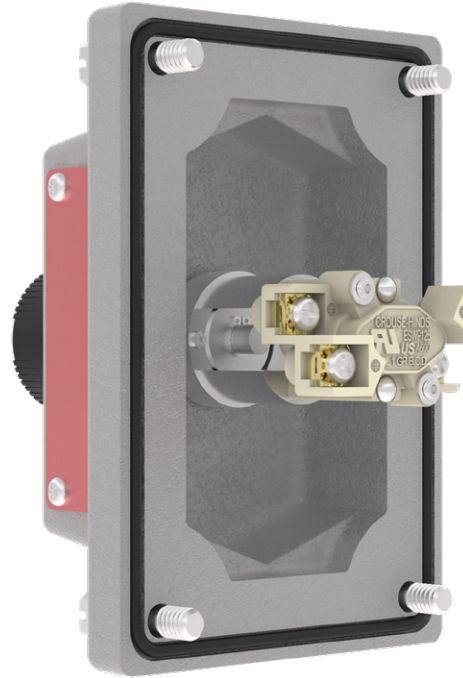
Eaton's innovative and factory sealed control station solutions safely and efficiently control power and protect circuits in industrial and hazardous area environments worldwide.

## Features of the new EDSX and DSDX NEMA 4X rated devices



### NEMA 4X gasket:

- Provides NEMA 4X\* protection against water ingress in the most demanding conditions



### Captive cover screws:

- Provide secure fastening while helping reduce costs associated with lost screws or damage

### Extended temperature range:

- Extended temperature range of -40°C to +60°C standard for improved reliability in extreme environments

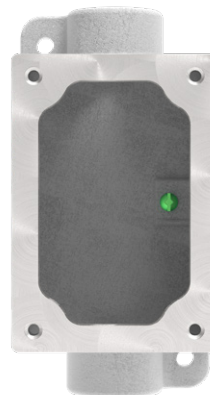
### Retrofit design enables easy upgrade to NEMA 4X protection\*:

- Simply purchase a DSDX cover and device assembly and use with the existing installed aluminum back box



DSDX cover & device

+



Original aluminum back box

=

NEMA 4X

\* If existing back box is iron and is used with new X series cover, it is NEMA 4 rated. To achieve NEMA 4X rating, the back box and the cover must be aluminum. Questions, please contact your local sales rep or Eaton's customer service.

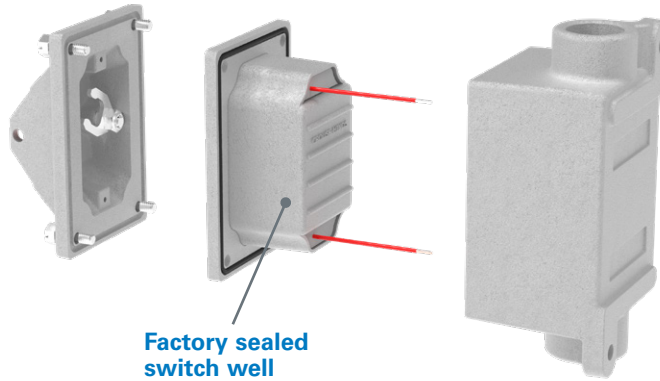
# The benefits of factory sealed control stations and switches

Reduce material costs

Reduce labor costs

Improve safety

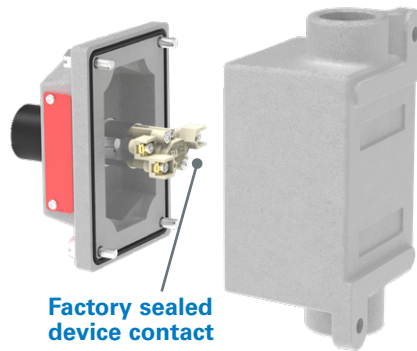
## Switches



Factory sealed switch well

- EDS and EDSX factory sealed snap switches or manual motor starting switches do not need external sealing
- The switches are enclosed in a unique sealing well with double flanges, which mate with the cover and the body
- Small, compact enclosures have accurately ground wide flanges on body, cover and sealing well for flametight joints
- Wiring pigtails are factory sealed from under the sealing well.
- Reliable pouring of seals at the factory ensures safe sealing.

## Control Stations



Factory sealed device contact

- Factory sealed EDS and EDSX pilot light, pushbutton and selector switch control stations do not need external sealing.
- Device contacts are factory sealed in explosionproof ESWP contact blocks.
- Small, compact enclosures have accurately ground wide flanges on both the body and cover for a flametight joint.

## Material and labor savings of factory sealed control station

Factory Sealed devices eliminate the need for explosionproof conduit seals in most applications.

No need to install explosionproof conduit seal and sealing compound.

- Eliminates 3/4" EYS21 seal fitting, \$32.01, and Chico compound, \$21.99. Saves \$54.00.
- Eliminates 50 minutes installation time for Chico seal, saves \$100.

Satisfies requirements of NEC<sup>®</sup> Sections 501.5(A)(1), 501.6(A) and (B) and 505.16(B)(1) and (2).

**Material and labor savings of at least \$154.00 per conduit entry**



# EDS/EDSX fully assembled control stations

Crouse-Hinds series EDS/EDSX pre-built hazardous area control stations with pushbuttons and selector switches are used in conjunction with magnetic starters or contactors for remote control of motors. Pilot lights are available to visually indicate that the desired function is being performed.

EDS/EDSX control stations are factory sealed to prevent arcing of the enclosed device from causing ignition of a hazardous atmosphere external to the enclosure. Factory sealing eliminates the need for external seals, simplifying installation and helping reduce material and labor costs.

## Applications:

EDS/EDSX factory sealed enclosures are installed in a rigid metallic conduit system for surface mounting adjacent to or remote from equipment being controlled, and are used:

- To help prevent arcing of enclosed device from causing ignition of a specific hazardous atmosphere, or atmospheres, external to the enclosure
- In industrial areas such as chemical plants, oil and gas refineries, paint and varnish manufacturing plants, gasoline bulk loading terminals, grain elevators, grain processing industries, coal processing or handling areas, or metal handling or finishing areas where atmosphere may contain hazardous gases and/or dust
- In non-hazardous areas where sturdy, durable enclosures are required
- In conjunction with magnetic starters or contactors for remote control of motors

Manual motor starting switch enclosures are used:

- For manual starting of small AC or DC motors
- To provide manual starting and stopping and, in the case of units with heaters, motor running protection

## Features:

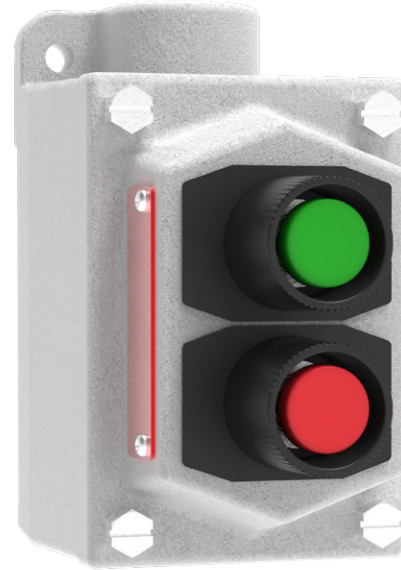
- Factory sealing eliminates external sealing fittings required for Class I, Division 1 & 2 environments, reducing installation costs and associated challenges
- Mounting lugs and taper tapped hubs with integral bushings
- Large captive screws for fastening cover to body (EDSX only)
- Lockout provisions on front operated pushbutton (marked "STOP" and "OFF") and selector switch covers
- Lockout hole for padlock having 1/4" hasp is provided when used with covers for front lever and side type operation
- On enclosures with front lever and side type operating handles, threaded type shafts and bushings are used to ensure hazardous protection
- Dead end (EDS) or through feed (EDSC) hubs – 1/2" to 1" sizes
- When "STOP" is indicated, button is automatically red; when "START" is indicated, button is automatically green; otherwise, black buttons are standard

## Electrical ratings:

- Contact block: 10A @ 600VAC, 5A @ 125VDC
- Pilot lights: 120V (1.2W LED, 6W incandescent), 24V S300 option (0.6W LED, 1.7W incandescent)

## Standard materials:

- Bodies – Feraloy iron alloy or copper-free aluminum
- Covers – Feraloy iron alloy or copper-free aluminum
- Shafts and shaft bushings – stainless steel
- Handle and pushbutton guards – type 6/6 nylon



## Standard finishes:

- Feraloy iron alloy – electrogalvanized and aluminum acrylic paint
- Copper-free aluminum – natural
- Type 6/6 nylon – black
- Stainless steel – natural

## Certifications and compliances:

### EDS:

#### NEC:

- Class I, Divisions 1, Groups C, D
- Class I, Division 2, Group B, C, D
- Class I, Zones 1 & 2, IIA
- Class I, Zones 2, IIB+H2
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standard:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 No. 14, 25, 213-17

#### Environmental ratings:

- NEMA 3
- -25°C to +40°C

### EDSX:

#### NEC:

- Class I, Divisions 2, Groups B, C, D
- Class I, Zone 2, IIA, IIB+H2
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standard:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 Nos. 14, 25, 213-17

#### Environmental ratings:

- NEMA 4X
- -40°C to +60°C

# EDS/EDSX fully assembled snap switches

Crouse-Hinds series hazardous area snap switches are used with magnetic starters or contactors for control of motors. Snap switch control stations are factory sealed to prevent arcing of the enclosed device from causing ignition of a hazardous atmosphere external to the enclosure. Factory sealing eliminates the need for external seals, simplifying installation and reducing material and labor costs.

## Applications:

Snap switches are installed in a rigid metallic conduit system for surface mounting adjacent to or remote from equipment being controlled and are used:

- To help prevent arcing of enclosed device from causing ignition of a specific hazardous atmosphere, or atmospheres, external to the enclosure
- In industrial areas such as chemical plants, oil and gas refineries, paint and varnish manufacturing plants, gasoline bulk loading terminals, grain elevators, grain processing industries, coal processing or handling areas, or metal handling or finishing areas where atmosphere may contain hazardous gases and/or dust
- In non-hazardous areas where sturdy, durable enclosures are required

## Features:

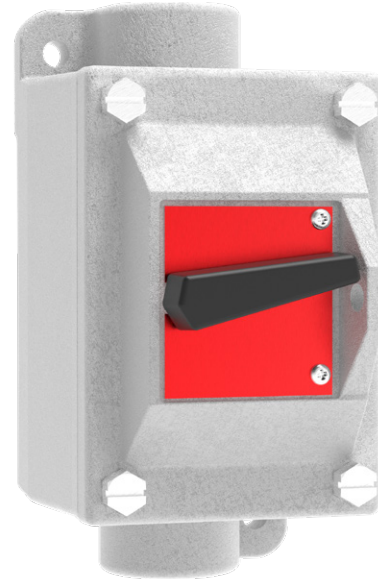
- Small and compact in design
- The switches are enclosed in a unique sealing well with double flanges, which mate with the cover and the body.
- Small, compact enclosures have accurately ground wide flanges on body, cover and sealing well for flamtight joints.
- Wiring pigtails are factory sealed from under the sealing well.
- Mounting lugs and taper tapped hubs with integral bushings
- Large captive screws for fastening cover to body (EDSX only)
- Lockout hole for padlock having 1/4" hasp is provided
- Threaded type shafts and bushings are used to ensure hazardous area protection

## Standard materials:

- Bodies – Feraloy iron alloy or copper-free aluminum
- Covers – Feraloy iron alloy or copper-free aluminum
- Shafts and shaft bushings – stainless steel
- Sealing enclosures – copper-free aluminum

## Standard finishes:

- Feraloy iron alloy – electrogalvanized and aluminum acrylic paint
- Copper-free aluminum – natural
- Stainless steel – natural



## Certifications and compliances:

### EDS/DSD:

#### NEC:

- Class I, Divisions 1 & 2, Groups B\*, C, D
- Class I, Zones 1 & 2, IIA, IIB+H2\*
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standards:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 Nos. 14, 25, 213-17

#### Environmental ratings:

- NEMA 3
- -25°C to +40°C

### EDSX/DSDX:

#### NEC:

- Class I, Division 2, Groups B, C, D
- Class I, Zone 2, IIA, IIB+H2
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standards:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 Nos. 14, 25, 213-17

#### Environmental ratings:

- NEMA 4X
- -40°C to +55°C. See de-rating table below.

### 30A EDSX/DSDX snap switch temperature de-rating

Ambient temp (°C)	Single gang	Multi gang or cover only
40	30A	30A
45		27A
50	27A	24A
55	24A	21A

This table applies only to 30A EDSX/DSDX product. No de-rating required for 20A EDSX/DSDX product.

\*For single gang enclosures only. Manual motor starters, circuit breakers and EDS(C)-23 snap switches are not rated for Cl. I, Div. 1 & 2, Gr. B.

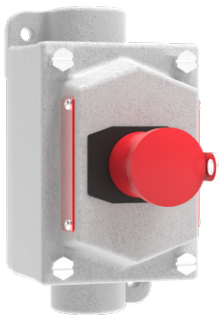
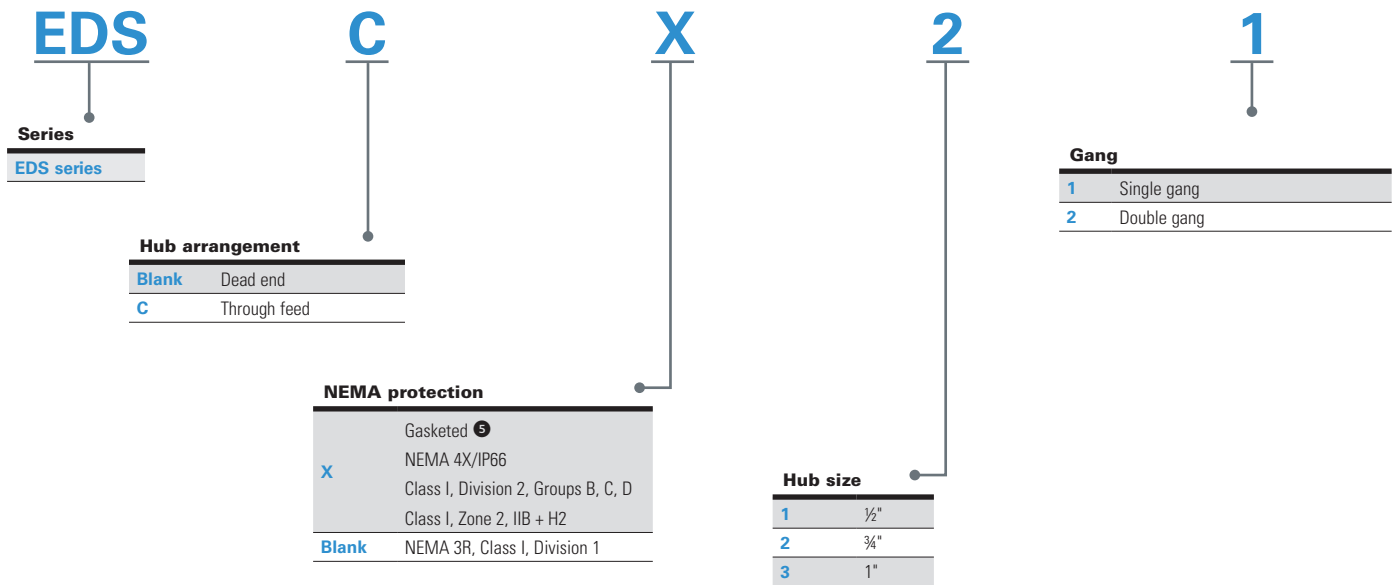
# EDS/EDSX fully assembled control stations and switches

## Ordering information

Part number example

**EDSCX215 SA**

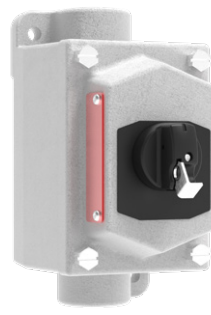
NEMA 4X rated aluminum EDSC through feed, single gang, front operated pushbutton control station with 3/4" hubs, 2 circuit switch and 2 buttons



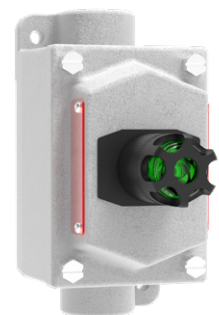
Maintained mushroom pushbutton



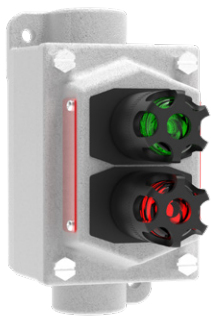
Single pushbutton



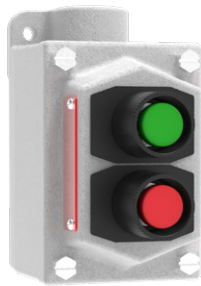
Front operated selector switch



Single pilot light



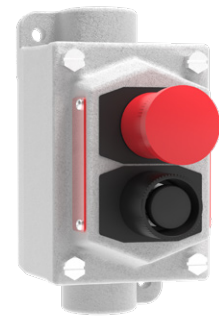
Double pilot lights



Double pushbuttons



Combination pushbutton and pilot light



Combination mushroom head pushbutton and single pushbutton

5

SA

**Heater (motor starting switch only)**

<b>G2 through G42</b>	GE heaters
<b>P1 through P39</b>	Allen-Bradley heaters
<b>W1 through W39</b>	Westinghouse heaters
<b>0</b>	Without heater

See page 8 for complete heater tables

**Operators**

Front operated pushbutton	
<b>84</b>	1 Circuit universal switch (internal) - 1 button external
<b>90</b>	2 Circuit universal switch (internal) - 2 button external
<b>5</b>	2 Circuit switch (1 circuit open -A, 1 circuit closed -B) (internal) 2 button external <sup>3</sup>
<b>92</b>	2 Circuit universal switch (internal) - 1 button external
<b>55</b>	2 Circuit switch (1 circuit open -A, 1 circuit closed -B (internal) 1 button external
Pilot lights <sup>6</sup>	
<b>524</b>	Single pilot light enclosure
<b>561</b>	Double pilot light enclosure (not available with a transformer)
Combination pushbutton and pilot lights	
<b>473</b>	1 Pilot - (single gang), 1 pushbutton, 1 universal switch - ordering with transformers (T suffix)
<b>471</b>	1 Pilot on one cover - (2 gang only), 2 pushbuttons on the other cover, - ordering with transformers (T suffix)
<b>868</b>	2 Pilots on one cover - (2 gang only), 2 pushbuttons on the other cover, not available with a transformer
Front operated selector switch	
<b>271</b>	2 Position, 2 circuit switch (internal)
<b>272</b>	2 Position, 4 circuit switch (internal)
<b>273</b>	3 Position, 2 circuit switch (internal) (position 1 - N.O., position 2 - open, position 3 - N.C.)
<b>274</b>	3 Position, 4 circuit switch (internal) (switch A = position 1 - N.O., position 2 - open, position 3 - N.C.; switch B - position 1 - N.O.; position 2 - open, position 3 - N.C.)
<b>275</b>	3 Position, 4 circuit switch (internal) (switch A = position 1 - N.C., position 2 - N.O., position 3 - N.O.; switch B - position 1 - N.O.; position 2 - N.O., position 3 - N.C.)
Front operated snap switch <sup>4</sup>	
<b>29</b>	Single cover assembly per gang, 1-pole, 20A 120/277 VAC (internal)
<b>8</b>	Single cover assembly per gang, 2-pole, 20A 120/277 VAC (internal)
<b>30</b>	Single cover assembly per gang, 3 way, 20A 120/277 VAC (internal)
<b>40</b>	Single cover assembly per gang, 4 way, 20A 120/277 VAC (internal)
<b>31</b>	Single cover assembly per gang, 1-pole, 30A 120/277 VAC (internal) - EDSX only
<b>32</b>	Single cover assembly per gang, 2-pole, 30A 120/277 VAC (internal) - EDSX only
<b>33</b>	Single cover assembly per gang, 3 way, 30A 120/277 VAC (internal) - EDSX only
<b>60</b>	Single cover assembly per gang, 3-pole, 30A 600 VAC (internal) - EDSX only
<b>23</b>	Single cover assembly per gang, 3-pole, 15A 125 VAC, 10 A 250 VAC (internal) (not factory sealed) (X option not available)
Front operated motor starting switch - external (NEMA 4X not available) <sup>4</sup>	
<b>99</b>	Single cover assembly per gang, 1-pole, A-B switch (internal)
<b>100</b>	Single cover assembly per gang, 2-pole, A-B switch (internal)
<b>093</b>	Single cover assembly per gang, 1-pole, GE switch (internal)
<b>094</b>	Single cover assembly per gang, 2-pole, GE switch (internal)
<b>101</b>	Single cover assembly per gang, 1-pole, West. switch (internal)
<b>102</b>	Single cover assembly per gang, 2-pole, West. switch (internal)

**Options and legend markings**

<b>LED</b>	LED pilot lights furnished in place of standard incandescent lights
<b>SA</b>	Bodies and covers aluminum - suffix required for "X" (gasketed, NEMA 4X <sup>5</sup> /IP66) configuration
<b>S111</b>	Momentary contact, front operated, red mushroom-head button (breaks N.C. contacts only)
<b>S153</b>	Lockout on stop, front operated pushbutton (locks normally closed contacts in open position) <sup>1</sup>
<b>S300</b>	Lamp set up for 24 volt (AC & DC) (not available with transformer feature)
<b>S634</b>	3 Position selector switch w/momentary contact clockwise operation, spring return to center, maintained contact counter clockwise operation
<b>S635</b>	3 Position selector switch w/momentary contact counter clockwise operation, spring return to center, maintained contact clockwise operation
<b>S752</b>	Exterior epoxy powder coat finish
<b>S769</b>	Maintained contact, front-operated, mushroom-head button with lockout & guard (breaks N.C. Contacts and maintains N.O. Contacts) <sup>2</sup>
<b>S842</b>	3 Position selector switch w/momentary contact left and right, spring return to center
<b>J1</b>	Red jewel
<b>J3</b>	Green jewel
<b>J6</b>	Amber jewel
<b>J10</b>	Clear jewel
<b>J11</b>	Blue jewel
<b>T2</b>	240/120 volt pilot light transformers
<b>T4</b>	480/120 volt pilot light transformer
<b>T5</b>	600/120 volt pilot light transformer

Legend marking note - See Instructions and Standard Marking Abbreviations on page 10 and Catalog Rules/Notes <sup>2</sup> <sup>3</sup> <sup>4</sup>**Catalog Rules / Notes**

- <sup>1</sup> If legend marking contains SP (STOP) or OF (OFF), Suffix S153 is NOT required. Lockout will be added. (Lockout not available in double pushbutton and with S111).
- <sup>2</sup> S769 only available on a single pushbutton assembly or one button of a 2-button assembly.
- <sup>3</sup> Default legend marking is START-STOP unless otherwise specified.
- <sup>4</sup> 1, 2, & 3-pole snap switches are marked ON-OFF, 3 & 4-way snap switches have blank stamping boxes, Motor starting switches are marked START-STOP. No alternate markings are permitted.
- <sup>5</sup> X includes gasketing and o-rings on assembly to provide a CL.I, Div.2, Group B,C,D, CL.II, Div.1 Group E,FG  
NEMA 4X/IP66 corrosion-resistant rating for aluminum only (suffix SA required).  
Valid only for front operated pushbuttons (5, 55, 84, 90, 92), combination pushbutton and pilot lights (471, 473, 868), front operated selector switch (271-275), front operated snap switch (29, 8, 30, 40, 31, 32, 33, 60) and pilot lights (524, 561)
- <sup>6</sup> Pilot lights only available with EDSX or EDSXC devices

# EDS/EDSX fully assembled control stations and switches

## Heater tables<sup>‡</sup>:

### Allen-Bradley

Max. motor full load amperage	Eaton's Crouse-Hinds symbol number	Max. motor full load amperage	Eaton's Crouse-Hinds symbol number
0.17	P1	2.92	P22
0.21	P2	3.09	P23
0.25	P3	3.32	P24
0.32	P4	3.77	P25
0.39	P5	4.16	P26
0.46	P6	4.51	P27
0.57	P7	4.93	P28
0.71	P8	5.43	P29
0.79	P9	6.03	P30
0.87	P10	6.83	P31
0.98	P11	7.72	P32
1.08	P12	8.24	P33
1.19	P13	8.90	P34
1.30	P14	9.60	P35
1.43	P15	10.80	P36
1.58	P16	12.00	P37
1.75	P17	13.50	P38
1.88	P18	15.20	P39
2.13	P19		
2.40	P20		
2.58	P21		

### General Electric

Max. motor full load amperage	Eaton's Crouse-Hinds symbol number	Max. motor full load amperage	Eaton's Crouse-Hinds symbol number
0.48	G2	3.27	G23
0.53	G3	3.56	G24
0.58	G4	3.88	G25
0.65	G5	4.22	G26
0.71	G6	4.60	G27
0.78	G7	5.00	G28
0.86	G8	5.43	G29
0.95	G9	5.90	G30
1.04	G10	6.41	G31
1.14	G11	6.98	G32
1.25	G12	7.60	G33
1.37	G13	8.25	G34
1.49	G14	8.95	G35
1.63	G15	9.75	G36
1.78	G16	10.60	G37
1.95	G17	11.40	G38
2.13	G18	12.50	G39
2.32	G19	13.60	G40
2.53	G20	14.80	G41
2.76	G21	16.00	G42
3.01	G22		

### Cutler-Hammer

Max. motor full load amperage	Eaton's Crouse-Hinds symbol number	Max. motor full load amperage	Eaton's Crouse-Hinds symbol number
0.43	W1	2.95	W21
0.48	W2	3.27	W22
0.53	W3	3.59	W23
0.58	W4	3.99	W24
0.64	W5	4.39	W25
0.71	W6	4.79	W26
0.78	W7	5.26	W27
0.87	W8	5.83	W28
0.95	W9	6.39	W29
1.03	W10	7.03	W30
1.15	W11	7.74	W31
1.27	W12	8.46	W32
1.35	W13	9.35	W33
1.51	W14	10.30	W34
1.67	W15	11.35	W35
1.83	W16	12.47	W36
1.99	W17	13.67	W37
2.23	W18	15.12	W38
2.47	W19	16.00	W39
2.71	W20		

These heaters are for motors rated 40°C continuously. For motors rated 50°C or 55°C, multiply full load current by 0.9 and use this value to select heaters. Symbol 0 (zero) must be used to indicate heater omitted. Includes one interchangeable heater.

‡ Select heater from table and use symbol number as second section of the catalog number. Example: EDS21101-W5. Insert symbol 0 (zero) to omit heater.

## Common EDS/EDSX catalog numbers

Type	EDS control stations and switches with 3/4" hub†	Cat. # - dead end	Cat. # - through feed
Front operated pushbuttons	2 Circuit switch (1 circuit open -A, 1 circuit closed -B) (internal) 2 button external	EDSX215 SA	EDSCX215 SA
Front operated pushbuttons	1 Circuit universal switch (internal) - 1 button external	EDSX2184 SA	EDSCX2184 SA
Front operated pushbuttons	2 Circuit universal switch (internal) - 2 button external	EDSX2190 SA	EDSCX2190 SA
Pushbuttons and pilot lights	1 Pilot - (single gang), 1 pushbutton, 1 universal switch - ordering with transformers (T suffix)	EDSX21473 J3 SA	EDSCX21473 J3 SA
Pushbuttons and pilot lights	1 Pilot on one cover -(2 gang only), 2 pushbuttons on the other cover,- ordering w/ transformers (T suffix)	EDSX22471 J1 SA	EDSCX22471 J1 SA
Pushbuttons and pilot lights	2 Pilots on one cover - (2 gang only), 2 pushbuttons on the other cover, - not available w/ a transformer	EDSX22868 J1 J3 SA	EDSCX22868 J1 J3 SA
Selector switches	3 Position, 2 circuit switch (internal) (position 1-N.O., position 2-Open, position 3-N.C.)	EDSX21273 SA	EDSCX21273 SA
Selector switches	3 Position, 4 circuit switch (internal) (Sw.A = position 1-N.O., position 2-Open, position 3-N.C.; Sw.B - position 1-N.O., position 2-open, position 3-N.C.)	EDSX21274 SA	EDSCX21274 SA
Selector switches	2 Position, 2 circuit switch (internal)	EDSX21271 SA	EDSCX21271 SA
Snap switches	Single cover assembly per gang, 1-pole, 20 amp (internal)	EDSX2129 SA	EDSCX2129 SA
Snap switches	Single cover assembly per gang, 3 way, 20 amp (internal)	EDSX2130 SA	EDSCX2130 SA
Snap switches	Single cover assembly per gang, 2-pole, 20 amp (internal)	EDSX218 SA	EDSCX218 SA
Snap switches	Single cover assembly per gang, 4 way, 20 amp (internal)	EDSX2140 SA	EDSCX2140 SA
Snap switches	Single cover assembly per gang, 1-pole, 30 amp (internal)	EDSX2131 SA	EDSCX2131 SA
Snap switches	Single cover assembly per gang, 2-pole, 30 amp (internal)	EDSX2132 SA	EDSCX2132 SA
Snap switches	Single cover assembly per gang, 3 way, 30 amp (internal)	EDSX2133 SA	EDSCX2133 SA
Snap switches	Single cover assembly per gang, 3-pole, 30 amp 600 VAC (internal)	EDSX2160 SA	EDSCX2160 SA
Motor starter switch*	Single cover assembly per gang, 1-pole, A-B switch (internal)	EDS2199 0 SA	EDSC2199 0 SA
Motor starter switch*	Single cover assembly per gang, 1-pole, West. switch (internal)	EDS21101 0 SA	EDSC21101 0 SA
Motor starter switch*	Single cover assembly per gang, 2-pole, West. switch (internal)	EDS21102 0 SA	EDSC21102 0 SA

\* NEMA 4X option not available.

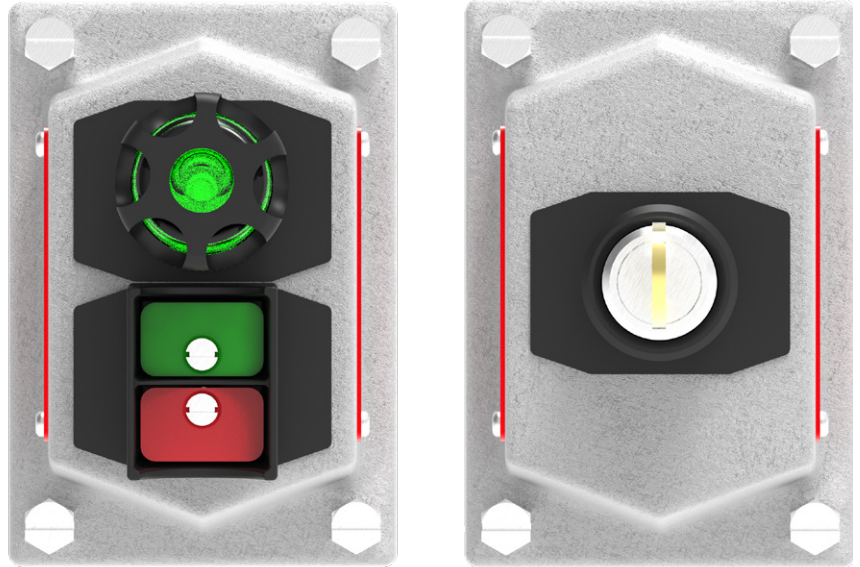
† Common catalog numbers shown with 3/4" hub. To order a different hub size, replace the first numeral "2" with "1" for 1/2" hub or "3" for 1" hub.



# DSD/DSDX cover and device sub-assemblies

Crouse-Hinds series DSD/DSDX hazardous area cover and device sub-assemblies are for use with our EDS/EDSC back boxes and EDSCM modular multi-gang device bodies. DSD/DSDX covers are available with a wide variety of devices and configurations, including manual motor starters, front operated pushbuttons, general use snap switches, side operated pushbuttons, selector switches and pilot lights.

DSD/DSDX sub-assemblies are factory sealed to prevent arcing of the enclosed device from causing ignition of a hazardous atmosphere external to the enclosure. Factory sealing eliminates the need for external seals, simplifying installation and helping reduce material and labor costs.



## Applications:

DSD/DSDX cover and device sub-assemblies are for mounting combinations of control device equipment for use in:

- Industrial areas such as chemical plants, oil and gas refineries, paint and varnish manufacturing plants, gasoline bulk loading terminals, grain elevators, grain processing industries, coal processing or handling areas where atmospheres may contain hazardous gases or dusts, and arcing of enclosed devices must not ignite the surrounding atmosphere
- Conjunction with magnetic starters or contactors for remote control and monitoring motors
- Manual starting and stopping of small AC or DC motors
- Controlling and supplying energy to portable electrical devices, such as motor generator sets, compressors, conveyors, portable tools, etc.

## Features:

DSD/DSDX cover and device sub-assemblies have:

- Device contacts for pilot light, pushbutton, and selector switch control stations are factory sealed. External sealing is not required, improving safety and reducing costs.
- Factory-sealing available for motor starting switch and snap switch sub-assemblies. See ordering information tables for details
- Large captive screws for fastening cover to body (DSDX only).
- Retrofit design enables easy upgrade to NEMA 4X protection\*. Simply purchase a DSDX cover & device assembly and use with the existing installed aluminum back box.
- Lockout hole for padlock having 1/4" hasp is provided when used with covers for front lever and side type operation
- Lockout provisions on front operated pushbutton (marked "STOP" and "OFF") and all selector switch covers
- For covers with front lever and side type operating handles, threaded type shafts and bushings are used to ensure hazardous protection
- Accurately ground flange for flametight joint when mated with ground flange on back box

## Electrical ratings:

- Contact block: 10A @ 600VAC, 5A @ 125VDC
- Pilot lights: 120V (1.2W LED, 6W incandescent), 24V S300 option (0.6W LED, 1.7W incandescent)

## Standard materials:

- Covers – Feraloy iron alloy and copper-free aluminum
- Shafts and shaft bushings – stainless steel
- Handles, pushbuttons and guards – type 6/6 nylon
- Sealing enclosures – copper-free aluminum

## Standard finishes:

- Feraloy – electrogalvanized and aluminum acrylic paint
- Copper-free aluminum – natural

## Certifications and compliances:

(When used with EDS/EDSC or EFS/EFSC back box):

### DSD:

#### NEC:

- Class I, Division 1, Groups C, D
- Class I, Division 2, Group B, C, D
- Class I, Zones 1 & 2, IIA
- Class I, Zone 2, IIB+H2
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standards:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 Nos. 14, 25, 213-17

### DSDX:

#### NEC:

- Class I, Division 2, Groups B, C, D
- Class I, Zone 2, IIA, IIB+H2
- Class II, Division 1, Groups E, F, G
- Class III

#### UL standards:

- UL1203, UL121201, UL508

#### CSA standard:

- C22.2 Nos. 14, 25, 213-17

## Environmental ratings:

Cover type	Back box material	NEMA rating	Temp. range
DSDX (aluminum)	Iron	NEMA 4	-40°C to +60°C
DSDX (aluminum)	Aluminum	NEMA 4X*	-40°C to +60°C
DSD (aluminum or iron)	Iron or aluminum	NEMA 3	-25°C to +40°C

\* If existing back box is iron and is used with new X series cover, it is NEMA 4 rated. To achieve NEMA 4X rating, the back box and the cover must be aluminum. Questions, please contact your local sales rep or Eaton's customer service.

# DSD/DSDX cover and device sub-assemblies

## Ordering information

### Part number example

### DSDX925 S634 SA

NEMA-4X\* rated aluminum DSDX cover with three position, two circuit (N.O., Open, N.C.) selector switch with momentary contact clockwise operation, spring return to center, maintained contact counter clockwise operation

**DSD**

Series  
DSD series

**X**

### NEMA protection

X	Gasketed <sup>8</sup>
	NEMA 4X/IP66 Class I, Division 2, Groups B, C, D Class I, Zone 2, IIB + H2
	Blank NEMA 3R, Class I, Division 1

**925**

### Single gang cover assemblies (step 1: select assembly)

#### Front operated motor starting switch covers and devices (NEMA 4X not available)

910	Front operated Allen-Bradley 1-pole switch, 1HP, 115-230 VAC
911	Front operated Allen-Bradley 2-pole switch, 1HP, 115-230 VAC
912	Front operated GE 1-pole switch, 1HP, 115-230 VAC
913	Front operated GE 2-pole switch, 1HP, 115-230 VAC
914	Front operated Westinghouse 1-pole switch, 1HP, 115-230 VAC
915	Front operated Westinghouse 2-pole switch, 1HP, 115-230 VAC
916	Front operated Square-D 2-pole switch, 2HP @ 250 VAC (30A), 3HP @ 600 VAC (20A)
917	Front operated GE 3-pole switch, 7.5HP @ 250 VAC (30A), 15HP @ 600 VAC (20A)

#### Front operated pushbutton covers and devices

918	One button, one universal switch
919	One button, two universal switches
920	One button, two universal switches, one N.O., One N.C.
921	Two button, two universal switches
922	Two button, two universal switches, one N.O., One N.C. <sup>2</sup>
962	Three button, (one double button and one single button), single button on bottom, lock out available only on single button
970	Momentary contact mushroom head (N111 style) and one button (breaks N.C.)

#### Front operated snap switch covers and devices

933	1-pole, 20A, 120/277 VAC
934	2-pole, 20A, 120/277 VAC
935	3-pole, 16A, 125V; 10A, 250 VAC (NEMA 4X not available)
936	Three way, 20A, 120/277 VAC
937	Four Way, 20A, 120/277 VAC
939	1-pole, 30A, 120/277 VAC
940	2-pole, 30A, 120/277 VAC
941	Three way, 30A, 120/277 VAC
943	3-pole, 30A, 600 VAC

#### Front operated selector switch covers and devices

923	Two position, two circuit
924	Two position, four circuit
925	Three position, two circuit (N.O., Open, N.C.)
926	Three position, four circuit (N.O., Open, N.C.)
927	Three position, four circuit (A1 = N.C., N.O., N.O.; B1 = N.O., N.O., N.C.)

#### Pilot light covers and devices

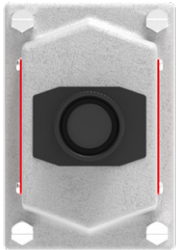
947	Two pilot lights (not available with a transformer)
948	One pilot light

#### Combination pushbutton and pilot lights

958	One pilot light and one pushbutton station
961	Double pushbutton w/pilot light (with a transformer - see table), lock out not available

#### Combination selector switches and pilot light covers and devices <sup>5</sup>

973	One light & two position switch, two circuit
974	One light & two position switch, four circuit
975	One light & three position switch, two circuit (N.O., Open, N.C.)
976	One light & three position switch, four circuit (N.O., Open, N.C.)
977	One light & three position switch, four circuit (A1 = N.C., N.O., N.O.; B1 = N.O., N.O., N.C.)



Single pushbutton



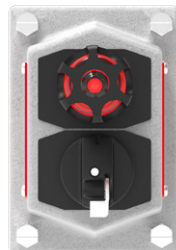
Combination pushbutton and double pushbutton



Single keyed selector switch



Combination pilot light and double pushbutton



Combination selector switch and pilot light

### Catalog Rules / Notes

- For use with 910-915 only, not applicable for 916 & 917.
- Default legend marking is START-STOP unless otherwise specified.
- If legend for marking contains SP (STOP) or OF (OFF), suffix S153 is NOT required. Lockout will be added. (Lockout not available in double pushbutton and with S111).
- S769 only available on a single pushbutton assembly or one button of a 2-Button assembly.
- XFMR option not available on DSD973 through DSD977.
- C1B is default key housing. IF S847 option is selected and no key housing has been selected then the customer would get C1B by default.
- 1, 2, & 3-pole snap switches are marked ON-OFF; 3 & 4-way snap switches have blank stamping boxes, motor starting switches are marked START-STOP. No alternate markings are permitted.
- "X" includes gasketing and o-rings on assembly to provide a CL.I, Div.2, Group B,C,D, CL.II, DIV.1 Group E,FG, NEMA 4X/IP66 corrosion-resistant rating for aluminum (suffix SA required).  
Valid only for front operated pushbuttons, front operated snap switches, selector switches, pilot lights, selector switch & pilot lights.

\* If existing back box is iron and is used with new X series cover, it is NEMA 4 rated. To achieve NEMA 4X rating, the back box and the cover must be aluminum. Questions, please contact your local sales rep or Eaton's customer service.

# S634

# SA

## Options for motor starting switches

Step 2: select heaters (see page 8 for complete table) ①	
<b>G2 through G42</b>	GE heaters
<b>P1 through P39</b>	Allen Bradley heaters
<b>W1 through W39</b>	Westinghouse heaters
<b>0</b>	Without heater
Step 3: select factory sealed cover if needed ②	
<b>S701</b>	Factory sealing cover (motor control) for use with manual motor starters
Step 4: select material option	
Step 5: select legend marking (see page 12)	

## Options for front operated pushbuttons

Step 2: select operator function option	
<b>S111</b>	Momentary stop, front operated, red mushroom-head button (breaks N.C. contacts only)
<b>S153</b>	Lockout on front operated pushbutton (locks normally closed contacts in open position) ③
<b>S769</b>	Maintained contact, front-operated, mushroom-head button with lockout & guard (breaks N.C. Contacts and maintains N.O. Contacts) ④
Step 3: select material option	
Step 4: select legend plate option	
<b>Blank</b>	Standard or no legend plate
Step 5: select legend marking (see page 12)	

## Options for pilot lights

Step 2: select color	
<b>J1</b>	Red jewel
<b>J3</b>	Green jewel
<b>J6</b>	Amber jewel
<b>J10</b>	Clear jewel
<b>J11</b>	Blue jewel
Step 3: select lamp style	
<b>Blank</b>	Standard incandescent lamp
<b>LED</b>	Led lamp furnished in place of standard incandescent lamp
Step 4: select voltage ⑤	
<b>S300</b>	24V lamp (AC&DC) (not available with XFMR)
<b>T2</b>	240/120 volt XFMR
<b>T4</b>	480/120 volt XFMR
<b>T5</b>	600/120 volt XFMR
Step 5: select material options	
Step 6: select legend plate option	
<b>Blank</b>	Standard or no legend plate
Step 7: select legend markings (see page 12)	

## Options for front-operated snap switches

Step 2: select factory sealed cover if needed	
<b>S697</b>	For factory sealing covers (for use w/ 20 & 30 A front operated snap switches only, not available on DSD935) suffix required for "X" (gasketed, NEMA 4X ⑧/IP66) configuration
Step 3: select material options	
Step 4: select legend marking (see page 12)	

## Options for front-operated selector switches

Step 2: select operator function options	
<b>S634</b>	3 Position selector switch w/momentary contact clockwise operation, spring return to center, maintained contact counter clockwise operation
<b>S635</b>	3 Position selector switch w/momentary contact counter clockwise operation, spring return to center, maintained contact clockwise operation
<b>S842</b>	3 Position selector switch w/momentary contact left and right, spring return to center
<b>S847</b>	Key operated selector switch - must define position where key is removed from (limited to NEMA 4)
Step 3: select removable key location (only if S847 is selected)	
<b>K1</b>	Selector switch key is removable from all positions
<b>K2</b>	Selector switch key is removable from left position for 2 position switches or from center position for 3 position switches
<b>K3</b>	Selector switch key is removable from right position for 2 position switches or from left position for 3 position switches
<b>K4</b>	Selector switch key is removable from right position for 3 position switches
Step 4: select key lock housing (only if S847 is selected)	
<b>C19B</b>	Key lock housing C19B
<b>C1B / Blank</b>	Key lock housing C1B ⑥
<b>C2B</b>	Key lock housing C2B
<b>C3B</b>	Key lock housing C3B
<b>C4B</b>	Key lock housing C4B
<b>C5B</b>	Key lock housing C5B
<b>C6B-18B</b>	Key lock housing C6B-C18B
<b>C20B-C152B</b>	Key lock housing C20B-C152B
Step 5: select material options	
Step 6: select legend plate option	
<b>Blank</b>	Standard or no legend plate
Step 7: select legend markings (see page 12)	

## Options for Selector switches and pilot light devices

Step 2: select option from pilot light options	
Step 3: select option from selector switches option	
Step 4: select material options	
Step 5: select legend marking (see page 12)	

## Material and finish options

Select enclosure options	
<b>Blank</b>	Iron cover (feraloy) with zinc & aluminum paint
<b>SA</b>	Aluminum cover - suffix required for "X" (gasketed, NEMA 4X ⑧/IP66) configuration
<b>S752</b>	Exterior gray epoxy powder coat finish (not required for NEMA 4X corrosion resistance)

## Legend marking options

See instructions and standard marking abbreviations on page 10 and catalog rules/notes ② ③ ⑧	
--	--

# Legend marking plates for pushbuttons, selector switches, and pilot lights

Marking req.	Cat. # suffix add	Standard pushbutton color	Actual marking on product
Acknowledge	<b>AK</b>	Black	ACK
Alarm	<b>AM</b>	Red	ALARM
Automatic	<b>AU</b>	Black	AUTO
By-Pass	<b>BP</b>	Black	BYPASS
Call	<b>CA</b>	Black	CALL
Close	<b>CL</b>	Black	CLOSE
Down	<b>DN</b>	Black	DOWN
Emergency	<b>EM</b>	Red	EMER
EM-Stop	<b>EM-SP</b>	Red	EMER-STOP
Fast	<b>FS</b>	Green	FAST
Forward	<b>FW</b>	Black	FWD
Hand	<b>HN</b>	Black	HAND
High	<b>HI</b>	Black	HIGH
In	<b>IN</b>	Green	IN
Jog	<b>JG</b>	Black	JOG
Lighting On	<b>LN</b>	Green	LTG-ON
Local	<b>LC</b>	Black	LOCAL
Lower	<b>LO</b>	Black	LOWER
Maintain	<b>MT</b>	Black	MAINT
Manual	<b>MN</b>	Black	MANUAL

Marking req.	Cat. # suffix add	Standard pushbutton color	Actual marking on product
Normal	<b>NR</b>	Green	NORMAL
Off	<b>OF</b>	Black	OFF
On	<b>ON</b>	Green	ON
Open	<b>OP</b>	Green	OPEN
Out	<b>OT</b>	Black	OUT
Purge	<b>PG</b>	Black	PURGE
Raise	<b>RA</b>	Green	RAISE
Remote	<b>RM</b>	Black	REMOTE
Reset	<b>RS</b>	Black	RESET
Reverse	<b>RV</b>	Black	REV
Run	<b>RN</b>	Black	RUN
Safe	<b>SF</b>	Green	SAFE
Silence	<b>SN</b>	Black	SILENC
Slow	<b>SL</b>	Green	SLOW
Start	<b>ST</b>	Green	START
Stop	<b>SP</b>	Red	STOP
Test	<b>TT</b>	Black	TEST
Trip	<b>TP</b>	Black	TRIP
Up	<b>UP</b>	Green	UP

Non-standard legend plate markings (not included in this table) can be accommodated by our Engineer-To-Order team. Non-standard markings must be included in catalog number exactly as desired on legend plates. There is a 10-character limit per marking.

## Common DSD/DSDX catalog numbers

Type	Description	Cat. #	
Front operated pushbuttons	Two button, two universal switches, one N.O., one N.C. ②	<a href="#">DSDX922 SA</a>	
Front operated pushbuttons	One button, one universal switch	<a href="#">DSDX918 SA</a>	
Front operated pushbuttons	Two button, two universal switches	<a href="#">DSDX921 SA</a>	
Front operated pushbuttons	Momentary contact mushroom head (S111 style) and one button (breaks N.C.)	<a href="#">DSDX970 SA</a>	
Pilot lights	Two pilot lights (not available with a transformer)	<a href="#">DSDX947 J1 J3 SA</a>	
Pilot lights	One pilot light	<a href="#">DSDX948 J1 SA</a>	
Pushbuttons and pilot lights	One pilot light and one pushbutton station	<a href="#">DSDX958 J1 SA</a>	
Pushbuttons and pilot lights	Double pushbutton w/pilot light (with a transformer - see table), lockout not available	<a href="#">DSDX961 J3 SA</a>	
Selector switches	Three position, two circuit (N.O., Open, N.C.)	<a href="#">DSDX925 SA</a>	
Selector switches	Three position, four circuit (A1 = N.C., N.O., N.O.; B1 = N.O., N.O., N.C.)	<a href="#">DSDX927 SA</a>	
Selector switches	Two position, two circuit	<a href="#">DSDX923 SA</a>	
Snap switches	1-pole, 20 amp	<a href="#">DSDX933 S697 SA</a>	
Snap switches	2-pole, 20 amp	<a href="#">DSDX934 S697 SA</a>	
Snap switches	3-pole, 30 amp	<a href="#">DSDX943 S697 SA</a>	
Motor starter switch*	Front operated Allen-Bradley 1-pole switch, 1HP, 115-230 VAC	<a href="#">DSD910 0 S701 SA</a>	
Motor starter switch*	Front operated Westinghouse 1-pole switch, 1HP, 115-230 VAC	<a href="#">DSD914 0 S701 SA</a>	
Motor starter switch*	Front operated Westinghouse 2-pole switch, 1HP, 115-230 VAC	<a href="#">DSD915 0 S701 SA</a>	
Back boxes		Cat. # - dead end	Cat. # - through feed
Back box	1/2" Single gang back box	<a href="#">EDS171 SA</a>	<a href="#">EDSC171 SA</a>
Back box	3/4" Single gang back box	<a href="#">EDS271 SA</a>	<a href="#">EDSC271 SA</a>
Back box	1" Single gang back box	<a href="#">EDS371 SA</a>	<a href="#">EDSC371 SA</a>
Back box	1/2" Double gang back box	<a href="#">EDS172 SA</a>	<a href="#">EDSC172 SA</a>
Back box	3/4" Double gang back box	<a href="#">EDS272 SA</a>	<a href="#">EDSC272 SA</a>
Back box	1" Double gang back box	<a href="#">EDS372 SA</a>	<a href="#">EDSC372 SA</a>

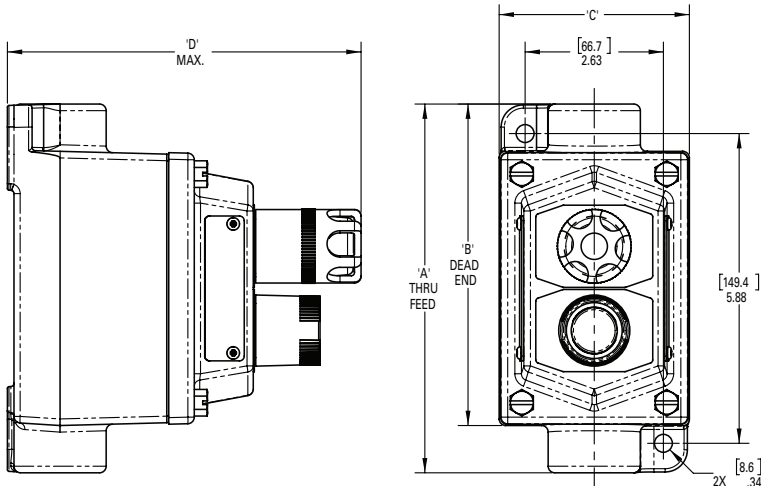
### Catalog Rules / Notes

② Default legend marking is START-STOP unless otherwise specified.

\* NEMA 4X option not available.

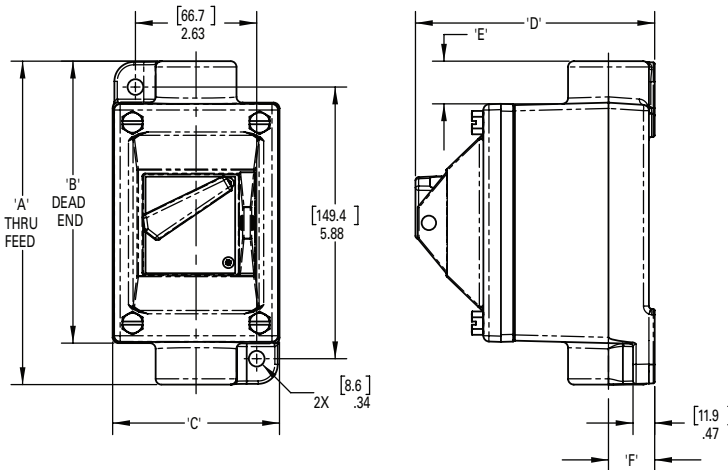
# Dimensions

## EDS/EDSX fully assembled control stations



Control station type	Hub size	A	B	C	D max.
EDS/EDSX single gang	1/2"	6.78	6.03	3.50	7.38
EDS/EDSX dual gang	1/2"	6.78	6.03	7.19	7.38
EDS/EDSX single gang	3/4"	6.78	6.03	3.50	7.38
EDS/EDSX dual gang	3/4"	6.78	6.03	7.19	7.38
EDS/EDSX single gang	1"	7.03	6.16	3.50	7.38
EDS/EDSX dual gang	1"	7.03	6.16	7.19	7.38

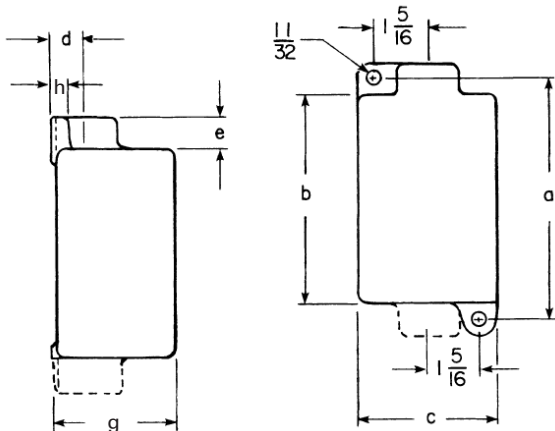
## EDS/EDSX snap switches



Enclosure Type	Hub Size	A	B	C	D Max.*	E	F
EDS/EDSX single gang, factory sealed	1/2"	6.78	6.03	3.50	5.25	0.81	0.75
EDS/EDSX dual gang, factory sealed				7.19	5.25		
EDS/EDSX single gang, factory sealed	3/4"	6.78	6.03	3.50	5.25	0.81	0.88
EDS/EDSX dual gang, factory sealed				7.19	5.25		
EDS/EDSX single gang, factory sealed	1"	7.03	6.16	3.50	5.25	0.94	1.00
EDS/EDSX dual gang, factory sealed				7.19	5.25		

\*EDS snap switches with number "23" operator are not factory sealed.  
Dimension D for these devices = 5.00

## Back Boxes



Control station type	a	b	c	d	e	g	h
EDS single gang	5.88	5.09	3.50	see below	3.06	0.47	
EDS dual gang	5.88	5.09	7.19	see below	3.06	0.47	

Hub size	d	e
1/2"	0.75	0.81
3/4"	0.88	0.81
1"	1.00	0.94





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