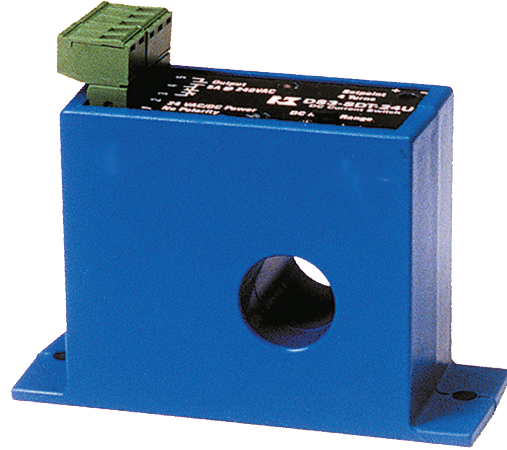


# DS3 SERIES

## 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.

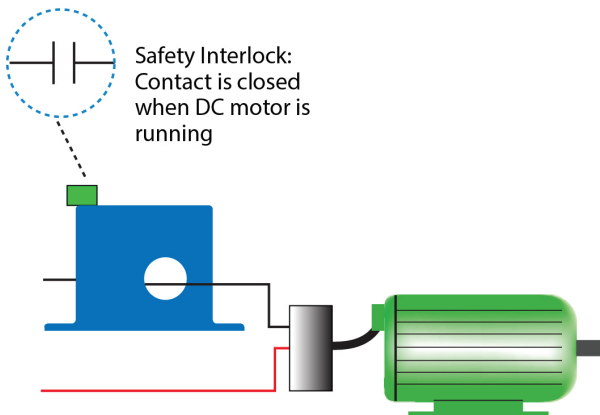
#### Machine Operation

- 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](http://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.

#### 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.

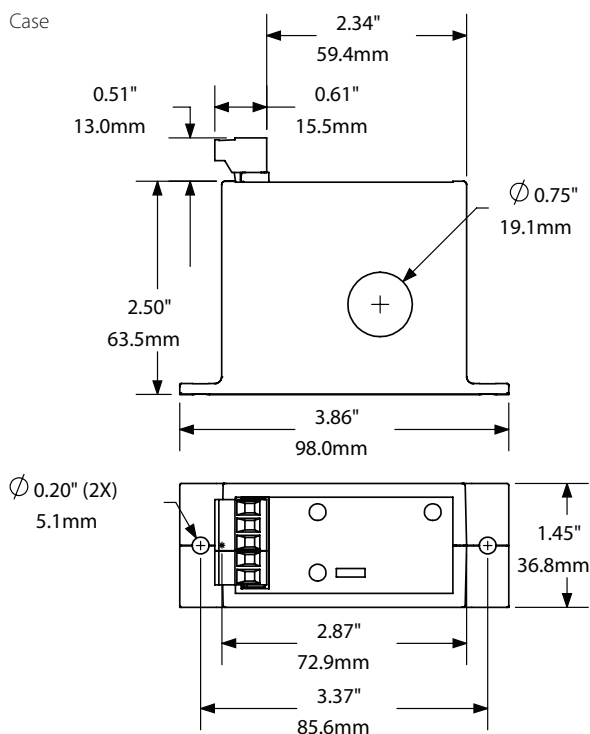
#### UL/cUL and CE Approved

- Accepted worldwide.

**OEMs****Test & Evaluation Units for OEMs**

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

### Current Sensing Switch Dimensions



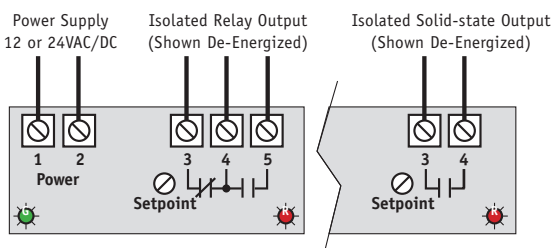
### Current Sensing Switch Specifications



<b>Power Supply</b>	24U = 15-28 VAC/VDC 12U = 11.4-20 VAC/VDC
<b>Power Consumption</b>	<4 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 Switch</b>	Isolated solid-state (NOU) or relay (SDT) contacts
<b>Output Rating</b>	• Solid-state: 0.15 A @ 240 VAC or VDC (N.O. only)* • Relay: 5.0 A @ 250 VAC, 5.0 A @ 30 VDC (SPDT only)* *General use
<b>Off-state Leakage</b>	<10 µA (solid-state), none (relay)
<b>Response Time</b>	80 ms max. (On delay) 60 ms max. (Off delay)
<b>Hysteresis</b>	5% of setpoint
<b>Isolation Voltage</b>	Tested to 1500 VAC
<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

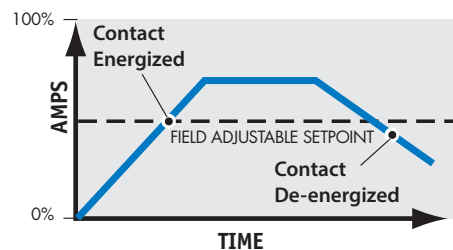
Current Sensing Switches

### Current Sensing Switch Connections



Notes:  
Pressure plate screw terminals.  
30-12 AWG solid or stranded.  
Field-adjustable setpoint.

### DS3 Series Sample Output/Power Supply



### Current Sensing Switch Ordering Information

Sample Model Number: DS3-SDT-24U

DC current sensing switch with SPDT relay contacts and 24 VAC/DC power supply. (DIN rail adapters are included)



(1) Setpoint AC Range

3	2-20, 10-50 and 20-100 A, jumper-selectable (2-14, 10-35, 20-70 A AC)
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(2) Output Type

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

(3) Power Supply

24U	24 VAC/VDC
12U	12 VAC/VDC

