

Closed Loop Hall AC/DC Current Sensor CYHCS-LXA

This Hall Effect current sensor is based on the closed loop compensating principle and designed with a high galvanic isolation between primary conductor and secondary circuit. 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 • Small size and encapsulated • Less power consumption • Current overload capability 	<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

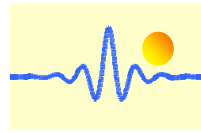
Electrical Data/Input

Part number	Primary Rated Current I_r (A)	Measuring Range I_p (A)	Primary Conductor (mm)	Turns ratio	Internal measuring resistor (Ω)
CYHCS-LXA03A	3	± 9	$\varnothing 0.6$	7:1050	200-400
CYHCS-LXA05A	5	± 15	$\varnothing 0.8$	4:1000	
CYHCS-LXA10A	10	± 30	$\varnothing 0.8$	3:1500	
CYHCS-LXA15A	15	± 45	$\varnothing 1.0$	2:1500	
CYHCS-LXA20A	20	± 60	$\varnothing 1.4$	1:1000	
CYHCS-LXA25A	25	± 75	$\varnothing 1.4$	1:1250	
CYHCS-LXA30A	30	± 90	$\varnothing 1.6$	1:1500	
CYHCS-LXA50A	50	± 150	$\square 2.4 \times 1.6$	1:2500	

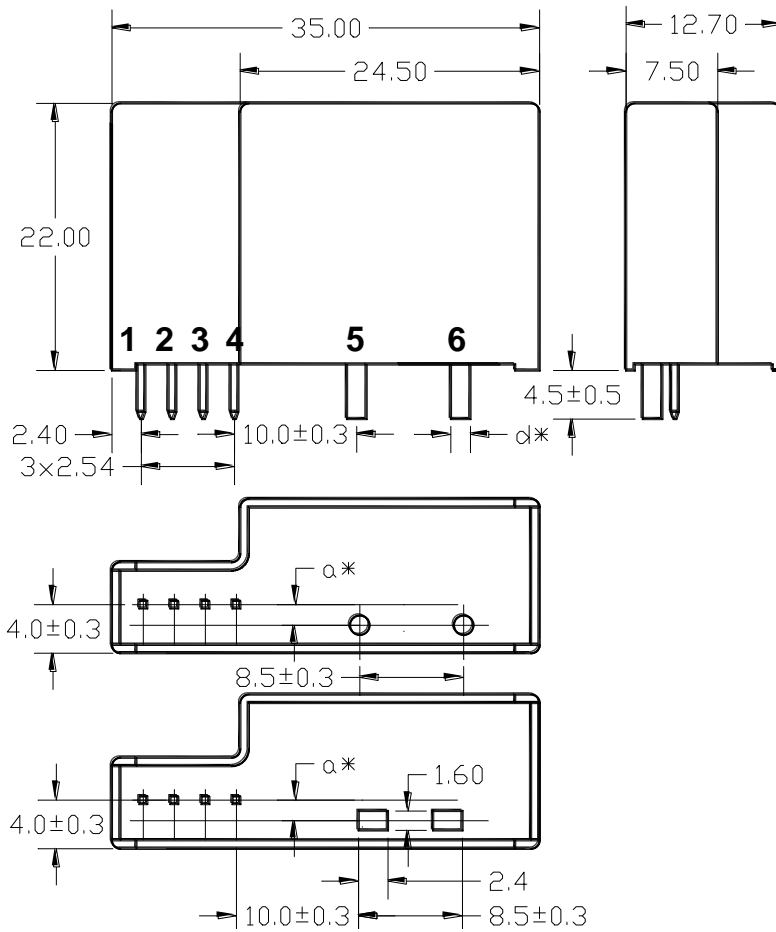
Rated Output Current:	$\pm 20\text{mA} \pm 0.5\%$
Supply Voltage	$\pm 15\text{V} \pm 5\%$,
Current Consumption	18mA $\pm 20\text{mA}$
Isolation voltage (50/60Hz, 1min)	2.5kV
Accuracy:	0.5%
Linearity:	<0.1% FS
Electric Offset Current	$\pm 0.2\text{mA}$
Thermal Drift of Offset Current	$\pm 0.005\text{mA}/^\circ\text{C}$
Response Time:	< 1 μs
Frequency Bandwidth:	DC ~ 150kHz

General Data

Ambient Operating Temperature:	-25 $^\circ\text{C}$ ~ +85 $^\circ\text{C}$
Ambient Storage Temperature:	-40 $^\circ\text{C}$ ~ +100 $^\circ\text{C}$



PIN Definition



1	+15V
2	-15V
3	Output
4	GND
5	Input +
6	Input -



Part number	a (mm)	d (mm)
CYHCS-LXA03A	1.3	Ø 0.6
CYHCS-LXA05A	1.4	Ø 0.8
CYHCS-LXA10A	1.4	Ø 0.8
CYHCS-LXA15A	1.6	Ø 1.0
CYHCS-LXA20A	1.6	Ø 1.0
CYHCS-LXA25A	1.6	Ø 1.4
CYHCS-LXA30A	1.7	Ø 1.6
CYHCS-LXA50A	1.7	□ 2.4x1.6

Operating instructions

1. Connect the pins of power source, output 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 voltage are available