

# EDS factory sealed manual motor starting switches and enclosures

Cl. I, Div. 1 & 2, Groups B<sup>A</sup>, C, D  
 Cl. II, Div. 1, Groups E, F, G  
 Cl. II, Div. 2, Groups F, G  
 Cl. III  
 NEMA 3, 7B<sup>A</sup>CD, 9EFG

Explosionproof  
 Dust-ignitionproof  
 Raintight  
 Wet Locations

2C

## Applications:

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 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 sealed devices have many distinct advantages:

- Reduce installation problems
- Eliminate external seals
- Lower installation costs
- Improve safety
- Mounting lugs and taper tapped hubs with integral bushings
- Large machine screws for fastening covers to bodies
- Lockout hole for padlock having 1/4" hasp is provided
- Close tolerances in machining of wide, mating flanges and journalled shafts and bearings produce flamtightness of enclosure joints
- Dead end (EDS) or through feed (EDSC) hubs – 3/4" or 1" sizes

## Options:

Description	Suffix
• For use in Group B hazardous areas .....	<b>GB<sup>A</sup></b>
• Copper-free aluminum bodies and covers .....	<b>SA</b>

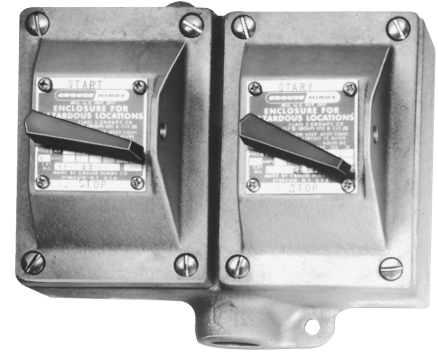
*For single- and two-gang units*

<sup>A</sup>Seals must be installed within 1/2" of each conduit opening in Division 1.

<sup>B</sup>Dimensions are approximate, not for construction purposes.



EDSC2199



EDSC2299

## Certifications and compliances:

### NEC/CEC:

- Class I, Divisions 1 & 2, Groups B<sup>A</sup>, C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, Groups F, G
- Class III

### UL standard:

- UL1203

### CSA standard:

- C22.2 No. 30

### Environmental ratings:

- NEMA/EEMAC 3, 7B<sup>A</sup>CD, 9EFG

## Standard materials:

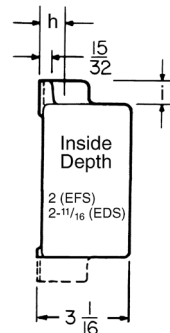
- Bodies – Feraloy iron alloy (U.S.); copper-free aluminum (Canada)
- Shafts and bushings – stainless steel
- Sealing enclosures – copper-free aluminum

## Standard finishes:

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

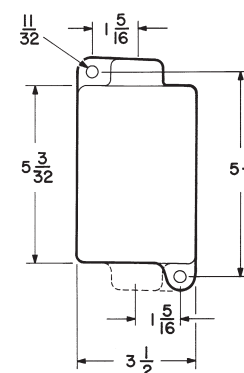
## Dimensions<sup>B</sup> (in inches):

### Side view

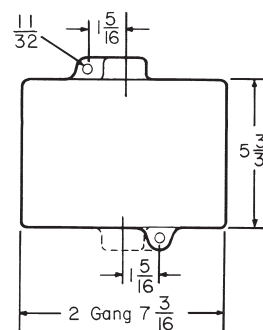


Hub size	h	i
3/4"	7/8	13/16
1"	1	15/16

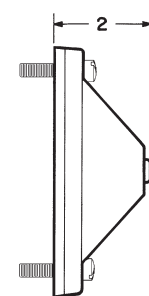
### Front view



Single-gang



Two-gang



Surface covers have same length and width as single- and two-gang bodies.

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## Ordering information:

### With Allen-Bradley Bulletin 600 switches

No. of poles	Maximum horsepower ratings		
	115-230 VAC	115-230 VDC	Cat. #
1	1		A B BUL 600 TOX4
2	1	0.75	A B BUL 600 TOX5

No. of poles	Hub size	Cat. # Dead end	Cat. # Through feed
<b>Single-gang</b>			
1	3/4"	EDS2199 ⊕	EDSC2199 ⊕
	1"	EDS3199 ⊕	EDSC3199 ⊕
2	3/4"	EDS21100 ⊕	EDSC21100 ⊕
	1"	EDS31100 ⊕	EDSC31100 ⊕
<b>Two-gang</b>			
1	3/4"	EDS2299 ⊕	EDSC2299 ⊕
	1"	EDS3299 ⊕	EDSC3299 ⊕
2	3/4"	EDS22100 ⊕	EDSC22100 ⊕
	1"	EDS32100 ⊕	EDSC32100 ⊕

### With General Electric switches

No. of poles	Maximum horsepower ratings			Cat. #
	115-230 VAC	115 VDC	230 VDC	
1	1	1	0.25	GE CR101 Y
2	1	1	1	GE CR101 H

No. of poles	Hub size	Cat. # Dead end	Cat. # Through feed
<b>Single-gang</b>			
1	3/4"	EDS21093 ⊕	EDSC21093 ⊕
	1"	EDS31093 ⊕	EDSC31093 ⊕
2	3/4"	EDS21094 ⊕	EDSC21094 ⊕
	1"	EDS31094 ⊕	EDSC31094 ⊕
<b>Two-gang</b>			
1	3/4"	EDS22093 ⊕	EDSC22093 ⊕
	1"	EDS32093 ⊕	EDSC32093 ⊕
2	3/4"	EDS22094 ⊕	EDSC22094 ⊕
	1"	EDS32094 ⊕	EDSC32094 ⊕

## Heater tables:

### 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		

⊕Includes one interchangeable heater. Select heater from the table below individual listings and use symbol number as second section of the catalog number. **Example:** EDS2199-P5. Insert symbol '0' (zero) to omit heater.

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

⊕Add GB suffix. Seals must be installed within 1/8" of each conduit opening for Group B usage.

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## Ordering information (continued):

### With Cutler-Hammer switches

No. of poles	Maximum horsepower ratings				Cat. #
	120-240 VAC	32 VDC	120 VDC	240 VDC	
1	1	0.25	0.25	0.25	WEST MST01
2	1	0.25	1	0.75	WEST MST02

No. of poles	Hub size	Cat. # Dead end	Cat. # Through feed
<b>Single-gang</b>			
1	3/4"	EDS21101 <sup>⓪</sup>	EDSC21101 <sup>⓪</sup>
	1"	EDS31101 <sup>⓪</sup>	EDSC31101 <sup>⓪</sup>
2	3/4"	EDS21102 <sup>⓪</sup>	EDSC21102 <sup>⓪</sup>
	1"	EDS31102 <sup>⓪</sup>	EDSC31102 <sup>⓪</sup>
<b>Two-gang</b>			
1	3/4"	EDS22101 <sup>⓪</sup>	EDSC22101 <sup>⓪</sup>
	1"	EDS32101 <sup>⓪</sup>	EDSC32101 <sup>⓪</sup>
2	3/4"	EDS22102 <sup>⓪</sup>	EDSC22102 <sup>⓪</sup>
	1"	EDS32102 <sup>⓪</sup>	EDSC32102 <sup>⓪</sup>

## Heater tables (continued):

### 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		

<sup>⓪</sup>Includes one interchangeable heater. Select heater from the table below individual listings and use symbol number as second section of the catalog number. **Example:** EDS2199-P5. Insert symbol '0' (zero) to omit heater.

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

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