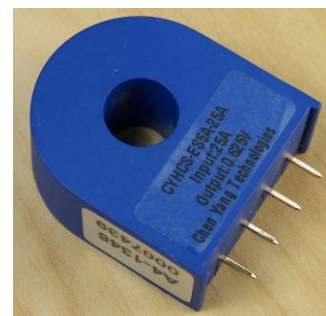




Current Sensors

CYHCS-ES5A

Hall Effect DC Current Sensor



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 accuracyVery good linearitySmall size and encapsulatedLess power consumptionCurrent overload capability	<ul style="list-style-type: none">Photovoltaic equipmentGeneral Purpose InvertersAC/DC Variable Speed DriversBattery Supplied ApplicationsUninterruptible Power SuppliesSwitched Mode Power Supplies

Electrical Data/Input

Part number	Primary Rated Current I_r (A)	Measuring Range I_p (A)	Turns ratio	Internal measuring resistor (Ω)
CYHCS-ES5A-10A	10	± 30	1:1000	$62.5 \pm 0.1\%$
CYHCS-ES5A-25A	25	± 75	1:2000	$50 \pm 0.1\%$
CYHCS-ES5A-50A	50	± 150	1:2000	$25 \pm 0.1\%$

Rated Output Voltage:	$+2.5V \pm 0.625V \pm 0.5\%FS$
Supply Voltage	$+5V \pm 5\%$,
Reference voltage R:	$+2.5VDC \pm 0.5\% FS$
Electric Offset Voltage	$+2.5VDC \pm 0.5\% FS$
Current Consumption (at $V_{out}=0V$)	$< 20mA$
Isolation voltage (50/60Hz, 1min)	3.0kV
Accuracy:	0.5% FS
Linearity:	$< 0.1\% FS$
Thermal Drift of Offset Voltage,	$\pm 0.4mV/^{\circ}C$
Response Time:	$< 1.0\mu s$
Di/dt following accuracy:	100A/ μs
Frequency Bandwidth (-1dB):	DC ~ 200 kHz

General Data

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

Products constantly update. All specifications are subject to change without notice.
For more information on this product, please contact:

PC&S, Inc. at +1 (800) 523-9194 or +1 (973) 448-9400

www.pc-s.com

Relation between Input Current and Output Voltage

Take the sensor CYHCS-ES5A-25A as sample, the relation between the input current and output voltage is shown in the table 1, Fig.1 and Fig. 2

Table1. Relation between the input current and output voltage

Input current (A)	-75	-50	-25	-12.5	0	12.5	25	50	75
Output voltage (V)	0.625	1.25	1.875	2.188	2.5	2.813	3.125	3.75	4.375

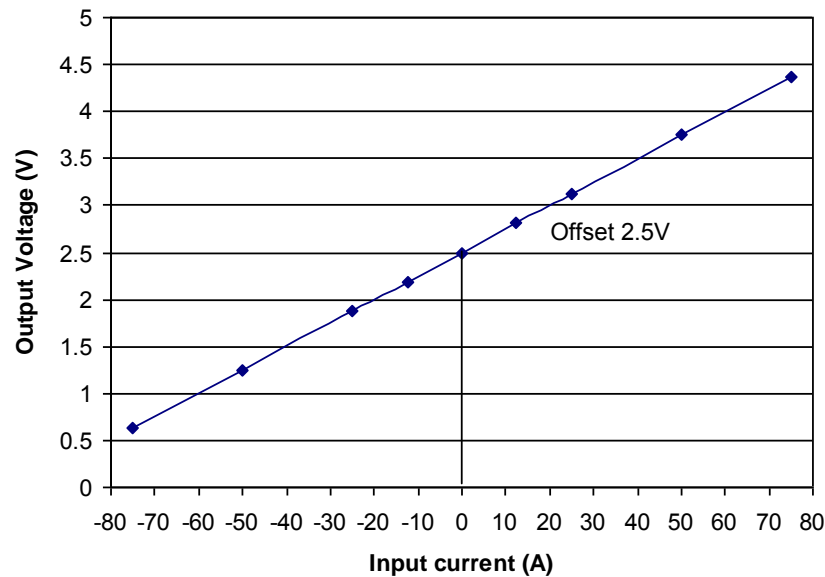


Fig. 1 Relation between the input current (DC) and output voltage (DC)

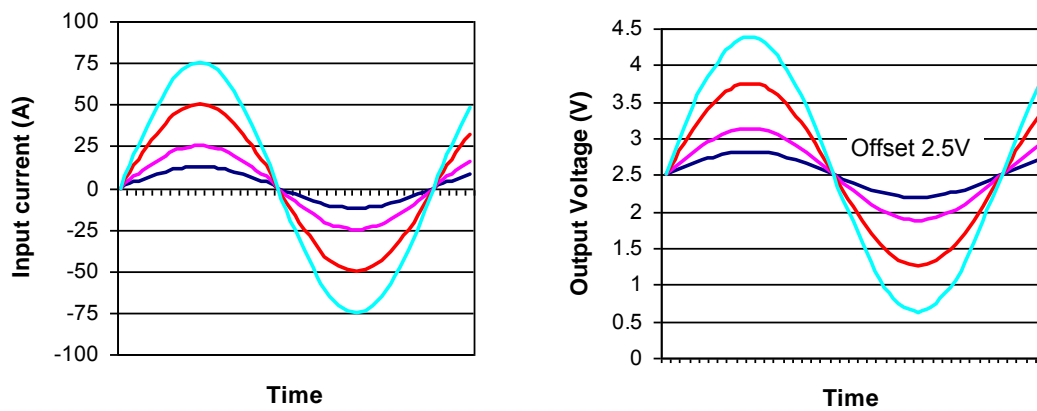


Fig. 2 Relation between the input current (AC) and output voltage (AC)

Dimensions (mm)

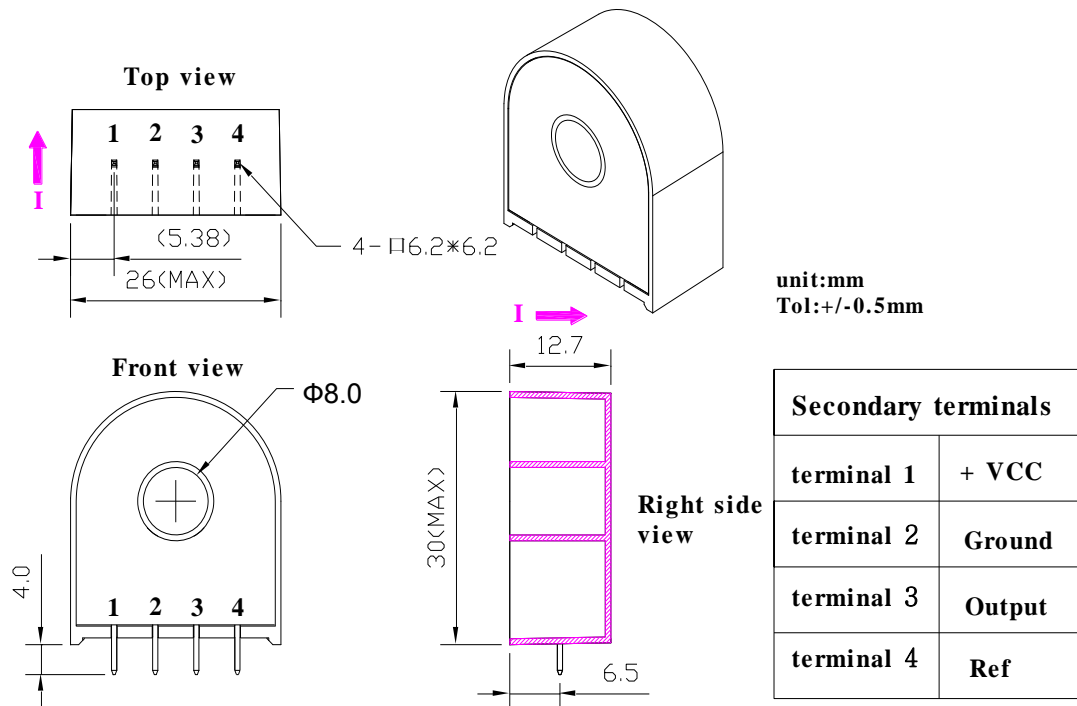


Fig. 3 Dimensions of CYHCS-ES5A

Connection

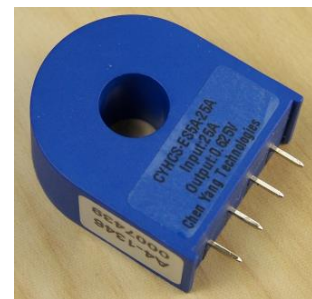
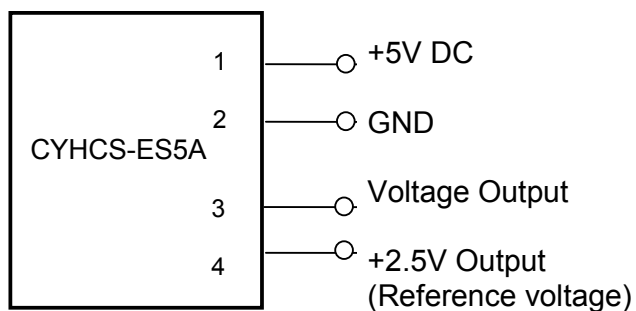


Fig. 4 Connection of CYHCS-ES5A

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.

CYHCS-ES5A Current Sensor



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For more information and certifications, please contact:

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