

Heavy-Duty Factory Sealed 6P+ Switches

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Cutler-Hammer® E50 6P+ Limit Switches by Eaton’s electrical business were specifically designed to withstand the penetrating properties of cutting fluids and coolants, such as those used in the automotive industry, as well as extreme shock, vibration and temperature fluctuations. The one-piece, epoxy filled switch body is prewired at the factory to ensure leak-proof, submersible performance. This unique construction positively stops fluid from finding its way to any and all critical connections.

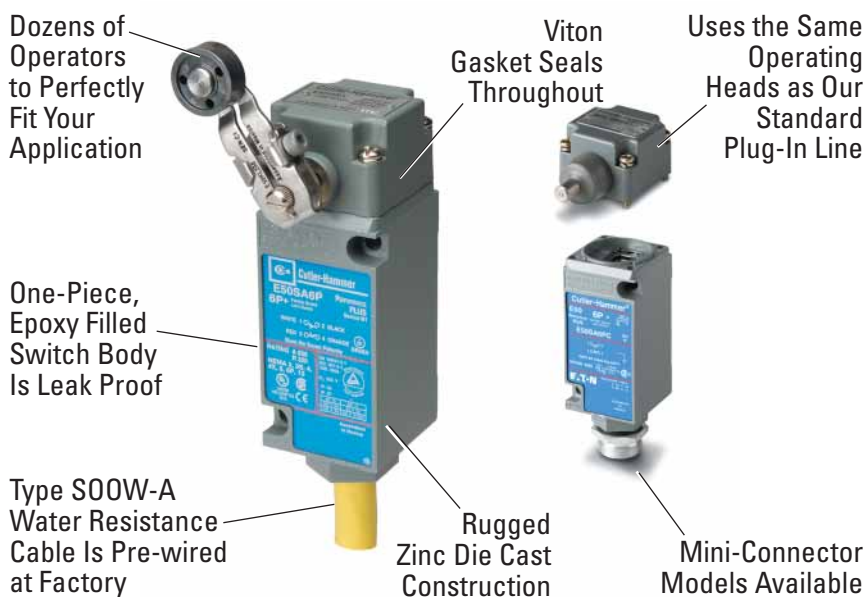
Our 6P+ switches can be ordered in separate components or as complete assembled devices. They are available with prewired 16 AWG cables or mini-connectors. Standard and custom cable lengths are available. As part of the E50 line, the 6P+ switches use the same operating heads as the standard E50 plug-in models to reduce the components you need to inventory.

Approvals

- UL Listed
- CSA Certified
- IEC.947.5.1
- TUV — E9271605E02

CE (where shown)







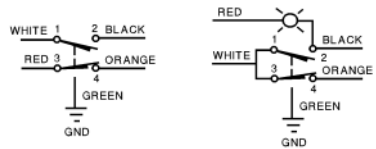

The Best Sealed, Most Durable Limit Switch You Can Buy



Product Features

- Manufactured to take the physical and environmental abuse (including cutting fluids and chemicals) of harsh industrial environments
- Modular, plug-in components (head and switch body) provide application flexibility, reduced inventory and less downtime
- Chemical resistant Viton gaskets, seals and boots are standard, and so are captive, posi-drive screws
- A special tertiary seal on the switch body prevents fluid from entering even when the operating head is not attached
- 600V rating, ridge-topped contacts and wiping action assure continuity even to logic level circuits
- Factory wired cable features a 350 pound pullout capacity
- Keyed, four direction head positioning. Standard 5° pre-travel and 90° total travel
- 24 – 120V AC/DC LED and 120V AC neon indicating lights available
- Rotary heads are field convertible CW, CCW, or both, without special tools
- Extended 5 year warranty

Model Selection — Assembled Switches — Standard (Connection is by 8-Foot Cable) ①

Assembled Switch 	Single Pole			Double Pole			
	Indicating Light:	None	LED (24 – 120V AC/DC)	Neon (120V AC)	None	LED (24 – 120V AC/DC)	Neon (120V AC)
Lever Sold Separately	Switch Body:	E50SA6P 1N.O.-1N.C.	E50SAL6P 1N.O.-1N.C.	E50SAN6P 1N.O.-1N.C.	E50SB6P 2N.O.-2N.C.	E50SBL6P 2N.O.-2N.C.	E50SBN6P 2N.O.-2N.C.
Operating Head Type ②		Catalog Number for Assembled Switches					
Side Rotary (requires an operating lever, see PG.05C.04.T.E) 	Standard Spring Return — E50DR1 ③	E50AR16P CE	E50ALR16P	E50ANR16P	E50BR16P	E50BLR16P	E50BNR16P
	Low Force Spring Return — E50DL1 ③	E50AL16P CE	E50ALL16P	E50ANL16P	E50BL16P	E50BLL16P	E50BNL16P
	Maintained Two-Position — E50DM1	E50AM16P CE	E50ALM16P	E50ANM16P	E50BM16P	E50BLM16P	E50BNM16P
Side Pushbutton, Spring Return — E50DS1 		E50AS16P CE	E50ALS16P	E50ANS16P	E50BS16P	E50BLS16P	E50BNS16P
Side Pushbutton, Adjustable Spring Return — E50DS2 		E50AS26P CE	E50ALS26P	E50ANS26P	E50BS26P	E50BLS26P	E50BNS26P
Side Push Roller, Spring Return — E50DS3 ④ 		E50AS36P CE	E50ALS36P	E50ANS36P	E50BS36P	E50BLS36P	E50BNS36P
Side Pushbutton, Maintained — E50DH1 		E50AH16P CE	E50ALH16P	E50ANH16P	E50BH16P	E50BLH16P	E50BNH16P
Wiring:		Single Pole 1N.O.-1N.C. (Must be same polarity) 			Double Pole 2N.O.-2N.C. (Same polarity each pole) 		

① Connection options (add the Code Suffix from the table below to the end of the Catalog Number):

Option	Catalog Number	Code Suffix
Mini-Connector ⑥	Single Pole (5-Pin Mini-Connector)	CSMS5D5CY1602
	Double Pole (9-pin Mini-Connector)	CSMS9D9CY1602
Cable Connection	12-foot cable length (standard)	12
	20-foot cable length (standard)	20
	Other lengths (special order)	Length in Feet


② For Operating Head specifications, see Page 4.

③ CW (clockwise) and CCW (counterclockwise) operation, easily convertible to CW only or CCW only operation.

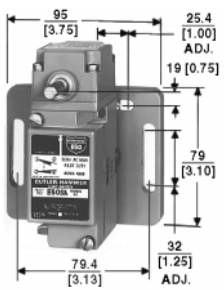

④ Roller can be converted in the field between horizontal and vertical.

⑤ For alternate wiring, use Code Suffix CW, see Page 6.


⑥ For a full selection of connector cables, see PG.05.05.T.E.

 Stocked product, typical order quantities guaranteed in stock.

Model Selection — Accessories (Continued)

Approximate Dimensions in mm [Inches]	Description	Catalog Number
	This is a mounting plate only 5/16 inch thick and includes the proper mounting bolts and nuts. The slots in the plate allow a maximum horizontal adjustment of 1 inch and vertical adjustment of 1-1/4 inches	E50KH3 ^①
	1/2 inch oiltight	E50KH6

^① Limit Switch not included.

 Stocked product, typical order quantities guaranteed in stock.

Specifications

Environmental Ratings	NEMA 1, 3, 3S, 4, 4X, 6, 6P, 13, IP67
Material of Construction	Zinc die cast
Switch Gasket Material	Viton [®]
Universal U.S./DIN Mounting Dimensions	1.16 in (30 mm) x 2.34 in (60 mm)
Conduit Entrance	1/2 in NPT threading
Contact Ratings	See below
Contact Operation	Snap action over center mechanism
Contact Material	Fine silver
Maximum Frequency of Operation	8000 operations per hour
Mechanical Life:	
Side Rotary	13,000,000 operations minimum
Side or Top Push	10,000,000 operations minimum
Electrical Life:	
Single Pole	1,000,000 operations typical at full load
Double Pole	100,000 operations typical at full load
Ambient Temperature Range — Standard	
Standard without Cable	14° to 250°F (-10° to 121°C)
Standard with Cable	14° to 221°F (-10° to 105°C)
Low Temperature without Cable	-40° to 250°F (-40° to 121°C)
Low Temperature with Cable	-40° to 221°F (-40° to 105°C)
Repeat Accuracy — Standard	
Side Operated	Within 0.0012 in
Top Operated	Within 0.0003 in
Side Rotary	Within 0.0014 in
Torque Requirements:	
Operating Head Screws	14 – 18 lb-in

Electrical Data — Maximum Contact Ratings (Same polarity each pole)

AC Volts	Current, Amperes			Voltamperes		DC Volts	Current, Amperes	
	Make	Break	Cont. ^②	Make	Break		Max. Make or Break	Cont. ^②

All Switches Except Gravity Return and Indicating Light Versions

NEMA A600 Rating						NEMA R300		
120	60	6	10	7200	720	125	0.22	1.0
240	30	3				250	0.11	1.0
480	15	1.5						
600	12	1.2						

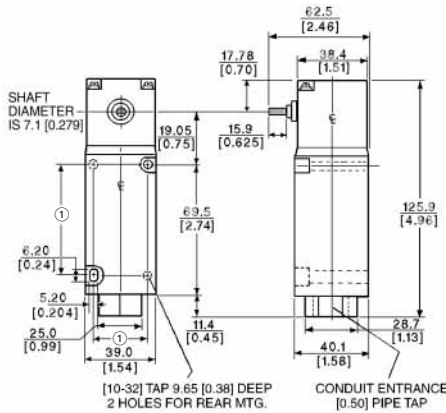
Switches with Indicating Lights (LED or Neon)

NEMA A150 Rating						NEMA R150		
120	60	6	10	7200	720	125	0.22	1.0

^② Thermal rating. Valid only if switch does not have to make or break.

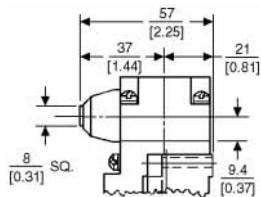
Approximate Dimensions in mm [Inches]

6P+ Limit Switch with Rotary Operating Head



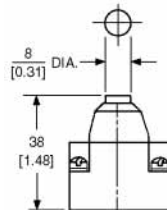
Side Push Operators

Pushbutton



Top Push Operators

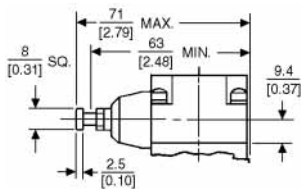
Pushbutton



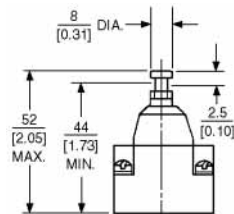
Wobble Operators

See Operators, PG.05C.04.T.E

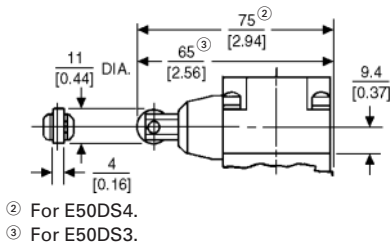
Adjustable Pushbutton



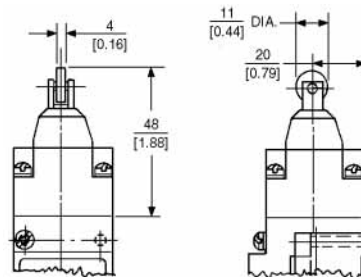
Adjustable Pushbutton



Roller



Roller



Maintained Pushbutton

