

## DS3 Series



**'DS3' Current Operated Switches from NK Technologies** 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 with choice of relay or a universal solid state output.

MADE IN  
USA

### DC Current Operated Switches

#### Applications

##### Electric Heating Elements

Instant indication of heater status.

##### Power Supplies

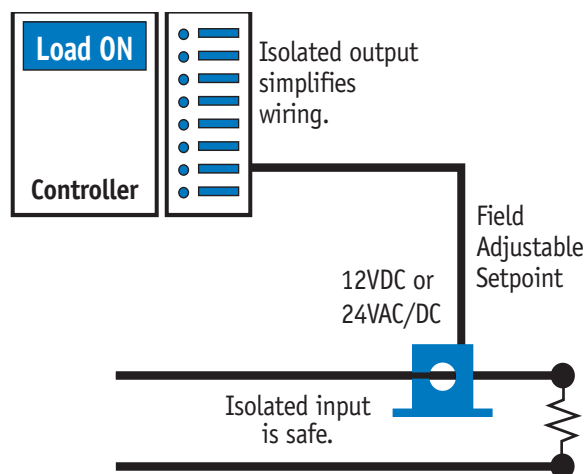
Signals over-current before equipment fails.

##### Machine Operation

Instant status of motors, lamps and other loads.

##### Telecom Sites

Monitors battery output.



#### Features

##### ■ Compact, One-piece Design

Fits in 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.

##### ■ Reliable

Solid state design.

##### ■ Built-in Mounting Feet

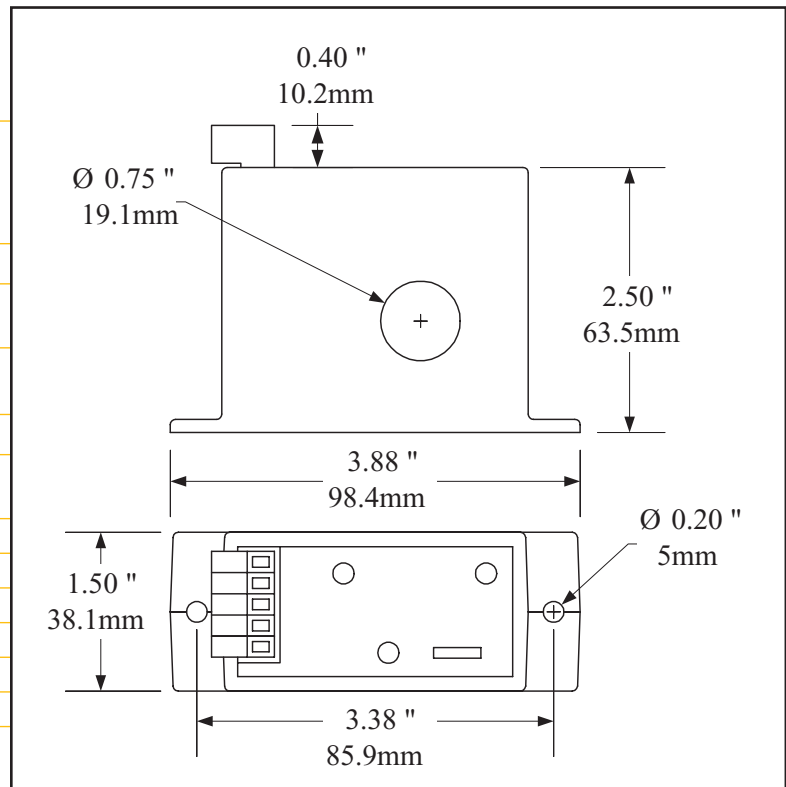
Simple, two-screw installation allows for secure mounting.

### DC Current Operated Switches

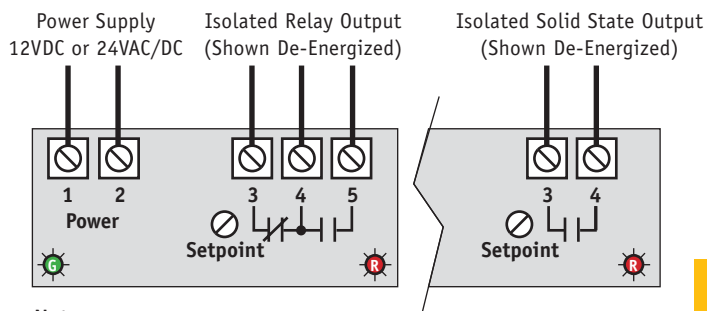
**DS3 Series**

## Specifications

<b>Output</b>	Isolated Dry Contact
<b>Output Rating</b>	<ul style="list-style-type: none"> <li>Solid State: 0.15A @ 240VAC/DC (N.O. Only)</li> <li>Relay: 5.0A @ 240VAC, 5.0A @ 30VDC (SPDT)</li> </ul>
<b>Off State Leakage</b>	< 10 $\mu$ A
<b>Response Time</b>	<ul style="list-style-type: none"> <li>100 ms (10% above setpoint)</li> <li>20 ms (100% above setpoint)</li> </ul>
<b>Setpoint Range</b>	4-20, 10-50 and 20-100A (DC) Jumper select (derate by $\sqrt{2}$ for AC)
<b>Hysteresis</b>	5% of Setpoint
<b>Overload</b>	<ul style="list-style-type: none"> <li>1,000% of range for 5 seconds</li> <li>200% of range indefinitely</li> </ul>
<b>Isolation Voltage</b>	3kV
<b>Frequency Range</b>	DC to 400Hz
<b>Sensing Aperture</b>	0.75" (19.1mm) dia.
<b>Power Supply</b>	20-28VAC/DC or 12VDC
<b>Power Consumption</b>	10VA
<b>Case</b>	UL 94V-0 Flammability Rated
<b>Environmental</b>	<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>



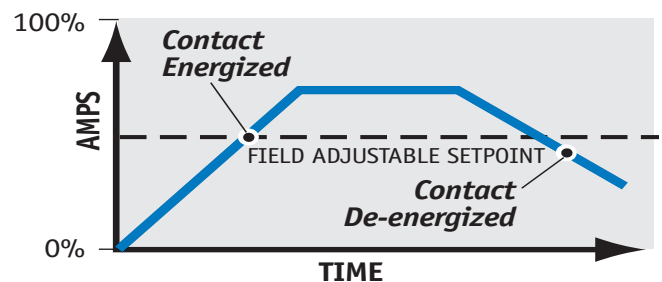
## Connections



### Notes:

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

## Output Operation



## Ordering Information

### Example: DS3-SDT-24U

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

DS	—	—	—
Setpoint Range	Output Type	Power Supply	
3 4-20, 10-50 and 20-100A, Jumper Select	SDT SPDT Relay (Form C) NOU Solid State N.O. AC/DC	24U +24VAC/DC 12U +12VDC	
C Custom (consult factory)			

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