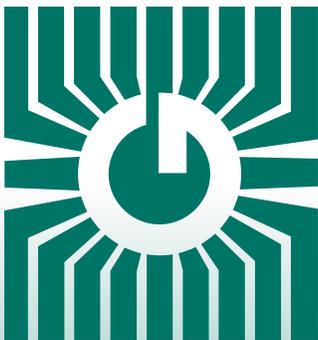
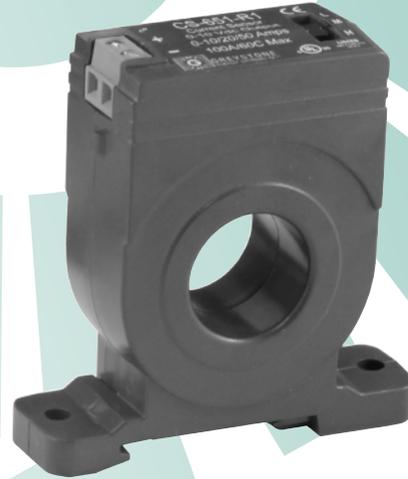


GREYSTONE
ENERGY SYSTEMS INC



SOLID CORE CURRENT SENSOR CS-6XX Series



Precision Power control/sensing

FEATURES:

- Solid Core
- 0-5, 0-10 Vdc or 4-20 mA Output
- Selectable or Fixed Range Models
- Self-powered and Loop-powered Models
- Up to 200 amps Input Current
- Small Compact Size

*Peace of mind
through reliable
current monitoring*

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM

AC CURRENT SENSORS

CS-650 Series

DESCRIPTION:

The CS-650 Series current sensors monitor line current for electrical loads such as pumps, conveyors, machine tools, or fans and output a 0-5 Vdc signal to represent the load current.

The CS-650 require no external power as they are totally powered by induction from the AC line being monitored.

The sensors are typically used to monitor motor operation and can be used to determine motor failure, belt loss, machine feed rates or tool wear.

SPECIFICATION:

Measurement Range.....	Up to 200 Amps - See ordering information
Maximum Input Current.....	CS-650-R1: 100 Amps Continuous CS-650-R2: 150 Amps Continuous CS-650-200: 250 Amps Continuous
Accuracy.....	± 2% FSO (5-100% of range)
Signal Output.....	0-5 Vdc
Sensor Power.....	Self-powered
Insulation Class.....	600 Vac, insulated conductors
Frequency.....	50/60 Hz
Response Time.....	200 mS Typical, 0-90 %
Output Load.....	1 MΩ typical
Loading Error.....	add 0.5% error with 100KΩ
Operating Temperature.....	-15 to 60 °C (5 to 140 °F)
Operating Humidity.....	5 to 90% RH non-condensing
Terminal Block.....	14 to 22 AWG
Dimensions.....	67 x 68.6 x 24.1 mm (2.65 x 2.7 x 0.95 in)
Sensor Aperture.....	20.3 mm (0.8 in)
Enclosure Material.....	ABS/PC, UL94 V-0
Agency Approvals.....	cULus Listed

FEATURES:

- No field adjustment necessary, factory calibrated
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

PRODUCT ORDERING INFORMATION

MODEL	Product Description												
CS-650	0-5 Vdc, Self-powered												
	<table border="1"> <thead> <tr> <th>CODE</th> <th>Input Range</th> <th>Maximum Input Current</th> </tr> </thead> <tbody> <tr> <td>-R1</td> <td>0-10/20/50 Amps - Switch Selectable</td> <td>100 Amps Continuous</td> </tr> <tr> <td>-R2</td> <td>0-50/100/150 Amps - Switch Selectable</td> <td>150 Amps Continuous</td> </tr> <tr> <td>-200</td> <td>0-200 Amps</td> <td>250 Amps Continuous</td> </tr> </tbody> </table>	CODE	Input Range	Maximum Input Current	-R1	0-10/20/50 Amps - Switch Selectable	100 Amps Continuous	-R2	0-50/100/150 Amps - Switch Selectable	150 Amps Continuous	-200	0-200 Amps	250 Amps Continuous
CODE	Input Range	Maximum Input Current											
-R1	0-10/20/50 Amps - Switch Selectable	100 Amps Continuous											
-R2	0-50/100/150 Amps - Switch Selectable	150 Amps Continuous											
-200	0-200 Amps	250 Amps Continuous											
CS-650	-R1												

Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

AC CURRENT SENSORS CS-651 Series

DESCRIPTION:

The CS-651 Series current sensors monitor line current for electrical loads such as pumps, conveyors, machine tools, or fans and output a 0-10 Vdc signal to represent the load current.

The CS-651 require no external power as they are totally powered by induction from the AC line being monitored.

The sensors are typically used to monitor motor operation and can be used to determine motor failure, belt loss, machine feed rates or tool wear.

SPECIFICATION:

Measurement Range.....	Up to 200 Amps - See ordering information
Maximum Input Current.....	CS-651-R1: 100 Amps Continuous CS-651-100: 150 Amps Continuous CS-651-200: 225 Amps Continuous
Accuracy.....	± 2% FSO (5-100% of range)
Signal Output.....	0-10 Vdc
Sensor Power.....	Self-powered
Insulation Class.....	600 Vac, insulated conductors
Frequency.....	50/60 Hz
Response Time.....	200 mS Typical, 0-90 %
Output Load.....	1 MΩ typical
Loading Error.....	add 0.5% error with 100KΩ
Operating Temperature.....	-15 to 60 °C (5 to 140 °F)
Operating Humidity.....	5 to 90% RH non-condensing
Terminal Block.....	14 to 22 AWG
Dimensions.....	67 x 68.6 x 24.1 mm 2.65 x 2.7 x 0.95 in)
Sensor Aperture.....	20.3 mm (0.8 in)
Enclosure Material.....	ABS/PC, UL94 V-0
Agency Approvals.....	cULus Listed

FEATURES:

- No field adjustment necessary, factory calibrated
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

PRODUCT ORDERING INFORMATION

MODEL	Product Description												
CS-651	0-10 Vdc, Self-powered												
	<table border="1"> <thead> <tr> <th>CODE</th> <th>Input Range</th> <th>Maximum Input Current</th> </tr> </thead> <tbody> <tr> <td>-R1</td> <td>0-10/20/50 Amps - Switch Selectable</td> <td>100 Amps Continuous</td> </tr> <tr> <td>-100</td> <td>0-100 Amps</td> <td>150 Amps Continuous</td> </tr> <tr> <td>-200</td> <td>0-200 Amps</td> <td>225 Amps Continuous</td> </tr> </tbody> </table>	CODE	Input Range	Maximum Input Current	-R1	0-10/20/50 Amps - Switch Selectable	100 Amps Continuous	-100	0-100 Amps	150 Amps Continuous	-200	0-200 Amps	225 Amps Continuous
CODE	Input Range	Maximum Input Current											
-R1	0-10/20/50 Amps - Switch Selectable	100 Amps Continuous											
-100	0-100 Amps	150 Amps Continuous											
-200	0-200 Amps	225 Amps Continuous											
CS-651	-R1												

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AC CURRENT SENSORS CS-675 Series

DESCRIPTION:

The CS-675 Series current sensors monitor line current for electrical loads such as pumps, conveyors, machine tools, or fans and output an analog signal to represent the load current. The CS-675 is loop-powered and requires 15 to 30 Vdc to power the device

The CS-675 series features True RMS current measurement suitable to measure complex waveforms such as those found in VFD controlled loads. They are also suitable for accurate measurement of phase angled controlled or time proportional SCR controlled load currents. The CS-675 Series contain a precision RMS-to-DC converter circuit which will measure load current accurately for complex, distorted or noisy waveforms as opposed to "average reading" devices that will only accurately measure pure sine waveforms .

SPECIFICATION:

Measurement Range	See Ordering Information below
Maximum Input Current	See Ordering Information below
Accuracy	± 2% FSO (5-100% of range)
Signal Output	4-20 mA
Sensor Power	15 to 30 Vdc (Loop -powered)
Insulation Class	600 Vac, insulated conductors
Frequency	20-400 Hz
Response Time	500 mS Typical, 0-90 %
Output Load	250 Ω typical
Maximum Load	>600 Ω Max. @ 24 Vdc
Operating Temperature	-15 to 50 °C (5 to 122 °F)
Operating Humidity	5 to 90% RH non-condensing
Terminal Block	14 to 22 AWG
Dimensions	66 x 67.3 x 24.9 mm (2.6 x 2.65 x 0.98 in)
Sensor Aperture	0.8 in (20.3 mm)
Enclosure Material	ABS/PC, UL94 V-0
Agency Approvals	cULus Listed

FEATURES:

- True RMS for complex waves
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

PRODUCT ORDERING INFORMATION

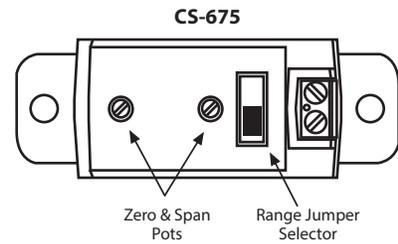
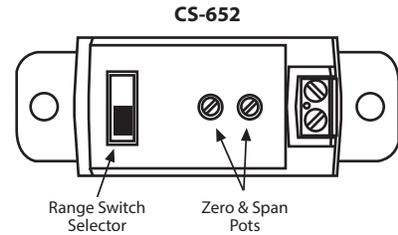
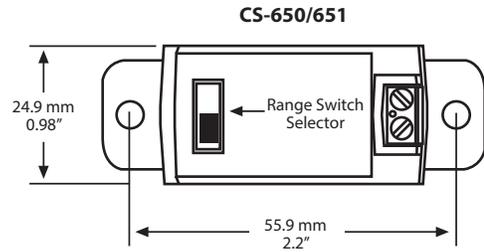
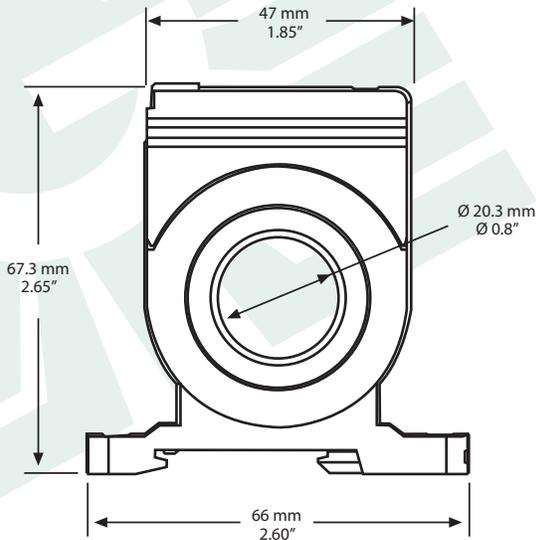
MODEL	Product Description
CS-675	4-20 mA, Loop-powered

CODE	Input Range	Maximum Input Current
-2	0-2 Amps	10 Amps Continuous
-5	0-5 Amps	15 Amps Continuous
-R1	0-10/20/50 Amps - Jumper Selectable	100 Amps Continuous
-R2	0-50/100/150 Amps - Jumper Selectable	150 Amps Continuous
-200	0-200 Amps	250 Amps Continuous

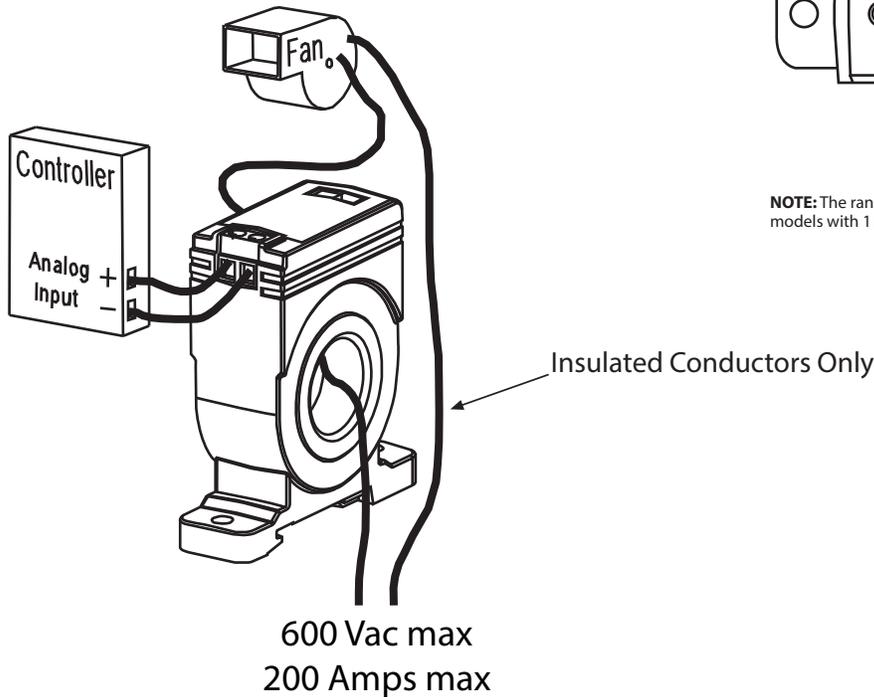
CS-675	-R1
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DIMENSIONS



NOTE: The range switch/jumper is not applicable for models with 1 fixed range.



Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters for Building Automation Management Systems.

We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM