AC current switches/sensors

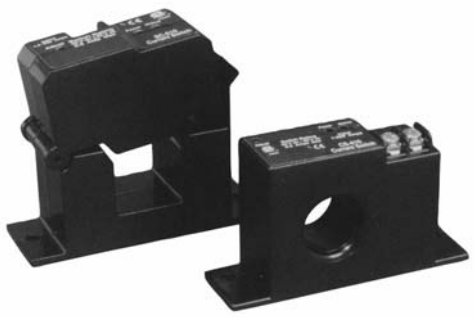
Current transformers with built-in control electronics

Selectable metering ranges

Current switches with AC/DC output, max 500 mA, or AC output, max 1 A.

Current sensors with 4-20 mA output

Made in accordance with the CE and EMC regulations



Description:

The C-mac current switches / current sensors are combined current transformers and control electronics with analogue or switch output.

In a lot of applications this combination eliminates the need for external control relays and/or signal converters, because the output of the unit can be connected directly to the input of standard process control equipment.

The units can monitor up to 200 Amps continuous. The current sensors are jumper selectable in 3 ranges, and the current switches are either jumper selectable or multirange.

The current switches are supplied with setpoint adjustment and switch output, which makes them very useful in applications where you want a signal, if a preset current level is exceeded, and you do not need to readjust this setpoint very often.

The current sensors are supplied with a 4 - 20 mA loop-powered analogue output. The output is proportional with the RMS value of the primary current. The units can be used to monitor motors, pumps, conveyors, machine tools or other electrical loads, where an analogue representation is required over a range of currents.
The current sensors are available in 2 variant, each with 3 selectable ranges, in order to achieve a good resolution in the selected metering range.
Accuracy, current sensors: +/- 1% FS.

Available variants:

1. Solid core switch units, primary hole = Ø 19 mm

type no.	output	max. voltage	max. current
CS410	AC/DC switch	30 VAC/40 VDC	500 mA
CS325	AC switch	250 VAC	1 A

2. Split core switch units, hole = 19 x 24 mm

type no.	output	max. voltage	max. current
SC510	AC/DC switch	30 VAC/40 VD	500mA
SC325	AC switch	250 VAC	1 A

3. Current sensors.

type no.	primary hole	output	supply
CS475	solid core	4 - 20 mA	10 - 42 VDC
SC575	split core	4 - 20 mA	10 - 42 VDC

Technical data:

Range selection, CS325 and SC325:

Range	Jumper	Max. cont.	6 sec's	1 sec.
1.25 - 6 A	none	60 A	100 A	175 A
6 - 40 A	mid	100 A	150 A	240 A
40 - 200 A	high	210 A	450 A	550 A

Range selection, CS475-1 and SC575-1:

Range	Jumper	Max. cont.
0 - 10 A	none	80 A
0 - 20 A	mid	120 A
0 - 50 A	high	180 A

Range selection, CS475-2 and SC575-2:

Range	Jumper	Max. cont.
0 - 50 A	none	120 A
0 - 100 A	mid	200 A
0 - 200 A	high	325 A

Hyst., react. delay, ON-voltage and leakage current:

type	hysteresis	delay	Von,	I Leakage
CS410	2 %	<200 ms	<0.1 V	<25 µA
CS325	2 %	<300 ms	<0.5 V	< 5 mA
SC510	2 %	<300 ms	<0.1 V	<25 µA
SC325	2 %	<400 ms	<0.5 V	< 5 mA

Frequency, metering signal: 10 - 400 Hz

Isolation
Primary - secondary circuit: 2,5 kV AC

Operation temperature: 0 - 70°C

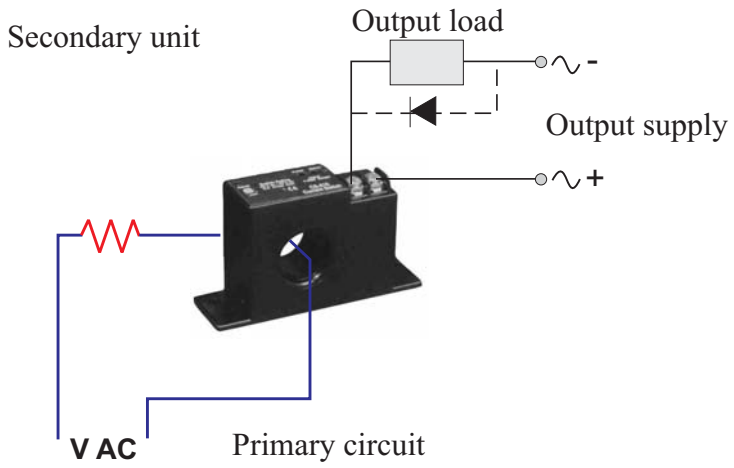
Operating humidity: 0 - 95 % RH

Material: Self- extinguishing ABS

LED's:
CS325, CS475
SC325, SC575: No LED's
CS410, SC510: power and status LED

Connection examples:

CS410 and SC510

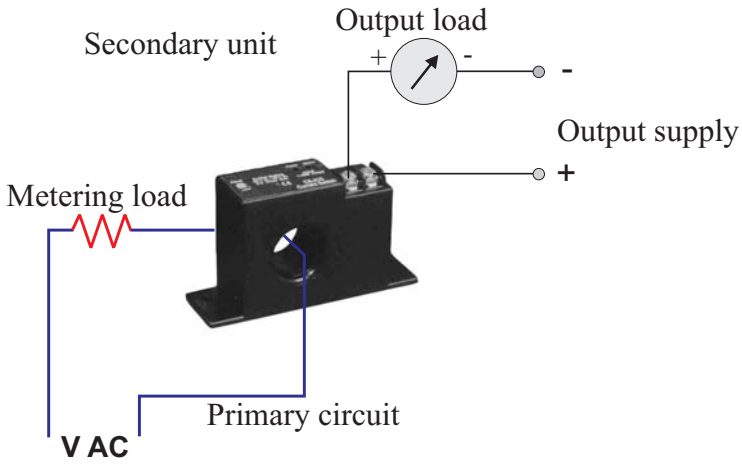


Note:

If the output load is inductive (i.e. relay, solenoid) you must connect a diode across the load, as indicated.

The CS325 and SC325 has a built-in snubber circuit.

CS475 and SC575



Note:

The unit requires 10 VDC for the internal electronics.
The output supply must be 10 VDC +(RL x 20 mA).
If. f.inst. the output load (instrument) has an internal resistance of 250 , the suppy must be at least 15 VDC.

Mechanical dimensions