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E50 Heavy-Duty Plug-In Switches

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Drawings Online

E50 Heavy-Duty Plug-In Switches

Product Description

E50 Modular Plug-In Limit Switch Components from Eaton's electrical sector are the industry standard with versatility of design and high reliability for low maintenance, installation and inventory costs. Standard Viton gaskets, seals and boots and a zinc die cast enclosure provide exceptional chemical resistance to the common coolants, cleansing agents, and hydraulic fluids found in machine tool, automotive, waste water treatment and other heavy-duty industrial applications. Mounting dimensions accommodate both U.S. and DIN standards for easy retrofit installations. Super bright 24–120 Vac/dc LED indicating light versions simplify setup and troubleshooting operations.

Features

- Modular, plug-in components (head, body and receptacle) provide application flexibility, reduced inventory and less downtime
- Manufactured to take the physical and environmental abuse (including cutting fluids and chemicals) of harsh industrial environments
- Chemical resistant Viton gaskets, seals and boots are standard, and so are captive, posi-drive screws
- The switches have terminal identification on the nameplate for a visual wiring checkout without guesswork. Heads and switch bodies can be replaced without rewiring

- E50 devices can be ordered in separate components or as complete assembled switches
- 600V rating, ridge-topped contacts and wiping action assure continuity even to logic level circuits
- Keyed, four direction head positioning
- Standard 5° pre-travel and 90° total travel
- 24–120 Vac/dc LED and 120 Vac neon indicating lights available
- Rotary heads are field convertible CW, CCW, or both, without special tools
- Epoxy filled, pin connector or pigtail pin connector receptacles available

Standards and Certifications

- UL Listed
- CSA Certified
- IEC.947.5.1
- TUV—E9271605E02
- CE (where shown)

(UL) (CSA) CE

⚠ DANGER

THIS SENSOR IS NOT A SAFETY DEVICE AND IS NOT INTENDED TO BE USED AS A SAFETY DEVICE. This sensor is designed only to detect and read certain data in an electronic manner and perform no use apart from that, specifically no safety-related use. This sensor product does not include self-checking redundant circuitry, and the failure of this sensor product could cause either an energized or de-energized output condition, which could result in death, serious bodily injury, or property damage.

For Customer Service in the U.S. call 1-877-ETN CARE (386-2273), in Canada call 1-800-268-3578. For Application Assistance in the U.S. and Canada call 1-800-426-9184.

Product Selection

Assembled Switches—Standard

Assembled Switch

E50 Heavy-Duty Plug-In Switches, Assembled—Standard

	Single-Pole (5 Terminal Receptacle)			**Two-Pole (9 Terminal Receptacle)**				
Indicating Light:	**None**	**LED (24–120 Vac/dc)**	**Neon (120 Vac)**	**None**	**LED (24–120 Vac/dc)**	**Neon (120 Vac)**	**LED (24–120 Vac/dc)**	**Neon (120 Vac)**
Switch Body:	**E50SA 1NO-1NC**	**E50SAL 1NO-1NC**	**E50SAN 1NO-1NC**	**E50SB 2NO-2NC**	**E50SBL 2NO-2NC**	**E50SBN 2NO-2NC**	**E50SCL 1NO-2NC**	**—**
Receptacle: ①	**E50RA**	**E50RA**	**E50RA**	**E50RB**	**E50RB**	**E50RB**	**E50RB**	**E50RB**

Operating Head Type ②

Description	**Assembled Switch (Head + Receptacle + Body) Catalog Number**			**Assembled Switch (Head + Receptacle + Body) Catalog Number**				

Side Rotary

Side Rotary (requires an operating lever, see **Page V8-T2-80**)

Standard spring return—E50DR1 ③ $C\epsilon$	**E50AR1**	**E50ALR1**	**E50ANR1**	**E50BR1**	**E50BLR1**	**E50BNR1**	**—**	**—**
Low force spring return—E50DL1 ③ $C\epsilon$	**E50AL1**	**E50ALL1**	**E50ANL1**	**E50BL1**	**E50BLL1**	**E50BNL1**	**—**	**—**
Maintained two-position—E50DM1 $C\epsilon$	**E50AM1**	**E50ALM1**	**E50ANM1**	**E50BM1**	**E50BLM1**	**E50BNM1**	**—**	**—**

Side Pushbutton

Spring Return

Spring return—E50DS1 $C\epsilon$	**E50AS1**	**E50ALS1**	**E50ANS1**	**E50BS1**	**E50BLS1**	**E50BNS1**	**E50CLS1**	**—**

Adjustable Spring Return

Adjustable spring return—E50DS2 $C\epsilon$	**E50AS2**	**E50ALS2**	**E50ANS2**	**E50BS2**	**E50BLS2**	**E50BNS2**	**E50BLS2**	**E50CNS2**

Circuit Diagrams, see **Page V8-T2-65**.

Notes

① Connection options (add the code suffix from the table below to the end of the catalog number):

Option		**Mating Cordset Catalog Number**	**Code Suffix**
Mini-connector ④ (with epoxy filled receptacle)	Single-pole (5-pin mini-connector)	**CSMS5D5CY1602**	**P5** ⑤
	Two-pole (9-pin mini-connector)	**CSMS9D9CY1602**	**P9** ⑤
Micro-connector ④ (with epoxy filled receptacle)	Single-pole (5-pin micro-connector)	**CSDS5A5CY2202**	**A5** ⑤
Cable connection (with epoxy filled receptacle)	8 ft cable length	—	**S**
	12 ft cable length	—	**S12**
	20 ft cable length	—	**S20**
Manifold mount (rear wiring entrance)		—	**M**
20 mm conduit entrance		—	**20**

② For operating head specifications, see **Page V8-T2-59**.
③ CW (clockwise) and CCW (counterclockwise) operation, easily convertible to CW only or CCW only operation.
④ For a full selection of cable connectors, see **Tab 10**, **section 10.1**.
⑤ Refer to **Page V8-T2-65** for wiring diagrams.

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E50 Heavy-Duty Plug-In Switches, Operating Heads, continued

Description	Travel to Operate Contacts	Travel to Reset Contacts	Total Travel	Force to Operate Contacts	Minimum Return Force	Operating Temperature [1]		Catalog Number
						Without Cable	With Pre-wired Cable	
Top Push Roller								
Spring return	0.040 in	0.020 in	0.280 in	4 lbs	8 oz	14° to 250°F (–10° to 121°C)	14° to 221°F (–10° to 105°C)	**E50DT3**
Wobble Head, Spring Return (requires a wobble operator, see **Page V8-T2-80**)								
Standard duty	10°	6°	15°	2 in-lbs	2.4 in-oz	14° to 250°F (–10° to 121°C)	14° to 221°F (–10° to 105°C)	**E50DW1**
Heavy-duty high strength steel	10°	6°	15°	2 in-lbs	2.4 in-oz	14° to 250°F (–10° to 121°C)	14° to 221°F (–10° to 105°C)	**E50DW2**

Top Push Roller

Wobble Head, Spring Return

Switch Bodies

E50 Heavy-Duty Plug-In Switches, Switch Bodies

Switch Body Construction [1]	Single-Pole 1NO-1NC Catalog Number	Two-Pole 2NO-2NC Parallel Wired Indicator Light Catalog Number	Two-Pole 2NC-1NO Series Wired Indicator Light Catalog Number
Without indicating light	**E50SA** CE	**E50SB**	—
With LED indicating light 24–120 Vac/dc	**E50SAL**	**E50SBL**	**E50SCL**
With neon indicating light 120 Vac	**E50SAN**	**E50SBN**	—
Circuit Diagrams, see **Page V8-T2-65**.			

Note

[1] Indicating lights are supplied from the factory wired as shown in Circuit Diagrams on **Page V8-T2-65**. However, they can be easily re-connected to terminals 1 and 2 if necessary (SPDT).