Version 2
Released in May 2016
Dr.-Ing. habil. Jigou Liu

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.

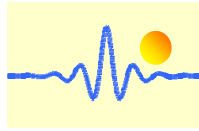| Product Characteristics	Applications
• Excellent accuracy • Very good linearity • Less power consumption • Current overload capability • Goods temperature properties	• **Photovoltaic equipment** • General Purpose Inverters • AC/DC Variable Speed Drivers • Battery Supplied Applications • Uninterruptible 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	50A	100A	200A	300A
Measuring range	±150A (±18V, 91 Ω)	±300A (±18V, 20Ω)	±600A (±18V, 30 Ω)	±900A (±18V, 20 Ω)
Turns ratio	1:1000	1:2000	1:2000	1:3000
Secondary Internal Resistance	25Ω	25Ω	25Ω	35Ω
Rated output current	50mA±0.5%	50mA±0.5%	100mA±0.5%	100mA±0.5%
Measuring resistance	50Ω ~ 100Ω	10Ω ~ 100Ω	10Ω ~ 50Ω	10Ω ~ 50Ω
Supply voltage	±12V ~ ±18VDC			
Galvanic isolation	6kV RMS/50Hz/1min,			
Current consumption	20mA + output current			

ACCURACY DYNAMIC PERFORMANCE

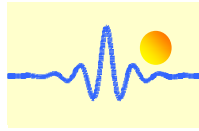|	
Zero offset current	±0.2mA
Thermal drift of offset current	±0.5mA (-25°C ~ +85°C)
Response time	<1.0µs
Accuracy	±0.5%
Linearity	≤0.1% FS
di/dt following accuracy	200A/µs
Bandwidth(-3dB)	DC ~ 100kHz

GENERAL CHARACTERISTIC

Operating temperature	-25°C~+85°C
Storage temperature	-40°C~+100°C

ChenYang
Technologies GmbH & Co KG

Dimensions (mm)

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

OFS

Pin Arrangement

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

CYHCS-B3C 1 — +12V~18V
2 — -12V~18V
3 — 0V (GND)

I_S R_M

ChenYang
Technologies GmbH & Co KG
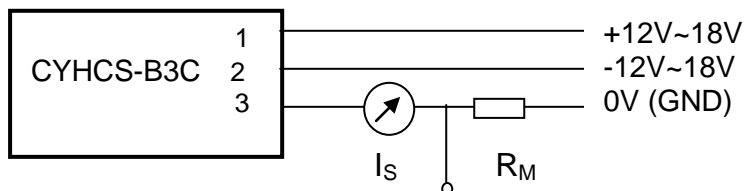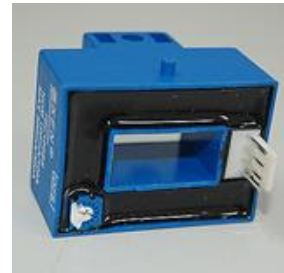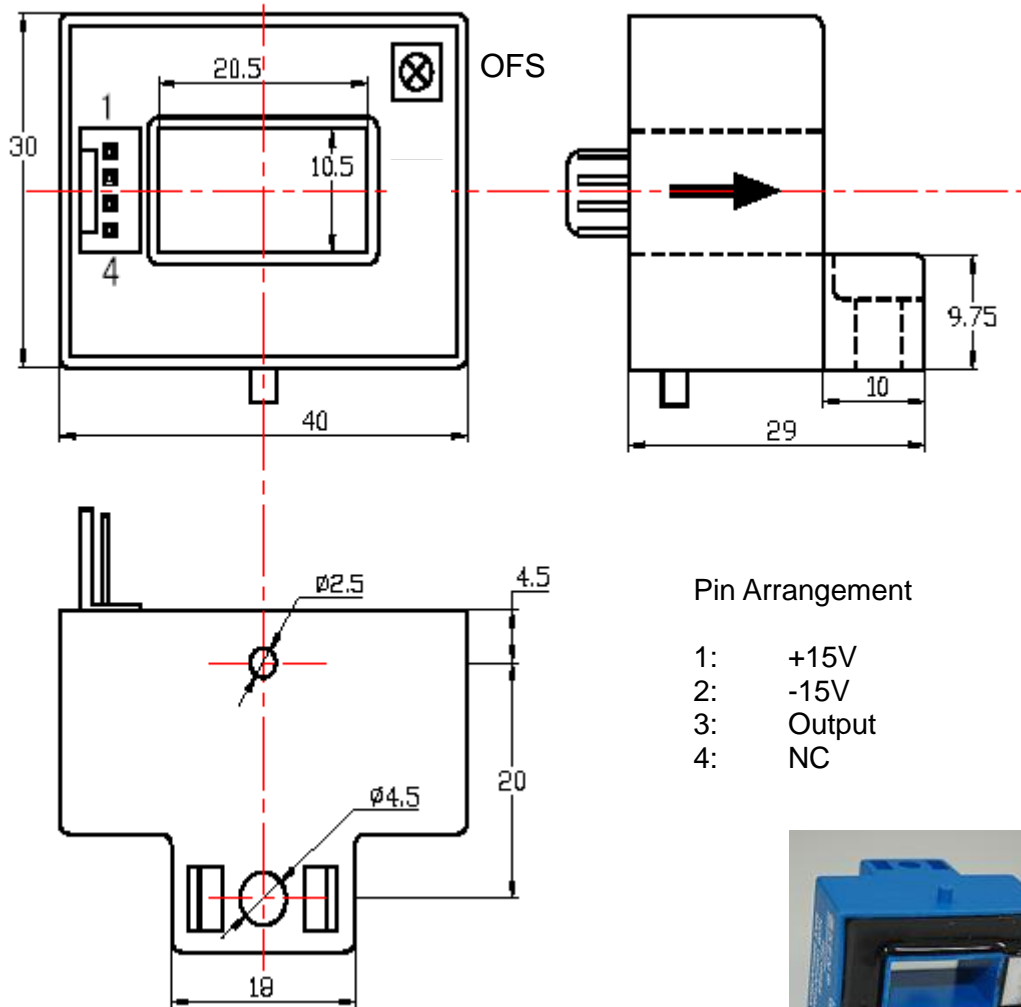
Case Style A (P/N: CYHCS-B3A-xxxx)
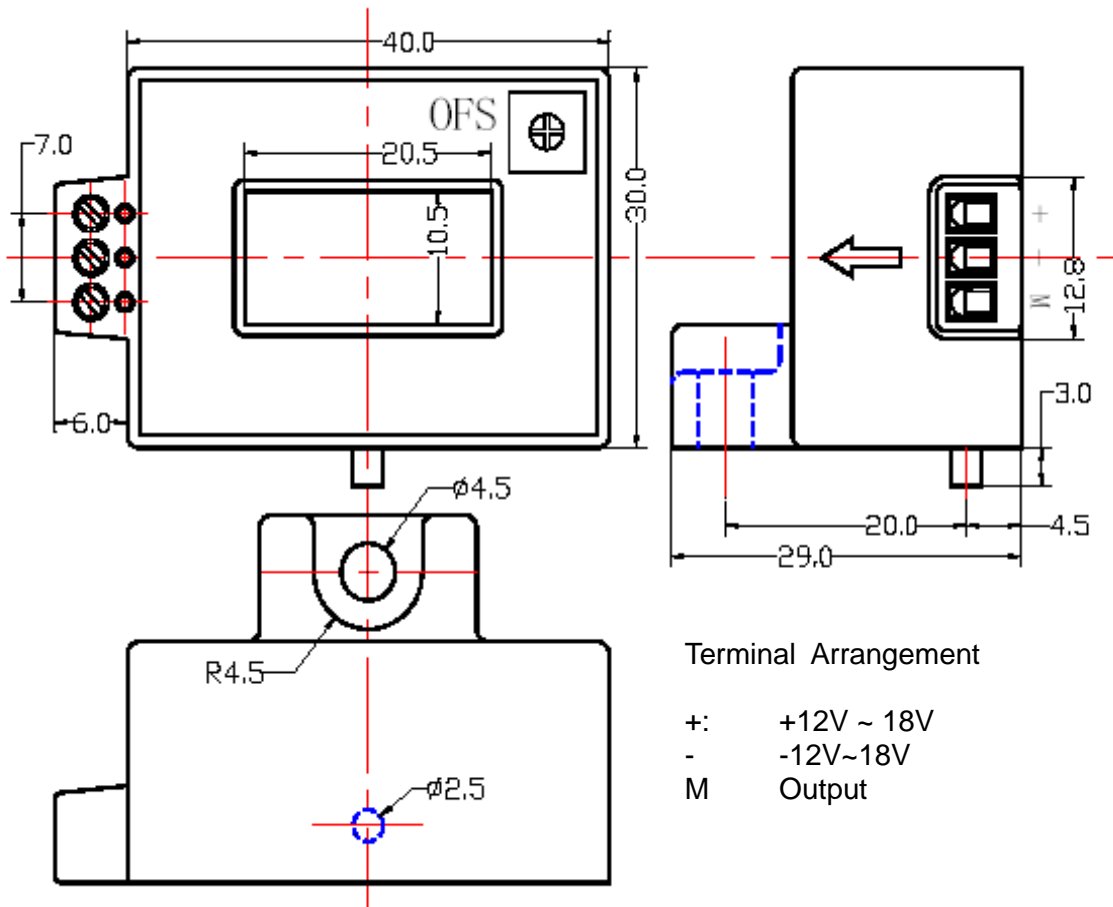
Terminal Arrangement

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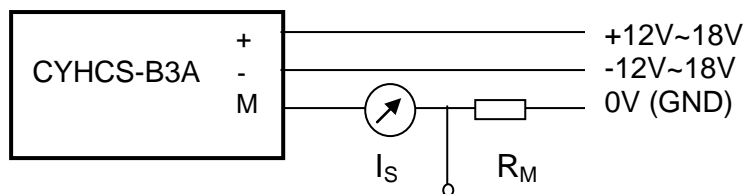
Notes:

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