Catalogue

Open Loop Hall Effect AC Current Sensors/ Transducers with Round Window

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Hall Effect AC Current Sensor CYHCS-C1TV

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 • Light in weight • 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 • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal RMS Current I_r (A)	Measuring Range (A)	DC Output Voltage (V)	Aperture Diameter (mm)	Part number
25	0-25	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	Ø20	CYHCS-C1TV-25A-xnC
30	0-30			CYHCS-C1TV-30A-xnC
40	0-40			CYHCS-C1TV-40A-xnC
50	0-50			CYHCS-C1TV-50A-xnC
100	0-100			CYHCS-C1TV-100A-xnC
200	0-200			CYHCS-C1TV-200A-xnC
300	0-300			CYHCS-C1TV-300A-xnC
400	0-400			CYHCS-C1TV-400A-xnC
500	0-500			CYHCS-C1TV-500A-xnC
600	0-600			CYHCS-C1TV-600A-xnC

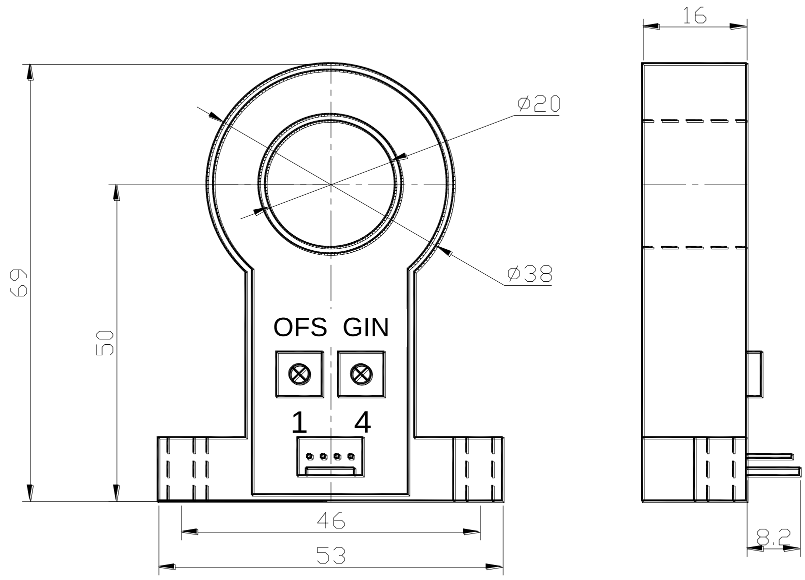
(n=2, *Vcc*= +12VDC ±5%; n=3, *Vcc* =+15VDC ±5%; n=4, *Vcc* =+24VDC±5%)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA
Isolation Voltage	2.5kV, 50/60Hz, 1min
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \to 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT, heat resistant 100°C flame retardant

General Data

Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-55°C ~ +100°C

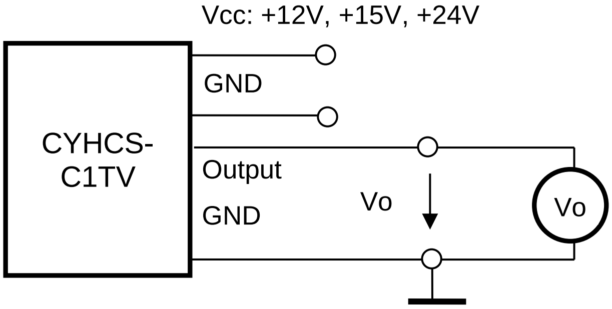
PIN Definition and Dimensions



1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection



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

Hall Effect AC Current Sensor CYHCS-C1TC

This Hall Effect current sensor is based on open loop principle and designed split 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 • 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 RMS Current I_r (A)	Measuring Range (A)	DC Output Current (mA)	Aperture Diameter (mm)	Part number
25	0~25	4-20 ±1.0%	Ø20	CYHCS-C1TC-25A-nC
30	0~30			CYHCS-C1TC-30A-nC
40	0~40			CYHCS-C1TC-40A-nC
50	0~50			CYHCS-C1TC-50A-nC
100	0~100			CYHCS-C1TC-100A-nC
200	0~200			CYHCS-C1TC-200A-nC
300	0~300			CYHCS-C1TC-300A-nC
400	0~400			CYHCS-C1TC-400A-nC
500	0~500			CYHCS-C1TC-500A-nC
600	0~600			CYHCS-C1TC-600A-nC

(n=3, *Vcc*= +12VDC ±5%; n=4, *Vcc* =+15VDC ±5%; n=5, *Vcc* =+24VDC±5%)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	2.5kV
Isolation resistance @ 500 VDC	> 500 MΩ

Accuracy and Dynamic performance data

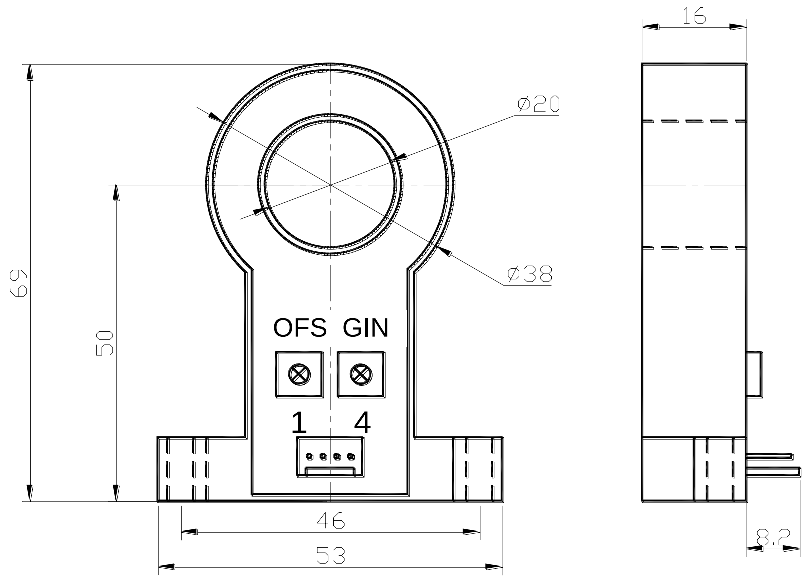
Accuracy at I_r, T_A=25°C,	<1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω

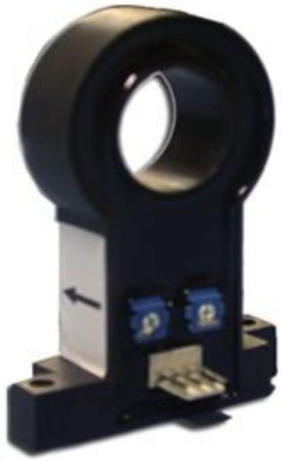
Frequency bandwidth (- 3 dB):	20Hz - 20kHz
Case Material:	PBT, heat resistant 100°C flame retardant

General Data

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

PIN Definition and Dimensions

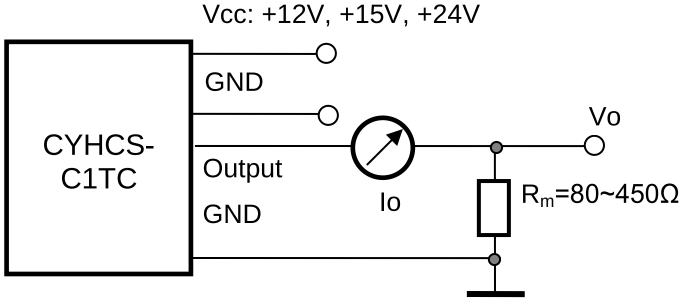




1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection



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

Split Core Hall Effect AC Current Sensor CYHCS-C2TV

This Hall Effect current sensor is based on open loop principle and designed with a split core and 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 • Light in weight • 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 • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data/Input

Primary Nominal rms Current I_r (A)	Primary Current Measuring Range I_p(A)	DC Output Voltage (V)	Part number
25A	0 ~ 25A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	CYHCS-C2TV-25A-xnC
30A	0 ~ 30A		CYHCS-C2TV-30A-xnC
40A	0 ~ 40A		CYHCS-C2TV-40A-xnC
50A	0 ~ 50A		CYHCS-C2TV-50A-xnC
100A	0 ~ 100A		CYHCS-C2TV-100A-xnC
200A	0 ~ 200A		CYHCS-C2TV-200A-xnC
300A	0 ~ 300A		CYHCS-C2TV-300A-xnC
400A	0 ~ 400A		CYHCS-C2TV-400A-xnC
500A	0 ~ 500A		CYHCS-C2TV-500A-xnC
600A	0 ~ 600A		CYHCS-C2TV-600A-xnC

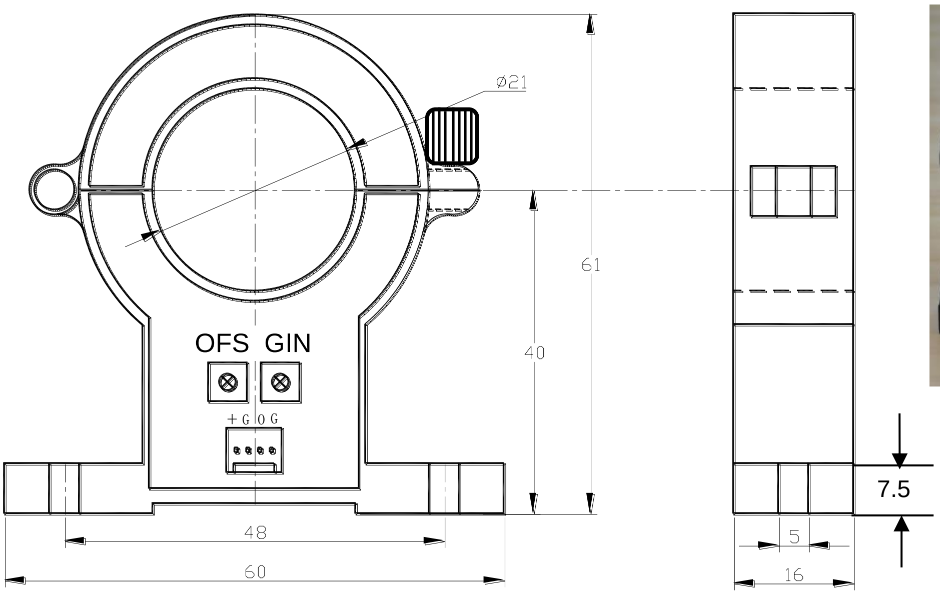
(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

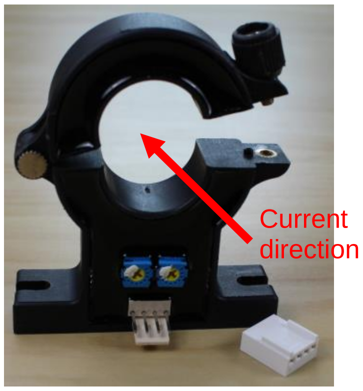
Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA
Isolation Voltage	2.5kV, 50/60Hz, 1min
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT

General Data

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

PIN Definition and Dimensions

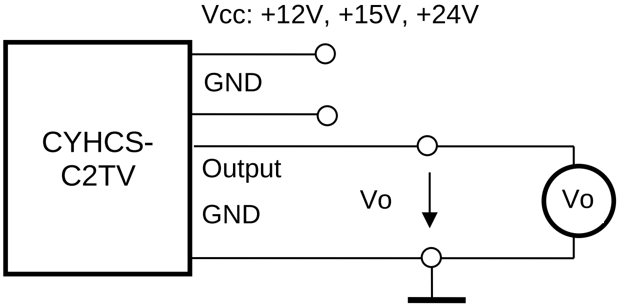




1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection

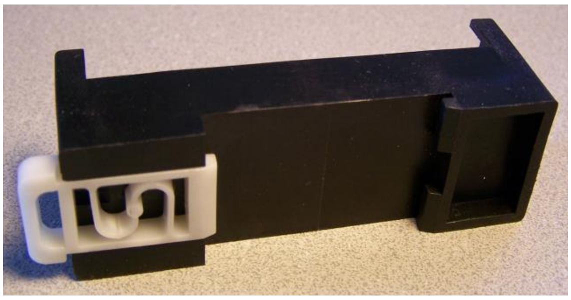


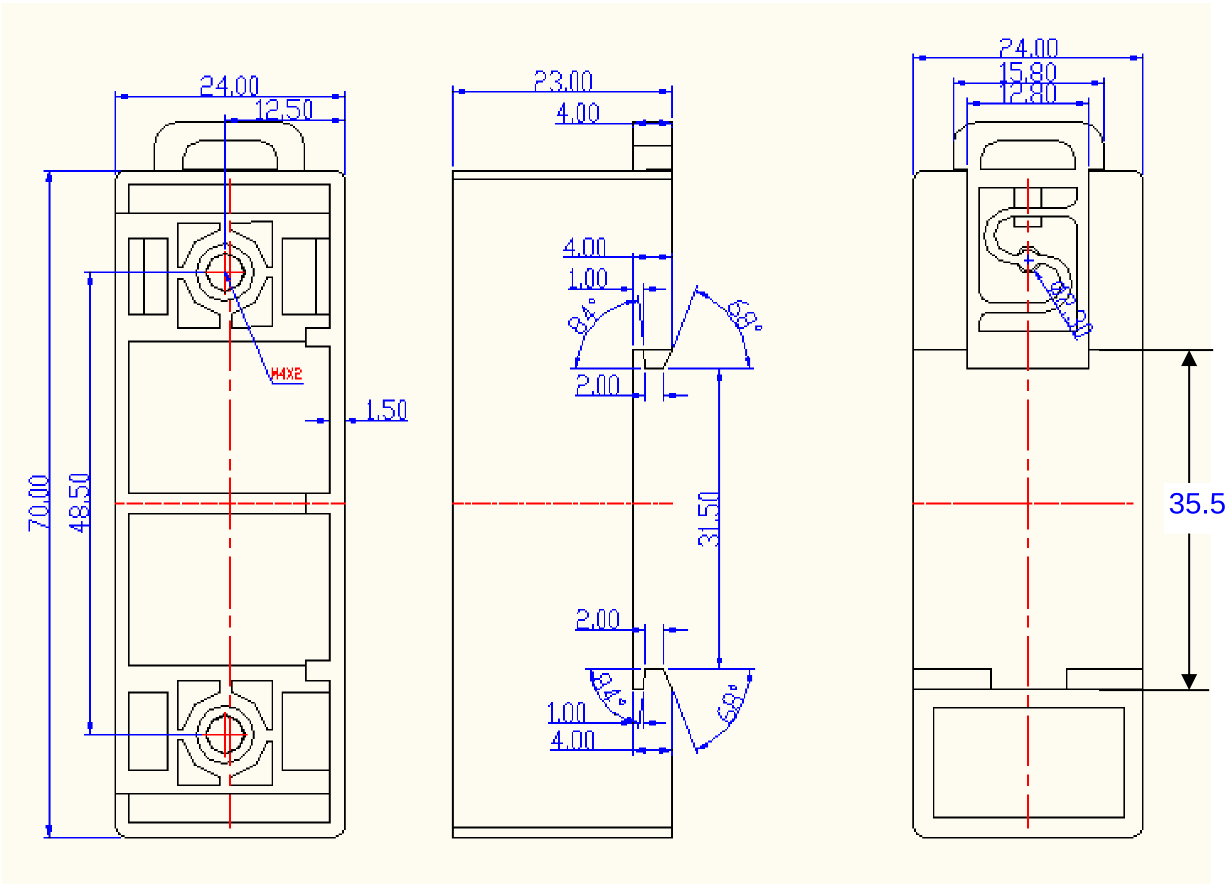
Notes:

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

DIN Rail Adapter CY-DRA88

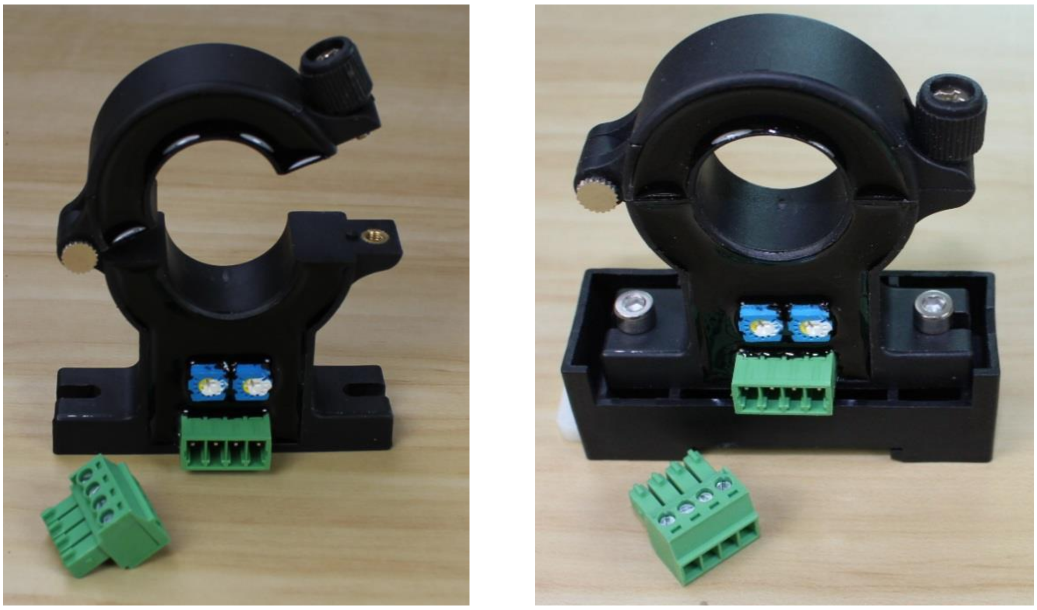
The DIN Rail Adapter CY-DRA88 is designed for mounting the sensor on 35mm DIN Rail. It has the size 70 x 24 x 23mm. The height from bottom to mounting surface is 14.8mm.





Mounting of Sensors

Sensor with Molex Connector
(The distance between the bottom und the middle of hole is 54.8mm)



Sensor with Phoenix Connector
(The distance between the bottom und the middle of hole is 54.8mm)

Split Core Hall Effect AC Current Sensor CYHCS-EKADA

This Hall Effect current sensor is based on open loop principle and designed with a split core and 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 RMS Current I_r (A)	Measuring Range (A)	DC Output Current (mA)	Aperture Diameter (mm)	Part number
25	0 ~ 50			CYHCS-EKADA-25A-nC
30	0 ~ 60			CYHCS-EKADA-30A-nC
40	0 ~ 80			CYHCS-EKADA-40A-nC
50	0 ~ 100			CYHCS-EKADA-50A-nC
100	0 ~ 200	4-20 ±1.0%	Ø21	CYHCS-EKADA-100A-nC
200	0 ~ 400			CYHCS-EKADA-200A-nC
400	0 ~ 800			CYHCS-EKADA-400A-nC
500	0 ~ 1000			CYHCS-EKADA-500A-nC
600	0 ~ 1000			CYHCS-EKADA-600A-nC

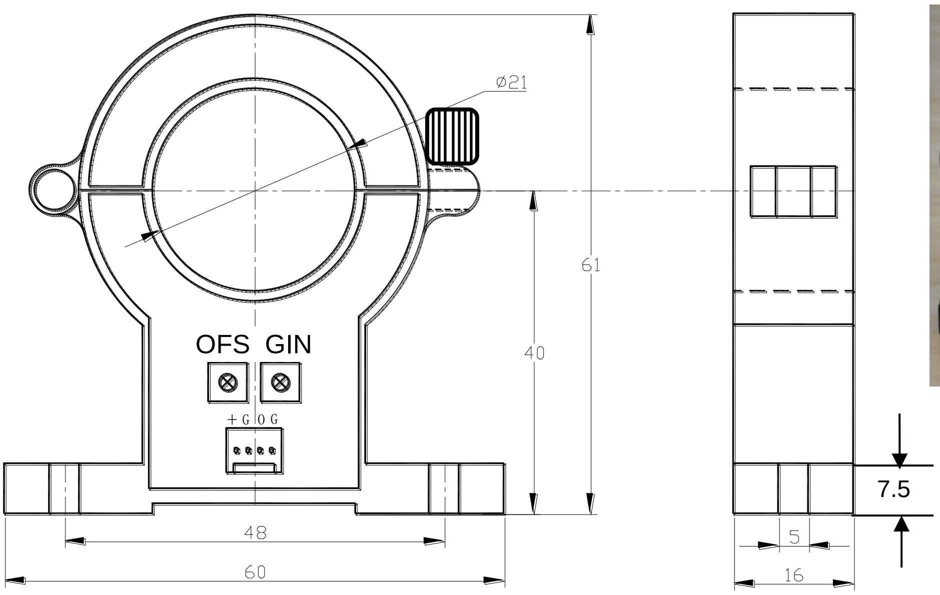
(n=3, Vcc= +12VDC ±5%; n=4, Vcc =+15VDC ±5%; n=5, Vcc =+24VDC±5%)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

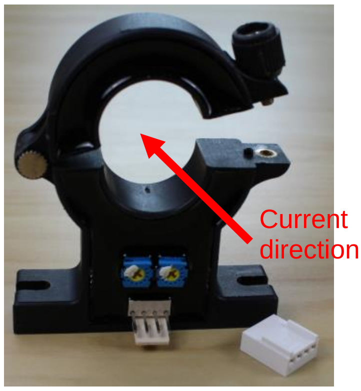
Supply Voltage	V_{cc}= +12V, +15V, +24V ± 5%,
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	5kV
Isolation resistance @ 500 VDC	> 500 MΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Current, T_A=25°C,	4mA
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time	t_r < 200ms
Frequency bandwidth (- 3 dB):	20Hz - 20kHz
Load resistance:	80-450Ω
Mean Time Between Failures (MTBF):	50k - 100k hours

General Data

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

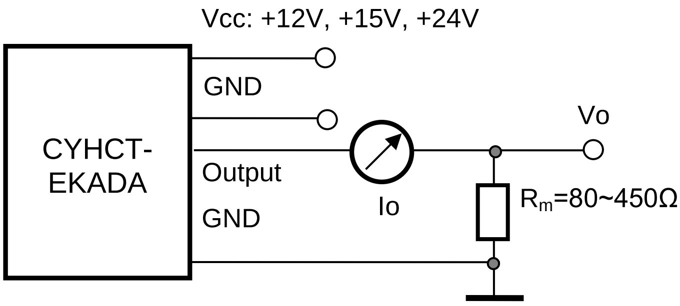
PIN Definition and Dimensions





1(+):	Vcc
2(G):	GND
3(O):	Output
4(G):	GND

OFS: Offset Adjustment GIN: Gain Adjustment

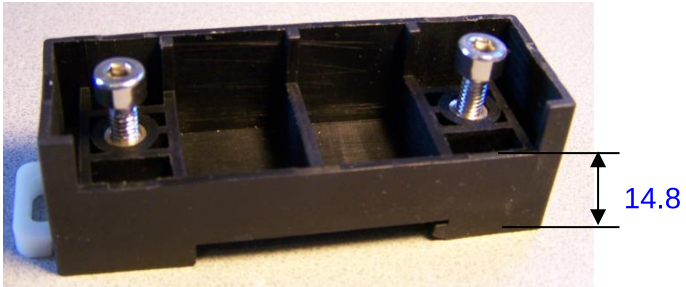


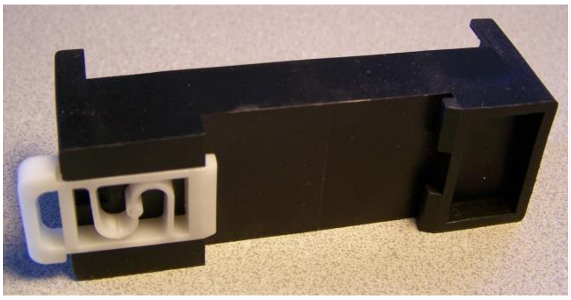
Notes:

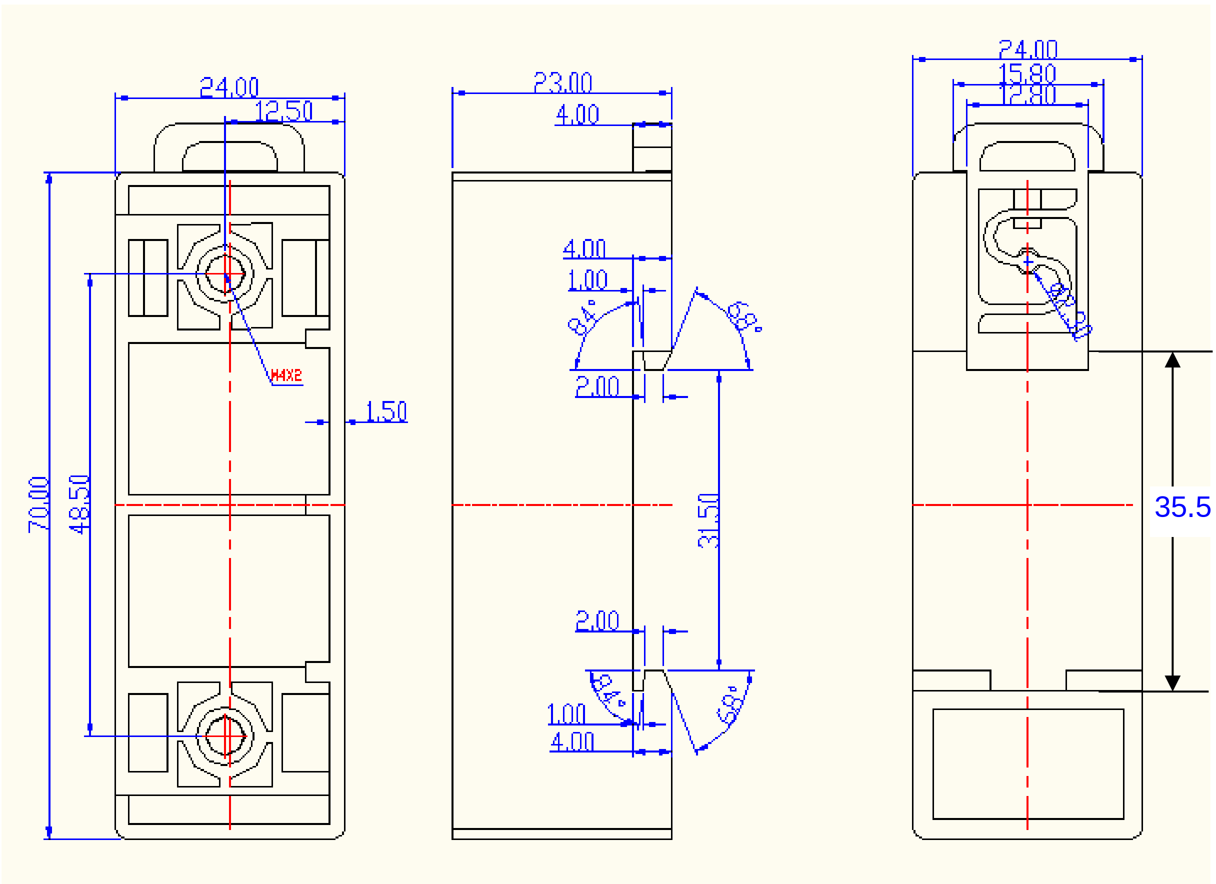
1. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
2. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
3. The best accuracy can be achieved when the window is fully filled 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

DIN Rail Adapter CY-DRA88

The DIN Rail Adapter CY-DRA88 is designed for mounting the sensor on 35mm DIN Rail. It has the size 70 x 24 x 23mm. The height from bottom to mounting surface is 14.8mm.







Mounting of Sensors

Sensor with Molex Connector
(The distance between the bottom und the middle of hole is 54.8mm)

Sensor with Phoenix Connector
(The distance between the bottom und the middle of hole is 54.8mm)

Split Core Hall Effect AC Current Sensor CYHCS-EKAD

This Hall Effect current sensor is based on open loop principle and designed with a split core and 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 RMS Current I_r (A)	Measuring Range RMS (A)	DC Output voltage (V)	Aperture Diameter (mm)	Part number
30	60	0-5 ±1.0%	Ø21	CYHCS-EKAD30A-C
50	100			CYHCS-EKAD50A-C
100	200			CYHCS-EKAD100A-C
200	400			CYHCS-EKAD200A-C
400	800			CYHCS-EKAD400A-C
500	1000			CYHCS-EKAD500A-C

(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage	V_{cc}= ±15V ± 5%,
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	2.5kV
Load resistance:	10kΩ
Isolation resistance @ 500 VDC	> 500 MΩ

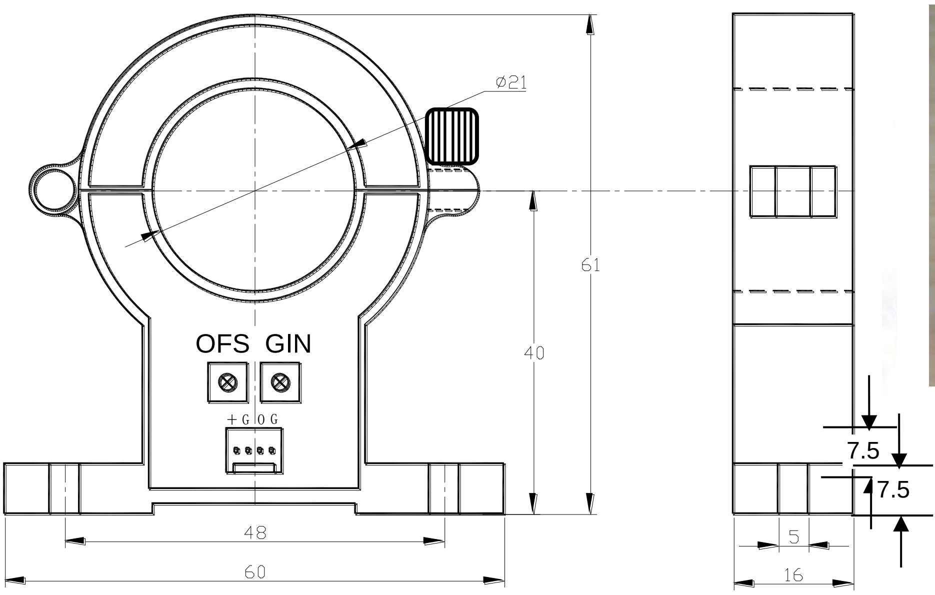
Accuracy and Dynamic performance data

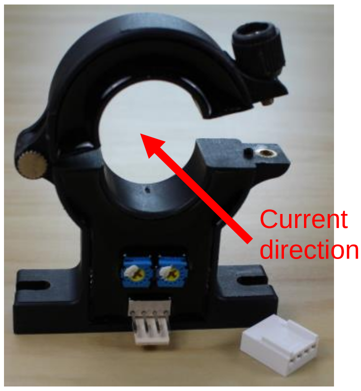
Accuracy at I_r, T_A=25°C (without offset),	X <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <25mV
Thermal Drift of Offset Voltage,	V_{ot} <±0.5mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency bandwidth (- 3 dB):	20Hz - 20kHz

General Data

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

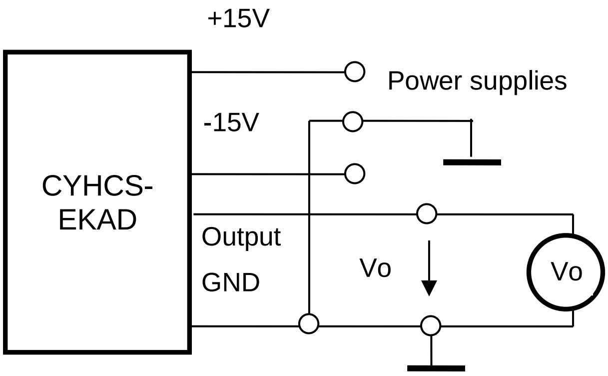
PIN Definition and Dimensions





+: +15V
-: -15V
O: Output
G: Ground

Connection

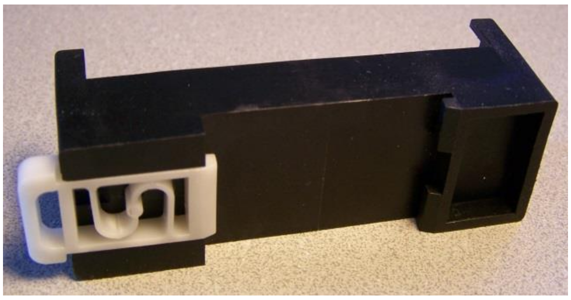


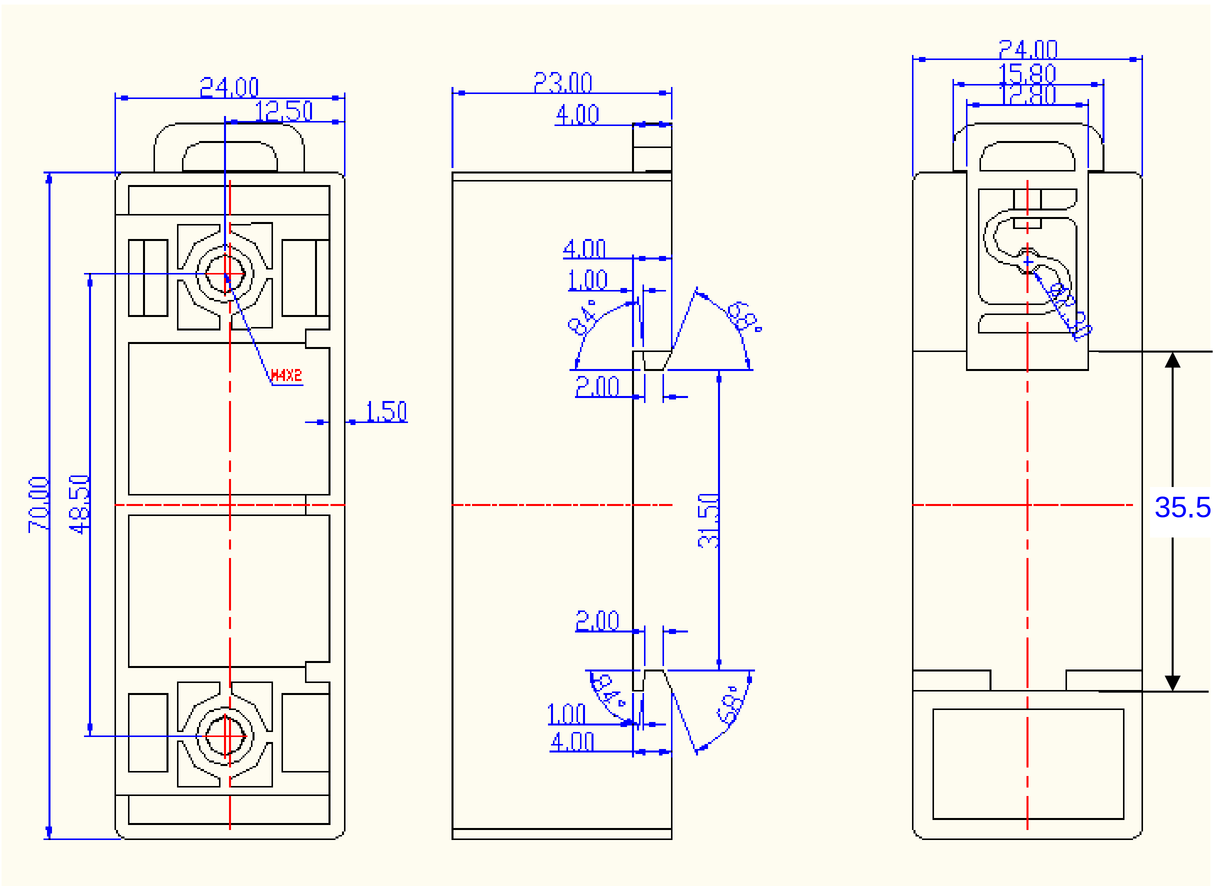
Notes:

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

DIN Rail Adapter CY-DRA88

The DIN Rail Adapter CY-DRA88 is designed for mounting the sensor on 35mm DIN Rail. It has the size 70 x 24 x 23mm. The height from bottom to mounting surface is 14.8mm.





Mounting of Sensors


Sensor with Molex Connector
(The distance between the bottom und the middle of hole is 54.8mm)


Sensor with Phoenix Connector
(The distance between the bottom und the middle of hole is 54.8mm)

Hall Effect AC Current Sensor CYHCS-D6V

This Hall Effect current sensor is based on open loop principle and designed with a solid core and a high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of AC current 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 rms Current I_r (A)	Measuring Range (A)	DC Output Voltage (V)	Part number
50	0 ~ ±50A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	CYHCS-D6V-50A-xn
100	0 ~ ±100A		CYHCS-D6V-100A-xn
200	0 ~ ±200A		CYHCS-D6V-200A-xn
300	0 ~ ±300A		CYHCS-D6V-300A-xn
400	0 ~ ±400A		CYHCS-D6V-400A-xn
500	0 ~ ±500A		CYHCS-D6V-500A-xn
600	0 ~ ±600A		CYHCS-D6V-600A-xn
700	0 ~ ±700A		CYHCS-D6V-700A-xn
800	0 ~ ±800A		CYHCS-D6V-800A-xn
900	0 ~ ±900A		CYHCS-D6V-900A-xn
1000	0 ~ ±1000A		CYHCS-D6V-1000A-xn

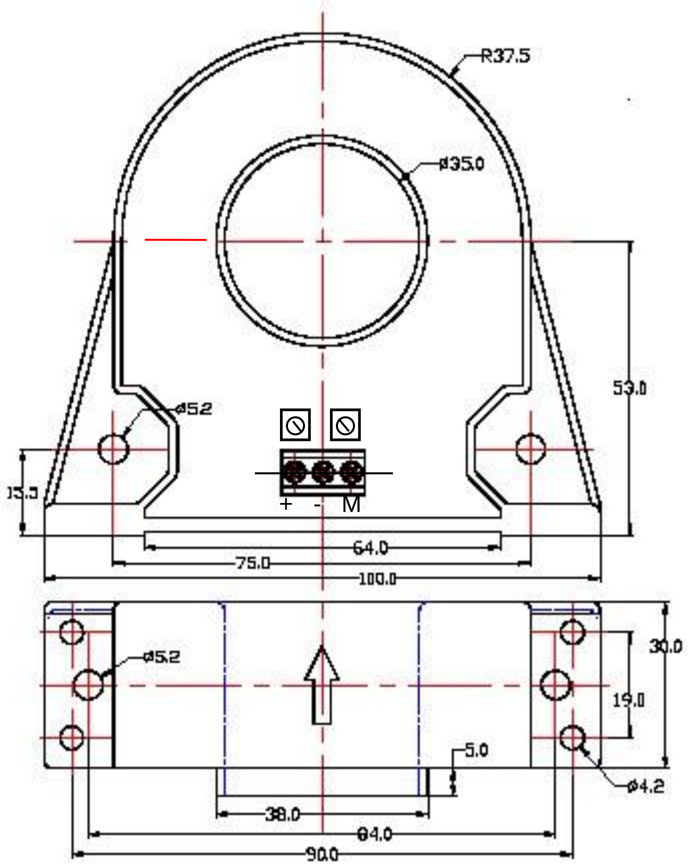
(n=2, *Vcc*= +12VDC ±5%; n=3, *Vcc* =+15VDC ±5%; n=4, *Vcc* =+24VDC±5%)

Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA
Isolation Voltage	2.5kV, 50/60Hz, 1min
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C

Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C

PIN Definition and Dimensions

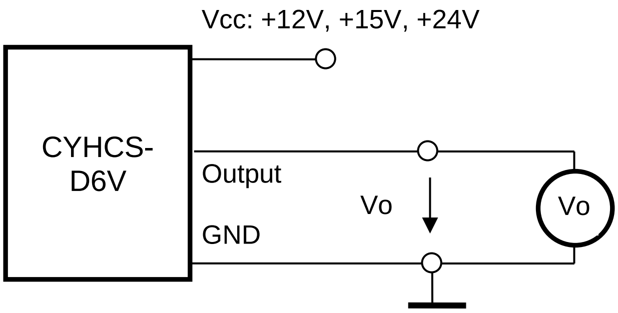
CYHCS-D6V-xxxx



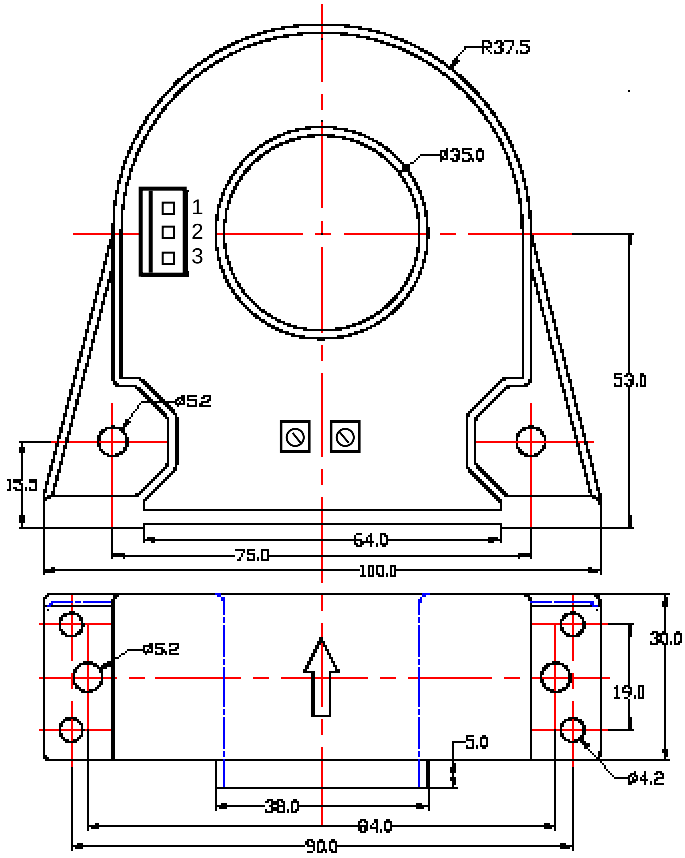
Current direction

Terminal Arrangement

1(+):	Vcc
2(-):	GND
3(M):	Output

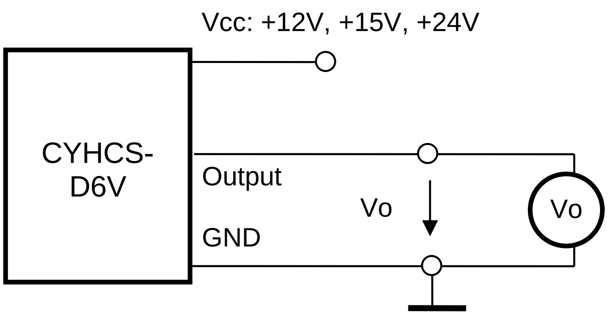


CYHCS-D6V-xxxx



Terminal Arrangement

1:	Vcc
2:	GND
3:	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

Hall Effect AC Current Sensor CYHCS-D6C

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 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 rms Current I_r (A)	Measuring Range (A)	DC Output Current Is (mA)	Part number
50	0 ~ ±50A	4-20 ±1.0%	CYHCS-D6C-50A-n
100	0 ~ ±100A		CYHCS-D6C-100A-n
200	0 ~ ±200A		CYHCS-D6C-200A-n
300	0 ~ ±300A		CYHCS-D6C-300A-n
400	0 ~ ±400A		CYHCS-D6C-400A-n
500	0 ~ ±500A		CYHCS-D6C-500A-n
600	0 ~ ±600A		CYHCS-D6C-600A-n
700	0 ~ ±700A		CYHCS-D6C-700A-n
800	0 ~ ±800A		CYHCS-D6C-800A-n
900	0 ~ ±900A		CYHCS-D6C-900A-n
1000	0 ~ ±1000A		CYHCS-D6C-1000A-n

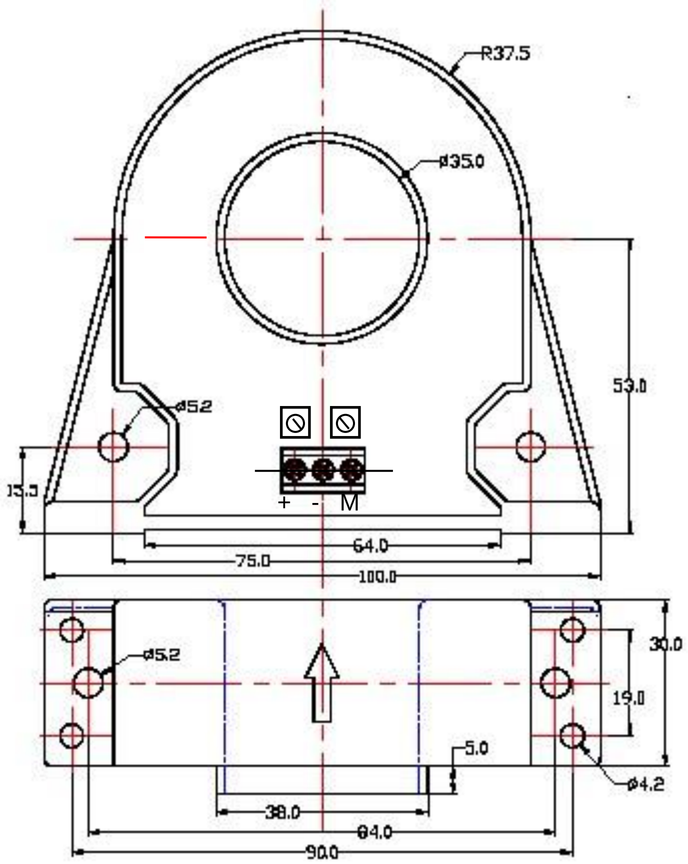
(n=3, Vcc= +12VDC ±5%; n=4, Vcc =+15VDC ±5%; n=5, Vcc =+24VDC±5%)

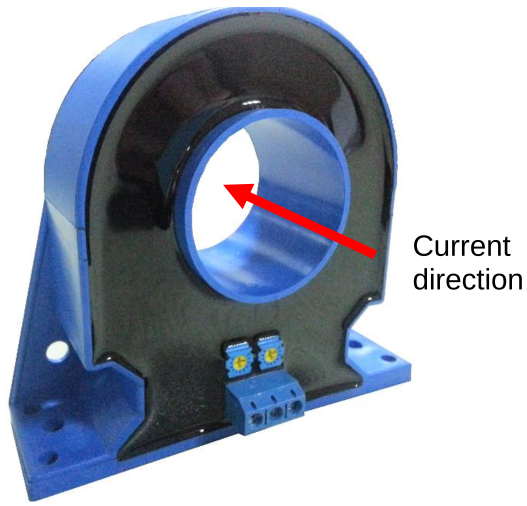
Supply Voltage	V_{cc}= +12V, +15V, +24V ± 5%,
Current Consumption	I_c < 25mA + Is
Galvanic isolation, 50/60Hz, 1min:	5kV
Isolation resistance @ 500 VDC	> 500 MΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Current, T_A=25°C,	4mA
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency bandwidth (- 3 dB):	20Hz - 20kHz
Load resistance:	80-450Ω
Mean Time Between Failures (MTBF):	50k - 100k hours

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

PIN Definition and Dimensions

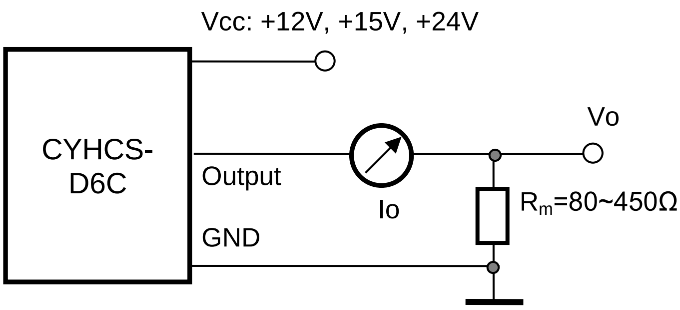
CYHCS-D6C-xxxx



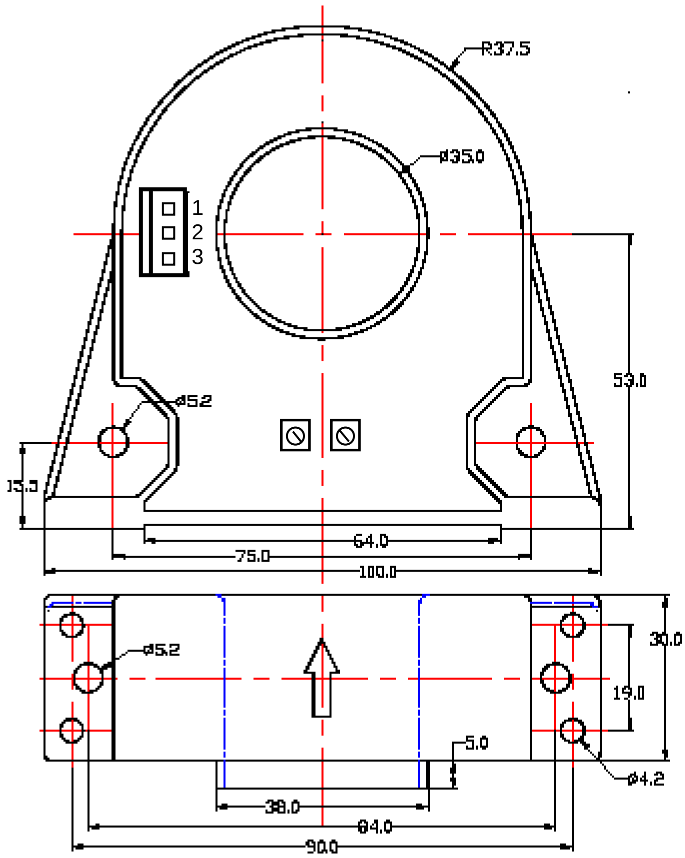


Terminal Arrangement

1(+):	Vcc
2(-):	GND
3(M):	Output

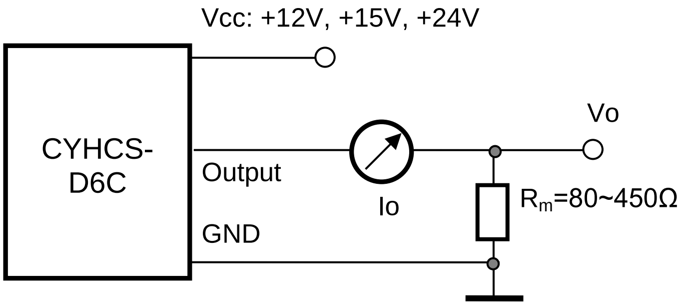


CYHCS-D6C-xxxx



Terminal Arrangement

1: Vcc
2: GND
3: 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

Split Core Hall Effect AC Current Sensor CYHCS-C3TV

This Hall Effect current sensor is based on open loop principle and designed with a split core and 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 • Light in weight • 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 • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A), rms	Primary Current Measuring Range I_p(A)	DC Output Voltage (V)	Part number
50A	0 ~ 50A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	CYHCS-C3TV-50A-xnC
100A	0 ~ 100A		CYHCS-C3TV-100A-xnC
200A	0 ~ 200A		CYHCS-C3TV-200A-xnC
300A	0 ~ 300A		CYHCS-C3TV-300A-xnC
400A	0 ~ 400A		CYHCS-C3TV-400A-xnC
500A	0 ~ 500A		CYHCS-C3TV-500A-xnC
800A	0 ~ 800A		CYHCS-C3TV-800A-xnC
1000A	0 ~ 1000A		CYHCS-C3TV-1000A-xnC
1500A	0 ~ 1500A		CYHCS-C3TV-1500A-xnC
2000A	0 ~ 2000A		CYHCS-C3TV-2000A-xnC

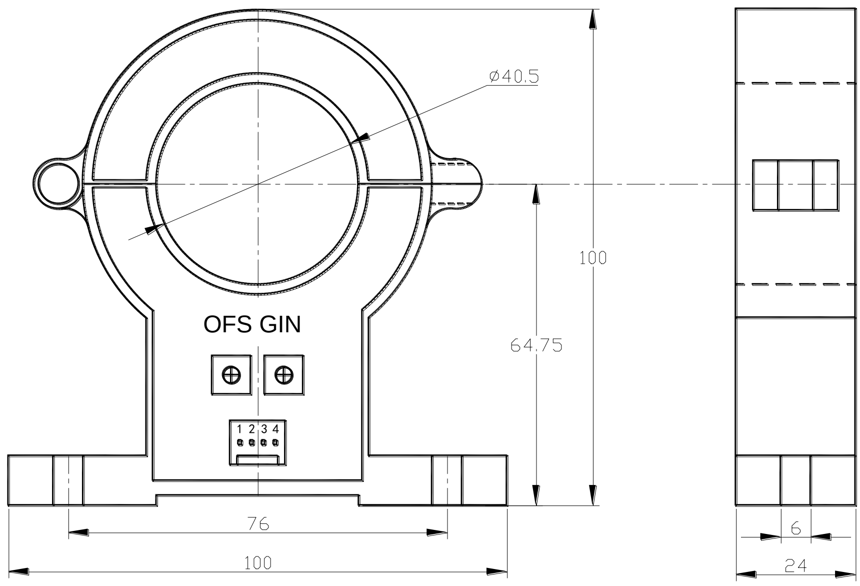
(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA
Isolation Voltage	5kV, 50/60Hz, 1min
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT, heat resistant 125°C flame retardant

General Data

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

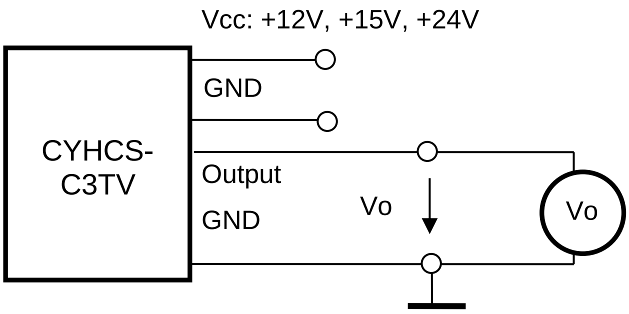
PIN Definition and Dimensions



1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection



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

Split Core Hall Effect AC Current Sensor CYHCS-EKBDA

This Hall Effect current sensor is based on open loop principle and designed with a split core and 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 RMS Current I_r (A)	Measuring Range (A)	DC Output Current (mA)	Aperture Diameter (mm)	Part number
50	0 ~ 50	4-20 ±1.0%	Ø40.5	CYHCS-EKBDA-50A-nC
100	0 ~ 100			CYHCS-EKBDA-100A-nC
200	0 ~ 200			CYHCS-EKBDA-200A-nC
500	0 ~ 500			CYHCS-EKBDA-500A-nC
800	0 ~ 800			CYHCS-EKBDA-800A-nC
1000	0 ~ 1000			CYHCS-EKBDA-1000A-nC
1500	0 ~ 1500			CYHCS-EKBDA-1500A-nC
2000	0 ~ 2000			CYHCS-EKBDA-2000A-nC

(n=3, *Vcc*= +12VDC ±5%; n=4, *Vcc* =+15VDC ±5%; n=5, *Vcc* =+24VDC±5%)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage	V_{cc}=+12V, +15V, +24V ± 5%
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	5kV
Isolation resistance @ 500 VDC	> 500 MΩ

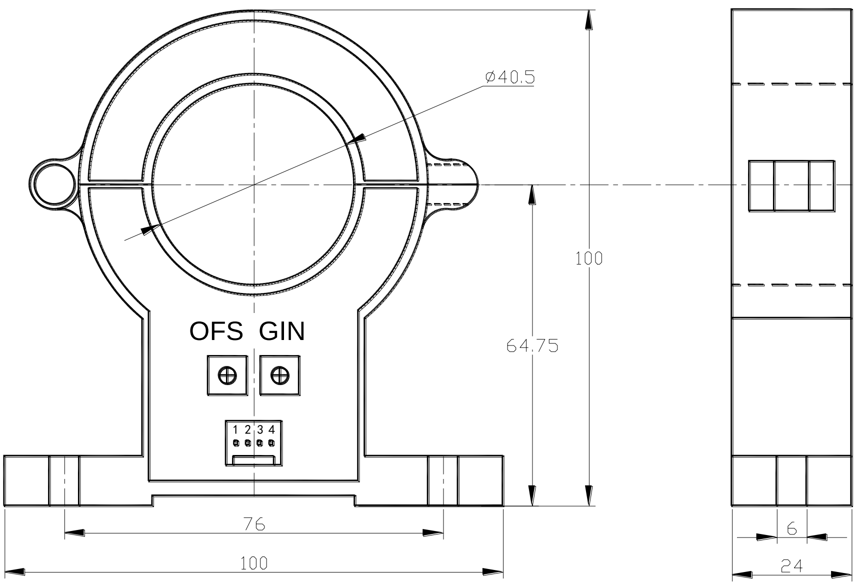
Accuracy and Dynamic performance data

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

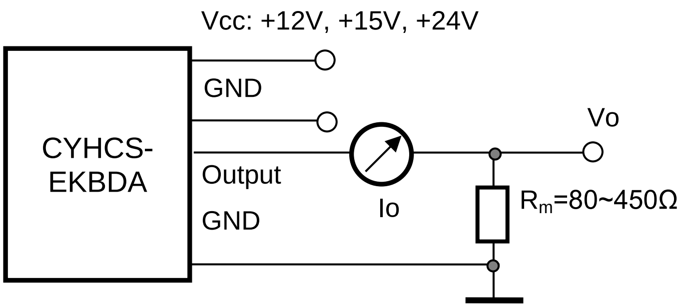
General Data

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

PIN Definition and Dimensions



1(+): Vcc
2(G): NC (GND)
3(O): Output
4(G): GND



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

Hall Effect AC Current Sensor CYHCS-WF3

The sensor CYHCS-WF3 is an open loop Hall Effect Sensor for the measurement of AC current. The sensor has a galvanic isolation between the primary conductor and the secondary electronic circuit.

Features and Advantages	Applications
• DC current measurement • Output signal option (0-20mA, 4-20mA, 0-5V, ±5V, 0-10V) • 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)	50A ~ 800A
Linear measuring range	0-60A ~ 0-960A
Overload current capability	20 times of rated input current, 5sec
Output signals	±5VDC, 0-5VDC, 0-10VDC, 0-20mADC, 4-20mADC
Power supply (voltage Ripple)	+12V DC, +24V DC, ±12V DC, ±15V DC (5%)
Measuring accuracy	±1.0%
Linearity (10% - 100%), 25°C	≤ ±0.5% FS
Zero offset voltage	±25mV
Thermal drift of offset voltage	≤±0.04%/°C
Galvanic isolation	6 kV AC, 50Hz, 1min
Isolation resistance	≥100MΩ
Response time	≤20µs for tracing output, ≤100ms DC voltage output, ≤150ms DC current output,
di/dt following accuracy	50A/µs
Current consumption	≤50mA
Output load	Voltage output : ≥2kΩ, Current output: ≤250Ω
Frequency range	25Hz ~ 5kHz
Case style and Window size	WF3 , Φ35mm
Operating temperature	-25°C ~ +70°C
Storage temperature	-45°C ~ + 85°C
Relative humidity	≤90%
MTBF	>50000h
Unit weight	200g

Definition of Part number:

CYHCS	-	WF3	-	m	-	x	n
(1)		(2)		(3)		(4)	(5)

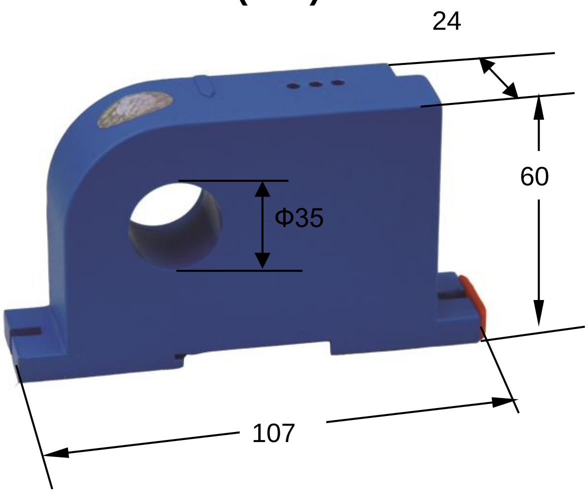
(1)	(2)	(3)	(4)	(5)
Series name	Case style	Rated Input current (m)	Output signal	Power supply
CYHCS	WF3	m = 50A, 100A, 200A, 300A, 400A, 500A, 600A, 700A, 800A	**x=1:** tracing voltage ±5V DC **x=3:** 0-5V DC **x=4:** 0-20mA DC **x=5:** 4-20mA DC **x=8:** 0-10V DC	n=**2:** +12V DC n=**4:** +24V DC n=**5:** ±12V DC n=**6:** ±15V DC

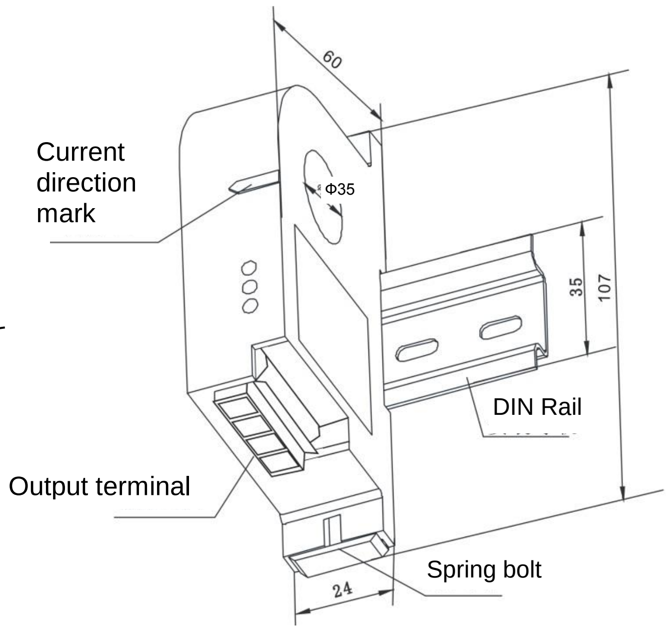
Example 1: CYHCS-WF3-400A -15, Hall Effect AC Current sensor with
Output signal: tracing voltage ±5V AC
Power supply: ±12V DC
Rated input current: 400A AC

Example 2: CYHCS-WF3-400A -14, Hall Effect AC Current sensor with
Output signal: tracing voltage ±5V AC
Power supply: +24V DC
Rated input current: 400A AC

Example 3: CYHCS-WF3-400A -54, Hall Effect AC Current sensor with
Output signal: 4-20mA DC
Power supply: +24V DC
Rated input current: 400A AC

DIMENSIONS (mm)





Dimensions: 107x 24 x 60mm, Aperture: Ø35 mm

Pin Arrangement:

+:	V+	-:	V- (or NC)
OUT:	Output	GND:	Ground

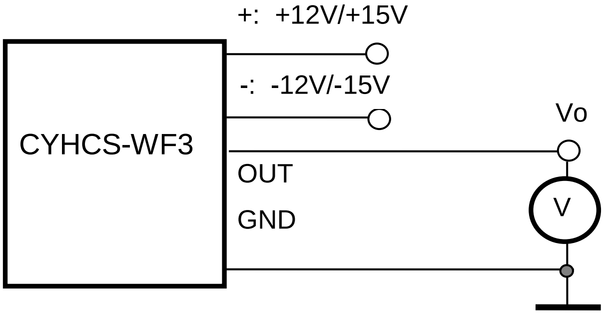
CONNECTIONS

The current carrying cable must pass through the window. The phase of output is the same as that of the current passing the window in the direction of the arrow indicated on the case.

a) Wiring of Sensors Using Double Power Supplies

Voltage Output

+:	+15V/+12V
OUT:	Output
GND:	Ground
-:	-15V/-12V

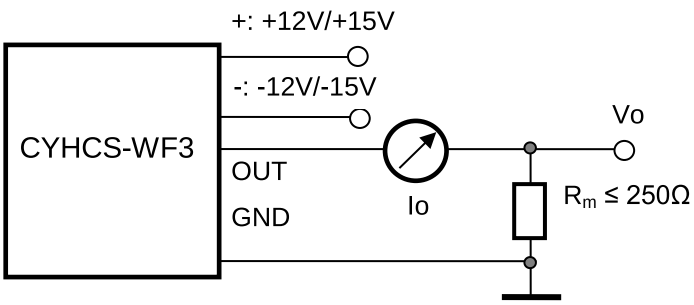


Relation between Input and Output:

Sensor CYHCS-WF3-400A-15	
Input current (A)	Output voltage (V)
-400	-5
-200	-2.5
0	0
200	2.5
400	5

Current Output

+:	+12V/+15V
OUT:	Output
GND:	Ground
-:	-12V/-15V



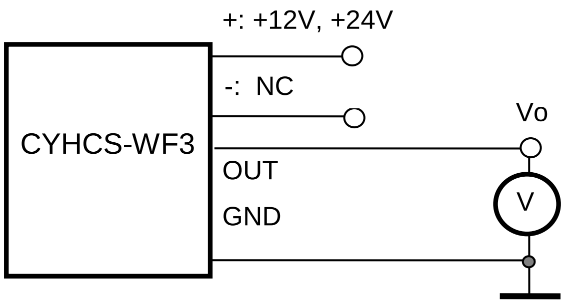
Relation between Input and Output (for R_m=250 Ω):

Sensor CYHCS-WF3-400A-55		
Input current (A)	Output current Io(mA, DC)	Output voltage Vo (V, DC)
0	4	1
100	8	2
200	12	3
300	16	4
400	20	5

B) Wiring of Sensors Using Single Power Supply

Voltage Output

+:	+12V, +24V
OUT:	Output
GND:	Ground
-:	NC

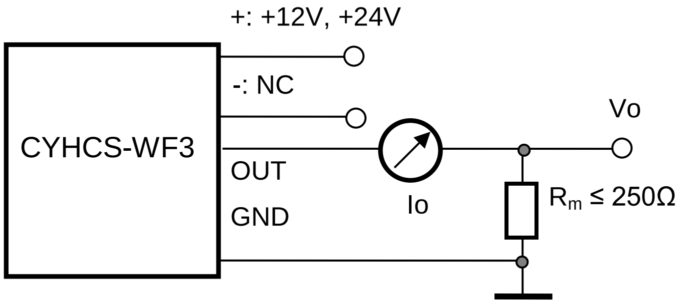


Relation between Input and Output:

Sensor CYHCS-WF3-400A-14	
Input current (A)	Output voltage (V)
-400	-5
-200	-2.5
0	0
200	2.5
400	5

Current Output

+):	+12V, +24V
OUT:	Output
GND:	Ground
-:	NC



Relation between Input and Output (for R_m=250 Ω):

Sensor CYHCS-WF3-400A-54		
Input current (A)	Output current Io(mA, DC)	Output voltage Vo (V, DC)
0	4	1
100	8	2
200	12	3
300	16	4
400	20	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 current of current carrying conductor is the same as the direction of arrow marked on the transducer case.