

Features

Modular plug-in



Pre-wired receptacle
with pin connector



Pre-wired cable



Features

- UL Listed, CSA Certified.
- All Metal Captive Screws.
- Keyed, Four-Directional Head.
- Steel-Reinforced Diaphragm Seal Between Operational Head And Switch Body.
- Permanent Instructions for Adjusting Operational Head.
- Modular, Plug-In Housing
 1. Heavy-Duty, Bifurcated, Plug-In Prongs.
 2. Ample Receptacle Wiring Space with 1/2 - NPT threaded conduit opening.
 3. Stepped Terminals On Single Pole; Deep Center Trough On Double Pole.
- NEMA Type 6P Submersible
 1. Completely Sealed With Epoxy.
 2. STOOW-A Cable or Prewired Receptacle With Pin Connector.

Design

Modular Plug-In Housing

These heavy duty plug-in limit switches may be provided as complete devices using a composite catalog number; or, separately as components; operating head, plug-in module and base receptacle.

Example:

Complete Switch:

3SE03-AR1

Single Pole, Double Throw contacts with Side Rotary, Momentary Head

Components

3SE03-SA ①

Single Pole, Double Throw Plug-in Module

3SE03-DR1

Side Rotary Head, Momentary

3SE03-RA ①

Standard, Single Pole Receptacle, 1 NO + 1 NC

Since components may be interchanged, operating heads, plug-in modules and receptacles may be combined to satisfy most of your everyday limit switch requirements. This leads to less inventory with greater flexibility.

Operating heads include side rotary; plain and roller plunger; and, wobble. A variety of levers are available.

The die-cast housing has an epoxy finish to protect against corrosion. All screws on the module and head are captive.

NEMA Type 6P Submersible

These heavy duty prewired, factory sealed switches meet the demanding enclosure requirements of UL (NEMA) Type 3, 4, 4X, 6P, 11, 12, and 13. They are intended for wet environments where the integrity of the threaded conduit and switch body seals must be assured.

The switch body cavity including threaded conduit entry is completely sealed with epoxy. An 8 foot, 5 or 9 conductor STOOW-A cable; or 5 or 9 pin prewired receptacle with pin connector is provided as standard.

Switches are provided as complete devices using composite catalog numbers; or, separately as components; operating head and switch body.

UL (NEMA) Type 6P switches are designed to provide a degree of protection against the entry of water during prolonged submersion at limited depths (tested with a 6 foot head of water for 24 hours).

Both the Modular Plug-in and the (NEMA) Type 6P Submersible styles provide 60 Amp make and 6 Amp break—120V AC and 10 Amp continuous current for 120, 240, 480 and 600V AC. The circuit contact configuration depends on the device selected and the application criteria.

Switches are available with momentary or maintained operating heads; and, single pole, double pole or center neutral (modular, plug-in only) contact configurations.

3SE03 limit switches offer a new standard of reliability and quality in automatic control circuits under heavy duty applications.

① Plug-in module and receptacle are keyed.

3SE03 North American Limit Switches

Specifications

**Non-safety
Modular, plug-in and NEMA type 6P submersible**

Technical data

Type	Modular, Plug-in and NEMA Type 6P Submersible					
Mechanical life	Side rotary: 13×10^6 make-break operations minimum All others: 10×10^6 make-break operations minimum					
Electrical life	Single Pole: 1×10^6 operations typical at full load Double Pole: 1×10^5 operations typical at full load					
Switching frequency	8×10^3 make-break operations per hour (maximum)					
Operating point accuracy	Side operated: 0.0012 in. (modular, plug-in housing) Side rotary: 0.0014 in. (modular plug-in). Top operated: 0.003 in. (modular, plug-in housing)					
Cable entry	1/2 in.-NPT, Prewired Cable or Prewired Receptacle with Pin Connector					
Ambient temperature	Without Cable: -10° to $+121^\circ\text{C}$, 14° to 250°F With Cable: -10° to $+105^\circ\text{C}$, 14° to 221°F					
Degree of protection	NEMA Type 1, 3, 3S, 4, 4X, 6, 6P, 11, 13; IP67					
Conductor size	22–12 AWG (modular, plug-in housing) 5 or 9 conductor, 16 AWG yellow jacketed type STOOW-A cable STOOW-A (prewired cable) 5 or 9 pin, 0.87 in. (22 mm) diameter receptacle (prewired receptacle with pin connector)					
Mounting	Any position					
Tightening Torque	Switch body screws: 25–30 lb-in. Operating head screws: 14–18 lb-in.					
NEMA rating	DC, NEMA R300		AC, NEMA A600			
Maximum current at	125V	250V	120V	240V	480V	600V
Make	0.22A	0.11A	60A	30A	15A	12A
Break	0.22A	0.11A	6A	3A	1.5A	1.2A
Max. volt-ampere						
Make	28VA	28VA	7200VA	7200VA	7200VA	7200VA
Break	28VA	28VA	720VA	720VA	720VA	720VA
Rated thermal current	DC, 1A		AC, 10A			
Rated operating voltage	DC, 300V		AC, 600V			




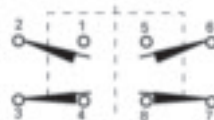







Operating temperature ^{1) 2)}



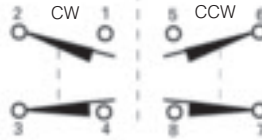

Temperature rating	Operation		Temperature range	
	Type	Return	Without cable	With cable
1	Side rotary	Momentary CW only or CCW only	10°F to 250°F -12°C to 121°C	10°F to 221°F -12°C to 105°C
2	Center neutral Side rotary Side plunger Two-sided plunger Roller side plunger	Momentary CW or CCW Maintained Momentary Maintained Momentary	14°F to 200°F -10°C to 94°C	14°F to 200°F -10°C to 94°C
3	Top plunger Top roller plunger Wobble head	Momentary Momentary Momentary	14°F to 250°F -10°C to 121°C	14°F to 221°F -10°C to 105°C

1) Temperature ranges below $+32^\circ\text{F}$ (0°C) are based on absence of freezing moisture or water.

2) For temperature rating of specific switch, refer to page 13/122, Operating Heads.

Complete switches without lever - threaded cable entry:

			Plug-In module type		Standard single pole 1 NO + 1 NC (3SE03-SA)		Standard double pole 2 NO + 2 NC (3SE03-SB)			
			Receptacle type surface mount		Single pole (3SE03-RA) 		Double pole (3SE03-RB) 			
Operating head type					Composite catalog number consisting of head, module and receptacle					
					Catalog Number		List Price \$ 1 unit	Catalog Number		List Price \$ 1 unit
			Side rotary CW and CCW operation convertible to CW only or CCW only		Standard momentary (3SE03-DR1)		3SE03-AR1 ^①	111.00	3SE03-BR1	135.00
					Standard maintained (3SE03-DM1)		3SE03-AM1	137.00	3SE03-BM1	161.00
					Low torqued momentary (3SE03-DL1)		3SE03-AL1	124.00	3SE03-BL1	148.00
			Plain side plunger		Momentary (3SE03-DS1)		3SE03-AS1	129.00	3SE03-BS1	153.00
			Roller side plunger		Momentary (3SE03-DS3)		3SE03-AS3	143.00	3SE03-BS3	167.00
			Two-sided plunger		Maintained (3SE03-DH1)		3SE03-AH1	149.00	3SE03-BH1	172.00
			Plain top plunger		Momentary (3SE03-DT1)		3SE03-AT1	122.00	3SE03-BT1	145.00
			Roller top plunger		Momentary (3SE03-DT3)		3SE03-AT3	136.00	3SE03-BT3	160.00
			Wobble head (without lever)		Momentary (3SE03-DW1)		3SE03-AW1	117.00	3SE03-BW1	141.00

			Plug-In module type		Center neutral Double pole 2 NO + 2 NC (3SE03-SN)				
			Receptacle type surface mount		Center neutral (3SE03-RB) 				
Operating head type					Composite catalog number consisting of head, module and receptacle				
					Catalog Number				List Price \$ 1 unit
			Side rotary (momentary)		Center Neutral	(3SE03-DN1) (3SE03-DN2)	3SE03-NN1 ^①		144.00
							3SE03-NN2 ^②		144.00

① 5° pretravel to operate contacts.

② 15° pretravel to operate contacts.