ChenYang
Technologies GmbH & Co KG

Split Core Hall Effect AC Current Sensor CYHCS-KF2C

This Hall Effect current sensor is based on open loop principle and designed with a high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of AC current, pulse currents etc. The output of the transducer reflects the rectified average value of the current in the carrying conductor.

Product Characteristics	Applications
• Excellent accuracy • Very good linearity • Using split cores and easy mounting • Less power consumption • Window structure • Electrically isolating the output of the transducer from the current carrying conductor • No insertion loss • Current overload capability	• **Photovoltaic equipment** • Frequency conversion timing equipment • Various power supply • Uninterruptible power supplies (UPS) • Electric welding machines • Transformer substation • Numerical controlled machine tools • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A), rms	Measuring Range (A)	DC Output Current (mA)	Window size (mm)	Part number
300	0~±300	4-20 ±1.0%	85 x 27	CYHCS-KF2C-300A-n
500	0~±500			CYHCS-KF2C-500A-n
600	0~±600			CYHCS-KF2C-600A-n
800	0~±800			CYHCS-KF2C-800A-n
1000	0~±1000			CYHCS-KF2C-1000A-n
1500	0~±1500			CYHCS-KF2C-1500A-n
2000	0~±2000			CYHCS-KF2C-2000A-n
3000	0~±3000			CYHCS-KF2C-3000A-n

(n=3, *Vcc*= +12VDC ±5%; n=4, *Vcc* =+15VDC ±5%; n=5, *Vcc* =+24VDC±5%)

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output current:	4-20mADC
Current Consumption	I_c < 40mA + Output current
Galvanic isolation, 50/60Hz, 1min:	5kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

Accuracy and Dynamic performance data

Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT

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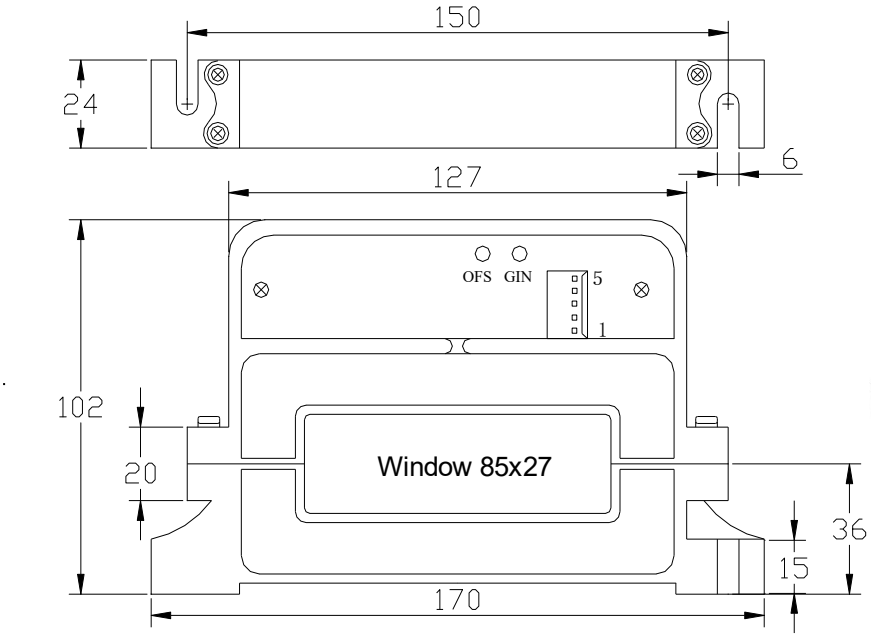
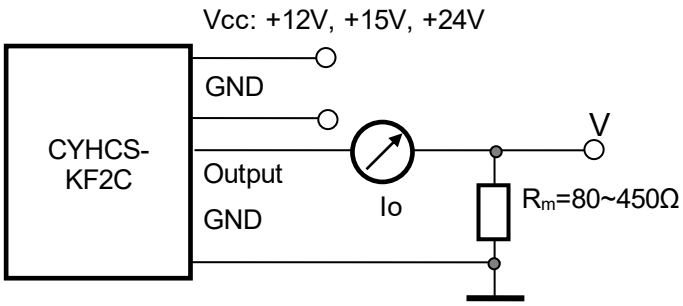
General Data

Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight,	560g

Dimensions





Pin Arrangement

1: Vcc
2: Ground (GND)
3: Ground (GND)
4: NC
5: Output

GIN: gain adjustment
OFS: offset adjustment

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 primary input cable is positioned at the center of sensor window and occupies over 50% of the window area.
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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