

Premo presents HCT-DHR420 series AC/DC current transducer, as a new current transducer developed by applying magnetic modulation principle, has good stability of low current and highly insulated primary and secondary, and can be used for measuring signal systems and circuit detection.



Features

- Closed loop Hall Effect sensor.
- Unipolar power supply.
- High current measurement.
- Isolated plastic case recognized according to UL94-V0.
- EN60947-1:2004, IEC60950-1:2001, EN50178:1998 compliant.

1. Electrical Characteristics

	Symbol	Min	Typ	Max	Unit
Nominal current	I_{PN}		20		A
HCT-020DHR420			50		A
HCT-050DHR420			100		A
HCT-100DHR420			200		A
HCT-200DHR420			300		A
HCT-300DHR420			400		A
HCT-400DHR420			500		A
HCT-500DHR420			600		A
HCT-1000DHR420			1000		A
Measuring range	I_p			120	A
HCT-020DHR420, HCT-050DHR420		-120		600	A
HCT-100DHR420, HCT-200DHR420		-600		1000	A
HCT-300DHR420, HCT-400DHR420		-1000		1500	A
HCT-500DHR420, HCT-600DHR420, HCT-1000DHR420		-1500			A
Rated output current	I_o		4-20		mA
Supply voltage ($\pm 5\%$)	V_{CC}	20		30	V
Current consumption	I_{CC}		$30 + I_s$		mA
Load resistor	R_L			300	Ω

2. Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured at full scale)		±0.5			%
Linearity (measured at full scale)	ε_{LLR}			0.5	%
Offset current	I_{OS}			4	mA
Offset current drift (starting at -40 °C)	KI_{OS}			±5	μA/°C
Response time ¹⁾	T_R			200	ms
di/dt ¹⁾		50			A/μs
Bandwidth (-1 dB)	F_C	0		6	kHz

¹⁾Best dynamic performance is achieved when using a bus bar.

3. Isolation parameters

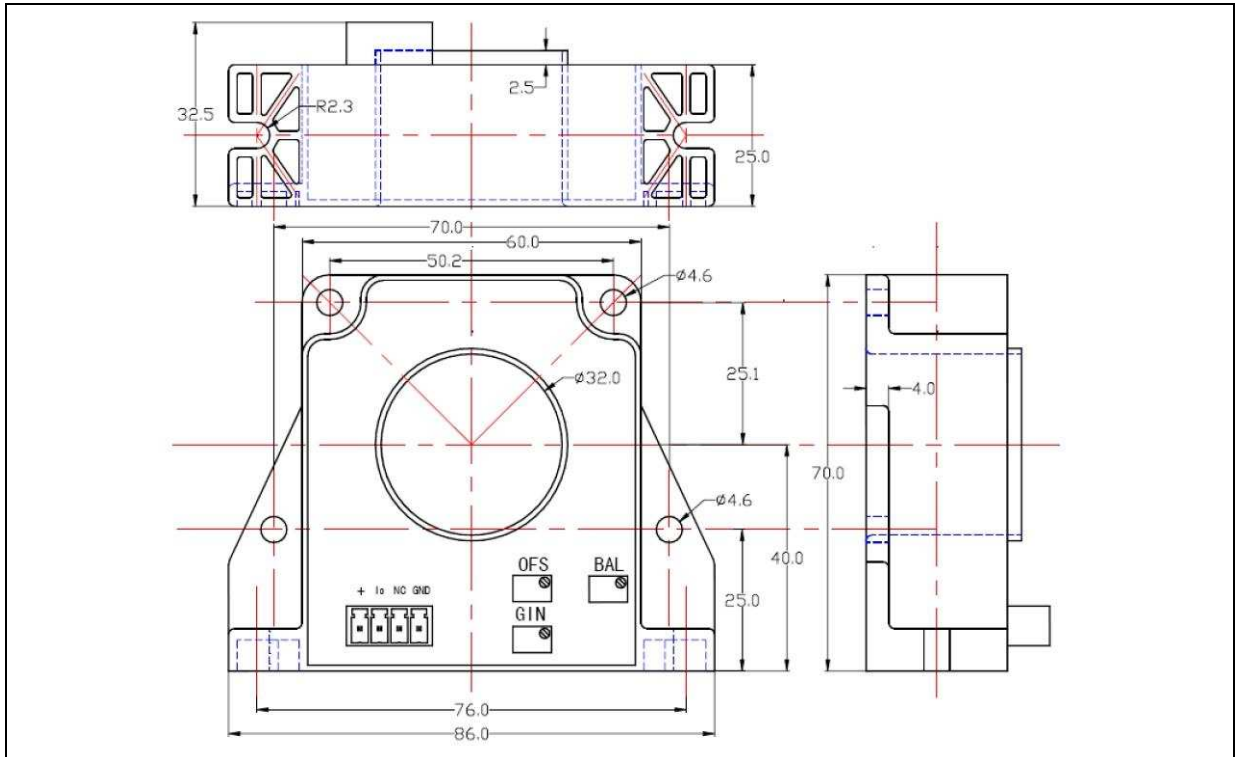
	Symbol	Min	Typ	Max	Unit
Galvanic isolation (50 Hz, 1 min)	V_I		4		kV

4. General parameters

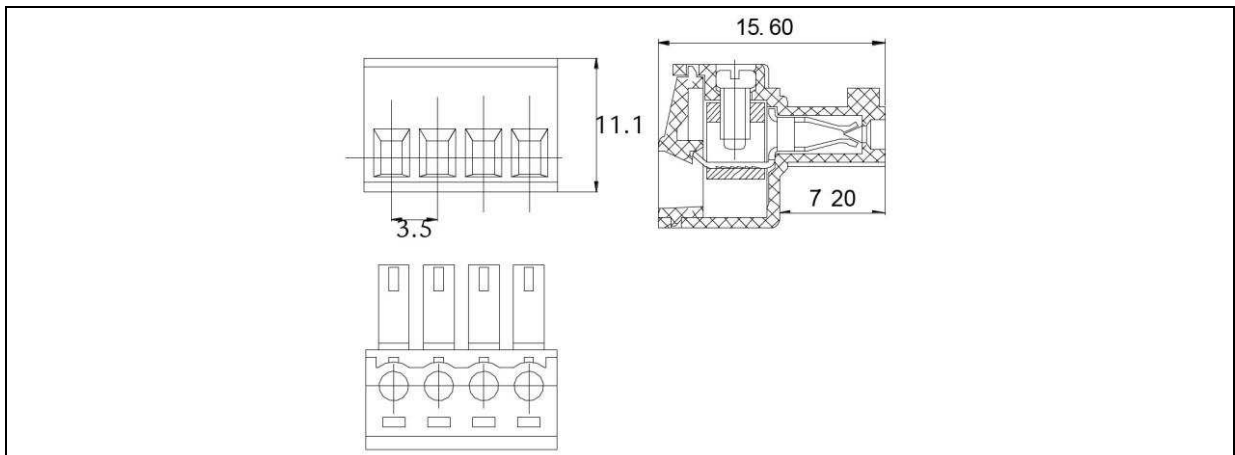
	Symbol	Min	Typ	Max	Unit
Operating temperature ²⁾	T_A	-40		85	°C
Storage temperature	T_S	-55		125	°C
Mass	m		205		g

²⁾Primary conductor temperature shall be below 120 °C.

5. Dimensions



User's connector detail



Pin description

Pin	Value
+	+Vcc
Io	Output current
NC	No connect
GND	Ground

Mechanical notes

1. All dimensions are in mm.
2. General tolerances according to ISO 2768-c.
3. All dimensions and mechanical fixations could be changed upon user needs or PREMO transducer development.

6. Marking

(HCT-020DHR420 marking example)

Marking notes

1. Component is marked on top side.
2. Arrow indicates direction of positive currents.