SENECA

T Series - Field converters

EN

T201DCH100-LP - T201DCH300-LP

Contact-less direct and alternating TRMS current transducer

General Specifications

- Direct and alternating current transducer galvanically insulated from the measuring circuit
- Measurement principle: Hall Effect
- Possibility to measure the direct and alternating component of TRMS current
- No shunt, no wasted power of primary current Circuit and no dissipation.
- Unipolar or bipolar measurement.
- High measurement accuracy: ∿ 0.5% ⎓ 1%.
- Suitable for Seneca modules with power supply sensors at 12V⎓ and input 4 - 20 mA.
- Two DIP-Switches selectable ranges.
- Damping filter availability to improve stable reading.
- Suitable for batteries, battery chargers, solar panels, power units and generic dc loads.
- Compact dimensions: 96,5 x 68 x 26 mm.

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Manuals and configuration software are available at website:
www.seneca.it/products/t201dch100-lp and www.seneca.it/products/t201dch300-lp
Technical support: support@seneca.it Product Informations: sales@seneca.

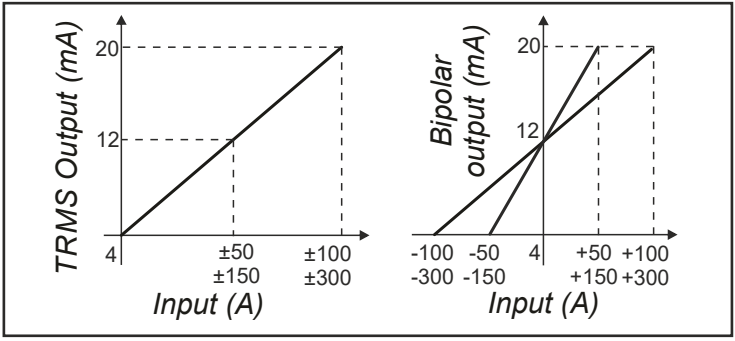
CSQ IQNet ISO 9001:2008

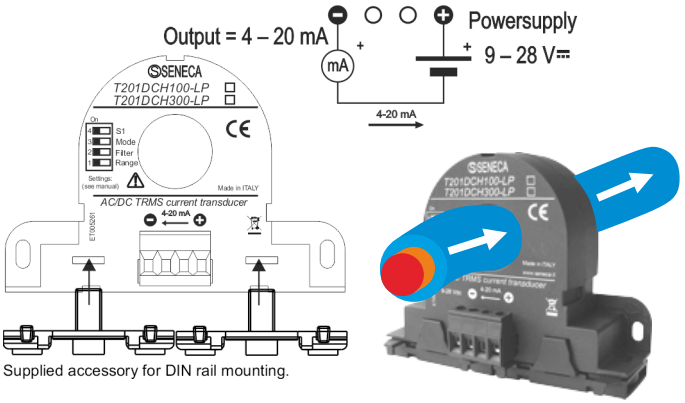
Technical features			
INPUT			
Measure type	AC / DC TRMS or Bipolar DC.		
Range T201DCH100-LP Range T201DCH300-	0 – 50A or 0 – 100A TRMS; -50 – +50A or -100 – +100A Bipolar 0 – 300A or 0 – 150A TRMS; -150 – +150A or -300 – +300A Bipolar (selectable by dip-switch.).		
Peak factor	1.3		
Bandwidth	1 kHz		
Insulation	When a sheathed wire is used, the insulation voltage is set by sheath properties. On a bare wire, it's stated to 3 kV ∿.		
Over-current	2000 A impulsive, 500 A permanent.		
OUTPUT AND POWER SUPPLY			
Type	4 – 20 mA, max. load R_{LOAD}=600 Ω. Screw terminals: ⊕ and ⊖.		
Terminals	Screw terminal pitch 5.08mm for max 2.5 mm^2 cables.		
Hole diameter	20.8 mm		
Power supply	9 – 28 V⎓ (between ⊕ and ⊖)		
Protections	- Polarity reversal - Over-Voltage		
Fail indication	< 3.8 mA		
Max. indication	< 22 mA		
PRECISION			
	Range	Precision ∿	Precision ⎓
Over the 2% of End of Scale	100 A or 300 A 50 A or 150 A	0.5% of end scale. 1% of end scale.	1% of end scale. 2% of end scale.
Under the 2% of End of Scale	100 A or 300 A 50 A or 150 A	1% of end scale. 2% of end scale.	2% of end scale. 4% of end scale.
Resolution	Output: 10 bit (1000 points) Input: 12 bit (4000 points).		
Temperature coefficient	< 200 ppm/°C.		
Error due to EMI	< 1%		
Response time	- Fast filter: 500 ms. - Slow filter: 1000 ms.		
Measure hysteresis	0.3% of the end scale (typical)		
OVERVOLTAGE CATEGORY			
Bare conductor	CAT. III 300V		
Insulated conductor	CAT. III 600V		

OPERATING CONDITION	
Protection degree	IP20.
Operating temperature	-20 – +70 °C.
Storage Temperature	-40 – +85 °C.
Humidity	10 – 90 % non-condensing.
Altitude	Up to 2000 m above sea level with bare conductor Up to 3500 m above sea level with insulated conductor
	CASE
Weight	47 g.
Overall dimensions	96,5 x 68 x 26 mm (without terminals)
Box material	PA6, black color
	STANDARDS
CE c UL us LISTED 3L0T	EN61326 (EMC requirements) EN61010-1 (safety)

DIP-switches								
Range			*Filter (10% – 90%)*		*Mode*		*Not Used*	
1	DCH100	DCH300	2	DCH100 - 300	3	DCH100 - 300	4	DCH100 - 300
	0 – 100A	0 – 300A		Filter = 500ms		TRMS ∿ / ⎓	⬇	Must be OFF
⬆	0 – 50A	0 – 150A	⬆	Filter = 1000ms	⬆	⎓ Bipolar		

In the table the ⬆ symbol corresponds to the switch in the ON position.
The instrument is factory delivered with range:
100A (T201DCH100-LP) or 300A (T201DCH300-LP), 500ms filter and RMS mode.





Supplied accessory for DIN rail mounting.

Mounting

The device can be located in any position and place, in accordance with the operating conditions above stated. Use the included holder bracket when fixing to a DIN rail. WARNING: High-strength magnetic fields may change the measured output value: Let avoid closeness to permanent magnets, electromagnets or iron bulks that cause such a modification of the surrounding magnetic field; try a different arrangement or orientation if zero error was greater than expected.

Multi-turn primary winding to improve sensibility

You can increase the sensibility of the device simply passing several times in the hole with the measuring current, realizing turns with multiplicative effect: For example, passing 5 times in the hole, as to see 4 turns, choosing a 50 A range, you get an equivalent sensibility of 10 A full-scale. When you make this, let dispose the turns with symmetry in order to preserve accuracy: use diametric contraposition with 2 turns, cross disposition with 4 turns, with 6 turns at 60° and so on.

Disposal of electrical & electronic equipment (applicable throughout the EU and other countries with separate collection programs). This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it.Instead,it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of it. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product, please contact your local city office, waste disposal service or the retail store where you purchased this product.