



Closed Loop Hall Current Sensor CYHCS-SYA

This Hall Effect current sensor is based on the closed loop compensating principle and designed with a high galvanic isolation between primary and secondary circuits. It can be used for measurement of DC and AC current, pulse currents etc. The output of the transducer reflects the real wave of the current carrying conductor.

Product Characteristics	Applications
<ul style="list-style-type: none">• Excellent accuracy• Very good linearity• Accuracy independent on the position of primary cable• Larger measuring range	<ul style="list-style-type: none">• Photovoltaic equipment• General Purpose Inverters• AC/DC Variable Speed Drivers• Battery Supplied Applications• Uninterruptible Power Supplies• Switched Mode Power Supplies

Electrical Data/Input

Part number	Primary Rated Current I_r (A)	Measuring Range I_p (A)	Primary Conductor (mm)	Turns ratio	measuring resistor range (Ω)
CYHCS-SYA03A	3	± 6	$\varnothing 0.6$	7:1050	200-400
CYHCS-SYA05A	5	± 10	$\varnothing 0.8$	4:1000	
CYHCS-SYA10A	10	± 20	$\varnothing 0.8$	3:1500	
CYHCS-SYA15A	15	± 30	$\varnothing 1.0$	2:1500	
CYHCS-SYA20A	20	± 40	$\varnothing 1.4$	1:1000	
CYHCS-SYA25A	25	± 50	$\varnothing 1.4$	1:1250	
CYHCS-SYA30A	30	± 60	$\varnothing 1.6$	1:1500	
CYHCS-SYA50A	50	± 100	2x $\square 1.6$ x1.5	1:2500	

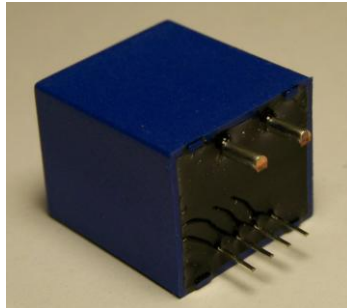
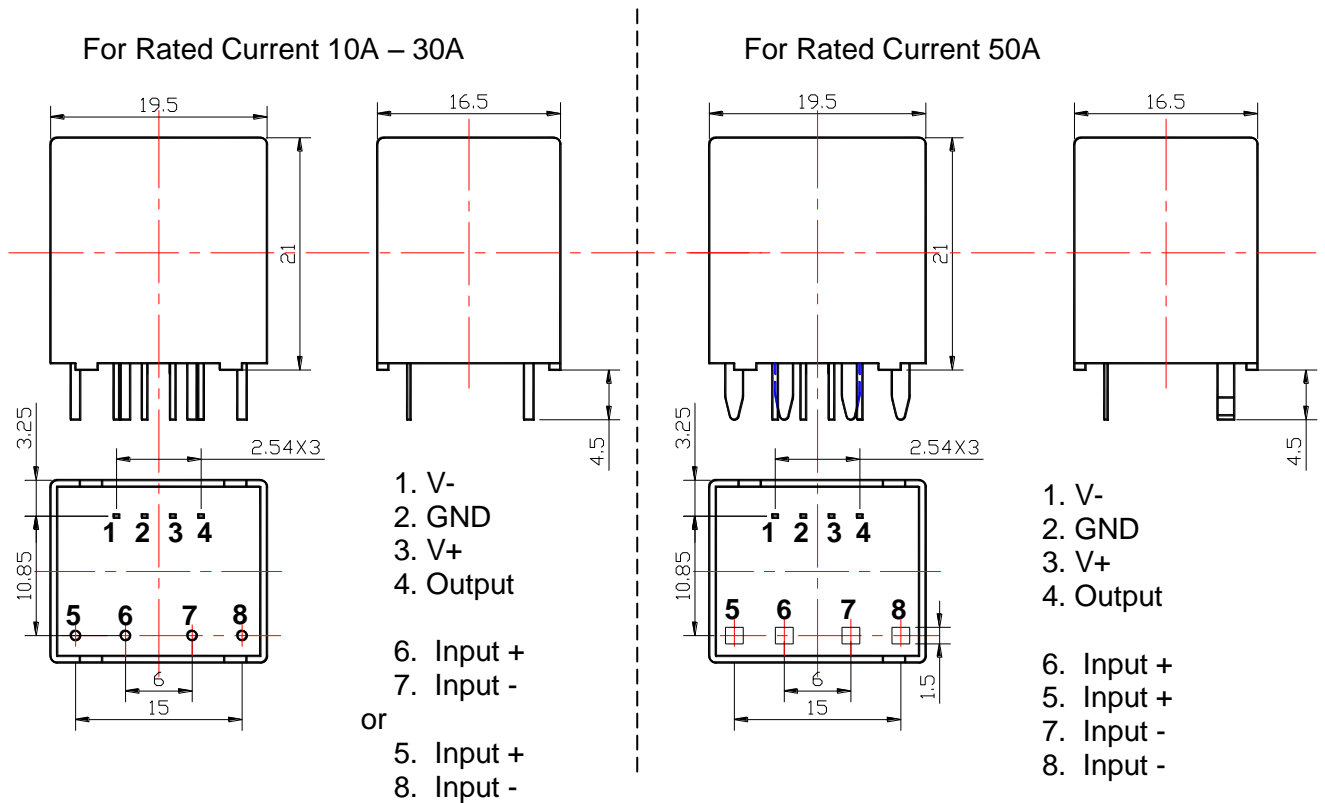
Rated Output current:	$\pm 20\text{mA} \pm 0.5\%$
Supply Voltage	$\pm 15\text{V} \pm 5\%$, 12mA
Current Consumption (at $I_{\text{out}}=0\text{V}$)	12mA
Isolation voltage (50/60Hz, 1min)	5kV
Accuracy:	0.5%
Linearity:	$< 0.1\%$ FS
Electric Offset Current	$\pm 0.2\text{mA}$
Thermal Drift of Offset Voltage,	$\pm 0.005\text{mA}/^\circ\text{C}$
Response Time:	$< 1\mu\text{s}$
Frequency Bandwidth:	DC ~ 150kHz

General Data

Ambient Operating Temperature:	$-40^\circ\text{C} \sim +85^\circ\text{C}$
Ambient Storage Temperature:	$-40^\circ\text{C} \sim +125^\circ\text{C}$



PIN Definition



Operating instructions

1. Connect the pins of power source, outputs respectively and correctly, never make wrong connection for DC current.
2. Temperature of the primary conductor should not exceed 100 °C.

Custom Sensors with other input current and output current are available