AC/DC Current transducers
HCT-LTH series

Email: info@grupopremo.com
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Premo presents HCT-LTH series AC/DC current transducer, a new design based on the Hall Effect principle. HCT-LTH series has good stability in 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	I_{PN}				
HCT-50LTH		5		50	A
HCT-100LTH		10		100	A
HCT-200LTH		20		200	A
HCT-300LTH		30		300	A
Measuring range	I_P				
HCT-50LTH		-150		150	A
HCT-100LTH		-300		300	A
HCT-200LTH		-600		600	A
HCT-300LTH		-900		900	A
Rated output current	I_S				
HCT-LTH series			100		mA
HCT-50LTH only			50		mA
Supply voltage (±5 %)	V_{CC}	±12		±18	V
Current consumption (measured at I_P = 0 A)	I_{CC}			20	mA
Turns ratio					
HCT-50LTH, HCT-100LTH			1:1000		
HCT-200LTH			1:2000		
HCT-300LTH[1]			1:3000		
Compensation winding resistance	R_C				
HCT-50LTH				30	Ω
HCT-100LTH				25	Ω
HCT-200LTH				20	Ω
HCT-300LTH				38	Ω

[1] It is possible to order an HCT-300LTH with a rated output of 150 mA with a turns ratio equal to 1:2000 and a measuring range of -600 to 600 A.

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2. Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured at I_{PN})		±0.2			%
Linearity (measured at full scale)	ε_{LLR}			±0.1	%
Offset current	I_{OS}			±0.2	mA
Offset current drift	KI_{OS}			±0.5	mA
Response time	T_R			1	µs
di/dt		200			A/µs
Bandwith (-3 dB)	F_C	0		100	kHz

3. Isolation parameters

	Symbol	Min	Typ	Max	Unit
Galvanic isolation (50 Hz, 1 min)	V_I		3		kV

4. General parameters

	Symbol	Min	Typ	Max	Unit
Operating temperature	T_A	-40		85	°C
Storage temperature	T_S	-40		125	°C
Mass	m		41		g

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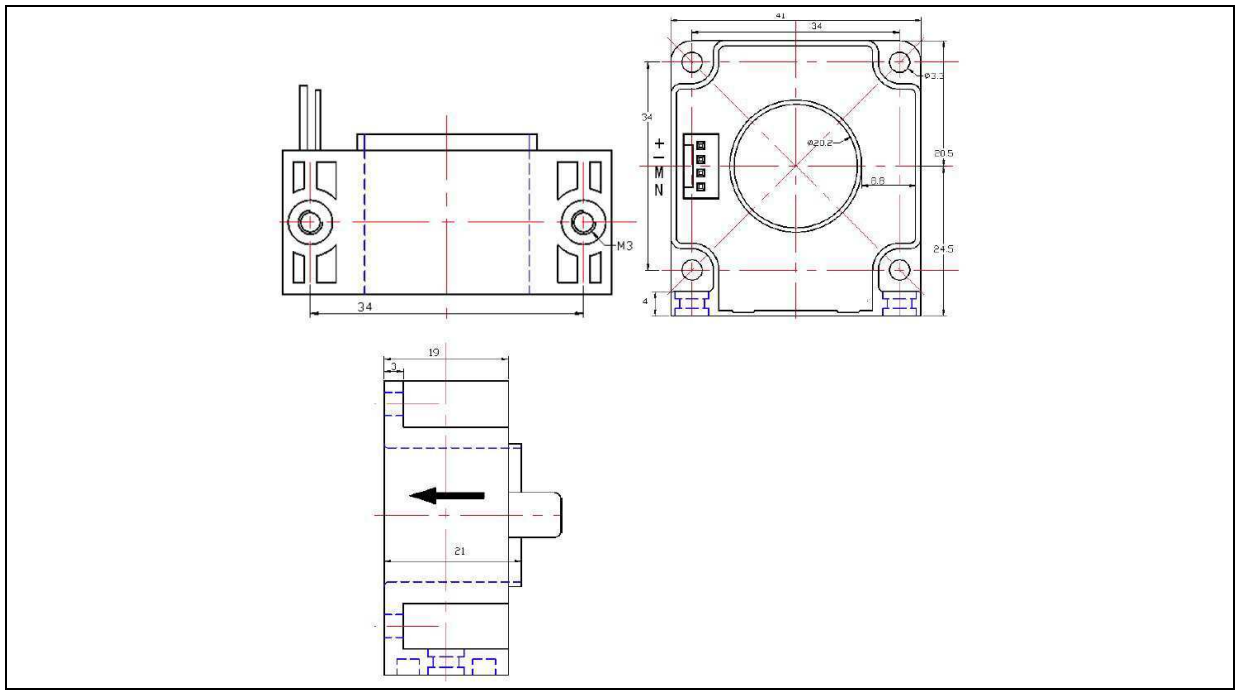
5. Dimensions



Pin description

Pin	Value
+	$+V_{CC}$
-	$-V_{CC}$
M	Output
N	No connect

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.

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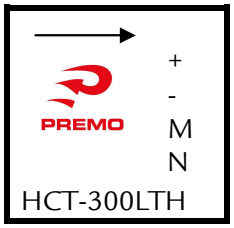
6. Electrical connection

Burden resistor

Code	Conditions	Value			Units
		Min	Typ	Max	
HCT-50LTH	±12 V, ±50A			200	Ω
	±12 V, ±150A			47	
	±15 V, ±50A			240	
	±15 V, ±150A			68	
HCT-100LTH	±12 V, ±100A			82	Ω
	±12 V, ±300A			12	
	±15 V, ±100A			120	
	±15 V, ±300A			20	
HCT-200LTH	±12 V, ±200A			91	Ω
	±12 V, ±600A			15	
	±15 V, ±200A			120	
	±15 V, ±600A			25	
HCT-300LTH	±12 V, ±300A			75	Ω
	±12 V, ±900A			18	
	±12 V, ±300A			100	
	±12 V, ±900A			30	

7. Marking



(HCT-300LTH marking sample)

Marking notes

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