



Product Description

The E10 switches from Eaton's Electrical Sector are intended for general purpose light industrial use. Designed for retrofit and OEM applications.

Features

General Purpose Toggles

- Various circuit functions include maintained and momentary
- Poles include from single-pole single-throw to four-pole double-throw
- Spade, screw, and solder terminations available
- Numerous ratings
- Short 11/32 in and tall 15/32 in bat lever available
- Standard 15/32–32 thd.
- Hardware furnished assembled

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Heavy-Duty Hesitation Switches

- One-hole panel mount
- Three position switch offers unique positive center stop feature to assure lever cannot be thrown from one side through the center OFF position without stopping
 - Design feature is a major acceptance for motor reversing and speed control applications
- Prevents motor damage resulting from high current generation by counter EMF of the armature at the time of reversing
- Known as anti-plugging, hesitation, positive stop or positive off switch

Non-Illuminated AC Rated Pushbuttons

- One-hole panel mount
- Medium-duty
- Spade and screw terminations available
- Various bushing lengths and button extensions
- Numerous ampere ratings with horsepower ratings

Standards and Certifications

- UL Recognized
- CSA—File No. LR40068

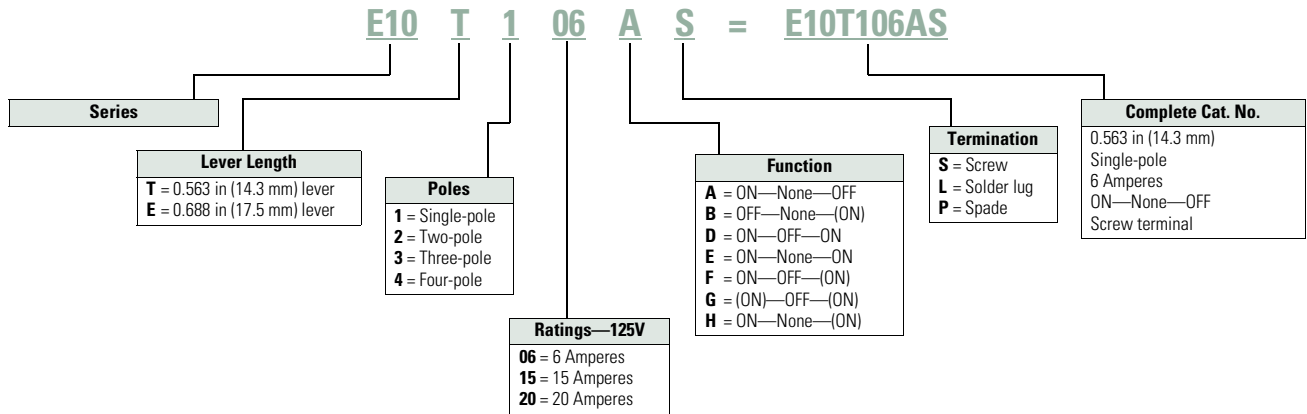


Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

Toggle Switches—E10 Series

Not to be used for ordering purposes



Product Selection

Toggle Switches

E10 Series—AC Rated—Minimum Order Quantity 10 Pieces

	Nominal AC Ratings			Poles and Throw ①	Function—Circuit with Lever In			Screw Terminal Catalog Number	0.250 in (6.4 mm) Spade Terminal Catalog Number	Solder Lug Catalog Number
	Amperes 125V	hp 250V	hp 50V		UP Position	CENTER Position	DOWN Position—Keyway			
Single-Pole										
	Single-Pole									
	6	3	—	1 P.S.T.	ON	None	OFF	E10T106AS	E10T106AP	E10T106AL
	15	10	3/4					E10T115AS	E10T115AP	E10T115AL
	20	10	3/4					E10E120AS	E10E120AP	E10E120AL
	6	3	—	1 P.D.T.	ON	OFF	ON	E10T106DS	E10T106DP	—
	15	10	3/4					E10T115DS	E10T115DP	E10T115DL
	20	10	3/4					E10E120DS	—	—
	6	3	—	1 P.D.T.	ON	None	ON	E10T106ES	—	—
	15	10	3/4					E10T115ES	E10T115EP	E10T115EL
	20	10	3/4					E10E120ES	—	—
	—	10	1/2	1 P.S.T.	OFF	None	(ON)	E10T115BS	E10T115BP	—
				1 P.D.T.	ON	OFF	(ON)	E10T115FS	E10T115FP	—
				1 P.D.T.	ON	None	(ON)	E10T115HS	E10T115HP	—
			1 P.D.T.	(ON)	OFF	(ON)	E10T115GS	E10T115GP	—	
Two-Pole										
	Two-Pole									
	6	3	—	2 P.S.T.	ON	None	OFF	E10T206AS	E10T206AP	—
	15	10	3/4					E10T215AS	E10T215AP	E10T215AL
	20	10	3/4					E10E220AS	E10E220AP	E10E220AL
	6	3	—	2 P.D.T.	ON	OFF	ON	E10T206DS	E10T206DP	—
	15	10	3/4					E10T215DS	E10T215DP	E10T215DL
	20	10	3/4					E10E220DS	E10E220DP	—
	6	3	—	2 P.D.T.	ON	None	ON	E10T206ES	—	—
	15	10	3/4					E10T215ES	E10T215EP	E10T215EL
	20	10	3/4					E10E220ES	—	—
	15	10	1/2	2 P.S.T.	OFF	None	(ON)	E10T215BS	—	—
				2 P.D.T.	ON	None	(ON)	E10T215HS	E10T215HP	—
				2 P.D.T.	(ON)	OFF	(ON)	E10T215GS	E10T215GP	—
Three-Pole										
	Three-Pole									
	15	10	3/4	3 P.S.T.	ON	None	OFF	E10E315AS	E10E315AP	—
				3 P.D.T.	ON	OFF	ON	E10E315DS	E10E315DP	E10E315DL
			3 P.D.T.	ON	None	ON	E10E315ES	E10E315EP	E10E315EL	
Four-Pole										
	Four-Pole									
	15	10	3/4	4 P.S.T.	ON	None	OFF	E10E415AS	—	E10E415AL
				4 P.D.T.	ON	OFF	ON	E10E415DS	—	E10E415DL
			4 P.D.T.	ON	None	ON	E10E415ES	—	E10E415EL	

Note

① See Circuit Diagrams on Page V7-T1-6.

Hesitation Switches

Heavy-Duty Hesitation Switch



E10 Series—Special Purpose—Minimum Order Quantity 10 Pieces

Nominal Ratings				Function—Circuit with Lever In...					Poles and Throw ①	Screw Terminal Catalog Number
Amperes		hp		Operation	UP Position	CENTER Position	DOWN Position—Keyway			
28 Vdc	125 Vac	250 Vac	250 Vac							
15	15	10	3/4	Maintained	ON	OFF	ON	2 P.D.T.	E10E215SS	
								3 P.D.T.	E10E315SS	
								4 P.D.T.	E10E415SS	

Pushbuttons

One-Hole Mounted Medium-Duty, Mom. Contact



E10 Series—Minimum Order Quantity 10 Pieces

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

Accessories

Toggle Switches Accessories—Minimum Order Quantity 100 Pieces

Description	Material/Notes	Catalog Number
Hexagon locknut	Zinc-chromate treated steel	E10TA101
Knurled face nut	Zinc-chromate treated steel	E10TA102
Internal tooth lockwasher	Cadmium plated steel	E10TA103
Terminal screws	#6-32 x 3/16 in binding head	E10TA201
Spade terminal adapter—0.250 in (6.4 mm)	Assembles to screw terminals	E10TA202
ON-OFF indicating plate—vertical orientation	Burnished nickel finish steel	E10TA301
OFF-ON indicating plate—horizontal orientation	Burnished nickel finish steel	E10TA302

E10TA104

Flip-up guard for toggle switches	E10TA104
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E10TA105

Fixed shroud for toggle switches	E10TA105
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Notes

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

① See Circuit Diagrams on **Page V7-T1-6**.

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

Technical Data and Specifications

Toggle Switches

Description	Specification
AC ratings	6–20A, 125 Vac 3–10A, 250 Vac Max. 3/4 hp at 250 Vac
DC ratings	6–20A, 28 Vdc
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 in-32 bushing and 0.068 x 0.035 in (1.7 x 0.9 mm) deep keyway that serves as anti-rotational feature
Lever lengths	0.563 in (14.3 mm) or 0.688 in (17.5 mm), bright nickel plated
Terminals	Screw, 0.250 in (6.4 mm) spade and solder lug

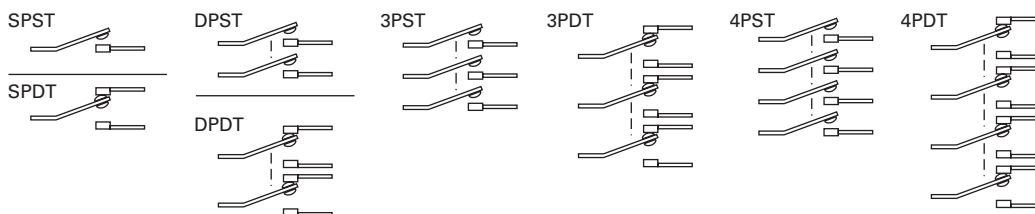
Hesitation Switches

Description	Specification
Operation	Slow make/slow break mechanism with butt action for AC and low voltage DC applications; maintained contacts; ideal for reversing motor applications; interlock mechanism prevents operation of lever through center position until manual pressure is momentarily relieved
AC ratings	15A, 125 Vac 10A, 250 Vac Max. 3/4 hp at 250 Vac
DC ratings	15A, 28 Vdc
Poles/throws	2, 3 and 4, double throw only
Mounting	Single-pole with threaded 0.468 in-32 bushing and 0.068 x 0.049 in (1.7 x 1.2 mm) deep keyway
Lever length	0.687 in (17.4 mm), stainless steel
Terminals	Screw

Pushbutton Actuators

Description	Specification
AC ratings	6–15A, 125 Vac (NO) 3–10A, 250 Vac (NO) Max. 1/3 hp at 125/250 Vac
Operation	Slow make/slow break mechanism Normally open contacts
Poles/throws	Single, single and double throw
Mounting	One hole with 0.468 in-32 threaded bushing and 0.068 x 0.035 in (1.7 x 0.9 mm) deep keyway Two bushing heights: 11/16 in (17.5 mm) and 11/32 in (8.7 mm)
Button extensions	17/32 in (13.5 mm) and 1/4 in (6.4 mm), bright nickel plated
Terminals	Screw

Circuit Diagrams



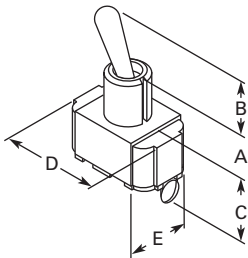
Dimensions

Approximate Dimensions in Inches (mm)

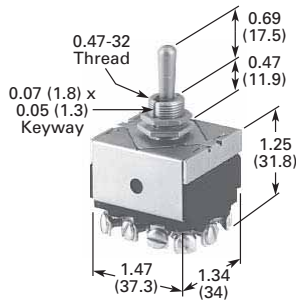
Toggle Switch Dimensions

No. of Poles	Operation	Bushing Length A	Lever Length B	Screw Terminals			Spade Terminals			Solder Lug		
				C	D	E	C [Ⓢ]	D	E	C	D	E
1	Momentary and 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)	0.75 (19.1)	1.31 (33.3)	1.31 (33.3)	0.75 (19.1)	1.25 (31.8)	1.31 (33.3)	0.75 (19.1)
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)

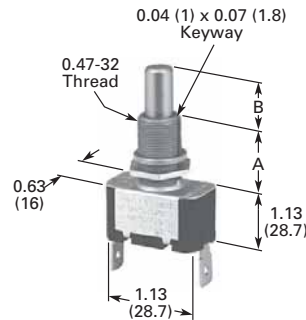
Toggle Switch



Hesitation Switch

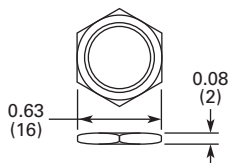


Pushbutton Actuator

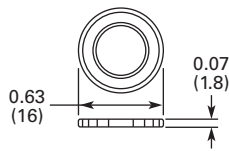


Accessories

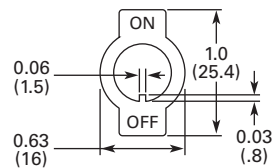
E10TA101 Hexagon Locknut



E10TA102 Knurled Face Nut



E10TA301 ON-OFF Indicating Plate—Vertical Orientation



E10TA302 ON-OFF Indicating Plate—Horizontal Orientation



Note

Ⓢ Spade terminal adapters are used on 6 ampere and momentary screw terminal switches, adding 0.42 in (10.7 mm) to dimension C.



Product Description

Designed for general purpose and OEM applications, this line of toggle switches provides a high IP68 rating for demanding environments.

Features

Molded-In Screw Terminal

- Completely sealed against dust, moisture and other contaminants
- One-hole mounted bushing for easy installation
- Multi-circuits offered
- Two- and three-position with maintained and momentary action
- Molded-in terminal inserts and terminals numbers
- Single- and two-pole circuitry

Econoswitch

- Environmentally sealed
- Single- and two-pole circuitry
- One-hole mounting for easy installation
- Multi-circuits
- Two- and three-position with maintained and momentary action
- Three types of termination offered as standard

Contents

Description

Environmentally Sealed Toggle Switches—E10E

Product Selection

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Econoswitch **V7-T1-9**

Switch Guard **V7-T1-9**

Technical Data and Specifications **V7-T1-10**

Dimensions **V7-T1-11**

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Standards and Certifications

- UL—File number E15346; Guide card number is WOYR2
- CSA—LR40068, class number 6241



UL and CSA Nominal Ratings

Catalog Number	125 Vac	250 Vac
Amperes		
E10E118xx	18	9
E10E218xx	18	9
Single-Phase hp		
E10E118xx	1/4	1/2
E10E218xx	1/2	1
Three-Phase hp		
E10E118xx	—	—
E10E218xx	—	—

Switch Guard

- For use with two-position switch
- Cover closure transfers switch toggle lever to OFF position
- One-hole mounted mounting style
- Cover is molded out of red thermoset molding material
- Guard cover is spring-loaded to either close or lock in open position
- Prevents accidental operation at switches

Options






Note: Contact your local Eaton Sales Representative for more information.

- Non-UL Recognized devices
 - Alternate toggle levers
 - Locking toggle levers
 - Rocker buttons
- Special mounting hardware
- Mounting hardware furnished assembled
- Terminal screws furnished assembled
- Special circuits
- Panel seal, part number 32-341
- Spade terminal adapters available

Product Selection






Molded-In Screw Terminal

E10E Series—Molded-In Screw Terminal

	Nominal AC Ratings					Circuit with Lever Position			Catalog Number
	Amperes		Single-Phase hp		Three-Phase hp	Up	Center	Down (Keyway)	
	125V	250V	125V	250V	125/250V				
Single-Pole	Single-Pole								
	18	9	1/4	1/2	—	ON	OFF	ON	E10E118DM
						ON	NONE	OFF	E10E118AM
						ON	NONE	ON	E10E118EM
Two-Pole	Two-Pole								
	18	9	1/2	1	—	ON	OFF	ON	E10E218DM
						ON	NONE	OFF	E10E218AM
						ON	NONE	ON	E10E218EM

Econoswitch

E10E Series—Econoswitch

	Current Ratings—Amperes							Circuit with Lever Position			Screw Terminal Catalog Number	Solder Lug Terminal Catalog Number	Spade Terminal Catalog Number
	Type of Operation	28 Vdc			115 Vac, 60 or 400 Hz			Up	Center	Down (Keyway)			
		Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load						
Single-Pole	Single-Pole												
	Maintained	5	20	15	3	15	10	ON	OFF	ON	E10E118DS	E10E118DL	E10E118DP
	Maintained	5	20	15	3	15	10	ON	NONE	OFF	E10E118AS	E10E118AL	E10E118AP
	Maintained	5	20	15	3	15	10	ON	NONE	ON	E10E118ES	E10E118EL	E10E118EP
	Momentary	4	15	10	2	15	7	ON ^①	OFF	ON ^①	E10E118GS	E10E118GL	E10E118GP
	Momentary	4	15	10	2	15	7	OFF	NONE	ON ^①	E10E118BS	E10E118BL	E10E118BP
Two-Pole	Two-Pole												
	Maintained	7	20	15	4	15	15	ON	OFF	ON	E10E218DS	E10E218DL	E10E218DP
	Maintained	7	20	15	4	15	15	ON	NONE	OFF	E10E218AS	E10E218AL	E10E218AP
	Maintained	7	20	15	4	15	15	ON	NONE	ON	E10E218ES	E10E218EL	E10E218EP
	Momentary	5	18	10	2	11	8	ON ^①	OFF	ON ^①	—	E10E218GL	E10E218GP
	Momentary	5	18	10	2	11	8	OFF	NONE	ON ^①	E10E218BS	E10E218BL	E10E218BP

Switch Guard

Switch Guard

E10E Series—Switch Guard



	Catalog Number
Switch Guard	E10TA104

Note

① Momentary contact.

Technical Data and Specifications

E10E Series—Molded-In Screw Terminal

Description	Specification
Watertight seal	Per MIL-STD-108E and designed to meet IP68
Thermoset molding materials	Meet flame retardant requirements
Temperature range	–50° to 150°F (–46° to 66°C)
Life	20,000 operations at rated load; 40,000 operations mechanical life; 6,000 operations at hp ratings per UL and CSA requirements
Bushings	15/32 in-32 thread

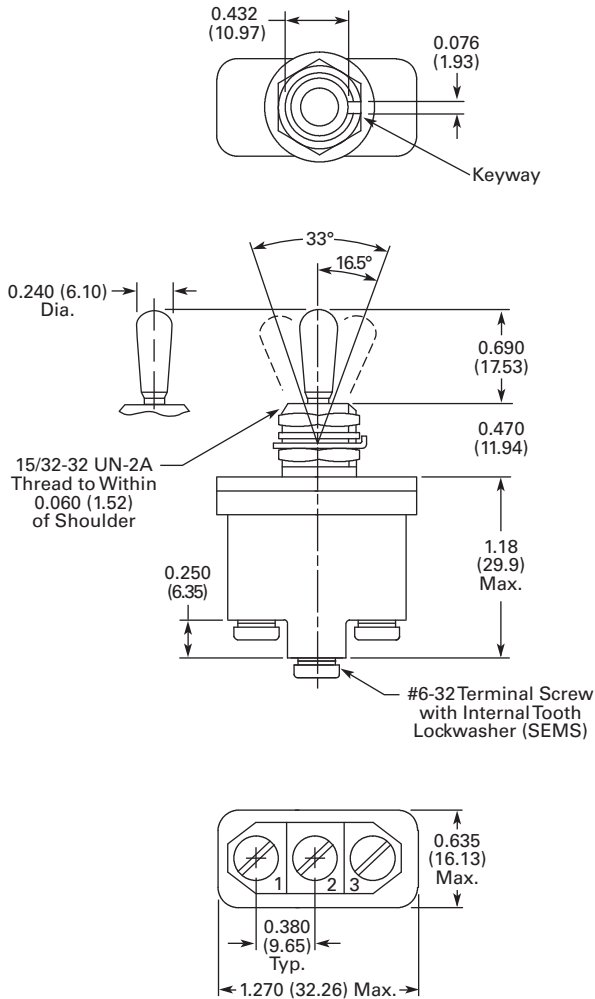
E10E Series—Econoswitch

Description	Specification
Watertight seal	Per MIL-STD-108E and designed to meet IP68
Type of terminal	Screws—6-32 UNC-22A Solder lug—0.125 in (3.17 mm) dia. hole Spade—0.250 in (6.35 mm) x 0.032 in (0.81 mm) thick
Life	50,000 operations at rated load; 100,000 operations mechanical life
Temperature range	–50° to 150°F (–46° to 66°C)

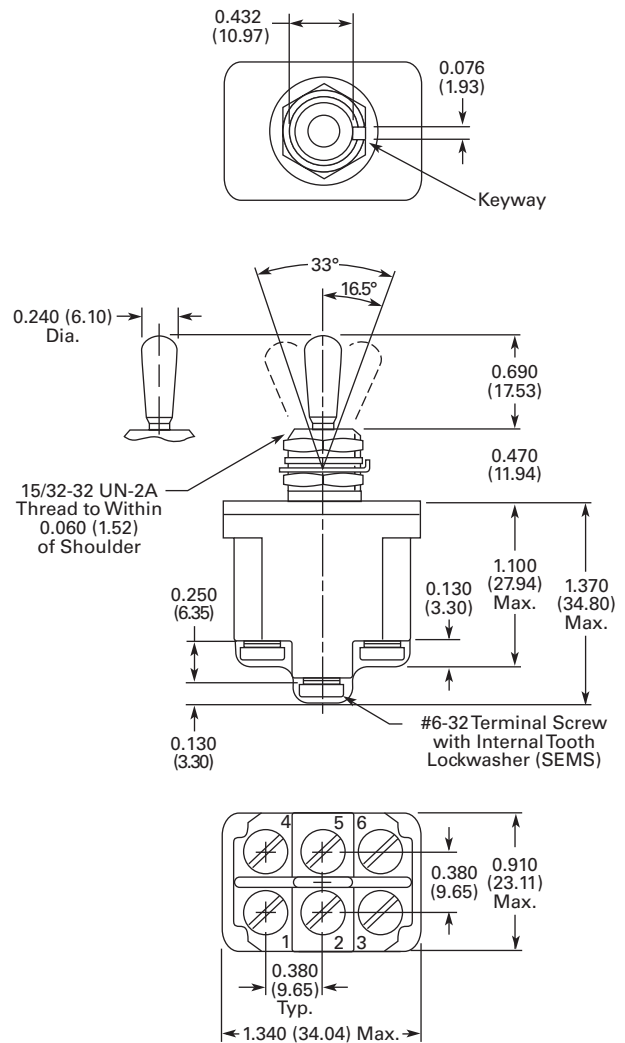
Dimensions

Approximate Dimensions in Inches (mm)

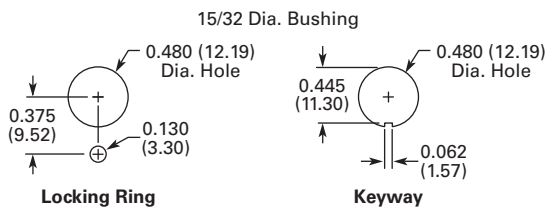
Single-Pole Molded-In Screw Terminal E10E Series



Two-Pole Molded-In Screw Terminal E10E Series



Toggle Switch Panel Cutout



1.2

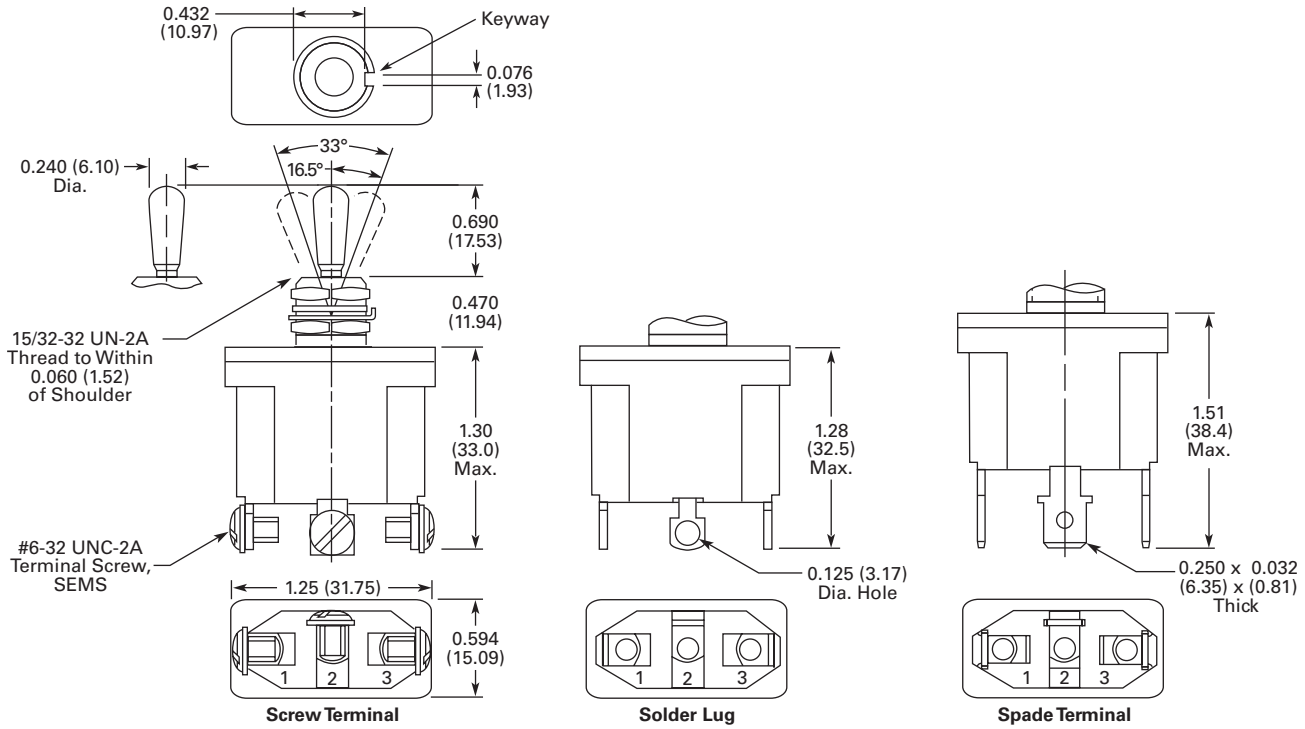
Pushbuttons and Indicating Lights

Environmentally Sealed Toggle Switches—E10E

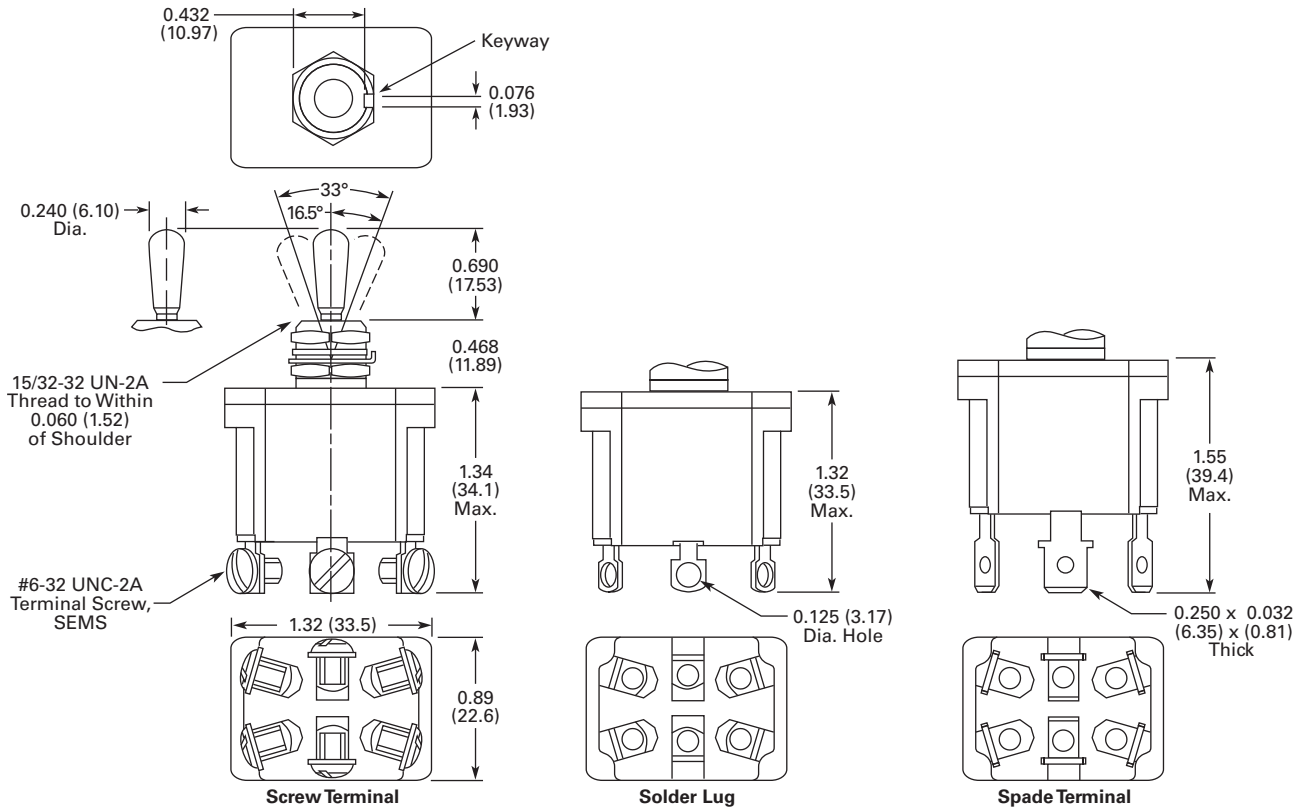
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Approximate Dimensions in Inches (mm)

Single-Pole Econoswitch E10E Series



Two-Pole Econoswitch E10E Series



Approximate Dimensions in Inches (mm)

Switch Guard

