

CSG-xx

Current Switch



CSG-GNG-100



Product Overview

The CSG-xx range of Current Switches are a range of AC or DC solid state switches that are designed to suit any application. Some models have a preset threshold to operate as a Go-No switch, while others have an adjustable threshold. The Solid core range suit new projects, whilst the Split core are ideal for retrofitting.

Features / Applications

- Replace Differential Pressure Switches
- Fixed or Adjustable Set-points
- Directly control the load in response to the current of the monitored unit.
- Monitor motors for seizing, jams or broken belts
- Low and mains voltage versions available
- Monitor Heaters

Technical Specifications

Part No	Switching Voltage	Core Type	Current Setpoint	Input Min Amps	Input Max Amps	Switching Type	Output Type	Auto range
CSG-GNG-100	30Vac/30Vdc	Solid	500mA	0.5A	100A	N.O.	Mosfet	Yes
CSG-GNG-200	30Vac/40Vdc	Solid	750mA	0.75A	200A	N.O.	Mosfet	Yes
CS-GNG	30Vac/40Vdc	Solid	1A	1A	200A	N.O.	Mosfet	Yes
CSG-610-75	30Vac/30Vdc	Solid	0.75 to 75A	0.75A	75A	N.O.	Mosfet	Yes
CSG-610-200	30Vac/40Vdc	Solid	1 to 200A	1.0A	200A	N.O.	Mosfet	Yes
CS-325	250Vac	Solid	1.25 to 200A	1.25A	200A	N.O.	Triac	No
CS-325-NS	250Vac	Solid	1.25 to 200A	1.25A	200A	N.O.	Triac	No
SCG-GNG-200	30Vac/40Vdc	Split	1.5A	1.5A	200A	N.O.	Mosfet	Yes
SCG-610-200	30Vac/40Vdc	Split	1.5 to 200A	1.5A	200A	N.O.	Mosfet	Yes
SC-325	120Vac	Split	1.6 to 200A	1.6A	200A	N.O.	Triac	No
SC-325-NS	120Vac	Split	1.6 to 200A	1.6A	200A	N.O.	Triac	No

Order Codes

CSG-GNG-100	-Mini Current Switch 30Vac/30dc, 0-100A, solid core, fixed setpoint, mosfet o/p 0.5A trip
CSG-GNG-200	-Current Switch 30Vac/30dc, 0-200A, solid core, fixed setpoint, mosfet o/p 0.75A trip
CS-GNG	-Current Switch 30Vac/40dc, 0-200A, solid core, fixed setpoint, mosfet o/p 1.0A trip
CSG-610-75	-Mini Current Switch 30Vac/30dc, 0.75-75A solid core, adjustable setpoint, mosfet o/p
CSG-610-200	-Current Switch 30Vac/40dc, 1-200A, solid core, adjustable setpoint, mosfet o/p
CS-325	-Current Switch 250Vac, solid core, adjustable setpoint, triac o/p
CS-325-NS	-Current Switch 250Vac, solid core, adjustable setpoint, triac o/p, no snubber
SCG-GNG-200	-Current Switch 30Vac/40dc, 1.5 to 200A, split core, fixed setpoint, mosfet o/p
SCG-610-200	-Current Switch 30Vac/40dc, 1.5 to 200A, split core, adjustable setpoint, mosfet o/p
SC-325	-Current Switch 120Vac, 1.6 to 200A, split core, adjustable setpoint, triac o/p
SC-325-NS	-Current Switch 120Vac, 1.6 to 200A, split core, adjustable setpoint, triac o/p, no snubber

Installation

SAFETY NOTE:

Prior to Installation ensure that all power sources are disconnected and locked-out and remain locked out during Installation and set-up, as severe injury or death can result from Electric Shock due to contact with High Voltage Conductors. Ensure all installations are in compliance with applicable electrical codes and that the installation is carried out by qualified installers familiar with the relevant standards and proper safety procedures for high voltage installations. Never rely on status indication on any device to determine if power is present in a conductor. Solid core devices require that the line to be monitored be disconnected and passed through the centre. Split core devices can be easily installed over existing wires

Sizing the device:

Ensure that the output circuit to be switched is within the ratings shown on the chart on page 1
The conductor may be looped more than once through the device to multiply the sensitivity but this also divides the maximum current

Mounting:

Mount the switch in a suitable location using the two mounting holes in the base of the unit or the DIN rail clip for the larger units

Connection:

Connect the switch circuit to the two screw terminals using ring or fork type terminals.
Note Polarity as indicated on the device labelled for DC switches. AC or AC/DC switch types are not polarity sensitive and operate as a "dry contact". All DC switches are reverse bias protected against a backwards connection and this will be indicated by a switch that always remains closed.

Operation

The output switch of all devices is normally open, when the monitored current exceeds the trip value as set by the multi-turn adjustment, the switch will close. If the unit has a status LED, it will light to indicate a closed switch. Devices that also have a power LED will indicate circuit power whenever there is sufficient current to operate the device, Typically 1Amp min. for solid core and 1.5Amp min. for split core devices.

All devices are factory set at the minimum switch-point (adjustment fully clockwise) to increase the set-point, while the monitored load is on, turn the adjustment counter-clockwise until the output turns off as indicated by either the status LED or a voltmeter connected across the device output with the load connected to indicate an open switch. Then turn the adjustment clockwise until the LED comes back on to indicate a closed switch or a voltmeter indication is seen. The adjustment should be turned slightly clockwise past this point to ensure normal line current variations do not cause fault

Applications

For applications with load currents exceeding the sensor current range use an external CT to reduce the current to an acceptable value. For example, to monitor a 500 Amp load current, use a 500A:5A CT and wrap the CT secondary through the CSG-610-200 four times so the sensor actually only sees 20 Amps when the load current is 500 Amps.

For applications with very small load currents (such as less than 1 Amp), wrap the monitored conductor through the sensor aperture several times to increase the current measured by the sensor. For example, to monitor a 0-1 Amp load with a CS-610-200, wrap the conductor through the sensor aperture 5 times so the sensor actually sees 0-5 Amps.

For any application with multiple wraps, note that the CS-610-200 maximum current rating must be divided by the number of wraps. For example, with one wrap the maximum current is 200 Amps, with 5 wraps the maximum current is $200/5 = 40$ Amps. Ensure the load current is < 40 Amps or the device may overheat and be damaged.

Snubbers

The CS/SC-325 with the snubber circuit is best used to switch high-current inductive loads such as small fan motors.
The CS/SC325-NS no snubber -is best used to switch resistive or low-current inductive loads such as relays or lights.

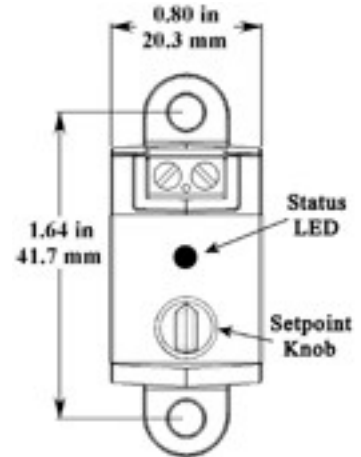
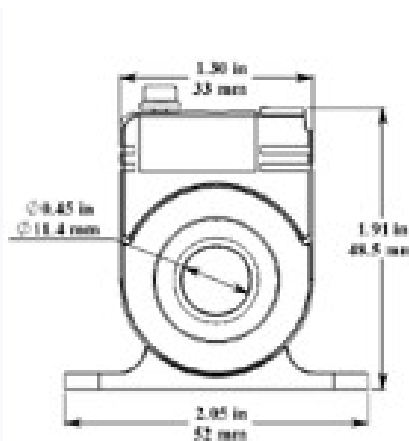
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Current Switch

CSG-GNG-100 & CSG-610-75

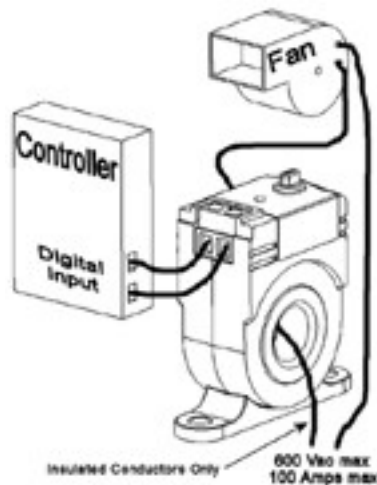
Mini



Product Specifications

Switching Voltage:	CSG-GNG-100	30Vac/30Vdc @ 500mA
	CSG-610-75	30Vac/30Vdc @ 500mA
Current Range	CSG-GNG-100	0.5 to 100A
	CSG-610-75	0.75 to 75A
Current Setpoint	CSG-GNG-100	Fixed at 0.5A
	CSG-610-75	Adjustable 0.75 to 75A
Input Frequency:		50/60Hz
Indication:		Status LED CSG-610-75 only
Mounting Type:		Solid Core
Insulation Class:		600Vac, insulated conductors
Response Time:		200mS typical
Material:		UL 94V-O Flammability rated ABS
Dimensions:		52 x 48.5 x 20.3mm
Conductor Hole:		11.4mm diam
Mounting Holes:		41.7mm centres x 5mm
Ambient Temp. Range:		-15 to +60deg C, 5-90% RH
Country of Origin:		Canada

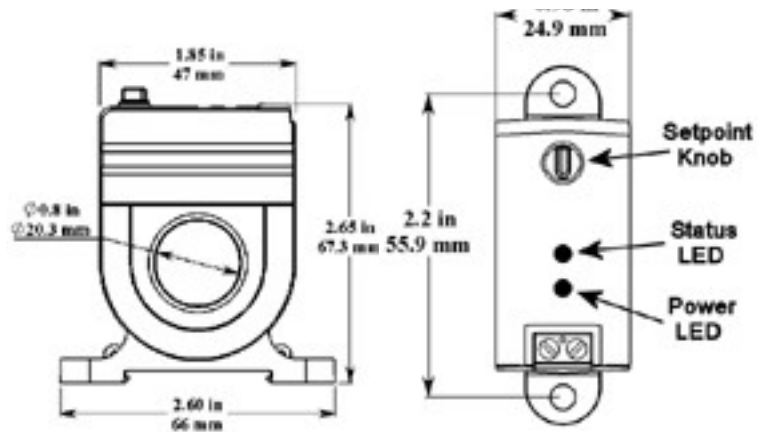
Wiring



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Current Switch

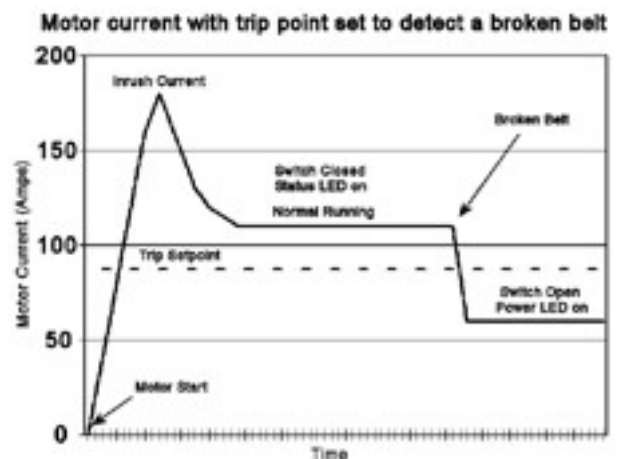
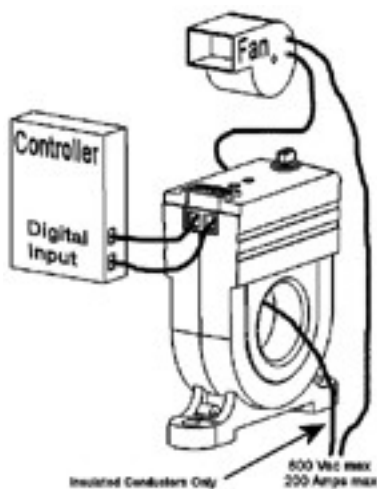
CSG-GNG-200 & CSG-610-200



Product Specifications

Switching Voltage:	CSG-GNG-200	30Vac/30Vdc @ 500mA
	CSG-610-200	30Vac/30Vdc @ 500mA
Current Range:	CSG-GNG-200	0.5 to 200A
	CSG-610-200	1.0 to 200A
Current Setpoint:	CSG-GNG-200	Fixed at 0.75A
	CSG-610-200	Adjustable 1.0 to 200A
Input Frequency:		50/60Hz
Indication:		Power & Status LED's CSG-610-200 only
Mounting Type:		Solid Core
Insulation Class:		600Vac, insulated conductors
Response Time:		200mS typical
Material:		UL 94V-O Flammability rated ABS
Dimensions:		66 x 67.3 x 24.9mm
Conductor Hole:		20.33mm diam
Mounting Holes:		DIN rail and 55.9mm centres x 5mm
Ambient Temp. Range:	CSG-GNG-200	-15 to +60deg C, 5-90% RH
	CSG-610-200	-15 to +50deg C, 5-90% RH
Country of Origin:		Canada

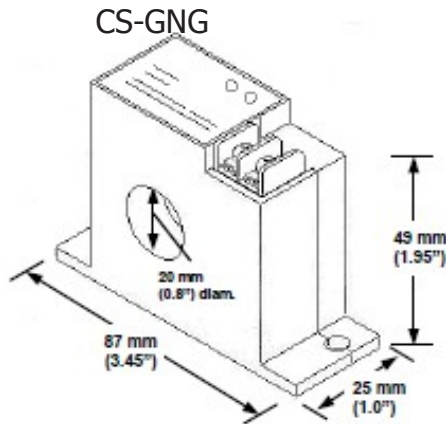
Wiring



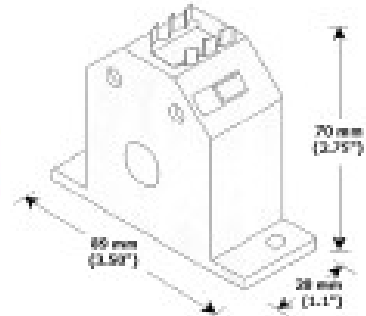
CSG-xx

Current Switch

CS-GNG & CS-325 & CS-325-NS



CS-325 & CS-325-NS



Product Specifications

Switching Voltage:	CS-GNG	30Vac/40Vdc @ 500mA
	CS-325	250Vac@1A
Current range:		1 to 200A
Current Setpoint	CS-GNG	Fixed at 1A
	CS-325	adjustable 1 to 200A
Output:	CS-GNG	N.O. Mosfet
	CS-325	Triac
Input Frequency:		10-400Hz
Mounting Type:		Solid Core
Hysteresis:		<2% FS
Material:		UL 94V-O Flammability rated ABS
Dimensions:	CS-GNG	49 x 87 x 25mm
	CS-325	70 x 89 x 24mm
Conductor Hole:		20mm diam
Mounting Holes:		76mm centres x 5mm
Ambient Temp. Range:		0 to +70deg C, 0-95% RH
Country of Origin:		Canada

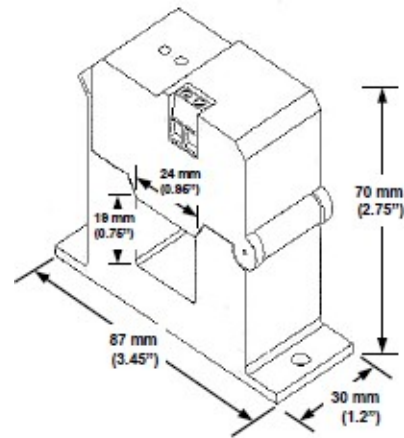
Snubbers

The CS/SC-325 with the snubber circuit is best used to switch high-current inductive loads such as small fan motors.
The CS/SC325-NS no snubber - is best used to switch resistive or low-current inductive loads such as relays or lights.

CSG-xx

Current Switch

SCG-GNG-200 & SC-610-200 & SC-325 & SC-325-NS Split Core



Product Specifications

Switching Voltage:	SCG-GNG-200	30Vac/40Vdc @ 500mA
	SCG-610-200	30Vac/40Vdc @ 500mA
	SC-325	120Vac
Current Range	SCG	1.5 to 200A
	SC-325	1.6 to 200A
Current Setpoint	SCG-GNG-200	Fixed at 1.5A
	SCG-610-200	Adjustable 1.5 to 200A
	SC-325	Adjustable 1.6 to 200A
Input Frequency:		50/60Hz
Indication:		Power & Status LED's CSG-610-200 only
Output Type:	SCG	N.O. Mosfet
	SC-325	Triac
Insulation Class:		600Vac, insulated conductors
Mounting Type:		Split Core
Response Time:		200mS typical
Material:		UL 94V-O Flammability rated ABS
Dimensions:		70 x 87 x 30mm
Conductor Hole:		24 x 19mm
Mounting Holes:		DIN rail and (not SC-325) 55.9mm centres x 5mm
Ambient Temp. Range:	SCG-GNG-200	-15 to +60deg C, 5-90% RH
	SCG-610-200	-15 to +50deg C, 5-90% RH
	SC-325	0 to 70deg C, 5-90% RH
Country of Origin:		Canada

Snubbers

The CS/SC-325 with the snubber circuit is best used to switch high-current inductive loads such as small fan motors.
The CS/SC325-NS no snubber - is best used to switch resistive or low-current inductive loads such as relays or lights.