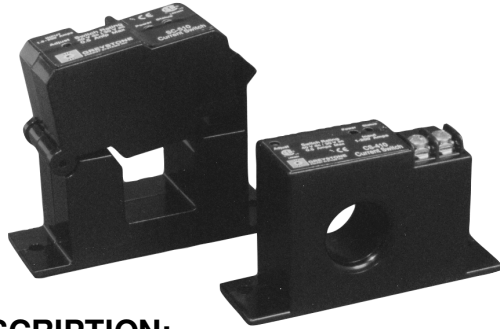


# AC CURRENT SENSORS

CS-450 / 475 and SC-550 / 575

# SOLID-STATE SENSORS FOR MONITORING AC CIRCUITS.



## FEATURES:

- No field adjustment necessary, factory calibrated
- Average measurement is equivalent to True RMS for pure sine waves for the CS-450 / SC-550 series
- True RMS measurement for sine waves or variable frequency drives for the CS-475 / SC-575 series
- Input / Output isolation via current transformer
- Solid-state reliability
- Small compact size
- Solid, reliable mounting method

## DESCRIPTION:

The CS-450 / 475 and SC-550 / 575 series of AC current sensors are solid-state transducers that convert a primary circuit current to a proportional output signal. The sensors can monitor up to 200 Amps continuous and feature three jumper selectable current ranges for the highest accuracy. All sensors are factory calibrated to ensure better than

1% accuracy. The CS-450 and the SC-550 are available with 0-5, 0-10 Vdc or 4-20 mA output signal types. The CS-475 and the SC-575 feature a true RMS 4-20 mA loop-powered output signal. All models are CSA certified or UL Approved and CE compliant.

## SPECIFICATIONS:

	CS-45X / SC-55X	CS-475 / SC-575
<b>Power Supply</b>	0-5/0-10 Vdc models are self-powered, 4-20 mA model requires 15-42 Vdc loop supply	15-42 Vdc (loop power)
<b>Input Current Ranges</b>	Three field selectable ranges (see below)	Three field selectable ranges (see below)
<b>Maximum Input Current</b>	10/20/50 Amp ranges-80/120/180 Amps inrush 50/100/200 Amp ranges-120/200/325 Amps inrush (See page 3 for SC-551 series)	2/5/10 Amp ranges – 35/60/90 Amps inrush 10/20/50 Amp ranges – 80/120/200 Amps inrush 50/100/200 Amp ranges – 175/300/400 Amps inrush
<b>Response Time</b>	100 mS (0-90%)	250 mS (0-90%)
<b>AC Conductor Hole</b>	Solid Core – 20mm (0.8”) diameter Split Core – 24 x 19 mm (0.95 x 0.75”)	Solid Core – 20mm (0.8”) diameter Split Core – 24 x 19 mm (0.95 x 0.75”)
<b>Output Loading Error (0-5/0-10)</b>	Calibrated with 1 M ohm load, add 1.2% error with 100k ohm load	N/A
<b>Enclosure Size (H x W x D)</b>	Solid Core – 49 x 87 x 25 mm (1.95 x 3.45 x 1.0”) Split Core – 70 x 87 x 30 mm (2.75 x 3.45 x 1.2”)	Solid Core – 49 x 87 x 25 mm (1.95 x 3.45 x 1.0”) Split Core – 70 x 87 x 30 mm (2.75 x 3.45 x 1.2”)
<b>Operating Temperature</b>	0 to 40°C (32 to 104°F)	0 to 40°C (32 to 104°F)
<b>Operating Humidity</b>	0 to 95% RH, non-condensing	0 to 95% RH, non-condensing
<b>Protection Circuitry</b>	Reverse voltage protected and output limited	Reverse voltage protected and output limited
<b>Wiring Connections</b>	Solid Core – Barrier strip Split Core – Screw terminals (14 to 22 AWG)	Solid Core – Barrier strip Split Core – Screw terminals (14 to 22 AWG)
<b>Enclosure Material</b>	UL 94 V-0 flammability rated ABS, Insulation class 600V	UL 94 V-0 flammability rated ABS, Insulation class 600V
<b>Manufacturing</b>	ISO 9001 Certified	ISO 9001 Certified
<b>Output Signal &amp; Accuracy</b>	0-5 Vdc, 0-10 Vdc or 4-20 mA Better than ±1% FS on all three ranges	4 to 20 mA represents 0 to 100% of current span Better than ±1% FS on all three ranges

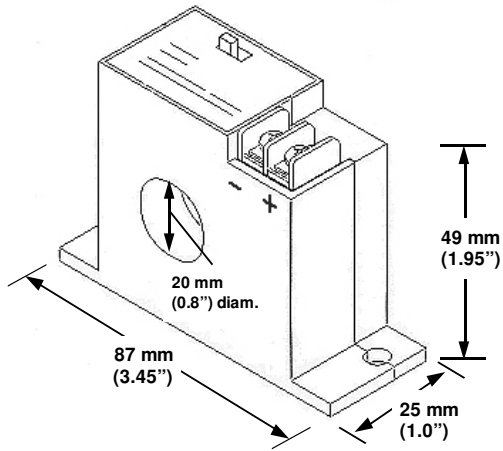
## CURRENT SENSOR: PRODUCT ORDERING INFORMATION

Solid Core (CS)					Split Core (SC)				
Model	Output	Approval	Frequency	Amp Ranges	Model	Output	Approval	Frequency	Amp Ranges
CS-450-1	0-5 Vdc	cULus	40 – 100 Hz	0-10/0-20/0-50	SC-550-1	0-5 Vdc	cCSAus, cULus	40 – 100 Hz	0-10/0-20/0-50
CS-450-2	0-5 Vdc	cULus	40 – 100 Hz	0-50/0-100/0-200	SC-550-2	0-5 Vdc	cCSAus, cULus	40 – 100 Hz	0-50/0-100/0-200
CS-451-1	0-10 Vdc	cULus	40 – 100 Hz	0-10/0-20/0-50	SC-551-1	See page 3 for new part numbers and ordering details			
CS-451-2	0-10 Vdc	cULus	40 – 100 Hz	0-50/0-100/0-200	SC-551-2	See page 3 for new part numbers and ordering details			
CS-452-1	4-20 mA	cULus	40 – 100 Hz	0-10/0-20/0-50	SC-552-1	4-20 mA	cCSAus, cULus	40 – 100 Hz	0-10/0-20/0-50
CS-452-2	4-20 mA	cULus	40 – 100 Hz	0-50/0-100/0-200	SC-552-2	4-20 mA	cCSAus, cULus	40 – 100 Hz	0-50/0-100/0-200
CS-475-0	4-20 mA	cULus	10 – 400 Hz	0-2/0-5/0-10	SC-575-1	4-20 mA	cCSAus, cULus	10 – 400 Hz	0-10/0-20/0-50
CS-475-1	4-20 mA	cULus	10 – 400 Hz	0-10/0-20/0-50	SC-575-2	4-20 mA	cCSAus, cULus	10 – 400 Hz	0-50/0-100/0-200
CS-475-2	4-20 mA	cULus	10 – 400 Hz	0-50/0-100/0-200					

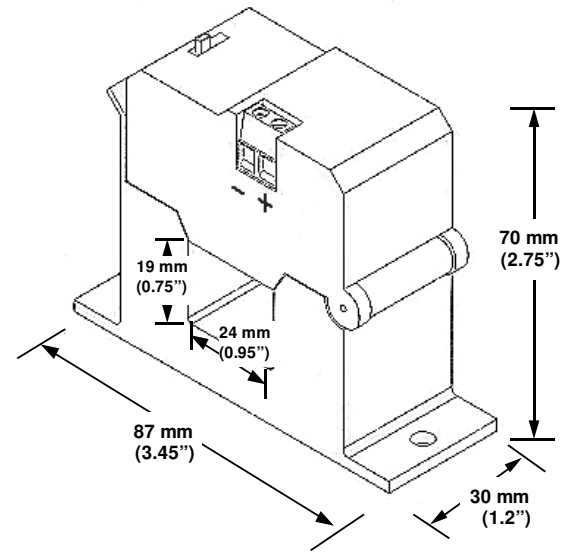
## CURRENT SENSOR (SC-551 Series): PRODUCT ORDERING INFORMATION

Model	Output	Approval	Frequency	Amp Range	Amperage max
SC-551-10	0-10Vdc	cULus	40-100Hz	0-10 Amps	140 Amps
SC-551-25	0-10Vdc	cULus	40-100Hz	0-25 Amps	160 Amps
SC-551-50	0-10Vdc	cULus	40-100Hz	0-50 Amps	190 Amps
SC-551-100	0-10Vdc	cULus	40-100Hz	0-100 Amps	250 Amps
SC-551-200	0-10Vdc	cULus	40-100Hz	0-200 Amps	350 Amps

## Solid Core CS-450 & CS-475 Series Current Sensor



## Split Core SC-550 & SC-575 Series Current Sensor



### Options Relay Mounting Base CR-112 / CR-124



### FEATURES:

- Can be easily mounted to any CS or SC product for easier installation
- Can be used as a stand-alone relay
- Convenient Relay Status LED
- Can be factory assembled with any CS or SC product
- Push-rivets supplied for fast and reliable field assembly
- SPDT Form C relay contacts
- Environmentally-friendly cadmium-free contacts
- Ideal for switching contactors, solenoids and motors
- Small compact size

### DESCRIPTION:

The CR-112 and CR-124 Command Relays are line voltage relays for use with the CS and SC current sensors and switches or as

stand-alone devices. All models are CSA certified, and CE compliant.

### SPECIFICATIONS: (NOTE: COMMAND RELAY DOES NOT ACCEPT A VARIABLE ANALOG SIGNAL)

<b>Relay Coil</b>	CR-112 12 Vac/dc $\pm$ 20% @ 18 mA CR-124 24 Vac/dc $\pm$ 20% @ 10 mA	<b>Enclosure Size (L x W x D)</b>	102 x 44 x 25 mm (4 x 1.75 x 1") 125 mm (4.9") length with mounting tabs
<b>Relay Contacts</b>	SPDT Form C (normally open, common, normally closed) 10 Amp resistive @ 250 Vac (UL508) 8 Amp inductive @ 250 Vac 5 Amp @ 30 Vdc	<b>Mounting Holes Dimension</b>	114 mm (4.5") spacing, 4.8 mm (0.19") diameter
<b>Contact Resistance</b>	100 m $\Omega$ maximum	<b>Enclosure Material</b>	UL 94V-0 flammability rated ABS
<b>Oper. Temperature</b>	-40 to 85°C (-40 to 185°F)	<b>Operating Humidity</b>	20 to 85% RH, non-condensing
<b>Wiring Connections</b>	Screw terminal block (12 to 28 AWG)	<b>Manufacturing Process</b>	ISO 9001 Certified