SENECA

T Series - Field converters

EN

T201DCH100 - T201DCH300

Contact-less direct and alternating

TRMS current transducer or bipolar direct

General Specifications

- You can use it like an active current transformer for alternating current.
- No shunt, no wasted power of primary current circuit and no dissipation.
- High measurement accuracy: AC:0.5%, DC:1%.
- Measurement principle: Hall Effect
- The device is suitable for Seneca modules with power supply sensors at 12V⎓ and input 0 – 10V⎓.
- Two DIP-Switches selectable ranges.
- Damping filter availability to improve stable reading.
- The device use is with: batteries , battery chargers, solar panels, power units and generic dc loads.
- Compact overall dimensions: 41 x 44 x 26 mm.
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Manuals and configuration software are available at website: www.seneca.it/products/t201dch100
or www.seneca.it/products/t201dch300
Technical support: support@seneca.it Product Informations: sales@seneca.it

CERTIFICATE N. 9115.SENE - REGISTRATION NUMBER IT-827
azienda con sistema di gestione per la qualità certificato
ISO 9001:2008

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Technical features

INPUT	
Measure type	AC / DC TRMS or Bipolar DC
Range T201DCH100 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 Bip. (DIP-Switch selectable)
Peak factor	2
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 3 kV ∿
Over-current	2000 A impulsive, 300 A permanent
OUTPUT AND POWER SUPPLY	
Type	0 – 10 V⎓, max. load R_{LOAD}=2 kΩ. The output has the negative shared with the power supply. Screw terminals: Vout and GND.
Terminals	Screw terminal pitch 5.08mm for max 2.5 mm^2 cables.
Hole diameter	20.8 mm
Power supply	11.5 – 28 V⎓ (between Vcc and GND)
Protections	- Polarity reversal - Over-Voltage
Power consumption	21 mA (without load)

ACCURACY

	Range	Precision ∿	Precision ⎓
Over the 2% of Full-Scale	100 A or 300 A 50 A or 150 A	0.5% of full-scale 1% of full-scale	1% of full-scale 2% of full-scale
Under the 2% of Full-Scale	100 A or 300 A 50 A or 150 A	1% of full-scale 2% of full-scale	2% of full-scale 4% of full-scale

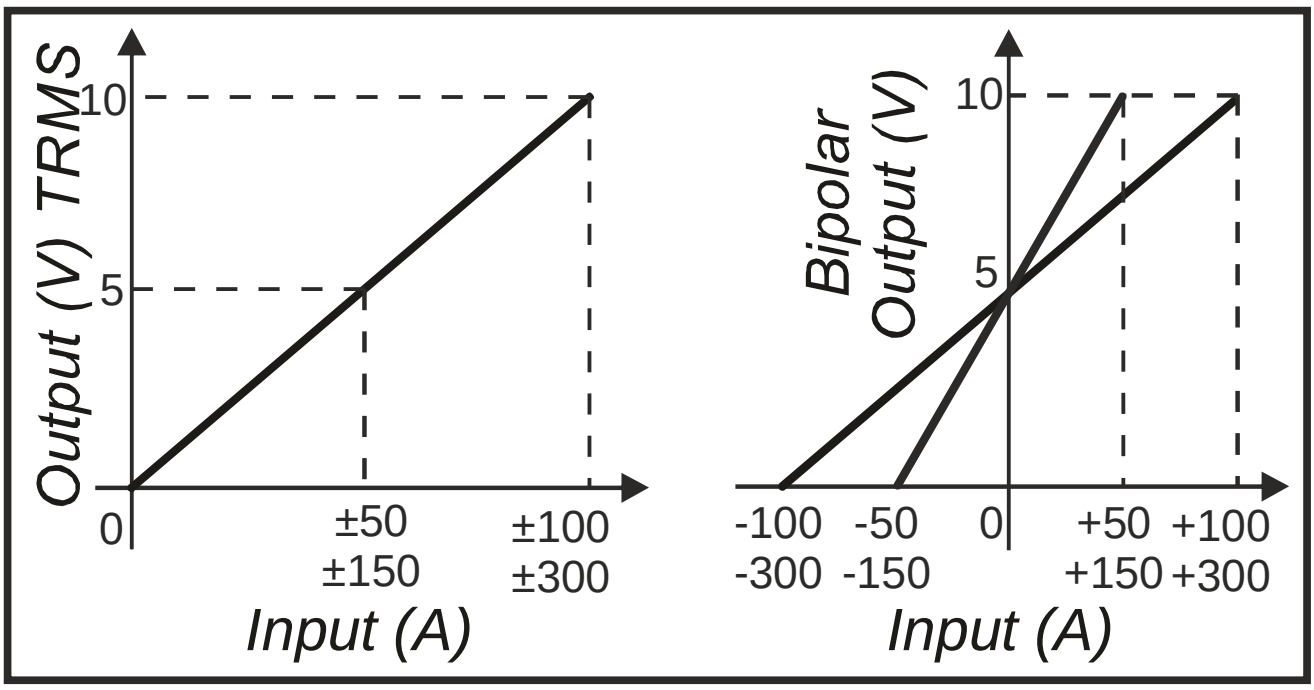
Resolution	12 bit (4000 points)
Temperature coefficient	< 200 ppm/°C.
EMI's Error	< 0.5%
Response time	- Fast filter: 800 ms. - Slow filter: 2000 ms.
Measure hysteresis	0.15% of full-scale (typical)
OVERVOLTAGE CATEGORY	
Bare conductor	CAT. III 300V
Insulated conductor	CAT. III 600V

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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 a.s.l.
CASE	
Weight	120 g.
Overall dimensions	96,5 x 68 x 26 mm (without terminals).
Box material	PA6, black color
STANDARDS	
Standards	EN61000-6-4 (electromagnetic emission in industrial environment) EN64000-6-2 (electromagnetic immunity in industrial environment) EN61010-1 (safety)

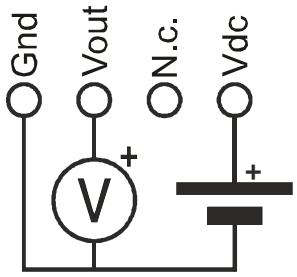
DIP-switches								
Range			*Filter (10% – 90%)*		*Mode*		*Not Used*	
1	DCH100	DCH300	2	DCH100 - 300	3	DCH100 - 300	4	
	0 – 100A	0 – 300A		Filter = 800ms		⎓/∿ TRMS		X
⬆	0 – 50A	0 – 150A	⬆	Filter = 2000ms	⬆	⎓ Bipolar	⬆	X

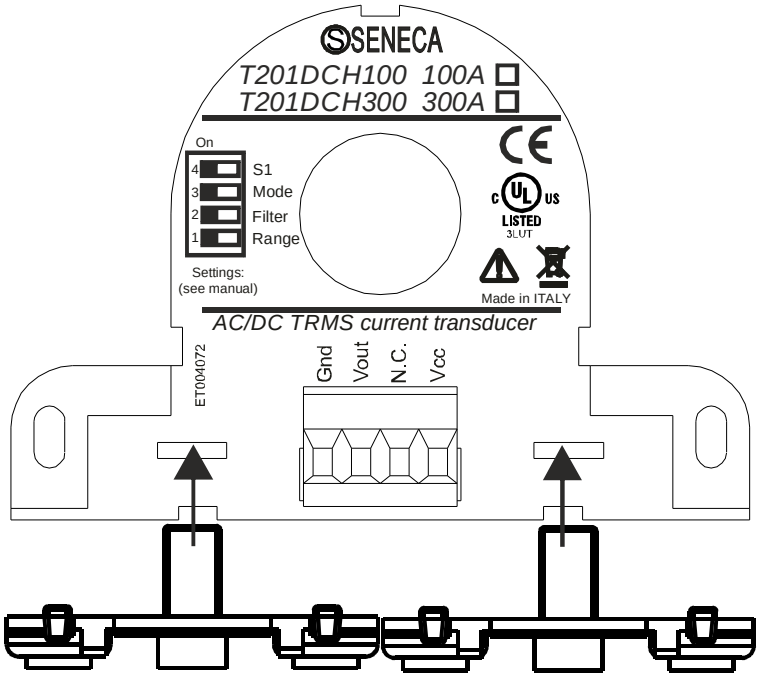
In the table the ⬆ symbol corresponds to the switch in the ON position.
The instrument is factory delivered with range 100A (DCH100) or 300A (DCH300), 800ms filter and RMS mode.

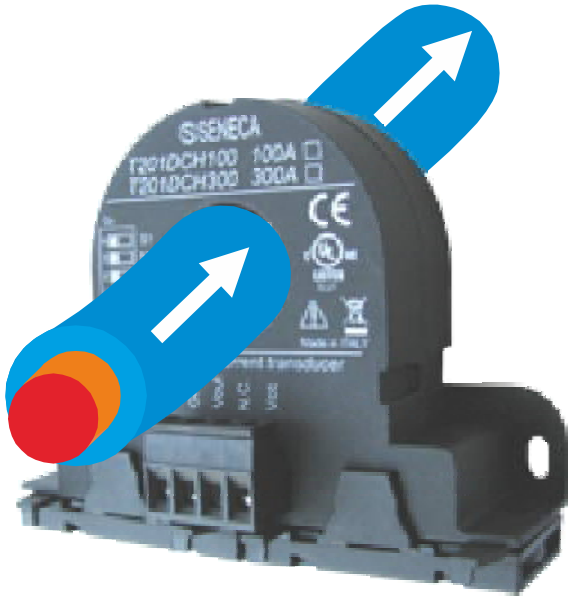


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Vdc = Powersupply 11.5 – 28 V⎓
Vout = output 0 – 10 V⎓
N.c. = not connected







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 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 as like as 4 + 2, and so on.



Disposal of electrical & electronic equipment (applicable throughout the EU and other countries wit 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.

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