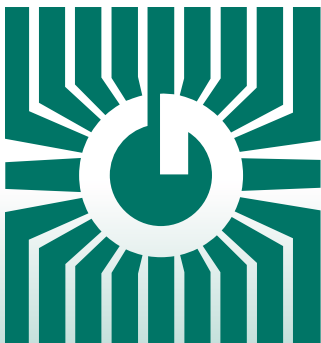


**GREYSTONE**  
ENERGY SYSTEMS INC



## SPLIT CORE CURRENT SENSOR SC-6XX Series



### Precision Power control/sensing

#### FEATURES:

- Split 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

## SC-650 Series

### DESCRIPTION:

The SC-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 SC-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..... | <b>SC-650-R1:</b> 100 Amps Continuous<br><b>SC-650-R2:</b> 150 Amps Continuous<br><b>SC-650-200:</b> 250 Amps Continuous |
| Accuracy.....              | ± 2% FSO (10-100% 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.....            | 76 x 79 x 24.9 mm<br>(3.0 x 3.1 x 0.98 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  |                       |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
|--------|--|-----------------------|-------------|-----------------------|-----|-------------------------------------|---------------------|-----|---------------------------------------|---------------------|------|------------|---------------------|
| SC-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   |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
| SC-650 | -R1  |                       |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |

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

# AC CURRENT SENSORS SC-651 Series

## DESCRIPTION:

The SC-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 SC-651 require no external power as they are totally powered by induction from the AC line being monitored. SChe 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..... | <b>SC-651-R1:</b> 100 Amps Continuous<br><b>SC-651-R2:</b> 150 Amps Continuous<br><b>SC-651-200:</b> 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<br>(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    |                                       |
|--------|------------------------|---------------------------------------|
| SC-651 | 0-10 Vdc, Self-powered |                                       |
|        | CODE                   | Input Range                           |
|        | -R1                    | 0-20/40/60 Amps - Switch Selectable   |
|        | -R2                    | 0-50/100/150 Amps - Switch Selectable |
|        | -200                   | 0-200 Amps                            |
|        | Maximum Input Current  |                                       |
|        |                        | 100 Amps Continuous                   |
|        |                        | 150 Amps Continuous                   |
|        |                        | 225 Amps Continuous                   |
| SC-651 | -R1                    |                                       |

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

# AC CURRENT SENSORS

## SC-652 Series

### DESCRIPTION:

The SC-652 Series current sensors monitor line current for electrical loads such as pumps, conveyors, machine tools, or fans and output a 4-20 mA Vdc signal to represent the load current.

The SC-652 is loop-powered and requires a 15-30 Vdc supply.

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..... | <b>SC-652-R1:</b> 100 Amps Continuous<br><b>SC-652-R2:</b> 150 Amps Continuous<br><b>SC-652-200:</b> 250 Amps Continuous |
| 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.....             | 50/60 Hz   |
| Response Time.....         | 250 mS Typical, 0-90 %   |
| Output Load.....           | 250 Ω typical  |
| Maximum Load.....          | <600 Ω at 24 Vdc   |
| 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<br>(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
- Average measurement is equivalent to True RMS for pure sine waves
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

### PRODUCT ORDERING INFORMATION

| MODEL  | Product Description  |                       |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
|--------|--|-----------------------|-------------|-----------------------|-----|-------------------------------------|---------------------|-----|---------------------------------------|---------------------|------|------------|---------------------|
| SC-652 | 4-20 mA, Loop-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>0-20/40/60 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 | 0-20/40/60 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    | 0-20/40/60 Amps - Switch Selectable  | 100 Amps Continuous   |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
| -R2    | 0-50/100/150 Amps - Switch Selectable  | 150 Amps Continuous   |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
| -200   | 0-200 Amps   | 250 Amps Continuous   |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |
| SC-652 | -R1  |                       |             |                       |     |                                     |                     |     |                                       |                     |      |            |                     |

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

# AC CURRENT SENSORS SC-675 Series

## DESCRIPTION:

The SC-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 SC-675 is loop-powered and requires 15 to 30 Vdc to power the device

The SC-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 SC-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 pure sine waves
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

## PRODUCT ORDERING INFORMATION

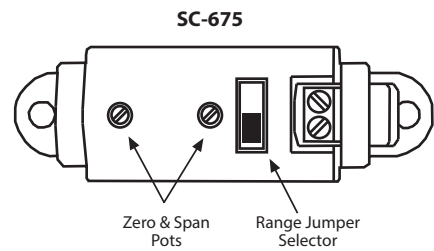
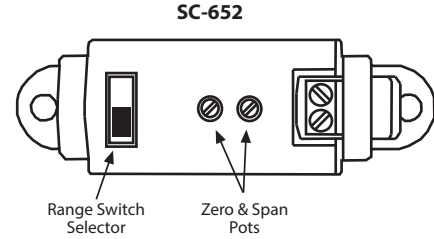
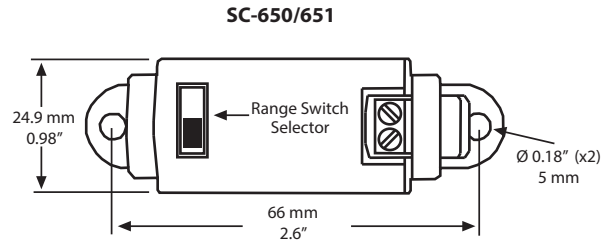
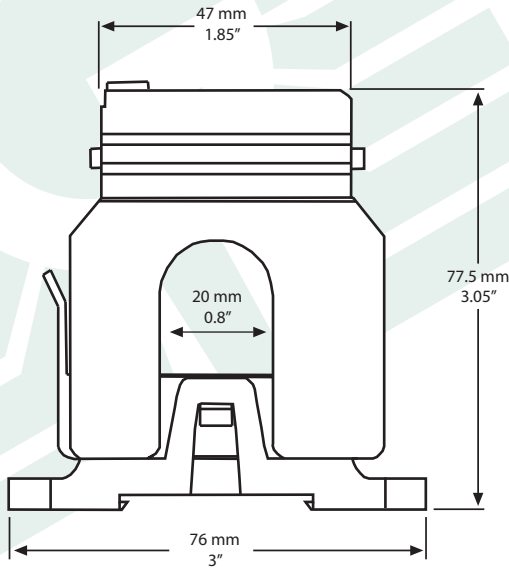
| MODEL  | Product Description   |
|--------|-----------------------|
| SC-675 | 4-20 mA, Loop-powered |

| 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   | 3X Range Selected Continuous |
| -R2  | 0-50/100/150 Amps - Jumper Selectable | 2X Range Selected Continuous |
| -200 | 0-200 Amps                            | 300 Amps Continuous          |

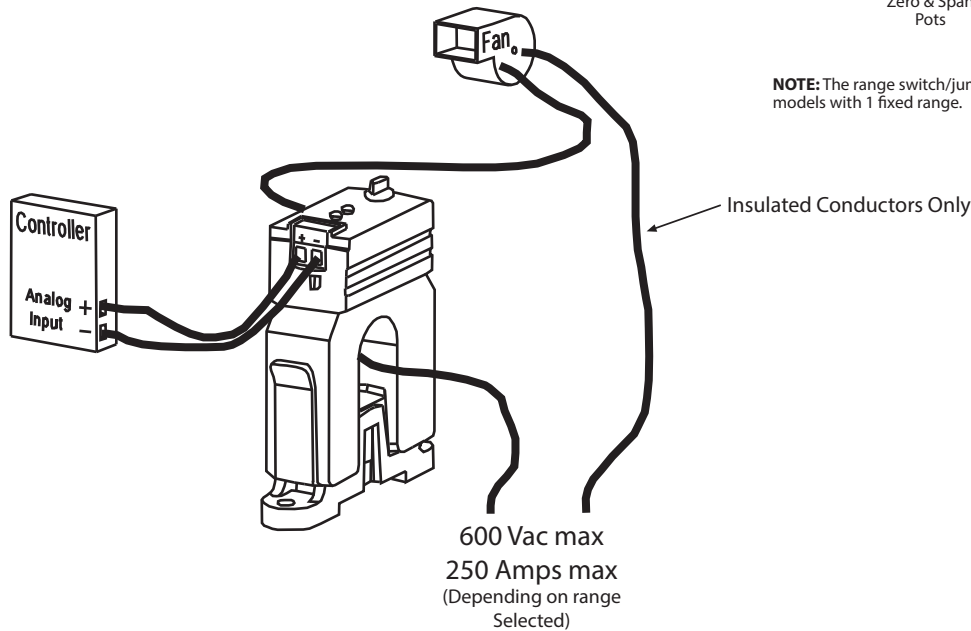
|        |     |
|--------|-----|
| SC-675 | -R1 |
|--------|-----|

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

# 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**