ChenYang Technologies GmbH & Co KG

AC/DC Closed Loop Hall Current Sensor CYHCS-B3C

This Hall Effect current sensor is based on 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
• Excellent accuracy • Very good linearity • Less power consumption • Current overload capability • Goods temperature properties	• **Photovoltaic equipment** • General Purpose Inverters • AC/DC Variable Speed Drivers • Battery Supplied Applications • Uninterruptible Power Supplies (UPS) • Switched Mode Power Supplies

ELECTRICAL CHARACTERISTICS

Part number	CYHCS-B3A/C-050A	CYHCS-B3A/C-100A	CYHCS-B3A/C-200A	CYHCS-B3A/C-300A
Rated current I_{PN}	50A	100A	200A	300A
Measuring range I_P	±100A(±15V)	±200A(±15V)	±300A(±15V)	±400A(±15V)
Turns ratio 1:N	1:1000	1:2000	1:2000	1:3000
Secondary Internal Resistance	10Ω	42Ω	42Ω	75Ω
Rated output current I_{SN}	50mA±0.5%	50mA±0.5%	100mA±0.5%	100mA±0.5%
Measuring resistance (V_C=±15V/I_{PN})	20Ω ~ 200Ω	20Ω ~ 200Ω	10Ω ~ 75Ω	10Ω ~ 50Ω
(V_C=±15V/I_P)	20Ω ~ 110Ω	20Ω ~ 75Ω	10Ω ~ 33Ω	10Ω ~ 20Ω
Supply voltage	±12V ~ ±18VDC			
Galvanic isolation	2.5kV RMS/50Hz/1min,			
Current consumption	20mA + Ip/N (output current)			

ACCURACY DYNAMIC PERFORMANCE

Zero offset current Ip=0	±0.3mA
Magnetic offset current Ip=0	±0.3mA
Thermal drift of offset current	±0.5mA (-25°C ~ +85°C)
Response time	<1.0μs
Accuracy	±0.7%FS
Linearity	≤0.2% FS
di/dt following accuracy	200A/μs
Bandwidth(-3dB)	DC ~ 100kHz

GENERAL CHARACTERISTIC

Operating temperature	-25°C~+85°C
Storage temperature	-40°C~+100°C
Unit weight	35g
Standard	Q/320115QHKJ01-2013

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Fax: +49 (0)8121– 2574101
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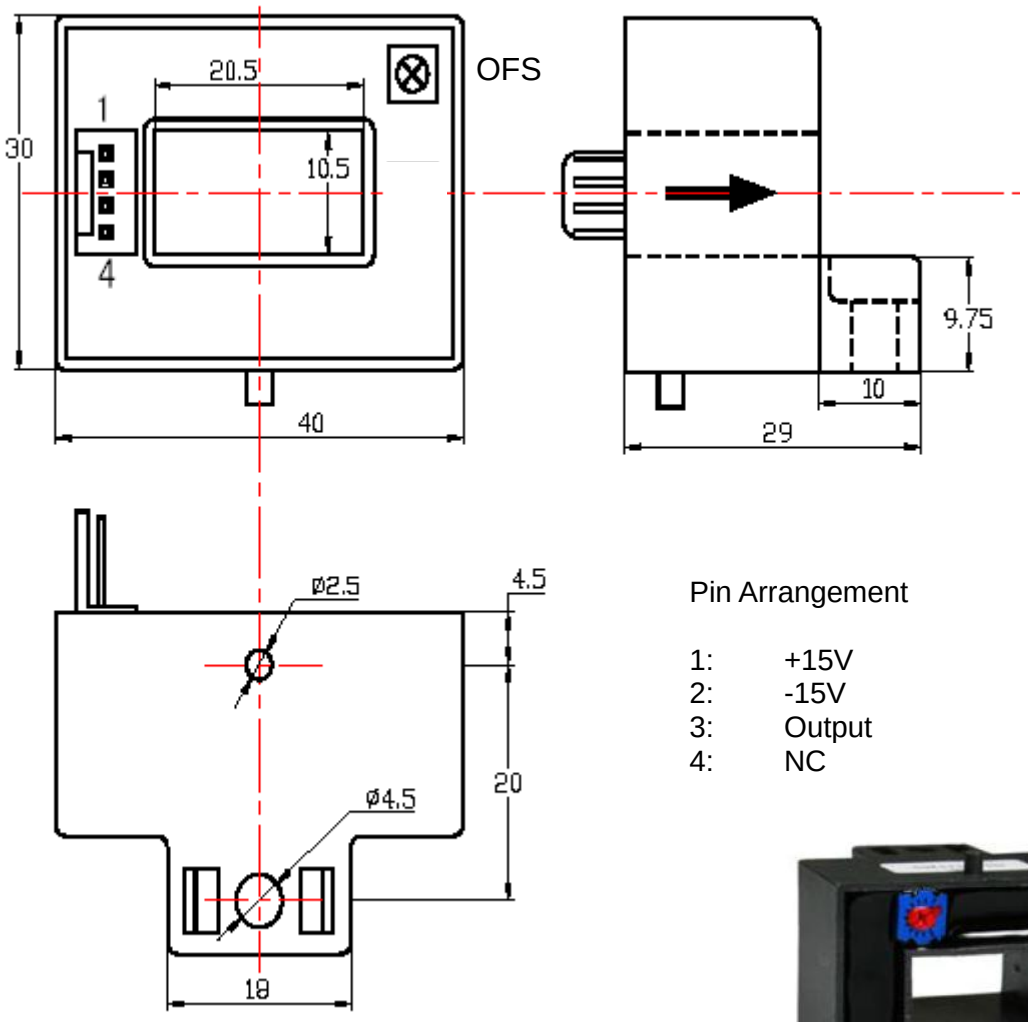
http://www.cy-sensors.com

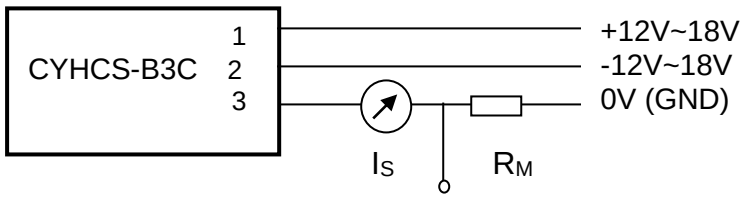
Dimensions (mm)

Case Style C (P/N: CYHCS-B3C-xxxx)



Pin Arrangement

1: +15V
2: -15V
3: Output
4: NC



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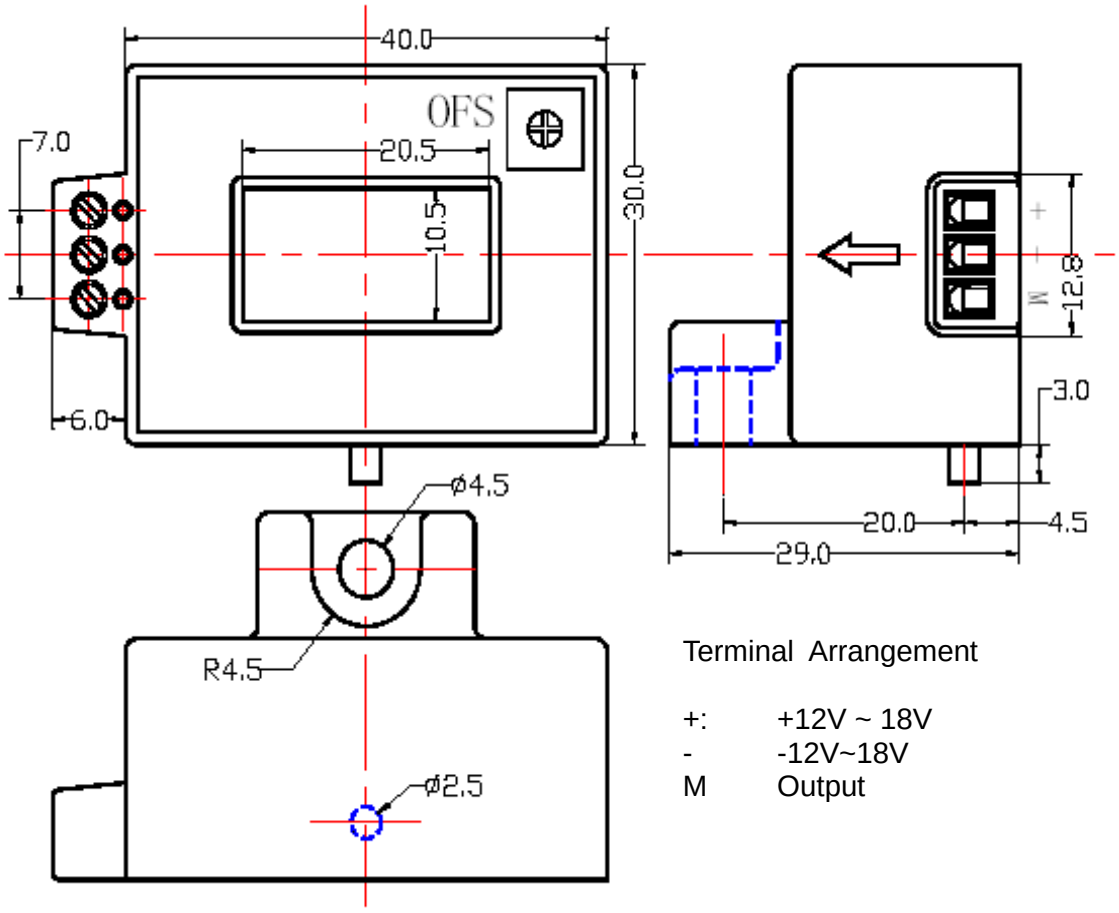
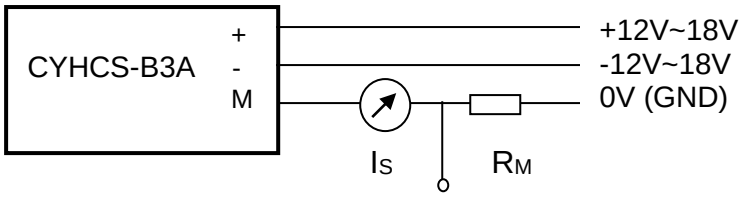
Case Style A (P/N: CYHCS-B3A-xxxx)



Terminal Arrangement

+:	+12V ~ 18V
-	-12V~18V
M	Output



Notes:

1. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
2. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
3. The best accuracy can be achieved when the window is fully filled with bus-bar (current carrying conductor).
4. The in-phase output can be obtained when the direction of current of current carrying conductor is the same as the direction of arrow marked on the transducer

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