



NK Technologies

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MADE IN
USA

DS3 SERIES Current Operated Switches

Applications

Welders and Platers

- Instant indication of equipment status.

Large Drive Motors

- Provides enhanced field loss protection.

Power Supplies

- Signals over-current before equipment fails.

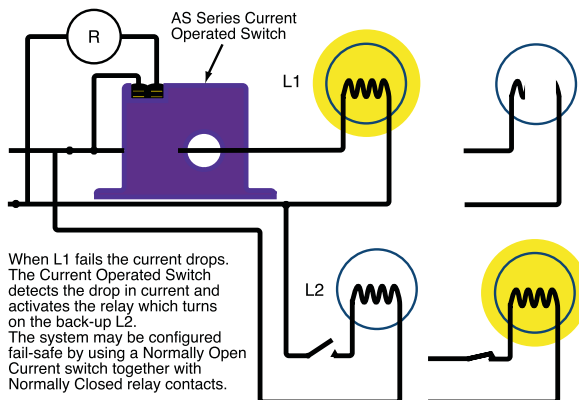
Machine Operation

- Instant status of motors, lamps and other loads.

Telecom Sites

- Monitors battery output.

Failure Detection



When L1 fails the current drops. The Current Operated Switch detects the drop in current and activates the relay which turns on the back-up L2. The system may be configured fail-safe by using a Normally Open Current switch together with Normally Closed relay contacts.

DS3 Series Current Operated Switches combine a Hall effect sensor, signal conditioner and a limit alarm into a single package. The DS3 Series offers three jumper-selected current input ranges and frequency response from DC to 400Hz. Available in a solid-core case with choice of relay or a universal solid-state output.

Features

Compact, One-piece Design

- Fits in easily amongst motor starters and power supplies in crowded control panels.

Input Isolation

- Safer than shunt/relay combinations.

Output Installation

- Isolated output greatly simplifies wiring.

Tough

- Designed to handle harsh industrial environments.

Adaptive Hysteresis

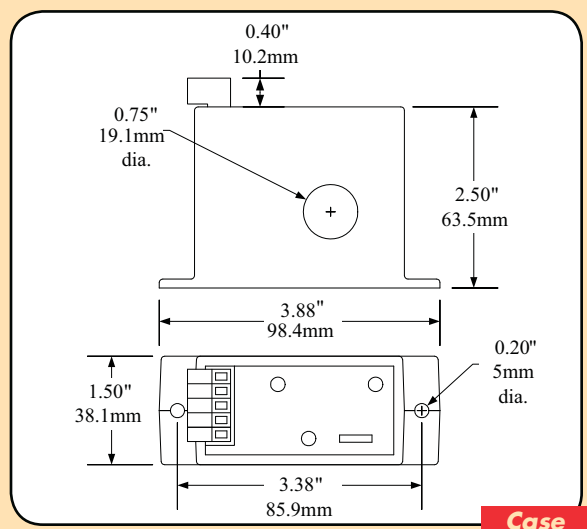
- Hysteresis is 5% of setpoint, allowing closer control than fixed hysteresis switches.

Built-in Mounting Feet

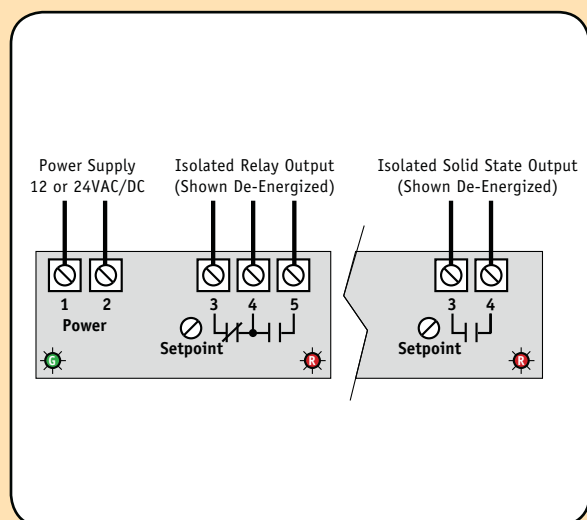
- Simple, two-screw installation allows for secure mounting.



Dimensions



Connections



Notes:

Pressure plate screw terminals.
12-22 AWG solid or stranded.
Field adjustable setpoint.

Specifications

Output	Isolated Dry Contact
Output Rating	● Solid State: 0.15A @ 240VAC or VDC (N.O. Only) ● Relays: 5.0A @ 240VAC, 5.0A @ 30VDC (SPDT)
Off State Leakage	<10 μ A
Response Time	● 100ms (10% above setpoint) ● 20ms (100% above setpoint)
Setpoint Range	● 4–20, 10–50 and 20–100A (DC) jumper selectable (derate by $\sqrt{2}$ for AC)
Hysteresis	5% of Setpoint
Isolation Voltage	3kV
Frequency Range	DC to 400Hz
Sensing Aperture	0.75" (19.1mm) dia.
Case	UL94 V0 Flammability Rated
Environmental	● -4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing ● -40 to 140°F (-40 to 60°C) (Solid state output only)

Ordering Information

Sample Model Number: DS3-SDT-24U

DS current operated switch with SPDT relay contacts and 24VAC/DC power supply.

DS (1) - (2) - (3)

(1) Setpoint Range

3	4–20, 10–50 and 20–100A, Jumper Selectable
C	Custom (consult factory)

(2) Output Type

SDT	SPDT Relay (Form C)
NOU	Solid State N.O. AC/DC

(3) Power Supply

24U	+24VAC/DC
12U	+12VAC/DC