CURRENT SENSORS

Precision current control/sensing

FEATURES:

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- Solid and split core models
- 4-20 mA, 0-5 Vdc, or 0-10 Vdc output models
- Monitor up to 200 amps

Peace of mind through reliable current sensors

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

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

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.

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

SPECIFICATIONS:

	CS-45X / SC-55X	CS-475 / SC-575
Power Supply	0-5/0-10 Vdc models are self-powered, 4-20 mA model requires 15-42 Vdc loop supply	15-42 Vdc (loop powered)
Input Current Ranges	Three field selectable ranges (see below)	Three field selectable ranges (see below)
Maximum Input Current	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
Response Time	100 mS (0-90%)	250 mS (0-90%)
AC Conductor Hole	Solid Core - 20 mm (0.8″) diameter Split Core - 24 x 19 mm (0.95 x 0.75″)	Solid Core - 20 mm (0.8") diameter Split Core - 24 x 19 mm (0.95 x 0.75")
Output Loading Error (0-5 / 0-10)	Calibrated with 1 M ohm load, add 1.2% error with 100k ohm	N/A
Enclosure Size (H x W x D)	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″)
Operating Temp.	0 to 40°C (32 to 104°F)	0 to 40°C (32 to 104°F)
Operating Humidity	0 to 95% RH, non-condensing	0 to 95% RH, non-condensing
Protection Circuitry	Reverse voltage protected and output limited	Reverse voltage protected and output limited
Wiring Connections	Solid Core - Barrier strip Split Core - Screw terminals (14 to 22 AWG)	Solid Core - Barrier strip Split Core - Screw terminals (14 to 22 AWG)
Enclosure Material	UL 94 V-0 flammability rated ABS, Insulation class 600V	UL 94 V-0 flammability rated ABS, Insulation class 600V
Manufacturing	ISO 9001 Certified	ISO 9001 Certified
Output Signal and Accuracy	0-5 Vdc, 0-10 Vdc or 4-20 mA Better than $\pm 1\%$ FS on all three ranges	4 to 20 mA represents 0 to 100% of current span Better than $\pm 1\%$ FS on all three ranges

CURRENT SENSOR: PRODUCT ORDERING INFORMATION

Solid Core (CS)					Split Co	re (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			ig 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			ig details
CS-452-1	4-20 mA	cULus	40-100 Hz	0-10/0-20/0-50	SC-552-1	1 4-20 mA cCSAus, cULus 40-100 Hz 0-10/0-20/0-2			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	I 4-20 mA cCSAus, cULus 10-400 Hz 0-10/0-20/0-5			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	0-10 Vdc	cULus	40-100Hz	0-10 Amps	140 Amp
SC-551-25	0-10 Vdc	cULus	40-100Hz	0-25 Amps	160 Amp
SC-551-50	0-10 Vdc	cULus	40-100Hz	0-50 Amps	190 Amp
SC-551-100	0-10 Vdc	cULus	40-100Hz	0-100 Amps	250 Amp
SC-551-200	0-10 Vdc	cULus	40-100Hz	0-200 Amps	350 Amp

CT/PT INPUT TRANSDUCER CVT-100

FEATURES:

- True RMS-DC conversion
- CT or PT input (pin selectable)
- Loop Powered

APPLICATIONS:

- Power consumption monitoring
- Overload detection

TRIAC, Inductive motors, etc.

transformers, contact Greystone

- Reverse voltage protection
- CSA NRTL/C approval (Canada / USA)



SPECIFICATIONS:

Power Supply:	10 - 32 Vdc		
Current Consumption:	26 mA (max.)		
Input Signal:	0 - 5 Amp RMS (CT) 0 - 20 Volt RMS (PT)		
Input Impedance	0.1 ohm(CT) 15k ohm(PT)		

Accuracy:	±1% Full Scale Output
Operating Temperature:	0 to 70°C (32 to 158°F)
Operating Humidity:	0 - 95% RH non-condensing
H x W x D:	19 x 57 x 70 mm (0.75 x 2.25 x 2.75")

NOTE: PT option includes 115/20 Vac transformer. For other potential

The CVT-100 accepts a 0 to 5 Amp RMS current from a CT, or a 0 to 20 Volt RMS voltage from a PT, and converts it to a proportional DC current loop. The CVT-100 incorporates a true RMS conversion which is corrected to all types of waveforms, and therefore can be used with a wide variety of load types: SCR,

Mountina:

Snap Track (factory supplied)

CVT-100: PRODUCT ORDERING INFORMATION

CODE	Enclosure Options	CODE	Input Options
Α	Snap Track	1	CT (0-5) AMP
		4	РТ

CURRENT TRANSFORMER Model RL



SPECIFICATIONS:

Insulation Class:
0.6 Kv 10Kv Bil
Frequency:
50-400 Hz
Approximate weight:
Model 5RL: 0.45 kg (1.0 lb)
Model 7 $RI \cdot 0.68$ kg (1.5 lb)

APPLICATIONS:

SOLID CORE CURRENT TRANSFORMER: **PRODUCT ORDERING INFORMATION**

			Model #5RL		Model #7RL	
Model	Order	Current	I.D. 39.6 mm (1.56")		I.D. 63.5 mm (2.50")	
	Code	Ratio	Precision	VA	Accuracy	VA
5RL	500	50:5	±2%	1.0	-	-
5RL	750	75:5	±2%	1.5	-	-
5RL or 7RL	101	100:5	±2%	2.0	±2%	2.5
5RL or 7RL	151	150:5	±1%	5.0	±1%	5.0
5RL or 7RL	201	200:5	±1%	5.0	±1%	5.0
5RL or 7RL	251	250:5	±1%	10.0	±1%	5.0
5RL or 7RL	301	300:5	±1%	12.5	±1%	12.5
5RL or 7RL	401	400:5	±1%	12.5	±1%	15.0
5RL or 7RL	501	500:5	±1%	20.0	±1%	25.0
5RL or 7RL	601	600:5	±1%	25.0	±1%	30.0
5RL or 7RL	751	750:5	±1%	25.0	±1%	30.0
5RL or 7RL	801	800:5	±1%	25.0	±1%	35.0
5RL or 7RL	102	1000:5	±1%	25.5	±1%	30.0
5RL or 7RL	122	1200:5	±1%	30.0	±1%	35.0
7RL	152	1500:5	-	-	±1%	40.0
7RI	162	1600.5	-	-	+1%	45.0







GREYSTONE ENERGY SYSTEMS INC

and there are no exposed metal parts other than the terminals. All models are CSA certified and UL approved.

Current Transformers provide a low amperage current output proportional to line current, for use in building automation, relaying, or metering. The core and windings of each unit are completely encased in UL approved plastic that is rated 94V1,

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Solid Core CS-450 & CS-475 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, UL approved and CE compliant.

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

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



GREYSTONE

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Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC sensors and transducers for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader by maintaining leadingedge 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.

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v.02/09



Split Core SC-550 & SC-575 Series