DC Leakage Current Sensor CYCT04-E

This current sensor series is based on magnetic modulation principle and has good stability for measuring small current and high isolation between primary current and secondary output signal. This sensor can be used for measurement of DC leakage currents.

Product Characteristics

- Excellent accuracy
- Very good linearity
- Less power consumption
- Window structure
- Electrically isolating the output of the transducer from the current carrying conductor
- No insertion loss
- Current overload capability

Applications

- Various power supply
- Communication systems
- Leakage current measurement
- Numerical controlled machine tools
- Current difference measurement
- Electric circuits measurement
- Microcomputer monitoring
- Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (mA)	Measuring Range (mA)	Output voltage (V)	Aperture Diameter (mm)	Part number
10	± 20	5 ±0.5%	Ø20.5	CYCT04-E10mA
20	± 40			CYCT04-E20mA
30	± 60			CYCT04-E30mA
40	± 80			CYCT04-E40mA
50	± 100			CYCT04-E50mA

The primary nominal current can be selected between 10mA und 50mA

Supply Voltage	V_{cc}= ±15V ± 5%
Current Consumption	I_c < 20mA
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 (without offset),	X <±0.5%
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <±30mV
Thermal Drift of Offset Voltage,	V_{ot} <±1mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 20ms

General Data

Ambient Operating Temperature,	T_A = -40°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +125°C

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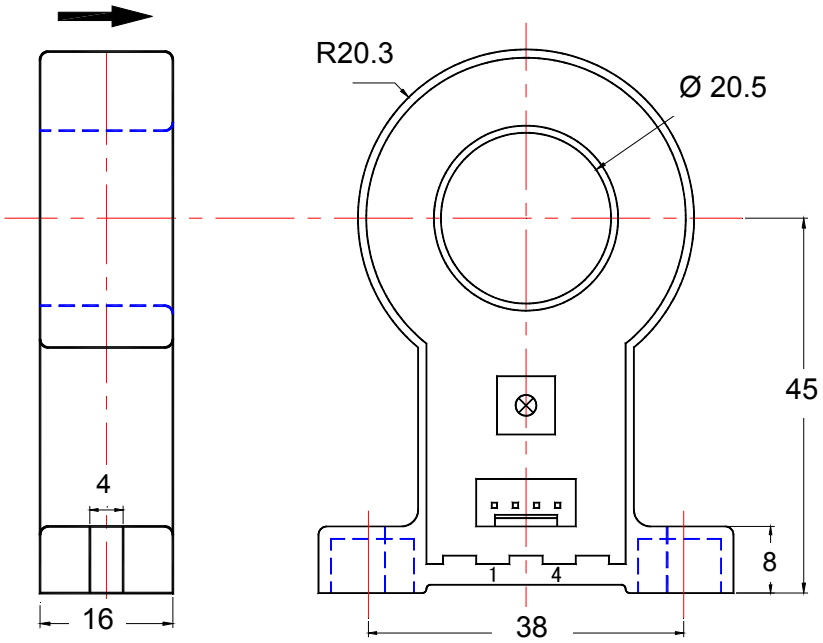
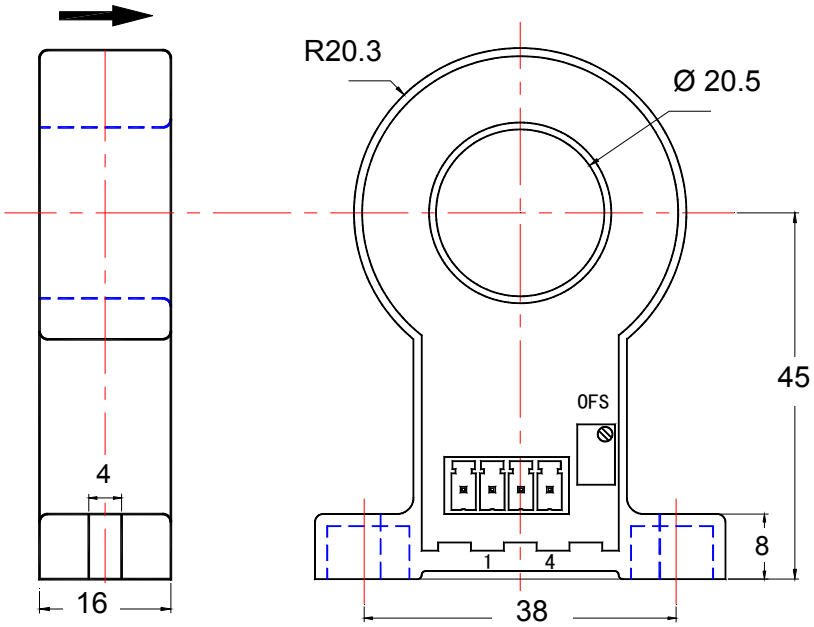
PIN Definition and Dimensions



Pin 1: +15V,
Pin 2: -15V,
Pin 3: Output,
Pin 4: ground



Terminal 1: +15V,
Terminal 2: -15V,
Terminal 3: Output,
Terminal 4: ground

Notes:

1. Connect the terminals of power source, outputs 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 primary cable (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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