AUTOMATION UNDER CONTROL

EN

CT-DCHLP100

Contact-less direct and alternating current TRMS transducer

General characteristics

- Direct and alternating current transducer galvanically isolated from the measurement circuit.
- Measurement principle: Hall effect.
- Possibility of measuring the direct and alternating TRMS component of the current.
- No shunt, no consumption from the measurement circuit and no dissipation.
- Unipolar or bipolar measurement.
- High measurement accuracy rating: ~ 0.5% ⎓ 1%.
- Two dip-switch selectable scales.
- Damping filter availability to improve stable reading.
- Suitable for batteries, battery chargers, solar panels, power units in general, DC and AC loads.
- Compact size: 96.5 x 68 x 26 mm

CE c UL us LISTED 3LUT

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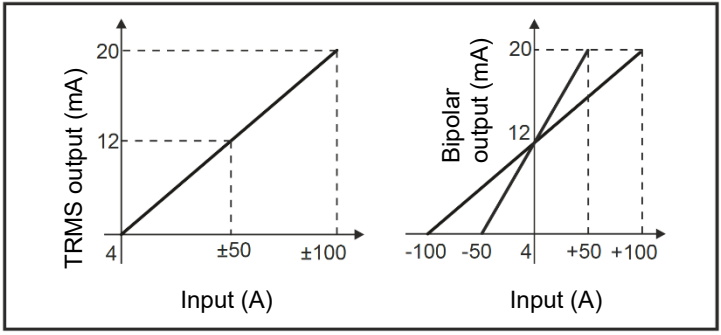
CSQ IQNet ISO 9001:2008

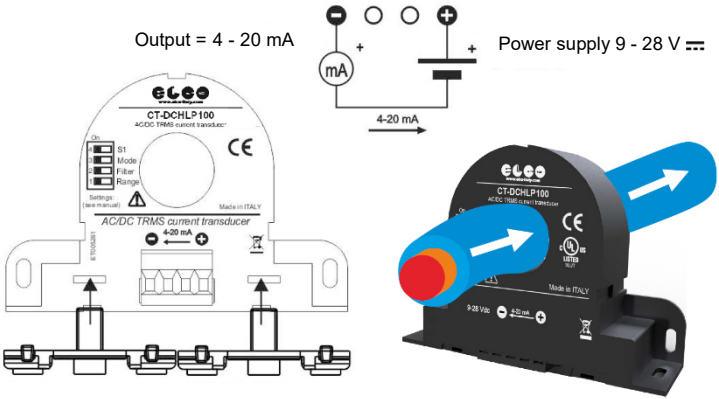
Technical Specifications			
INPUT			
Type of measurement	AC / DC TRMS or DC Bipolar		
Capacity	0 – 50 A o 0 – 100 A TRMS; -50 – +50 A o -100 – +100 A Bipolar (dip-switch selected)		
Crest factor	2		
Pass-band	1 kHz		
Insulation	When using a sheathed conductor, the sheath of the conductor determines the insulation voltage. An insulation of 3 kV~ is guaranteed on bare conductors.		
Overload	2000 A impulsive, 500 A continuous		
OUTPUT E POWER			
Type	4 - 20 mA, maximum load R_{LOAD} = 600 Ω. Terminals ⊕ and ⊖		
Connections	Removable terminal with 5.08 mm pitch for cables up to 2.5 mm^2.		
Hole diameter	20.8 millimeters		
Power supply	9 - 28 V ⎓ (between ⊕ and ⊖)		
Protections	- Polarity reversal. - Overvoltage protection.		
Fault Indication	< 3.8 mA		
Maximum indication	< 22 mA		
ACCURACY			
	Capacity	Precision ~	Precision ⎓
Above 2% of full scale	100 A 50 A	0.5% of the f.s. 1% of the f.s.	1% of the f.s. 2% of the f.s.
Below 2% of full scale	100 A 50 A	1% of the f.s. 2% of the f.s.	2% of the f.s. 4% of the f.s.
Resolution	Output: 10 bit (1000 points) Input: 12 bit (4000 points).		
Temperature coeff.	< 200 ppm/°C		
EMI error	< 1%		
Response speed	- «fast» filter: 500ms - «slow» filter: 1000 ms.		
Hysteresis on measurement	0.3% of full scale (typical)		
OVERVOLTAGE CATEGORIES			
Bare conductor	CAT. III 300 V		
Insulated conductor	CAT. III 600 V		

ENVIRONMENTAL CONDITIONS	
Protection rating	IP20.
Operating temperature	-20– +70°C.
Storage temperature	-40– +85°C.
Humidity	10 – 90% non - condensing
Altitude	Up to 2000 m a.s.l. with bare conductor Up to 3500 m a.s.l. with insulated conductor
CASE	
Weight	47 g
Dimensions	96.5 x 68 x 26 mm (terminal excluded)
Case	PA6, black
STANDARDS	
CE c UL us LISTED	EN61326 (EMC compliance) EN61010-1 (safety)

DIP-switches							
Scales		*Filter (10% - 90%)*		*Mode*		*Not used*	
1	DCHLP100	2	DCHLP100	3	DCHLP100	4	DCHLP100
	0– 100 A		Filter = 500ms		TRMS ~/ ⎓	↓	Must be OFF
↑	0– 50 A	↑	Filter = 1000ms	↑	⎓ Bipolar		

In the table, the ↑ symbol corresponds to the switch in the ON position.





Assembly

The device can be mounted in any position, in compliance with the expected environmental conditions. In case of installation on DIN rail, use the accessory supplied.
ATTENTION: high-strength magnetic fields can alter the measurement: avoid proximity to permanent magnetic fields, electromagnets or iron bulks that can induce strong alterations of the magnetic field; if the zero error is greater than the declared error, try a different arrangement or orientation.

Increased sensitivity with multi-

It is possible to increase the sensitivity of the device by simply passing through the hole several times with the measuring current, creating turns with a multiplicative effect: for example, 5 passes, corresponding to 4 turns, with a capacity of 50 A, result in an equivalent sensitivity of 10 A full-scale. With this solution, the turns should be arranged symmetrically in order to preserve instrument accuracy: with 2 turns, make sure to arrange them diametrically opposite to each other, with 4 turns ensure a cross arrangement, with 6 turns 60° spacing etc.

Electrical and electronic waste disposal (applicable in the European Union and other countries operating a separate waste collection policy). The symbol on the product or the packaging indicates that the product cannot be disposed of as household waste. It should be taken to an authorised recycling centre for electrical and electronic waste. By ensuring that the product is disposed of correctly, you will help prevent potential negative impacts on the environment and human health that could result from inappropriate product disposal. Material recycling will contribute to the preservation of natural resources. For more detailed information. Please contact your appropriate local office, the waste disposal service or the supplier from which you purchased the product.