

DS3 SERIES

Current Sensing Switches

DS3 Series Current Sensing 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 400 Hz. Available in a solid-core case with choice of relay or a universal solid-state output.



Current Sensing Switch Applications

Welders and Platers

- Instant indication of equipment status.

Large Drive Motors

- Provides enhanced field loss protection.

Power Supplies

- Signals overcurrent before equipment fails.

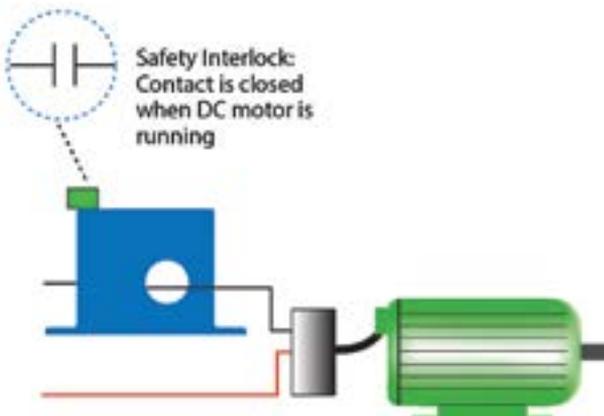
Machine Operation

- Instant status of motors, lamps and other loads.

Telecom Sites

- Monitors battery output.

Failure Detection



- For additional Application Examples, go to www.nktechnologies.com/applications

Current Sensing Switch 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 a wide range of temperatures found in 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.

UL/cUL and CE Approved

- Accepted worldwide.

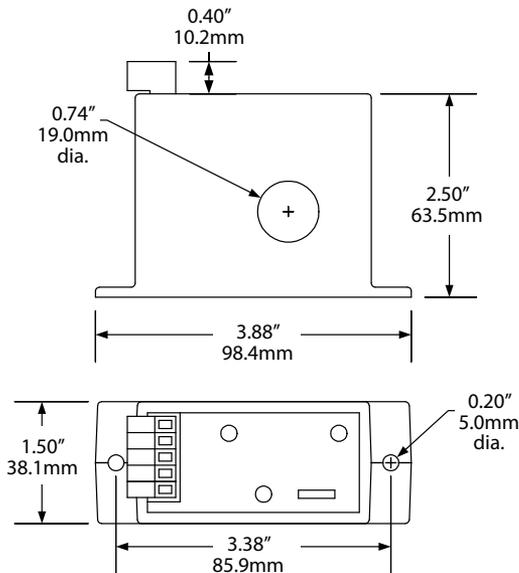
OEMs

Test & Evaluation Units for OEMs

Free program expedites evaluation process. See page 1 for details.

Current Sensing Switch Dimensions

Case



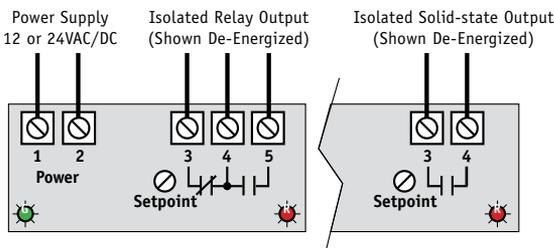
Current Sensing Switch Specifications



Power Supply	10–28 VDC
Power Consumption	<2 VA
Setpoint Range	2–20, 10–50 and 20–100 A (DC) adjustable (3–28, 14–71, 28–141 A AC)
Output Description	Isolated solid-state or relay contacts
Output Rating	• Solid-state: 0.15 A @ 240 VAC or VDC (N.O. only) • Relays: 5.0 A @ 240 VAC, 5.0 A @ 30 VDC (SPDT)
Off-state Leakage	<10 μ A (solid-state), none (relay)
Response Time	80 ms max.
Time Delay	None
Hysteresis	5%
Isolation Voltage	UL listed to 1270 VAC, tested to 3 kV
Frequency Range	DC to 400 Hz
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	UL/cUL, CE

Current Sensing Switches

Current Sensing Switch Connections



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

Current Sensing Switch Ordering Information

Sample Model Number: DS3-SDT-24U
DS current sensing switch with SPDT relay contacts and 24 VAC/DC power supply.



(1) Setpoint Range	
3	2–20, 10–50 and 20–100 A, jumper-selectable
(2) Output Type	
SDT	SPDT Relay (Form C)
NOU	Solid-state N.O. AC/DC
(3) Power Supply	
24U	+24 VAC/DC
12U	+12 VAC/DC

DS3 Series Sample Output/Power Supply

