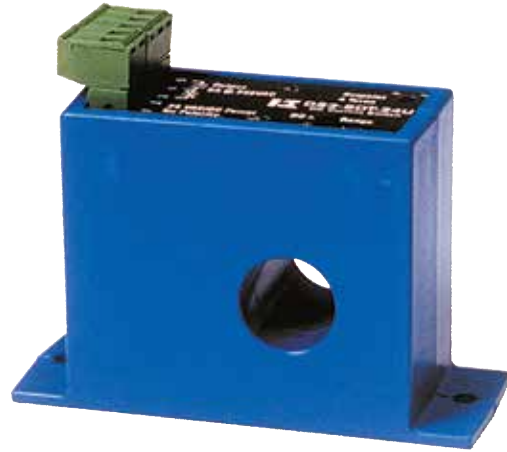


# DS3 SERIES

## 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.

### 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.

#### Pluggable Terminals

- Speed installation.

#### 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.

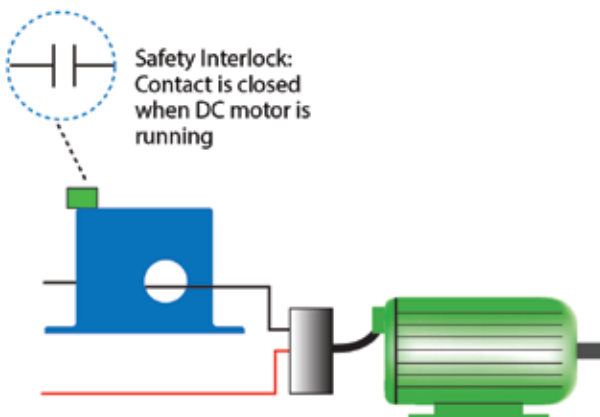
#### Built-in Mounting Feet

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

#### UL/cUL and CE Approved

- Accepted worldwide.

### Failure Detection



- For additional Application Examples, go to [www.nktechnologies.com/applications](http://www.nktechnologies.com/applications)

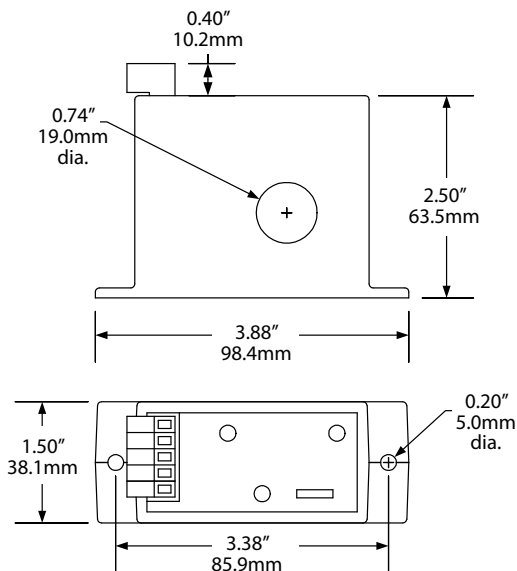
OEMs

Test & Evaluation Units for OEMs

Free program expedites evaluation process. See page 3 for details.

### Current Sensing Switch Dimensions

Case



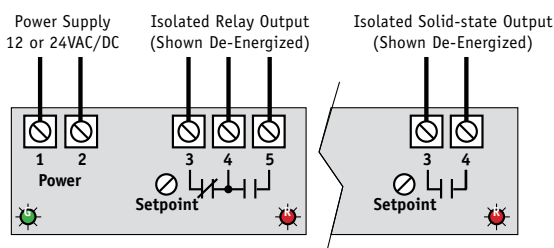
### Current Sensing Switch Specifications



<b>Power Supply</b>	10–28 VDC
<b>Power Consumption</b>	<2 VA
<b>Setpoint Range</b>	2–20, 10–50 and 20–100 A DC adjustable (2–14, 10–35, 20–70 A AC)
<b>Output Description</b>	Isolated solid-state or relay contacts
<b>Output Rating</b>	• Solid-state: 0.15 A @ 240 VAC or VDC (N.O. only) • Relays: 5.0 A @ 240 VAC, 5.0 A @ 30 VDC (SPDT)
<b>Off-state Leakage</b>	<10 µA (solid-state), none (relay)
<b>Response Time</b>	80 ms max.
<b>Time Delay</b>	None
<b>Hysteresis</b>	5%
<b>Isolation Voltage</b>	UL listed to 1270 VAC, tested to 3 kV
<b>Frequency Range</b>	DC to 400 Hz
<b>Case</b>	UL94 V-0 Flammability Rated
<b>Environmental</b>	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
<b>Listings</b>	UL/cUL, CE

Current Sensing Switches

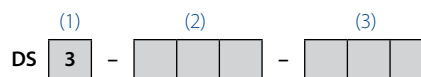
### Current Sensing Switch Connections



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. (DIN rail adapters are included)



(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

