Catalogue

Open Loop AC Hall Effect Current Sensors

Transducers with Rectangle Windows

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Hall Effect AC Current Sensor CYHCS-BTV

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 • 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 voltage	Window Sizes (mm)	Part number
50	0 ~ ±50	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	20.5x10.5	CYHCS-BTV-50A-xn
100	0 ~ ± 100			CYHCS-BTV-100A-xn
200	0 ~ ± 200			CYHCS-BTV-200A-xn
300	0 ~ ± 300			CYHCS-BTV-300A-xn
400	0 ~ ±400			CYHCS-BTV-400A-xn
500	0 ~ ±500			CYHCS-BTV-500A-xn
600	0 ~ ±600			CYHCS-BTV-600A-xn

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

Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	2.5kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

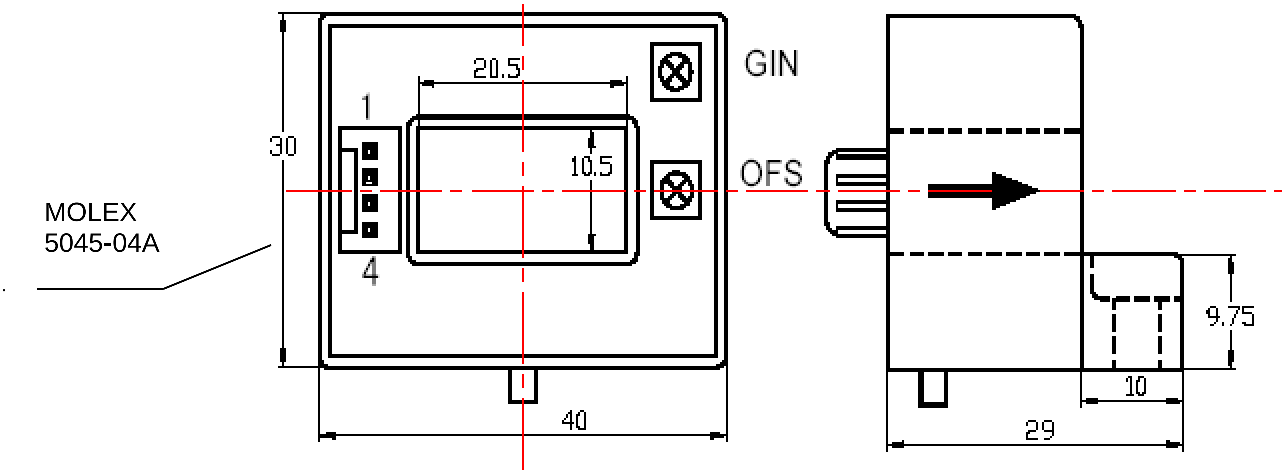
Accuracy and Dynamic performance data

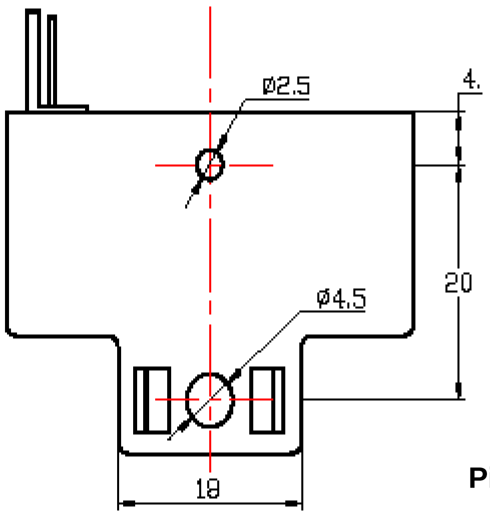
Accuracy at I_r, T_A=25°C,	<1.0% FS
Linearity from 0 to I_r, T_A=25°C,	<0.5% FS
Zero Output Voltage, T_A=25°C,	<50mV
Hysteresis offset voltage:	<±25mV
Thermal Drift of Offset Voltage,	<±1.0mV/°C
Frequency bandwidth (- 3 dB):	20Hz-20kHz
Response Time at 90% of I_P (*f*=1k Hz)	< 200ms

General Data

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

PIN Definition and Dimensions





Pin Arrangement:

1: Vcc; 2: Ground;
3: Output; 4: NC

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-BTC

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 • 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
50	0 ~ ±50	4-20±1.0%	20.5x10.5	CYHCS-BTC-50A-n
100	0 ~ ± 100			CYHCS-BTC-100A-n
200	0 ~ ± 200			CYHCS-BTC-200A-n
300	0 ~ ± 300			CYHCS-BTC-300A-n
400	0 ~ ±400			CYHCS-BTC-400A-n
500	0 ~ ±500			CYHCS-BTC-500A-n
600	0 ~ ±600			CYHCS-BTC-600A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

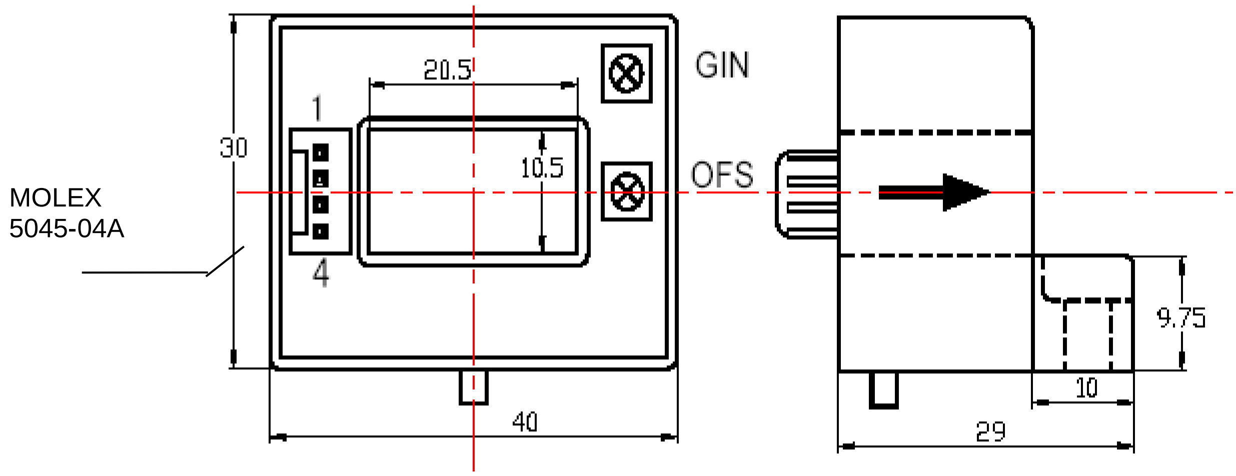
Accuracy and Dynamic performance data

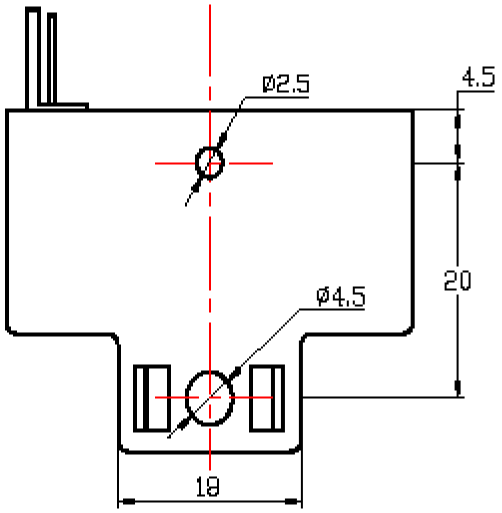
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz

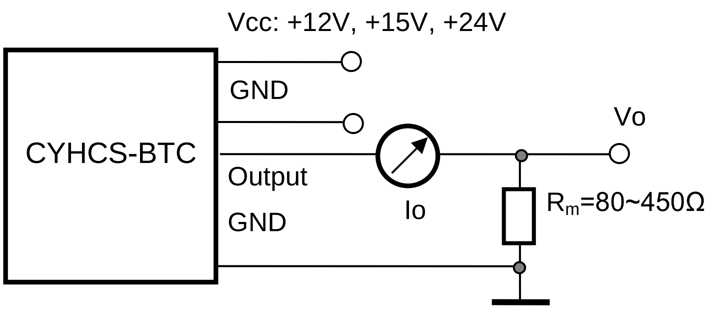
General Data

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

PIN Definition and Dimensions







Pin Arrangement:

1: Vcc;
2: Ground;
3: Output;
4: NC

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

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Hall Effect AC Current Sensor CYHCS-FV

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 Voltage (V)	Window Size (mm)	Part number
200	0~±200	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	41x14	CYHCS-FV-200A-xn
400	0~±400			CYHCS-FV-400A-xn
500	0~±500			CYHCS-FV-500A-xn
600	0~±600			CYHCS-FV-600A-xn
800	0~±800			CYHCS-FV-800A-xn
1000	0~±1000			CYHCS-FV-1000A-xn
2000	0~±2000			CYHCS-FV-2000A-xn

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

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ

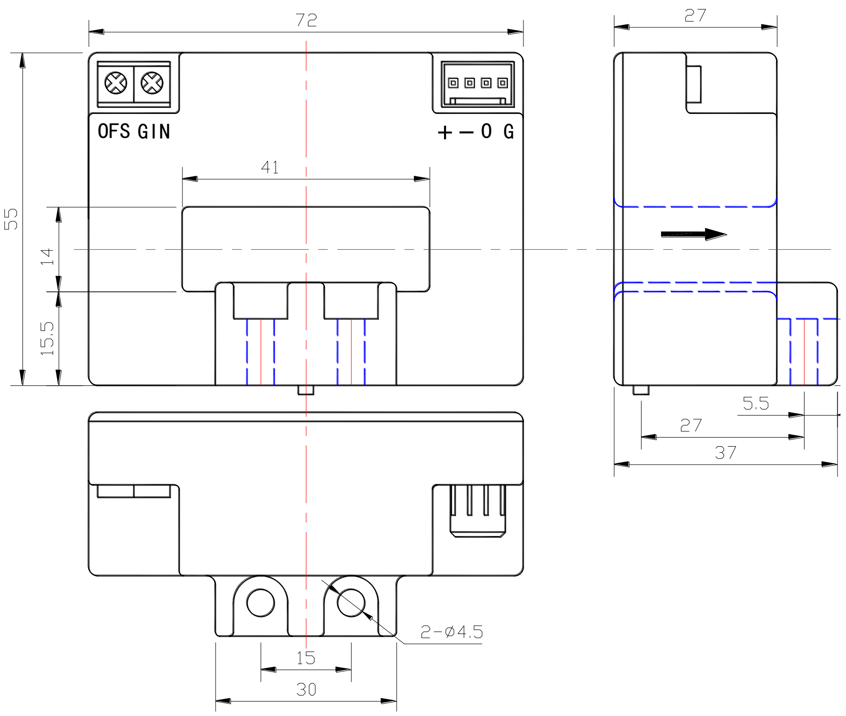
Accuracy and Dynamic performance data

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 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
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
Unit weight:	217g/unit

Dimensions



Pin Arrangement

+: Vcc
-: Ground
O: Output
G: Ground

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-FC

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
200	0~±200	4-20 ±1.0%	41x14	CYHCS-FC-200A-n
400	0~±400			CYHCS-FC-400A-n
500	0~±500			CYHCS-FC-500A-n
600	0~±600			CYHCS-FC-600A-n
800	0~±800			CYHCS-FC-800A-n
1000	0~±1000			CYHCS-FC-1000A-n
2000	0~±2000			CYHCS-FC-2000A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

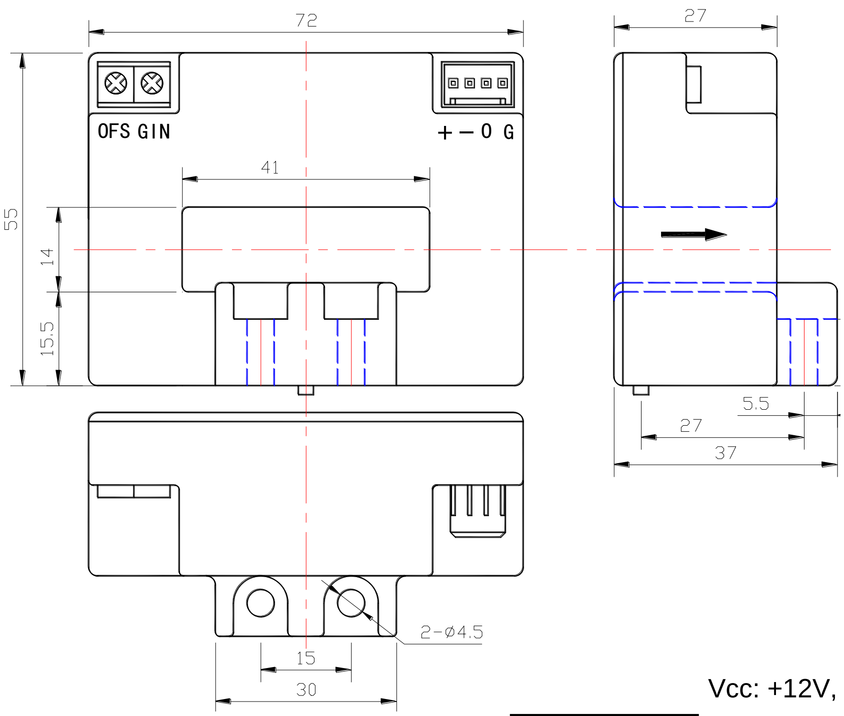
Accuracy and Dynamic performance data

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

General Data

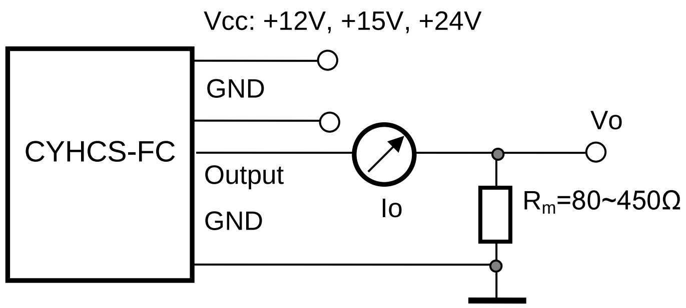
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	217g/unit

Dimensions



Pin Arrangement

+: Vcc
-: Ground
O: Output
G: Ground



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-FAV

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** • 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 Voltage (V)	Window size (mm)	Part number
400	0~±400	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	51x13	CYHCS-FAV-400A-xn
500	0~±500			CYHCS-FAV-500A-xn
600	0~±600			CYHCS-FAV-600A-xn
800	0~±800			CYHCS-FAV-800A-xn
1000	0~±1000			CYHCS-FAV-1000A-xn
1500	0~±1500			CYHCS-FAV-1500A-xn
2000	0~±2000			CYHCS-FAV-2000A-xn

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

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ

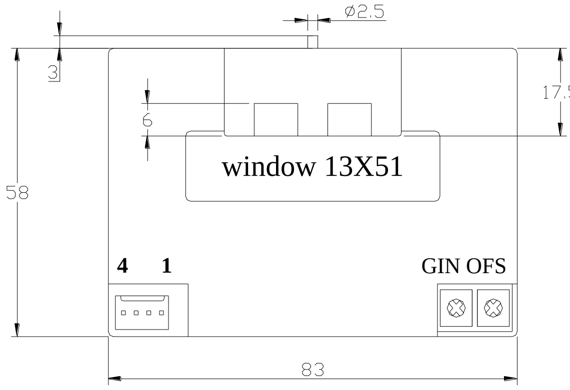
Accuracy and Dynamic performance data

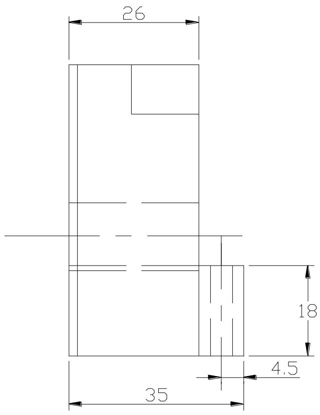
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material:	PBT

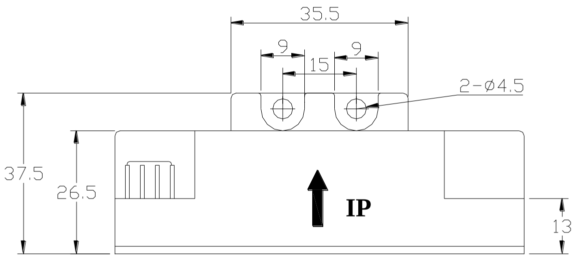
General Data

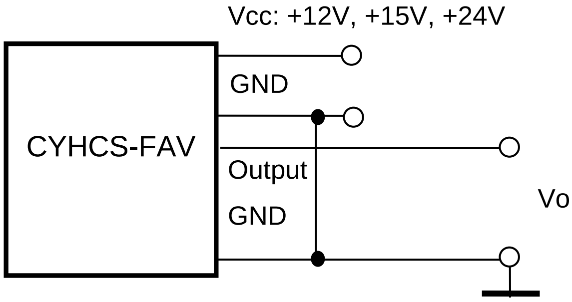
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	300g/unit

Dimensions









Pin Arrangement

1: Vcc
2: Ground
3: Output
4: Ground

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 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-FAC

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)	Aperture Diameter (mm)	Part number
400	0~±400	4-20 ±1.0%	51x13	CYHCS-FAC-400A-n
500	0~±500			CYHCS-FAC-500A-n
600	0~±600			CYHCS-FAC-600A-n
800	0~±800			CYHCS-FAC-800A-n
1000	0~±1000			CYHCS-FAC-1000A-n
1500	0~±1500			CYHCS-FAC-1500A-n
2000	0~±2000			CYHCS-FAC-2000A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

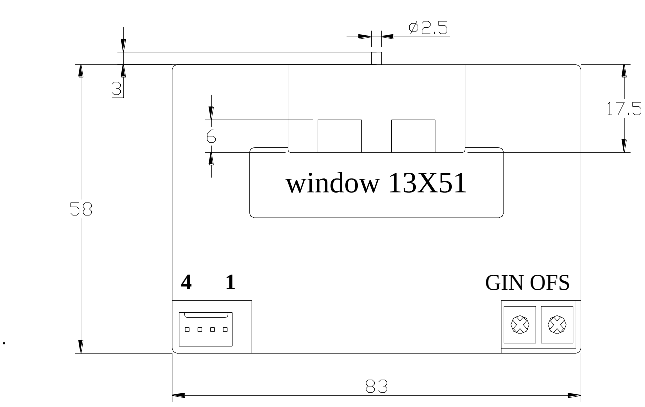
Accuracy and Dynamic performance data

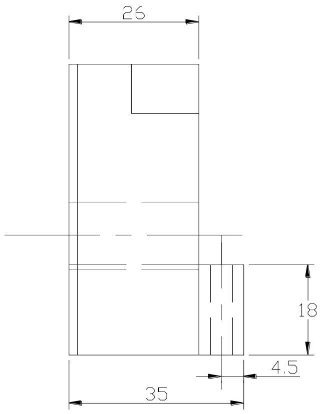
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material: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

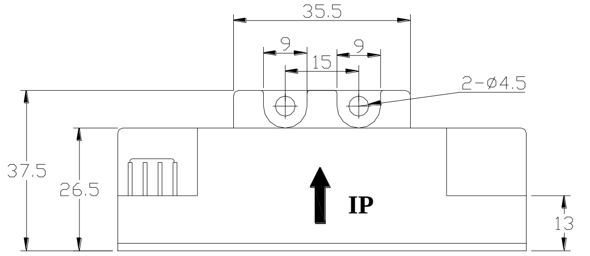
General Data

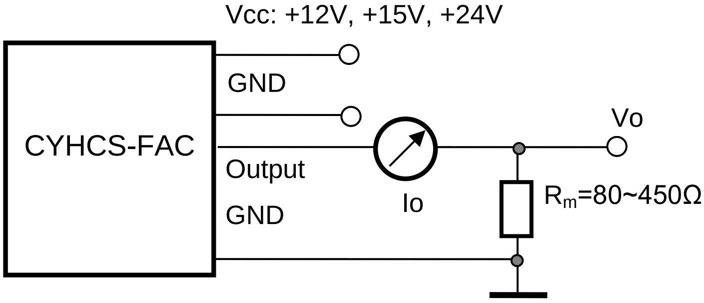
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	300g/unit

Dimensions









Pin Arrangement

1: Vcc
2: Ground
3: Output
4: Ground

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 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-KD

This Spilt Core 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 • With Split Core, easy installation • 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), (AC)	Measuring Range (A), AC	Output current Vo (DC)	Window Size (mm)	Part number
300	± 300	5V	64 x 16	CYHCS-KD300A
500	± 1000			CYHCS-KD500A
600	± 1200			CYHCS-KD600A
800	± 1600			CYHCS-KD800A
1000	± 2000			CYHCS-KD1000A
2000	± 3000			CYHCS-KD2000A

Supply Voltage	V_{cc}= ±12~15VDC ± 5%
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

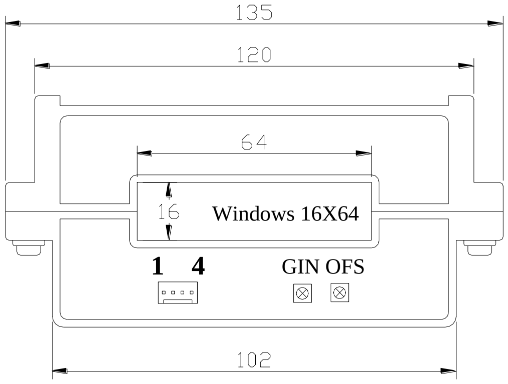
Accuracy and Dynamic performance data

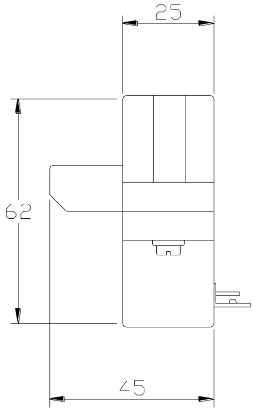
Accuracy at I_r, T_A=25°C (without offset),	X <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <0.5% FS
Electric Offset Voltage, T_A=25°C,	20mV
Thermal Drift of Offset Voltage,	V_{ot} <±0.5mV/°C
Frequency bandwidth (- 3 dB):	DC-10kHz
Response Time at 90% of I_P (f=1k Hz)	t_r ≤ 200ms
Load resistance:	≥10kΩ

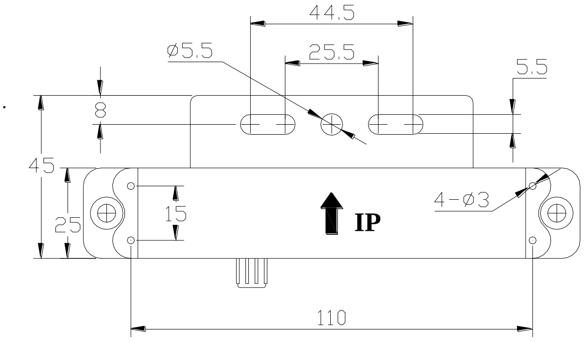
General Data

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

Dimensions







Pin Arrangement

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

Notes:

5. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
6. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
7. The best accuracy can be achieved when the window is fully filled with bus-bar (current carrying conductor).
8. 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-KDA

This Spilt Core 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 • With Split Core, easy installation • 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), (AC)	Measuring Range (A), AC	Output current Io (DC)	Window Size (mm)	Part number
300	± 600	4 -20mA	64 x 16	CYHCS-KDA300A
500	± 1000			CYHCS-KDA500A
800	± 1600			CYHCS-KDA800A
1000	± 2000			CYHCS-KDA1000A
1500	± 2500			CYHCS-KDA1500A
2000	± 3000			CYHCS-KDA2000A

Supply Voltage	V_{cc}= +24VDC ± 5%
Current Consumption	I_c < 25mA +Io
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

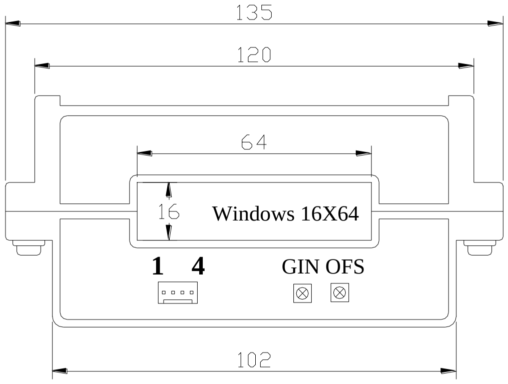
Accuracy and Dynamic performance data

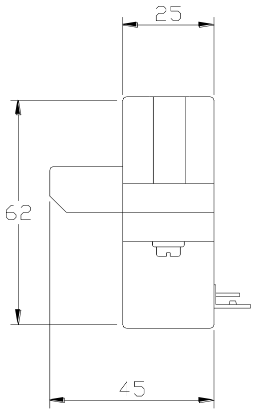
Accuracy at I_r, T_A=25°C (without offset),	X <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <0.5% FS
Electric Offset Current, T_A=25°C,	4mA ± 0.05mA
Thermal Drift of Offset Current,	<±0.05mA/°C
Frequency bandwidth (- 3 dB):	20Hz-20kHz
Response Time at 90% of I_P (f=1k Hz)	t_r ≤ 200ms
Load resistance:	80-450Ω

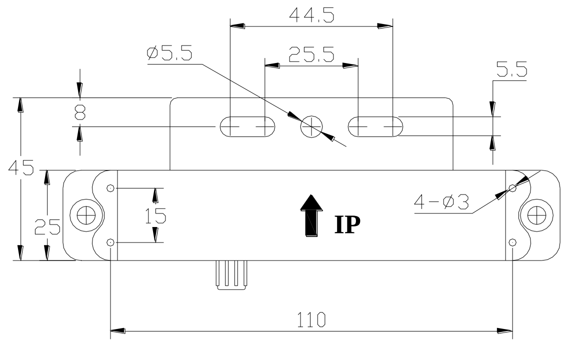
General Data

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

Dimensions







Pin Arrangement

1: +24V
2: 0V (GND)
3: Output
4: GND

Notes:

9. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
10. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
11. The best accuracy can be achieved when the window is fully filled with bus-bar (current carrying conductor).
12. 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-KV

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

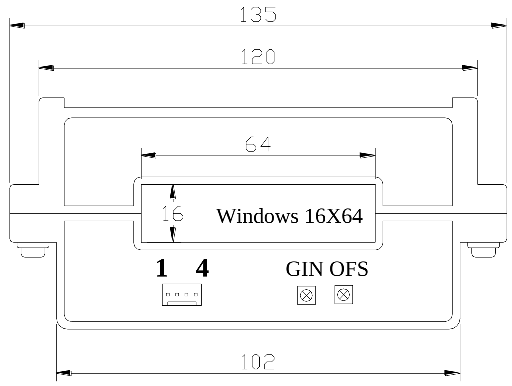
Electrical Data

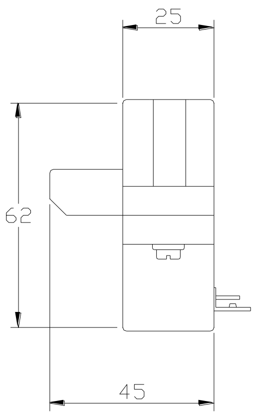
Primary Nominal Current I_r (A), rms	Measuring Range (A)	DC Output Voltage (V)	Window size (mm)	Part number
300	0~±300	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	64x16	CYHCS-KV-300A-xn
500	0~±500			CYHCS-KV-500A-xn
600	0~±600			CYHCS-KV-600A-xn
800	0~±800			CYHCS-KV-800A-xn
1000	0~±1000			CYHCS-KV-1000A-xn
1500	0~±1500			CYHCS-KV-1500A-xn
2000	0~±2000			CYHCS-KV-2000A-xn

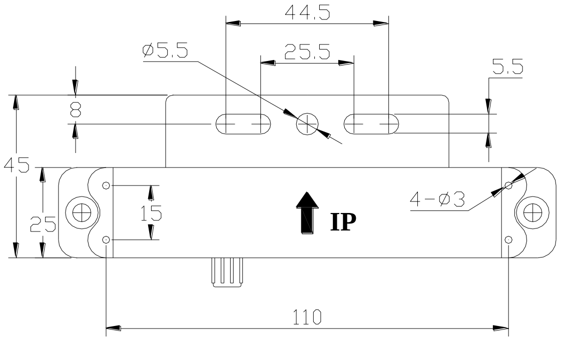
(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC)

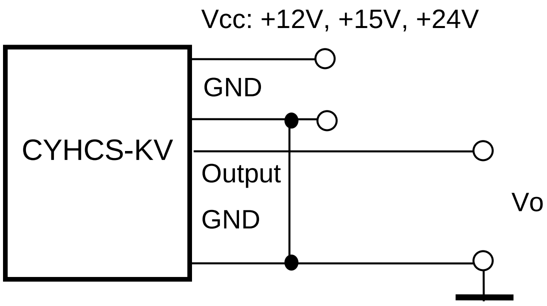
Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% 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
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	300g/unit
Case Material:	PBT

Dimensions









Pin Arrangement

1: Vcc
2: Ground
3: Output
4: Ground

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 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-KC

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%	64x16	CYHCS-KC-300A-n
500	0~±500			CYHCS-KC-500A-n
600	0~±600			CYHCS-KC-600A-n
800	0~±800			CYHCS-KC-800A-n
1000	0~±1000			CYHCS-KC-1000A-n
1500	0~±1500			CYHCS-KC-1500A-n
2000	0~±2000			CYHCS-KC-2000A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

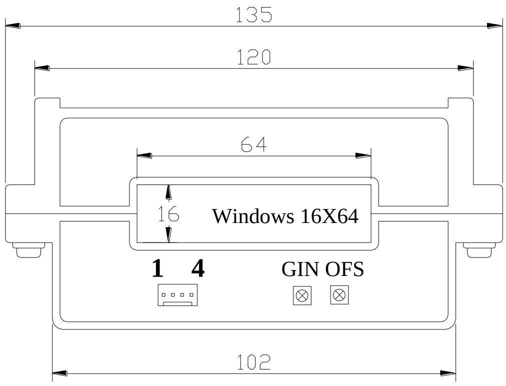
Accuracy and Dynamic performance data

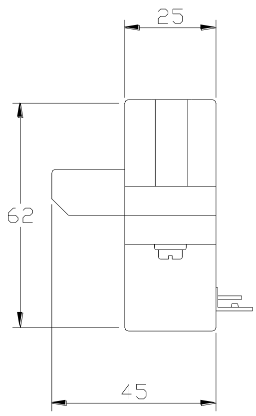
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz

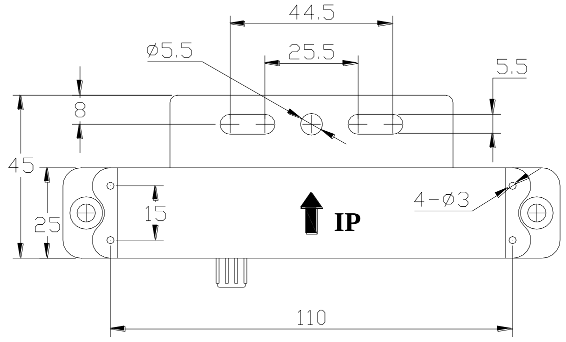
General Data

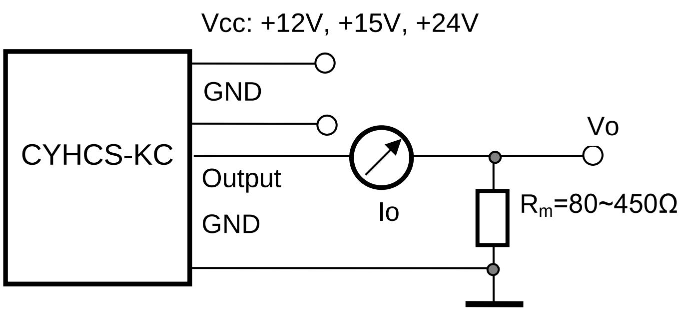
Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	300g/unit
Case Material:	PBT

Dimensions









Pin Arrangement

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

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 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-KF2V

This Hall Effect current sensor is based on open loop principle and designed with a high galvanic isolation between primary and secondary circuits. 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 Voltage (V)	Window size (mm)	Part number
500	0~±500	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	85 x 27	CYHCS-KF2V-500A-xn
600	0~±600			CYHCS-KF2V-600A-xn
800	0~±800			CYHCS-KF2V-800A-xn
1000	0~±1000			CYHCS-KF2V-1000A-xn
1500	0~±1500			CYHCS-KF2V-1500A-xn
2000	0~±2000			CYHCS-KF2V-2000A-xn
3000	0~±3000			CYHCS-KF2V-3000A-xn

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

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ

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 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
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz

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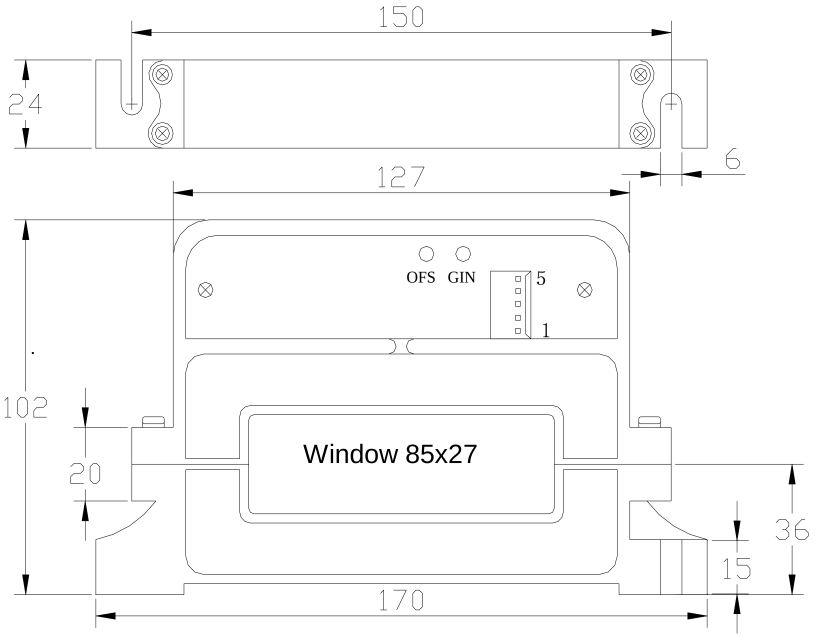
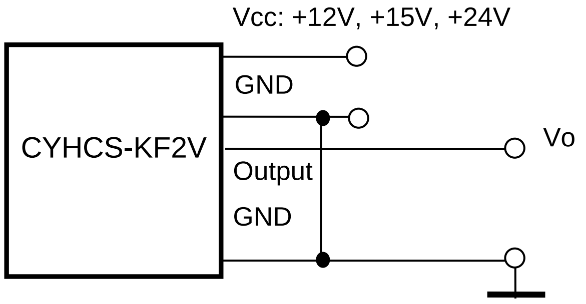
General Data

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

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 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

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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
500	0~±500	4-20 ±1.0%	85 x 27	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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

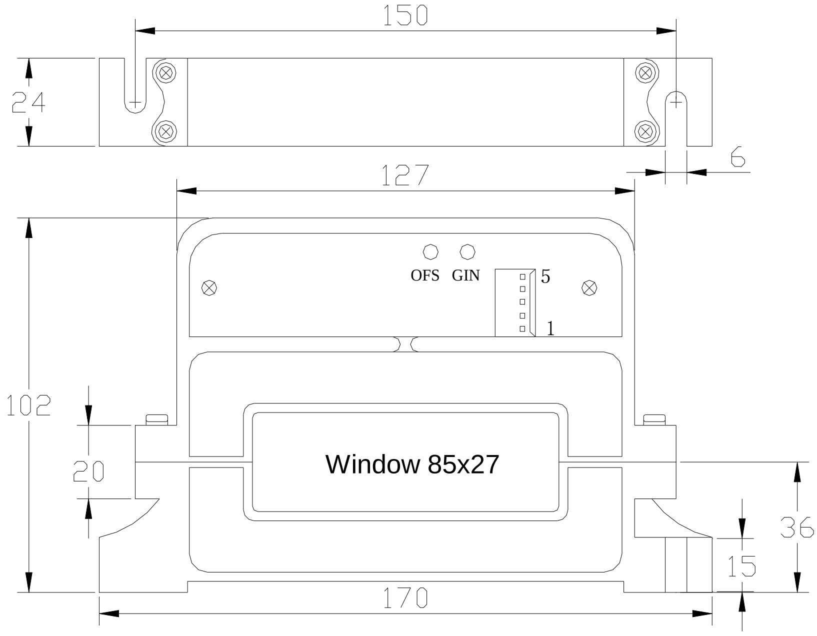
Accuracy and Dynamic performance data

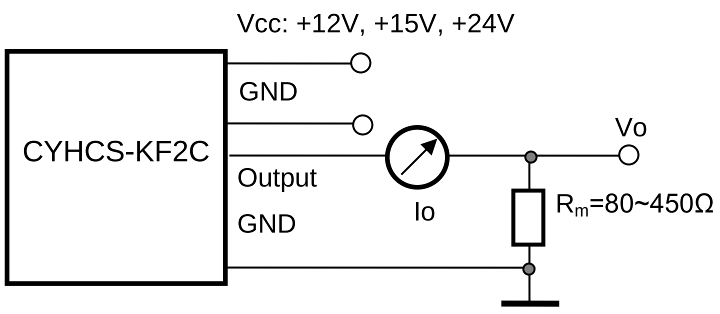
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz

General Data

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

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 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-K104V

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 Voltage (V)	Window size (mm)	Part number
500	0~±500	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	104 x 36	CYHCS-K104V-500A-xn
1000	0~±1000			CYHCS-K104V-1000A-xn
1500	0~±1500			CYHCS-K104V-1500A-xn
2000	0~±2000			CYHCS-K104V-2000A-xn
3000	0~±3000			CYHCS-K104V-3000A-xn
4000	0~±4000			CYHCS-K104V-4000A-xn
5000	0~±5000			CYHCS-K104V-5000A-xn

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

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ

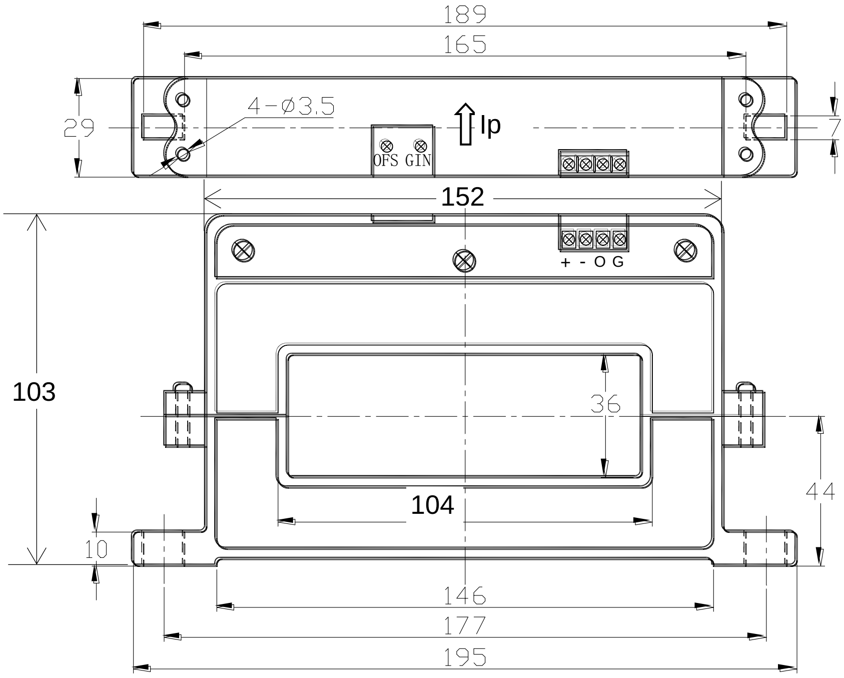
Accuracy and Dynamic performance data

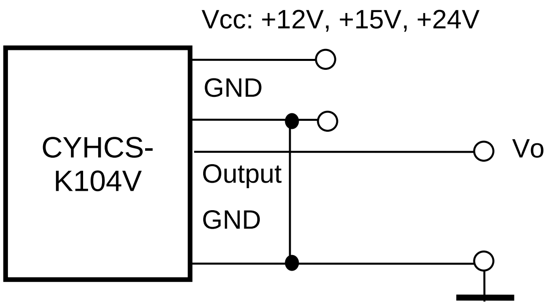
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 200ms
Frequency 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

Dimensions





Pin Arrangement

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

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 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-K104C

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
500	0~±500	4-20 ±1.0%	104 x 36	CYHCS-K104C-500A-n
1000	0~±1000			CYHCS-K104C-1000A-n
1500	0~±1500			CYHCS-K104C-1500A-n
2000	0~±2000			CYHCS-K104C-2000A-n
3000	0~±3000			CYHCS-K104C-3000A-n
4000	0~±4000			CYHCS-K104C-4000A-n
5000	0~±5000			CYHCS-K104C-5000A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

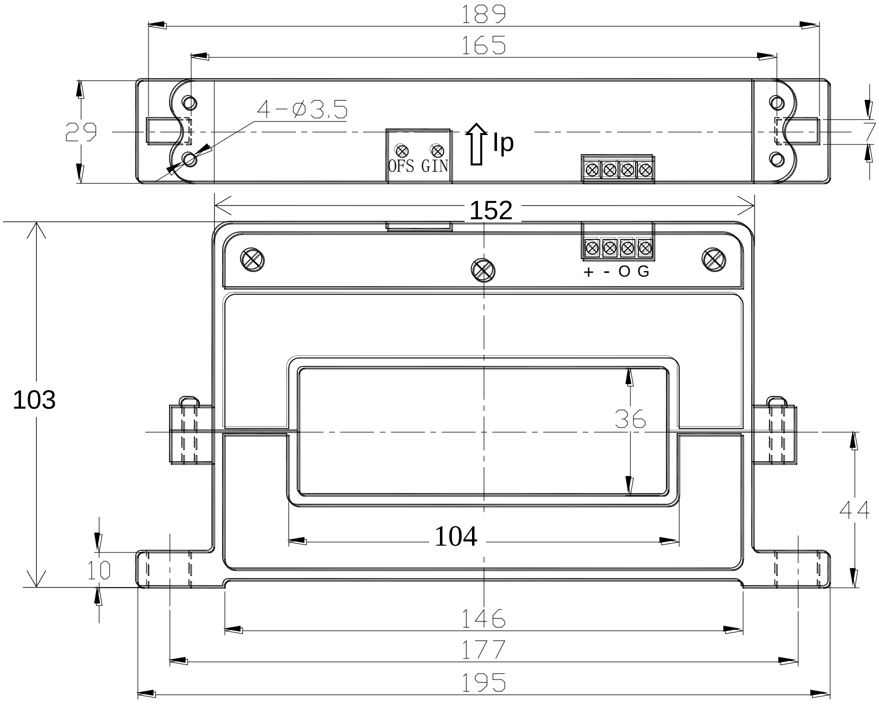
Accuracy and Dynamic performance data

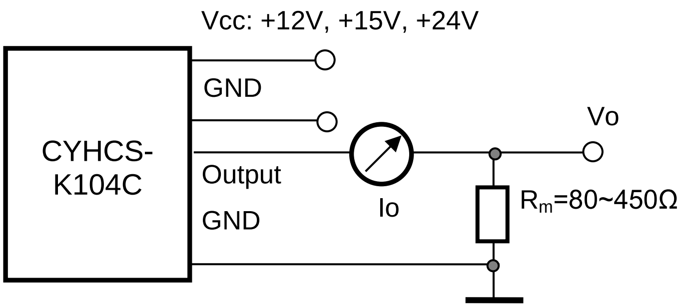
Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 200ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = 20Hz - 20 kHz
Case Material: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

General Data

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

Dimensions





Pin Arrangement

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

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 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-C5

This Hall Effect current sensor is based on open loop principle and can be used for measurement of AC currents.

Product Characteristics	Applications
• Excellent accuracy • Very good linearity • Small size • 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 • Transformer substation • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Measuring range M	300A ~ 6000A AC
Linearity range	1.5 x M (for 300A ~ 4000A), 6500A (for >4000A)
Overload capacity	5 x M_{max} (maximum measuring range)
Nominal output signals	0-4V, 0-5V, 0-10V, -5V~+5V, 0-20mA, 4-20mA, -20mA~+20mA , ….
Supply voltage	+12VDC, +15VDC, +24VDC, ±12VDC, ±15VDC
Current consumption	18mA ~ 50mA + output current
Galvanic isolation	3KV RMS/50Hz/min

Accuracy and Dynamic Performances

Zero offset voltage	±20	mV
Hysteresis error	±10	mV
Thermal drift of offset current	≤500	ppm/°C
Response time (tracing output)	≤10 (di/dt=50A/μs)	μs
Accuracy	±1.0	%
Linearity	≤1.0	%FS

General Data

Operating temperature	-10 ~ +80	°C
Storage temperature	-25 ~ +85	°C

Definition of Part number:

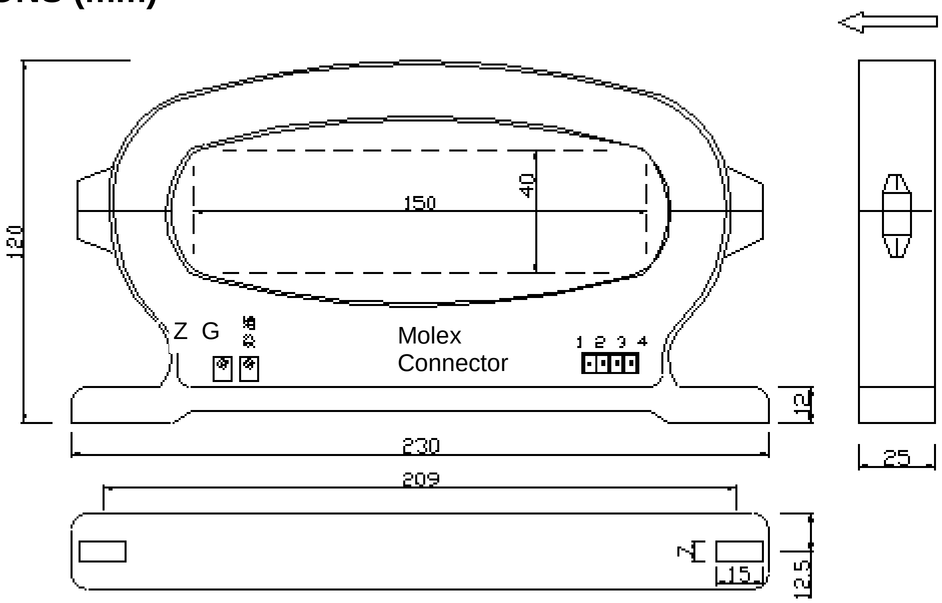
CYHCS	-	C5	-	m	-	x	n
(1)		(2)		(3)		(4)	(5)

(1)	(2)	(3)	(4)	(5)
Series name	Case style	Rated Input current rms (m)	Output signal	Power supply
CYHCT	C5	m = 300A, 400A, 500A, 600A, 800A, 1000A, 2000A, 3000A, 4000A, 5000A, 6000A	**x=0:** 0-4V 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=3:** +15V DC **n=4:** +24V DC **n=5:** ±12V DC **n=6:** ±15V DC

Example 1: CYHCS-C5-1000A -34, Hall Effect AC Current sensor with
Output signal: 0-5V DC
Power supply: +24V DC
Rated input current: 0-1000A AC

Example 2: CYHCS-C5-1000A -56, Hall Effect AC Current sensor with
Output current: 4-20mA DC
Power supply: ±15V DC
Rated input current: 0-1000A AC

DIMENSIONS (mm)



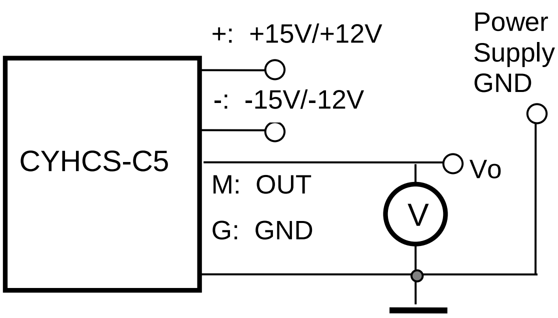
CONNECTION

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

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



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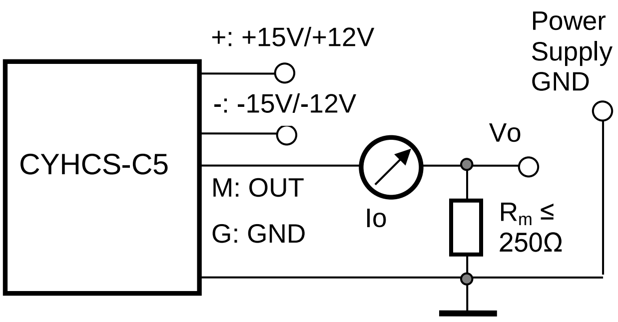
Relation between Input and Output:

Sensor CYHCS-C5-1000A-35	
Input current (A)	Output voltage (V)
0	0
250	1.25
500	2.5
750	3.75
1000	5

Current Output

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



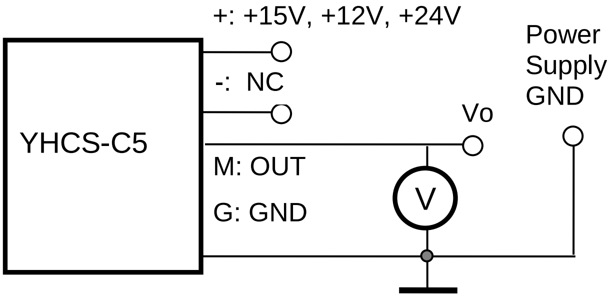
Relation between Input and Output (for R_m=250 Ω):

Sensor CYHCS-C5-1000A-45		
Input current (A)	Output current Io(mA)	Output voltage Vo (V)
0	0	0
250	5	1.25
500	10	2.5
750	15	3.75
1000	20	5

B) Wiring of Sensors Using Single Power Supply

Voltage Output

1(+): +15V, +12V, +24V
2(-): NC
3(M): Output
4(G): Ground

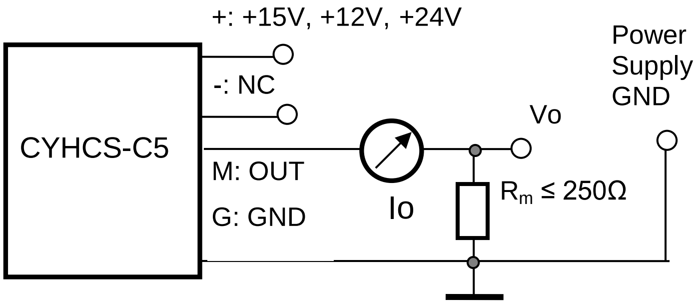


Relation between Input and Output:

Sensor CYHCS-C5-1000A-84	
	Output voltage (V)
0	0
250	2.5
500	5
750	7.5
1000	10

Current Output

1(+): +15V, +12V, +24V
2(-): NC
3(M): Output
4(G): Ground



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

Sensor CYHCS-C5-1000A-54		
Input current (A)	Output current Io(mA)	Output voltage Vo (V)
0	4	1
250	8	2
500	12	3
750	16	4
1000	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.

Hall Effect AC Current Sensor CYHCS-HBV

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 • 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 Voltage (V)	Window Size (mm)	Part number
2000	0~±2000	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	140 x 50	CYHCS-HBV-2000A-xn
3000	0~±3000			CYHCS-HBV-3000A-xn
4000	0~±4000			CYHCS-HBV-4000A-xn
5000	0~±5000			CYHCS-HBV-50000A-xn
6000	0~±6000			CYHCS-HBV-6000A-xn
8000	0~±8000			CYHCS-HBV-8000A-xn
9000	0~±9000			CYHCS-HBV-9000A-xn

(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC

Supply Voltage	V_{cc}= +12V, +15V, +24VDC ± 5%
Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Output Impedance:	R_{out} < 150Ω
Load resistance:	10kΩ

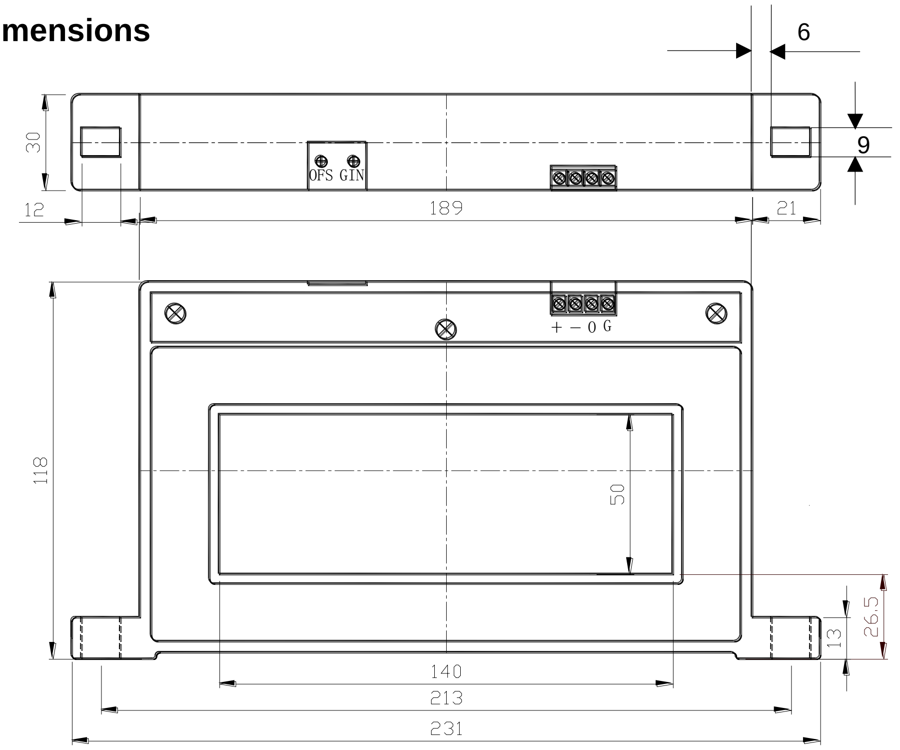
Accuracy and Dynamic performance data

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 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
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

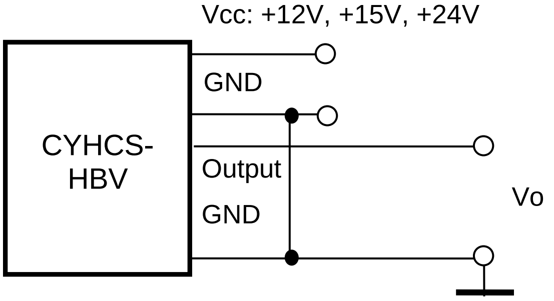
Dimensions



Pin Arrangement

+: Vcc
-: Ground (GND)
O: Output
G: Ground (GND)

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 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-HBC

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 - 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
2000	0~±2000	4-20 ±1.0%	140 x 50	CYHCS-HBC-2000A-n
3000	0~±3000			CYHCS-HBC-3000A-n
4000	0~±4000			CYHCS-HBC-4000A-n
5000	0~±5000			CYHCS-HBC-5000A-n
6000	0~±6000			CYHCS-HBC-6000A-n
8000	0~±8000			CYHCS-HBC-8000A-n
9000	0~±9000			CYHCS-HBC-9000A-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 < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

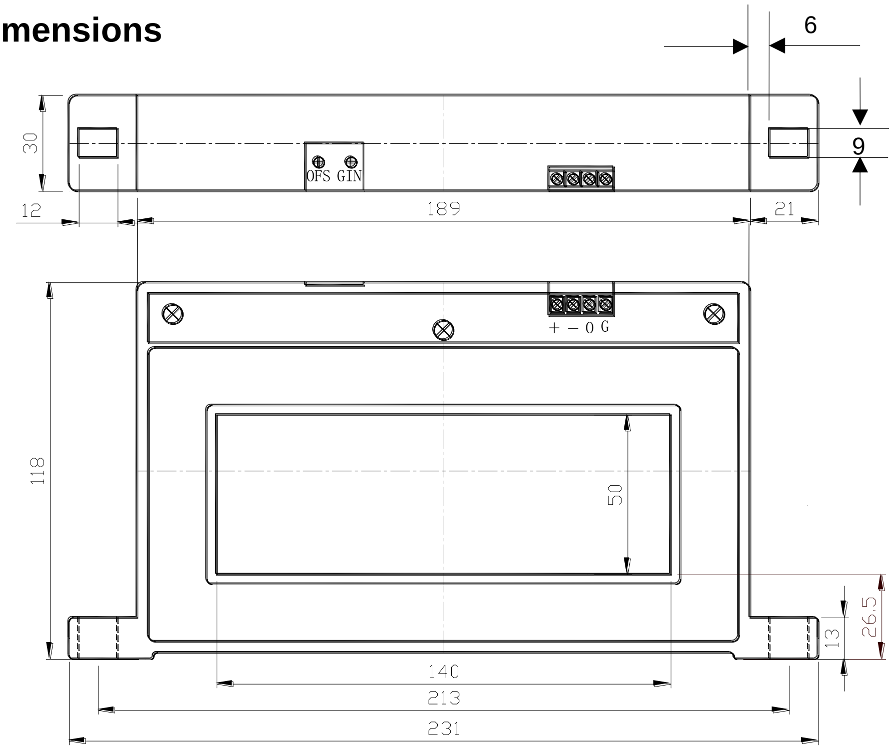
Accuracy and Dynamic performance data

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

General Data

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

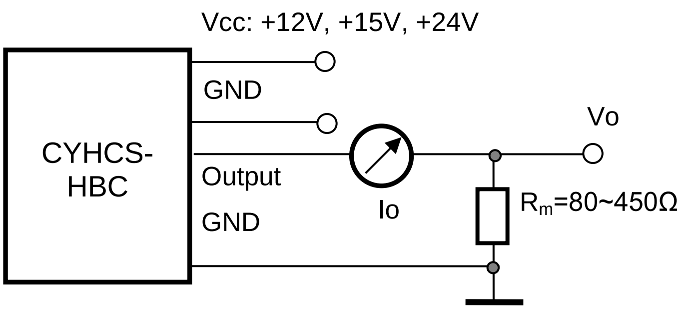
Dimensions



Pin Arrangement

+: Vcc
-: Ground (GND)
O: Output
G: Ground (GND)

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 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