

Premo presents HCT-LTHA series AC/DC current transducer, a new design based on the Hall Effect principle. HCT-LTHA series has good stability in very high currents and a highly insulated primary and secondary.

## Features

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



## 1. Electrical parameters

	Symbol	Min	Typ	Max	Unit
Nominal current HCT-100LTHA HCT-200LTHA HCT-300LTHA	$I_{PN}$		100 200 300		A A A
Measuring range HCT-100LTHA HCT-200LTHA HCT-300LTHA	$I_p$	-300 -600 -900		300 600 900	A A A
Rated output current (at $I_{PN}$ ) HCT-100LTHA HCT-200LTHA HCT-300LTHA <sup>1</sup>	$I_s$		50 100 100		mA mA mA
Supply voltage ( $\pm 5\%$ )	$V_{CC}$	$\pm 12$		$\pm 18$	V
Current consumption (measured at $I_p = 0$ A)	$I_{CC}$			20	mA
Turns ratio HCT-100LTHA HCT-200LTHA HCT-300LTHA			1:2000 1:2000 1:3000		
Compensation winding resistance ( $T = 25^\circ\text{C}$ ) HCT-100LTHA HCT-200LTHA HCT-300LTHA	$R_C$		25 21 32		$\Omega$ $\Omega$ $\Omega$

<sup>1)</sup> It is possible to order an HCT-300LTHA with a rated output current of 150 mA with a turns ratio equal to 1:2000 and a measuring range (-600, 600) A.

### 2. Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured $I_{PN}$ @ $T = 25^{\circ}\text{C}$ )		$\pm 0.2$			%
Linearity (measured at full scale)	$\epsilon_{LLR}$			0.1	%
Offset current	$I_{OS}$			$\pm 0.2$	mA
Offset current drift	$KI_{OS}$			$\pm 0.5$	mA/ $^{\circ}\text{C}$
Response time	$T_R$			1	$\mu\text{s}$
di/dt		200			A/ $\mu\text{s}$
Bandwidth (-3 dB)	$F_C$	0		150	kHz

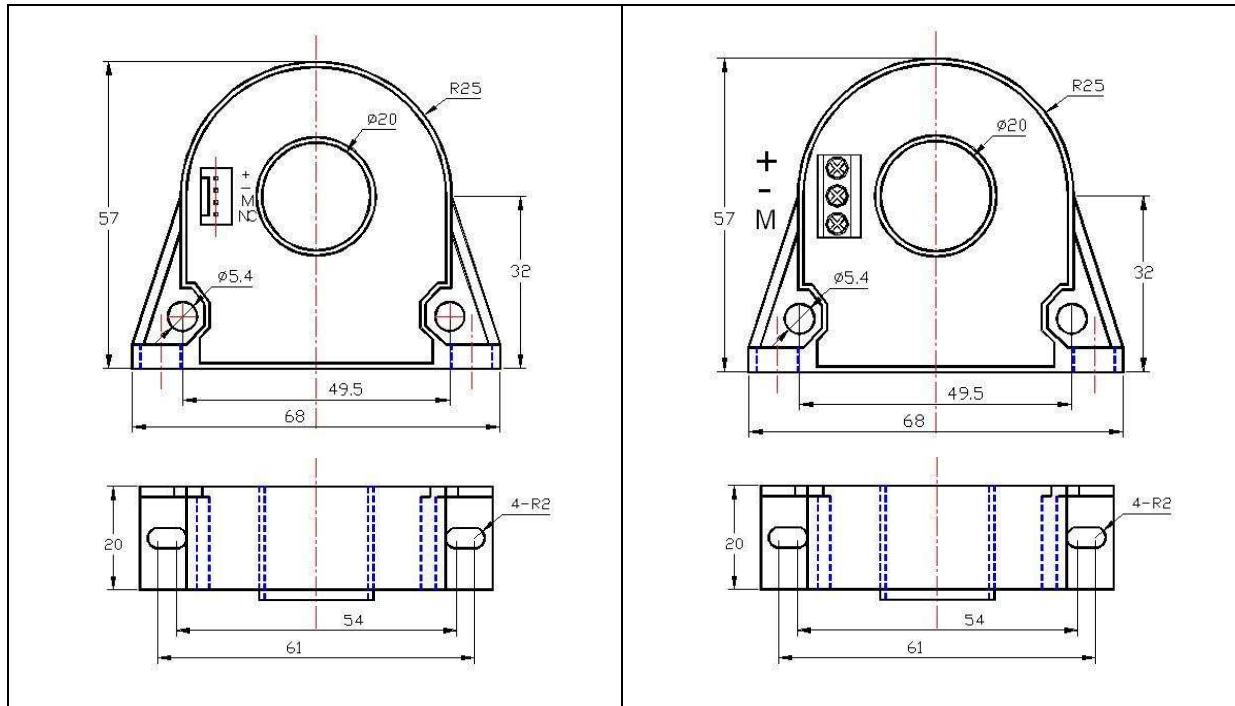
### 3. Isolation parameters

	Symbol	Min	Typ	Max	Unit
Galvanic isolation (50 Hz, 1 min)	$V_I$		6		kV

### 4. General parameters

	Symbol	Min	Typ	Max	Unit
Operating temperature	$T_A$	-40		85	$^{\circ}\text{C}$
Storage temperature	$T_S$	-40		125	$^{\circ}\text{C}$

## 5. Dimensions



HCT-LTHA v1

HCT-LTHA v2

### Pin description

Pin	Value	
	HCT-LTHA	HCT-LTHA 2
+	+V <sub>CC</sub>	
-	-V <sub>CC</sub>	
M	Output	
NC	No connect	N/A

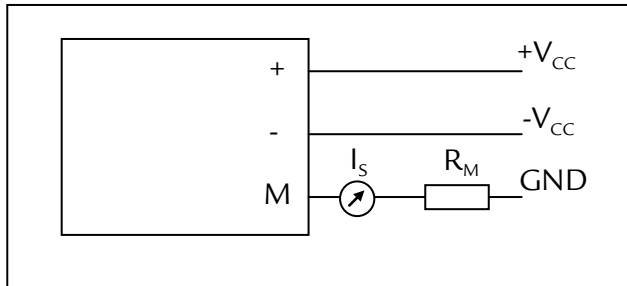
### Connector description

HCT-LTHA v1	HCT-LTHA v2
Molex 22011042	DG300-5.0

### Mechanical notes

1. All dimensions are in mm.
2. General tolerances according ISO 2768-c.
3. All dimensions and mechanical fixations could be changed upon user needs or PREMO transducer development.
4. Arrow indicates direction of positive currents.

## 6. Electrical connection



Connection example

Measurement resistor (max)

Voltage	HCT-100LTHA		HCT-200LTHA		HCT-300LTHA*		HCT-300LTHA	
	±100 A	±200 A	±200 A	±500 A	±200 A	±500 A	±300 A	±600 A
±12 V	80 Ω	25 Ω	80 Ω	20 Ω	80 Ω	20 Ω	76 Ω	22 Ω
±15 V	110 Ω	40 Ω	120 Ω	30 Ω	120 Ω	30 Ω	100 Ω	36 Ω

Notes:

1. HCT-300LTHA\* means the before mentioned 1:2000 turns ratio special model.