



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.



DC Current Operated Switches

Applications

Electric Heating Elements

Instant indication of heater status.

Power Supplies

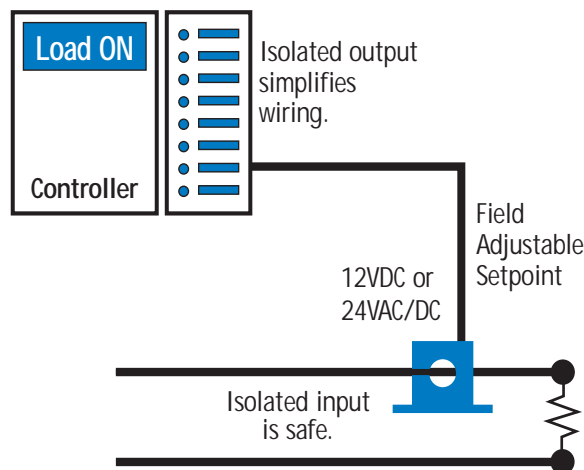
Signals over-current before equipment fails.

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.

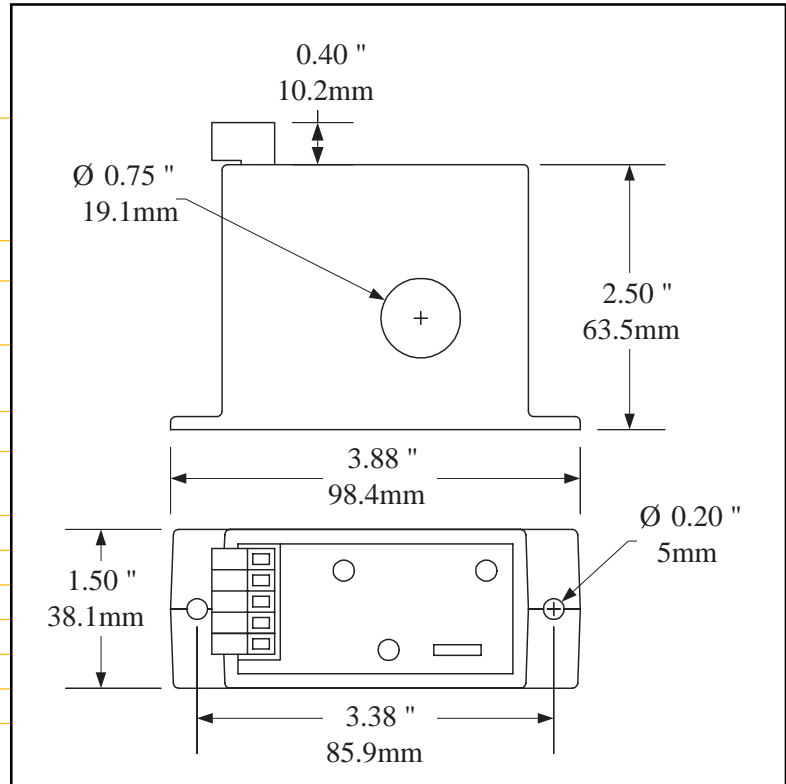
DC Current Operated Switches

DS3 Series

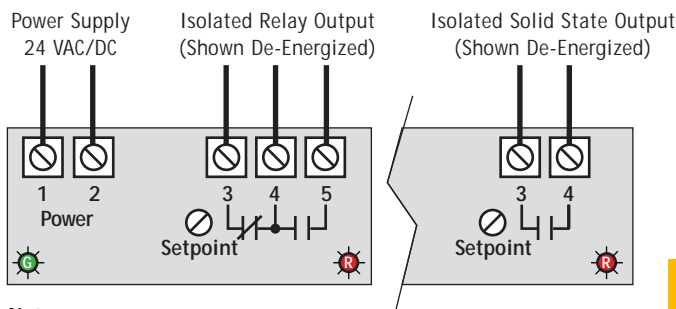
Know your power...
because with knowledge comes control.

Specifications

Output	Isolated Dry Contact
Output Rating	<ul style="list-style-type: none"> Solid State: 0.15A @ 240VAC/DC (N.O. Only) Relay: 5.0A @ 240VAC, 5.0A @ 30VDC (SPDT)
Off State Leakage	< 10 μ A
Response Time	<ul style="list-style-type: none"> 100 ms (10% above setpoint) 20 ms (100% above setpoint)
Setpoint Range	4–20, 10–50 and 20–100A (DC) Jumper select (derate by $\sqrt{2}$ for AC)
Hysteresis	5% of Setpoint
Overload	<ul style="list-style-type: none"> 1,000% of range for 5 seconds 200% of range indefinitely
Isolation Voltage	3kV
Frequency Range	DC to 400Hz
Sensing Aperture	0.75" (19.1mm) dia.
Power Supply	20–28VAC/DC or 12VDC
Power Consumption	10VA
Case	UL 94V-0 Flammability Rated
Environmental	<ul style="list-style-type: none"> -4 to 122°F (-20 to 50°C), 0–95% RH, non-condensing -40 to 140°F (-40 to 60°C) (Solid State Output Only)



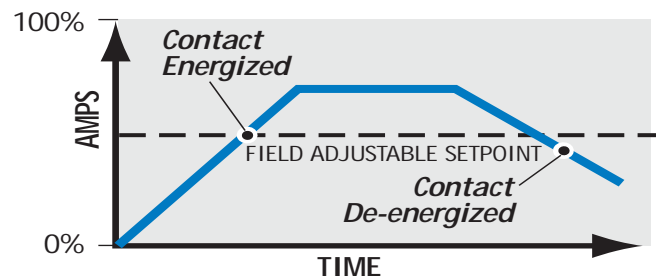
Connections



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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