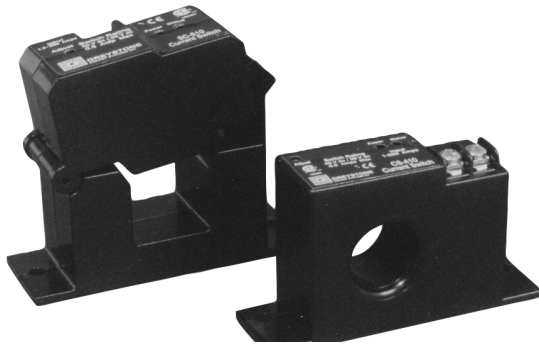


# AC CURRENT SWITCHES

CS-400 / SC-500

ADJUSTABLE CURRENT-OPERATED SOLID-STATE  
RELAYS FOR SWITCHING AC OR DC CIRCUITS



## FEATURES:

- Auto-ranging eliminates lost jumpers
- Self-powered and no insertion loss
- True digital switching and no leakage
- Small compact size
- Easy field adjustment with status LED's
- Input / Output isolation via current transformer
- Solid-state reliability
- Solid, reliable mounting method

## DESCRIPTION:

The CS-400 / SC-500 series of AC current switches are solid-state switches that activate a contact closure whenever the monitored primary circuit current exceeds a pre-set level. Several models are available to switch various load types as indicated in the Product Ordering Chart. Several models feature integral LEDs to indicate device power and also the switch status. Most switch

models include a multi-turn adjustment to set the trip threshold to the desired value and the GNG model operates as a go/no-go status indicator with a factory set minimum threshold value. The switches can monitor up to 200 Amps continuous and feature an auto-range circuit to eliminate manual jumpers. All models are CSA certified or UL approved and CE compliant.

## SPECIFICATIONS:

<b>Setpoint Range</b>	1-200 Amps for CS models, 1.5-200 for SC models, GNG model fixed at 1A, GNG-L model fixed at 0.5 A. CS-325 (-NS) and SC-525-S (-NS): <u>Jumper</u> <u>Amp-Turns</u> Low (none)                      1-6 Medium                              6-40 High                                  40-200 40-150 {SC-525-S (-NS)}	<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")
<b>Wiring Connections</b>	Solid Core – Barrier strip Split Core – Screw terminals (14 to 22 AWG)	<b>Enclosure Material</b>	UL 94V-0 flammability rated ABS, Insulation Class 600V
<b>Hysteresis</b>	< 2% FS max	<b>Certification</b>	CSA or UL (see below table), CE
<b>Operating Temperature</b>	0 to 40°C (32 to 104°F)	<b>Power Supply</b>	None – Self-powered
<b>Response Time</b>	< 200 mS	<b>AC Conductors Hole</b>	Solid Core – 20 mm (0.8") diameter Split Core – 24 x 19 mm (0.95 x 0.75)

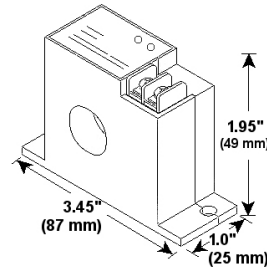
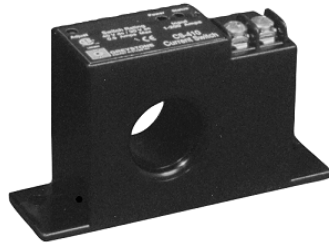
## CURRENT SWITCH: PRODUCT ORDERING INFORMATION

Model	Output Type	Switch V Max	I Max	Von @ 24Vdc @ 150 mA	Leakage Current	Power LED	Status LED	Auto Range	Input I Min	Input I Max	Approval
CS-GNG	Mosfet	30Vac/40Vdc	500 mA	<0.1 V	<25 µA	No	No	Yes	1A	200A	cULus
CS-GNG-L	Mosfet	30Vac/40Vdc	500 mA	<0.1 V	<25 µA	No	No	Yes	0.5A	200A	cULus
CS-410	Mosfet	30Vac/40Vdc	500 mA	<0.1 V	<25 µA	Yes	Yes	Yes	1A	200A	cULus
CS-325*	Triac	250Vac	1 Amp	n/a	<5 mA	No	No	No	1.25A	200A	cCSAus
CS-325-NS*	Triac	250Vac	1 Amp	n/a	<1 mA	No	No	No	1.25A	200A	cCSAus
SC-GNG	Mosfet	30Vac/40Vdc	500 mA	<0.1 V	<25 µA	No	No	Yes	1.5A	200A	cCSAs, cULus
SC-510	Mosfet	30Vac/40Vdc	500 mA	<0.1 V	<25 µA	Yes	Yes	Yes	1.5A	200A	cCSAs, cULus
SC-525-S*	Triac	120 Vac	500 mA	n/a	<5 mA	No	No	No	1.5A	150A	cULus
SC-525-NS*	Triac	120 Vac	500 mA	n/a	<1 mA	No	No	No	1.5A	150A	cULus

\* The CS-325/SC-525-S with the snubber circuit is best used to switch high-current inductive loads such as small fan motors. The CS-325/SC-525-NS is best used to switch resistive or low-current inductive loads such as relays or lights.

# AC HIGH CURRENT SWITCH

CS-425-HC Series



## APPLICATIONS:

- Directly control of AC loads, such as dryer booster fans, in response to the current of a monitored AC circuit
- Replaces Differential Pressure switches

## DESCRIPTION:

The CS-425-HC products are solid-state current switches with N.O. triac outputs to control high-current line-voltage AC loads. All models have a factory set trip level of approximately 1 Amp and require no field adjustment for easy installation. Internal circuits are powered by induction from the line being monitored and all models are cULus certified.

## SPECIFICATIONS:

<b>Maximum Core Current</b>	50 Amps	<b>Turn on time</b>	<200 mS
		<b>Turn off time</b>	0, 5, 10 or 15 minutes (factory set)
<b>Operating Temperature</b>	0 to 40°C (32 to 104°F)	<b>Operating Humidity</b>	0 – 95% RH non-condensing
<b>Trip Set-Point</b>	Approximately 1 Amp	<b>Material</b>	UL 94V-0 flammability rated ABS, Insulation Class 600V
<b>Enclosure Size (H x W x D)</b>	49 x 87 x 25 mm (1.95" x 3.45" x 1")	<b>Mounting Holes</b>	2 x 5 mm holes spaced 76 mm on base (2 x 0.19" holes spaced 3" on base)
<b>AC Conductor Hole</b>	20 mm (0.8") Diameter	<b>Switch Type</b>	Solid-state triac
<b>Switch Rating</b>	120 Vac @ 2.5 Amps Max	<b>Off -state Leakage</b>	< 1 mA

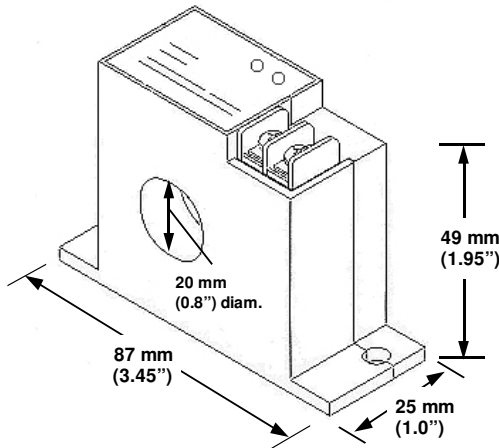
## DRYER BOOSTER FAN OPERATION:

The CS-425-HC series can operate a dryer booster fan directly. These devices sense when a clothes dryer is drawing 1 Amp of current and then closes the output switch to activate the dryer vent booster fan. When the dryer cycle is complete and the current drops below the threshold, the output switch will remain closed for a pre-set delay time to allow heat to be removed from the vent before the switch is opened again. The device is designed to mount in a standard electrical box and the dryer supply neutral (white) wire passes through the center of the sensor so no physical connection is made. The device output can switch 120 Vac loads up to 2.5 Amps.

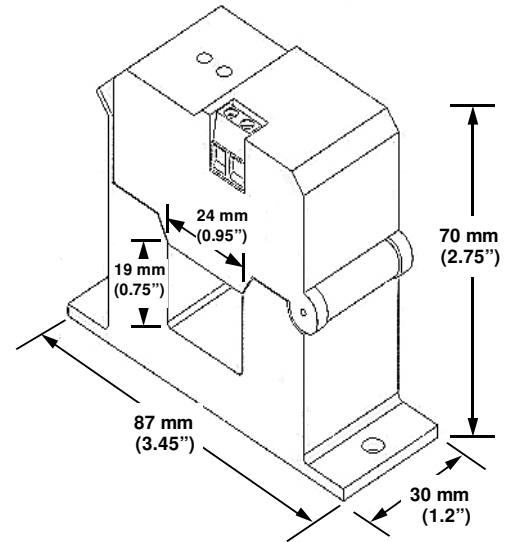
## CURRENT SWITCH: PRODUCT ORDERING INFORMATION

Model	Output Type	Switch V Max	Switch I Max	Leakage Current	Input I Min	Input I Max	Time Delay (off)	Approval
CS-425-HC-0	Triac	120 VAC	2.5 Amp	<1 mA	~1 Amp	50 Amps	none	cULus
CS-425-HC-5	Triac	120 VAC	2.5 Amp	<1 mA	~1 Amp	50 Amps	5 minutes	cULus
CS-425-HC-10	Triac	120 VAC	2.5 Amp	<1 mA	~1 Amp	50 Amps	10 minutes	cULus
CS-425-HC-15	Triac	120 VAC	2.5 Amp	<1 mA	~1 Amp	50 Amps	15 minutes	cULus

## Solid Core CS-400 Series Current Switch



## Split Core SC-500 Series Current Switch



### 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 to Canadian and US standards and CE compliant.

### SPECIFICATIONS:

<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 $^{\circ}$ C (-40 to 185 $^{\circ}$ F)	<b>Operating Humidity</b>	20 to 85% RH, non-condensing
<b>Wiring Connections</b>	Screw terminal block (12 to 28 AWG)	<b>Approval</b>	cCSAus