

HCS-4

HIGH CURRENT SENSOR

SPECIFICATIONS

Physical

Size

Length: 10.5"

Width: 2.25"

Height: 4.1"

Weight

24 oz.

Environmental

Storage

Temperature: -50°C to +85°C

Humidity: 0% to 95%, non-condensing

Operating

Temperature: -40°C to +72°C

Humidity: 0% to 95%, non-condensing

Mounting

Shelf or desktop

Construction

Chassis

Fully enclosed, anodized aluminum, thumbscrews allow access inside

Externally accessible connectors and LEDs

Electrical

Single printed circuit board inside chassis

Power

Voltage

Input: 8 to 40 Vdc

Consumption

Typical: 50 mA (at 12 Vdc)

Fully Active: less than 150 mA (at 12 Vdc)

Protection

Isolation

Minimum 4000 Vdc to ground, infinite duration, to any terminal input

Input Impedance

Infinite to current conductor (fully isolated)

Internal Relays (4)

Operation

Operates when current exceeds limit value

Type

Non-latching mechanical, with dual form C contacts, wired in parallel

Contacts

Rated Load: 2 A at 24 Vdc, 1 A at 125 Vac

Minimum Load: 2 mA at 5 Vdc

Maximum Operating Voltage: 60 Vdc, 125 Vac

Maximum Switching Capacity: 125 VA, 60 W

Service Life: 5 million mechanical (minimum), 1 million electrical (typical)

Transient Filtering

Each sensor includes hysteresis and a 2.66 second filter that will ignore momentary current fluctuations

LED Indicators

High Current (4)

Red: indicates current has exceeded limit value

Power

Green: indicates that power has been applied to unit

Controls

Internal (4)

Potentiometer: 20-turn, used to adjust current limit value

Test Points: female, used to connect DVM when setting current limit value

Jumpers Settings: dual, for selecting latching mode and AC or DC current

External

Toggle switch to reset LEDs and relays

Connectors

Power

Detachable, screw-down with 6 terminals, 12 to 22 AWG

Terminals 1 & 2: B, battery positive

Terminals 3 & 4: N, battery negative

Terminals 5 & 6: test inputs

Input / Output (4)

Detachable, screw-down with 4 terminals, 12 to 22 AWG

Terminal 1: normally open relay contact

Terminal 2: normally closed relay contact

Terminals 3 & 4: relay common

Range

Current limit value may be adjusted between 1.0 and 20.0 Adc or Aac

Accuracy

The greater of $\pm 2.0\%$ or .15 A as compared to 10 times limit value