ChenYang Technologies GmbH & Co KG

Split Core Hall Effect AC/DC Current Sensor CYHCS-EKFSC

This Hall Effect current sensor is based on open loop principle and designed with a split core and high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of AC/DC current 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 • Split core 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 supplies • Uninterruptible power supplies (UPS) • Electric welding machines • Electrolyzing and electroplating equipment • Electric powered locomotive • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A)	Measuring Range I_p(A)	Output Current Io(mA)	Window Size (mm)	Part number
300A	0 ~ ± 300A	X=2: 0±20mA X=5: 4-20mA X=(OF): -20mA ~OF~+20mA OF: Offset current (-4mA ~ +4mA)	Ø62	CYHCS-EKFSC-300A-X
400A	0 ~ ± 400A			CYHCS-EKFSC-400A-X
500A	0 ~ ± 500A			CYHCS-EKFSC-500A-X
800A	0 ~ ± 800A			CYHCS-EKFSC-800A-X
1000A	0 ~ ± 1000A			CYHCS-EKFSC-1000A-X
2000A	0 ~ ± 2000A			CYHCS-EKFSC-2000A-X
4000A	0 ~ ± 4000A			CYHCS-EKFSC-4000A-X
5000A	0 ~ ± 5000A			CYHCS-EKFSC-5000A-X
6000A	0 ~ ± 6000A			CYHCS-EKFSC-6000A-X

Supply Voltage:	V_{cc}=24VDC ± 5%
Current Consumption:	Ic < 35mA +Io for Ip<3000A, 50mA +Io for Ip⩾3000A
Isolation Voltage:	5kV, 50/60Hz, 1min
Measuring resistance:	R_m ≤ 600Ω
Accuracy at I_r, T_A=25°C (without offset):	E <±1.0% FS
Linearity from 0 to I_r, T_A=25°C:	E_L <±1.0% FS
Overload capability:	3 times of primary nominal current
Electric Offset Current, T_A=25°C:	I_{oe} =4mA or 12mA for Io=4-20mA, I_{oe} ≤±0.1mA for Io=0±20mA
Magnetic Offset Current (I_r →0):	I_{om} ≤±0.1mA
Thermal Drift of Offset Current (I_p=0, T_A=-25°C~85°C):	I_{ot} ≤±200ppm/°C
Response Time at 90% of I_P (f=1k Hz):	t_r ≤ 7μs
Frequency Bandwidth (-3dB):	f_b = DC - 20kHz

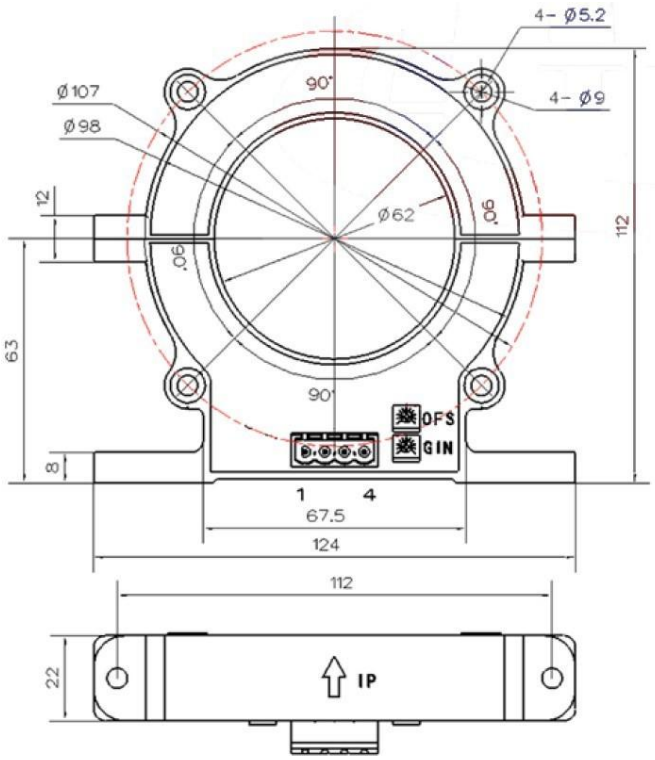
General Data

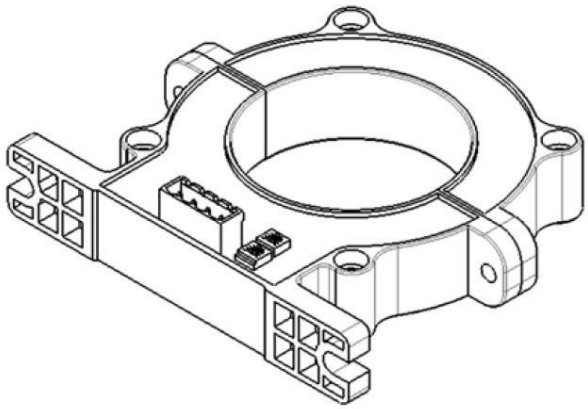
Ambient Operating Temperature:	T_A =-25°C ~ +85°C
Ambient Storage Temperature:	T_S =-40°C ~ +100°C
Unit Weight:	500g/pc
Standard:	Q/320115QHKJ01-2016

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel.: +49 (0)8121 – 2574100
Fax: +49 (0)8121– 2574101
Email: info@cy-sensors.com
http://www.cy-sensors.com

PIN Definition and Dimensions





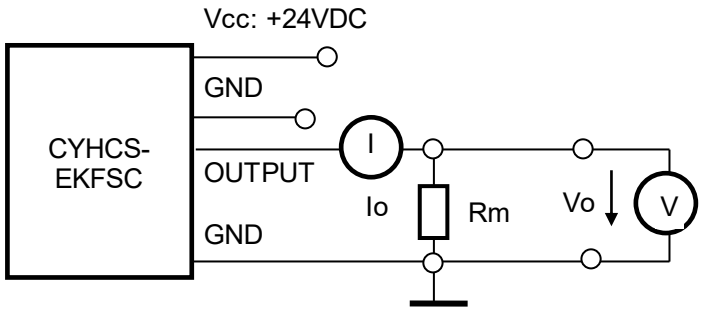
OFS: Offset Adjustment GIN: Gain Adjustment

Pin arrangement of connector:

1:	Vcc	2:	GND
3:	OUTPUT	4:	GND

Cable connection:

Red:	Vcc
Blue:	GND
Yellow:	OUTPUT
Black:	GND



$R_m \leq 600\Omega$

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 current conductor 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 current direction of current carrying conductor is the same as the direction of arrow marked on the transducer

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel.: +49 (0)8121 – 2574100
Fax: +49 (0)8121– 2574101
Email: info@cy-sensors.com
http://www.cy-sensors.com