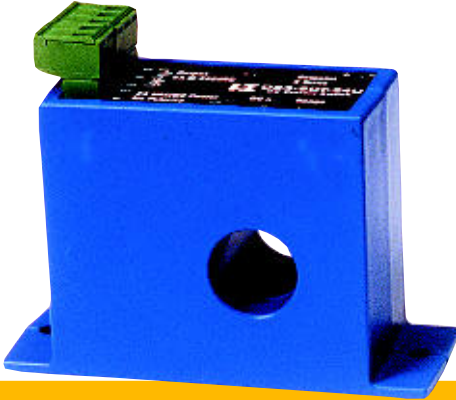


# DS3 Series



'DS3' Current Switches from NK Technologies combine a Hall effect sensor, signal conditioner and a limit alarm into a single package. The DS3 Series has three jumper selected current input ranges and frequency response from DC to 400Hz. Available in a top terminal solid core case with either a relay output or a universal solid state output.

## DC Current Switches

### Applications

#### Electric Heating Elements

Instant indication of heater status.

#### Power Supplies

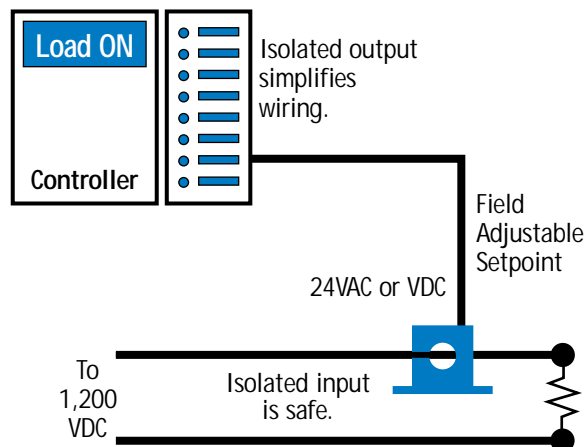
Signals over-current before equipment fails.

#### Machine Operation

Instant status of motors, lamps and other loads.

#### Telecom Sites

Monitors battery output.



### Features

#### ■ Compact, One-piece Design

Fits in crowded motor starters, power supplies and control panels.

#### ■ Input Isolation

Much 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.
- Allows closer control than fixed hysteresis.

#### ■ Reliable

Solid state design.

#### ■ Built-in Mounting Bracket

Solid, secure mounting that inspectors want to see.

*DC Current Switches*

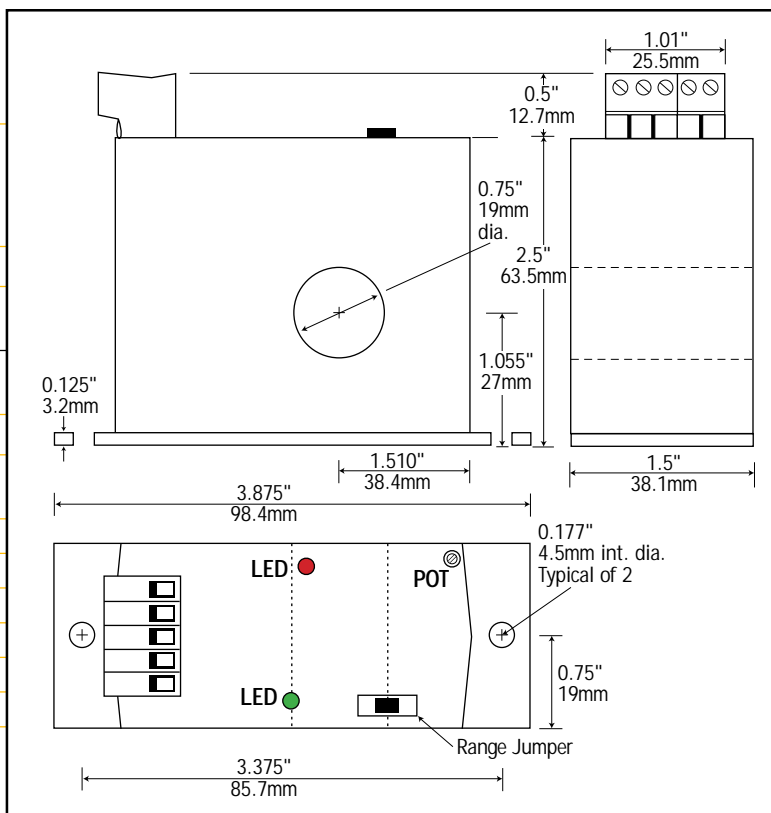
*DS3 Series*

*Know your power...*

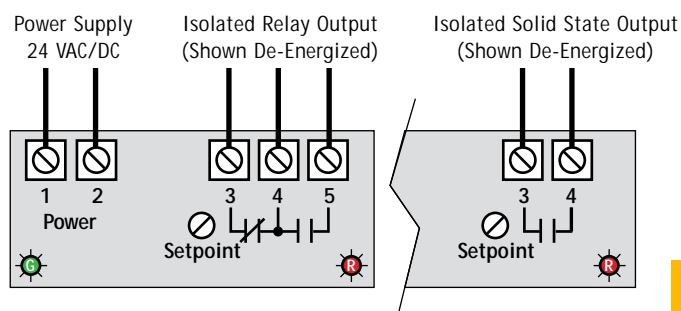
*because with knowledge comes control.*

## Specifications

Output	Isolated dry contact
Output Rating	<ul style="list-style-type: none"> <li>■ Solid State: 0.2A @ 240VAC/DC (N.O. Only)</li> <li>■ Relay: 5.0A @ 240VAC, 5.0A @ 30VDC (SPDT)</li> </ul>
Off State Leakage	None
Response Time	<ul style="list-style-type: none"> <li>■ 100ms (10% above Setpoint)</li> <li>■ 20ms (100% above Setpoint)</li> </ul>
Setpoint Range	4–20, 10–50 and 15–100A (DC) Jumper select (derate by $\sqrt{2}$ for AC)
Hysteresis	5% of Setpoint
Overload	<ul style="list-style-type: none"> <li>■ 1,000% of range for 5 seconds</li> <li>■ 200% of range indefinitely</li> </ul>
Isolation Voltage	3kV
Frequency Range	DC to 400Hz
Sensing Aperture	0.75" (19mm) dia.
Power Supply	20–28VDC or VAC
Power Consumption	10VA
Case	UL 94V-0 Flammability rated
Environmental	<ul style="list-style-type: none"> <li>■ –4 to 122°F (–20 to 50°C), 0–95% RH, non-condensing</li> <li>■ –40 to 140°F (–40 to 60°C) (Solid State Output Only)</li> </ul>



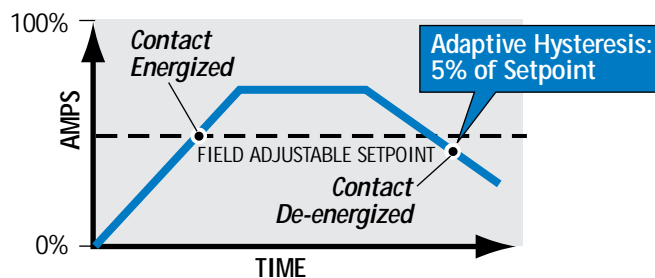
## Connections



### Notes:

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

## Output Operation



## Ordering Information

Example: DS3-SDT-24U

DS current switch, low range with SPDT relay contacts and 24VAC/DC power supply.

DS	—		—	24U
Setpoint Range		Output Type		Power Supply
3 4–20, 10–50 and 15–100A, Jumper Select		SDT SPDT Relay (Form C)		24U +24VAC/DC
C Custom (consult factory)		NOU Solid State N.O. AC/DC		

**DC Current Switches**

**DS3 Series**