Hall Effect AC/DC Current Sensor CYHCS-WF2

The sensor CYHCS-WF2 is Hall Effect current sensor for the measurement of AC/DC current. The sensor has a galvanic isolation between the primary conductor and the secondary electronic circuit.

Features and Advantages	Applications
• AC/DC current measurement • Output signal option (±4VAC/DC, ±5VAC/DC) • 35mm DIN Rail • High isolation between primary and secondary circuits • No insertion losses • Easy installation	• **Photovoltaic equipment** • Battery banks, such as, monitoring load current and charge current, verifying operation • Transportation, measuring traction power or auxiliary loads • Phase fired controlled heaters • Directly connect to PLC • Sense motor stalls and short circuits

Specifications

Rated input current (DC current calibration)	5A, 10A, 15A, 20A, 25A, 30A, 40A, 50A, 100A
Linear measuring range	1.2 times of rated input current
Output signals	±4VAC/DC, ±5VAC/DC,
Power supply	±12V DC, ±15V DC
Measuring accuracy	±1.0%
Linearity (10% - 100%), 25°C	≤ ±0.5%
Zero offset voltage	±25mV
Hysteresis error	±25mV
Thermal drift of offset voltage	≤300PPM/°C
Galvanic isolation	3 kV AC, 50Hz, 1min
Isolation resistance	≥20MΩ
Response time	≤15μs
Frequency range	DC/25Hz ~ 20kHz
Overload capacity	20 times of rated current, 1s, interval 300s, repeat 5times
Static Current	10mA
Output load	5mA
Mounting	35mm DIN Rail
Case style and Window size	WF2 with aperture Ø20mm
Operating temperature	-25°C ~ +70°C
Storage temperature	-45°C ~ + 85°C
Relative humidity	≤90%
Mean Time Between Failures (MTBF)	≥ 100k hours

Definition of Part number:

CYHCS	-	WF2	-	m	-	x	n
(1)		(2)		(3)		(4)	(5)

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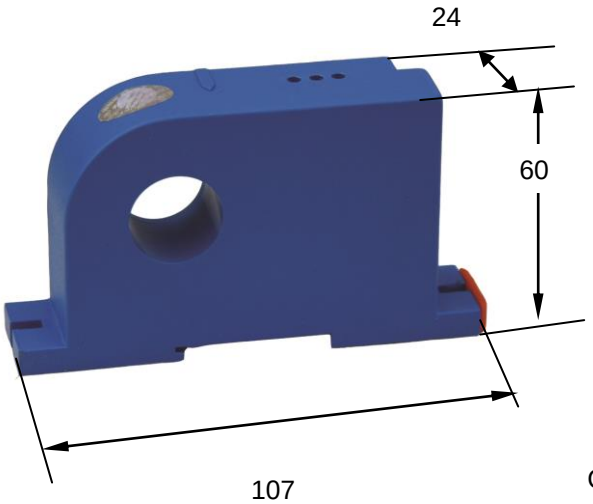
(1)	(2)	(3)	(4)	(5)
Series name	Case style	Rated Input current (m)	Output signal	Power supply
CYHCS	WF2	m = 5A, 10A, 15A, 20A, 25A, 30A, 40A, 50A, 100A	**x=0:** ±4V AC/DC x=**1:** ±5V AC/DC	n=**5:** ±12V DC n=**6:** ±15V DC

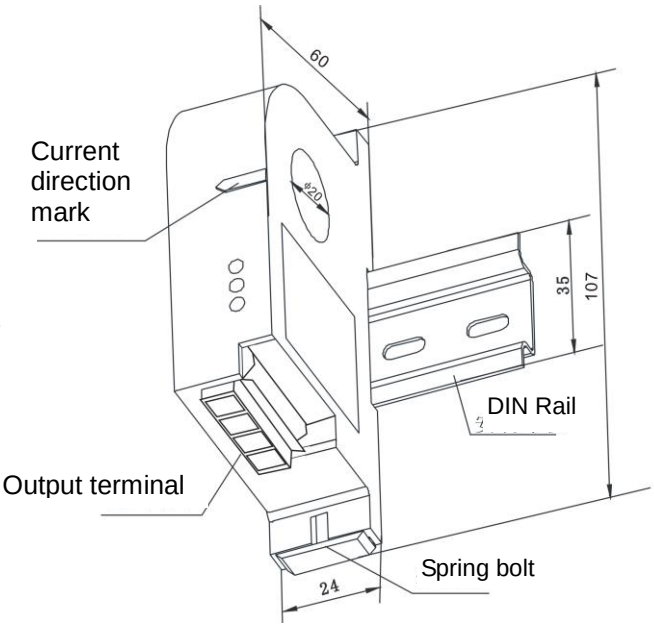
Example 1: CYHCS-WF2-100A -15, Hall Effect AC/DC Current sensor with
Output signal: ±5V AC/DC
Power supply: ±12V DC
Rated input current: 100A AC/DC

Example 2: CYHCS-WF2-10A -05, Hall Effect AC/DC Current sensor with
Output signal: ±4V AC/DC
Power supply: ±12V DC
Rated input current: 10A AC/DC

Example 3: CYHCS-WF2-5A -16, Hall Effect AC/DC Current sensor with
Output signal: ±5V AC/DC
Power supply: ±15V DC
Rated input current: 5A AC/DC

DIMENSIONS (mm)





Dimensions: 107x 24 x 60mm, Aperture: Ø20 mm

Pin Arrangement:
1(+): Power supply V+
2(-): Power supply V-
3(G): Ground
4(M): Output

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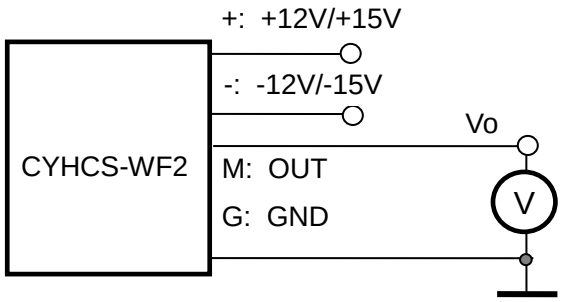
CONNECTION

1(+): +15V/+12V Power Supply
2(-): -15V/-12V Power Supply
3(G): Ground
4(M): Output



Relation between Input and Output:

Sensor CYHCS-WF2-100A-15	
Input current (A)	Output voltage (V)
-100	-5
-75	-3.75
-50	-2.5
-25	-1.25
0	0
25	1.25
50	2.5
75	3.75
100	5

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 the primary input current is the same as the direction of arrow marked on the transducer case.

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