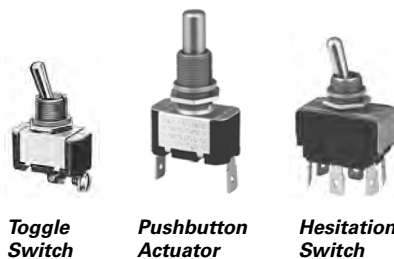


## E10 Series

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## Product Description

Cutler-Hammer® E10 switches from Eaton's electrical business are intended for general purpose light industrial use. Designed for retrofit and OEM applications, the one-hole mounted units feature a bright nickel plated lever and a 0.468"-32 diameter threaded bushing with a 0.068 x 0.035 inch (1.7 x 0.9 mm) deep keyway for anti-rotation. Mounting hardware, consisting of one hexagonal locknut, one knurled or hexagonal face nut, and #6-32 x 3/16" (where applicable) binding head terminal screw. All are furnished unassembled in individually sealed poly bags, packed 10 per carton.

## Standards and Certifications

- UL Recognized — File No. 2702
- CSA — File No. LR40068

## Technical Data and Specifications

### Toggle Switches

- AC Ratings:
  - 6 – 20A, 125V AC
  - 3 – 10A, 250V AC
  - Max. 3/4 hp @ 250V AC
- DC Ratings:
  - 6 – 20A, 28V DC
- Electrical Life: 6,000 cycles make/break at switch ampere rating
- Operation:
  - Slow make/slow break mechanism with butt action for AC and low voltage DC applications
  - Maintained and momentary contacts
- Poles/Throws: 1 through 4, single and double throw

### Mounting:

- One hole with threaded 0.468"-32 bushing and 0.068 x 0.035 inch (1.7 x 0.9 mm) deep keyway that serves as anti-rotational feature

- Lever Lengths: 0.563 inch (14.3 mm) or 0.688 inch (17.5 mm), bright nickel plated

- Terminals: Screw, 0.250 inch (6.4 mm) spade and solder lug

## Hesitation Switches

### Operation:

- Slow make/slow break mechanism with butt action for AC and low voltage DC applications; maintained contacts; ideal for reversing motor applications; patented interlock mechanism prevents operation of lever through centre position until manual pressure is momentarily relieved.

- AC Ratings:
  - 15A, 125V AC
  - 10A, 250V AC
  - Max. 3/4 hp at 250V AC

- DC Ratings:
  - 15A, 28V DC

- Poles/Throws: 2, 3 and 4, double throw only

### Mounting:

- One pole with threaded 0.468"-32 bushing and 0.068 x 0.049 inch (1.7 x 1.2 mm) deep keyway

- Lever Length: 0.687 inch (17.4 mm), stainless steel

- Terminals: Screw

## Pushbutton Actuators

- AC Ratings:
  - 6 – 15A, 125V AC (NO)
  - 3 – 10A, 250V AC (NO)
  - Max. 1/3 hp @ 125/250V AC

### Operation:

- Slow make/slow break mechanism
- Normally open contacts

- Poles/Throws: Single, single and double throw

### Mounting:

- One hole with 0.468"-32 threaded bushing and 0.068 x 0.035 inch (1.7 x 0.9 mm) deep keyway
- Two bushing heights: 11/16 inch (17.5 mm) and 11/32 inch (8.7 mm)





- Button Extensions: 17/32 inch (13.5 mm) and 1/4 inch (6.4 mm), bright nickel plated

- Terminals: Screw

**Product Selection**

**Toggle Switches**

**Table 2-1. Toggle Switches — AC Rated — Minimum Order Quantity 10 Pieces**

	Nominal AC Ratings			Poles and Throw ①	Function — Circuit with Lever In ②			Screw Terminal	0.250 Inch (6.4 mm) Spade Terminal	Solder Lug	
	Amperes		hp		UP Position	CENTRE Position	DOWN Position — Keyway	Catalogue Number	Catalogue Number	Catalogue Number	
	125V	250V	250V								
 <b>1-Pole</b>	<b>1-Pole</b>										
	6 15 20	3 10 10	— 3/4 3/4	1 P.S.T.	ON	None	OFF	E10T106AS E10T115AS E10E120AS	E10T106AP E10T115AP E10E120AP	E10T106AL E10T115AL E10E120AL	
	6 15 20	3 10 10	— 3/4 3/4	1 P.D.T.	ON	OFF	ON	E10T106DS E10T115DS E10E120DS	E10T106DP E10T115DP —	— E10T115DL —	
	6 15 20	3 10 10	— 3/4 3/4	1 P.D.T.	ON	None	ON	E10T106ES E10T115ES E10E120ES	— E10T115EP —	— E10T115EL —	
	—	10	1/2	1 P.S.T. 1 P.D.T. 1 P.D.T. 1 P.D.T.	OFF ON ON (ON)	None OFF None OFF	(ON) (ON) (ON) (ON)	E10T115BS E10T115FS E10T115HS E10T115GS	E10T115BP E10T115FP E10T115HP E10T115GP	— — — —	
	 <b>2-Pole</b>	<b>2-Pole</b>									
		6 15 20	3 10 10	— 3/4 3/4	2 P.S.T.	ON	None	OFF	E10T206AS E10T215AS E10E220AS	E10T206AP E10T215AP E10E220AP	— E10T215AL E10E220AL
		6 15 20	3 10 10	— 3/4 3/4	2 P.D.T.	ON	OFF	ON	E10T206DS E10T215DS E10E220DS	E10T206DP E10T215DP E10E220DP	— E10T215DL —
		6 15 20	3 10 10	— 3/4 3/4	2 P.D.T.	ON	None	ON	E10T206ES E10T215ES E10E220ES	— E10T215EP —	— E10T215EL —
		15	10	1/2	2 P.S.T. 2 P.D.T. 2 P.D.T.	OFF ON (ON)	None None OFF	(ON) (ON) (ON)	E10T215BS E10T215HS E10T215GS	— E10T215HP E10T215GP	— — —
		 <b>3-Pole</b>	<b>3-Pole</b>								
	15		10	3/4	3 P.S.T. 3 P.D.T. 3 P.D.T.	ON ON ON	None OFF None	OFF ON ON	E10E315AS E10E315DS E10E315ES	E10E315AP E10E315DP E10E315EP	— E10E315DL E10E315EL
 <b>4-Pole</b>	<b>4-Pole</b>										
	15	10	3/4	4 P.S.T. 4 P.D.T. 4 P.D.T.	ON ON ON	None OFF None	OFF ON ON	E10E415AS E10E415DS E10E415ES	— — —	E10E415AL E10E415DL E10E415EL	

① See Figure 2-1 Circuit Arrangements on Page 2-4.

② ( ) = Momentary contacts, spring return action.

E10 Series, Hesitation Switches and Actuators

Hesitation Switches

Table 2-2. Hesitation Switches — Special Purpose — Minimum Order Quantity 10 Pieces

Approximate Dimensions in Inches (mm)	Nominal Ratings				Operation	Function — Circuit with Lever In			Poles and Throw ①	Screw Terminal  Catalogue Number
	Amperes		hp			UP Position	CENTRE Position	DOWN Position — Keyway		
	28V DC	125V AC	250V AC	250V AC						
	15	15	10	3/4	Maintained	ON	OFF	ON	2 P.D.T. 3 P.D.T. 4 P.D.T.	E10E215SS E10E315SS E10E415SS

① See Figure 2-1 Circuit Arrangements below.

**Note:** Interlock mechanism prevents operation of lever through the centre position until pressure is momentarily relieved. Designed for control and protection of reversing motors.

Pushbutton Actuators

Table 2-3. Pushbutton Actuators — Minimum Order Quantity 10 Pieces

Approximate Dimensions in Inches (mm)	Nominal Ratings					Poles and Throw ②	Contacts	Bushing Length Inches (mm) Dim. "A"	Button Extension Inches (mm) Dim. "B"	Typical Maximum Operating Force	Screw Terminal	Spade Terminal 0.250 Inch (6.4 mm)
	Amperes AC		hp		Catalogue Number						Catalogue Number	
	125V	250V	125 -	250V								
	NO	NC	NO	NC								
	6	—	3	—	—	1 P.S.T.	NO	0.69 (17.5) 0.34 (8.6)	0.53 (13.5) 0.25 (6.4)	0.9 lbs.	E10P106RS E10P106JS	E10P106RP —
	15	—	10	—	1/3	1 P.S.T.	NO	0.69 (17.5) 0.34 (8.6)	0.53 (13.5) 0.25 (6.4)	0.9 lbs.	E10P115RS E10P115JS	E10P115RP —
	15	10	10	5	1/4 ③	1 P.D.T.	NO, NC	0.69 (17.5)	0.53 (13.5)	1.0 lbs.	E10P115LS	—

② See Figure 2-1 Circuit Arrangements below.

③ Rated 1/4 hp at 125V, 1/2 hp at 250V.

Circuit Arrangements

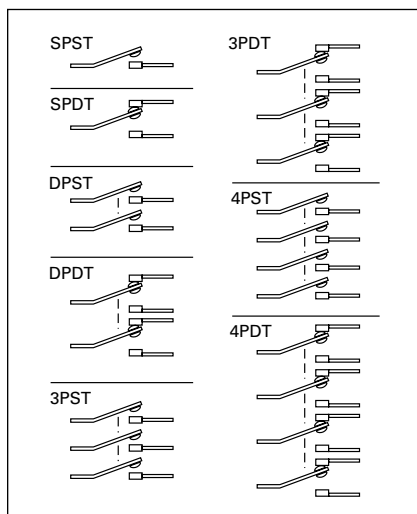
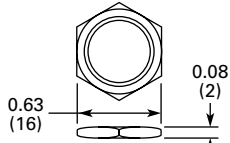
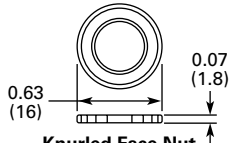
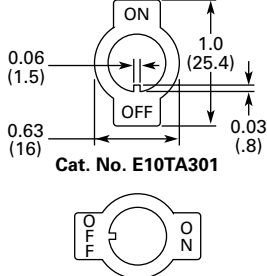



Figure 2-1. Circuit Arrangements

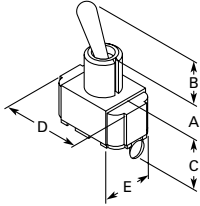
**Accessories**

**Table 2-4. Accessories — Minimum Order Quantity 100 Pieces**

Description	Material/Notes	Catalogue Number	Approximate Dimensions in Inches (mm)
Hexagon Locknut	Zinc-Chromate Treated Steel	<b>E10TA101</b>	 <p>Hexagon Locknut Cat. No. E10TA101</p>
Knurled Face Nut	Zinc-Chromate Treated Steel	<b>E10TA102</b>	 <p>Knurled Face Nut Cat. No. E10TA102</p>
Internal Tooth Lockwasher	Cadmium Plated Steel	<b>E10TA103</b>	
Terminal Screws	#6-32 x 3/16" Binding Head	<b>E10TA201</b>	
Spade Terminal Adapter — 0.250 inch (6.4 mm)	Assembles to Screw Terminals	<b>E10TA202</b>	
ON-OFF Indicating Plates — Vertical Orientation Horizontal Orientation	Burnished Nickel Finish Steel	<b>E10TA301 E10TA302</b>	 <p>Cat. No. E10TA301</p> <p>Cat. No. E10TA302</p>
Flip-Up Guard for Toggle Switches		<b>E10TA104</b>	
Fixed Shroud for Toggle Switches		<b>E10TA105</b>	

Dimensions

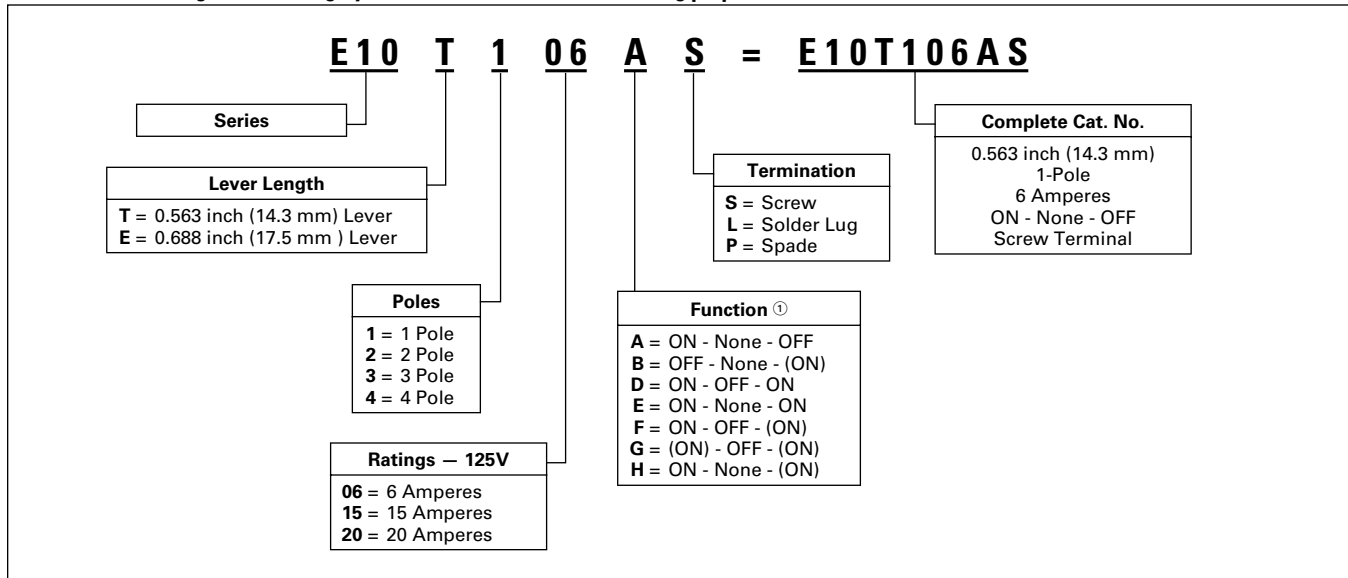
Table 2-5. Toggle Switch — Approximate Dimensions

	No. of Poles	Operation	Approximate Dimensions in Inches (mm)										
			Bushing Length A	Lever Length B	Screw Terminals			Spade Terminals			Solder Lug		
					C	D	E	C	D	E	C	D	E
	1	Momentary & Maintained	0.47 (11.9)	0.56 (14.2)	1.00 (25.4)	1.17 (29.7)	0.63 (16.0)	1.13 (28.7)	1.13 (28.7)	0.63 (16.0)	1.00 (25.4)	1.13 (28.7)	0.63 (16.0)
	2	Maintained	0.47 (11.9)	0.56 (14.2)	1.06 (26.9)	1.31 (33.3)	0.75 (19.1)	1.19 (30.2)	1.31 (33.3)	0.75 (19.1)	1.06 (26.9)	1.31 (33.3)	0.75 (19.1)
		Momentary	0.47 (11.9)	0.56 (14.2)	1.25 (31.8)			1.31 (33.3)			1.25 (31.8)		
	3	Maintained	0.47 (11.9)	0.69 (17.5)	1.27 (32.3)	1.34 (34.0)	1.44 (36.6)	1.37 (34.8)	1.34 (34.0)	1.44 (36.6)	1.23 (31.2)	1.34 (34.0)	1.44 (36.6)
4	Maintained	0.47 (11.9)	0.69 (17.5)	1.20 (30.5)	1.30 (33.0)	1.40 (35.6)	1.30 (33.0)	1.34 (34.0)	1.40 (35.6)	1.23 (31.2)	1.34 (34.0)	1.44 (36.6)	

Note: Spade terminal adapters are used on 6 ampere, 20 ampere and momentary screw terminal switches, adding 0.42 (10.7) to dimension C.

Catalogue Number Structure

Table 2-6. E10 Catalogue Numbering System — Not to be used for ordering purposes



① ( ) = Momentary contacts, spring return action.