SENECA

T Series - Field converters

EN

T201DCH

Contact-less direct and alternating TRMS current transducer

Overall description

The T201DCH is an isolated, contact-less direct and alternating TRMS current transducer. The device's function and look are very similar to those of an active standard CT, but with the remarkable feature of measuring the continuous component of the pass-trough current. For its electrical endurance, ease of use and compact dimensions,the T201DCH fits every kind of current measurement up to 50 Adc or 50Aac.

Key features

Similar usage to a standard alternating current active CT.
No shunt, no wasted power of primary current circuit.
High accuracy rating: 0.5%.
Suitable for use with all the Seneca modules that supply the T201DCH with at least 12Vdc and that have a 0-10Vdc analogue input
Two ranges that are dip-switch selectable.
Damping filter availability to improve stable reading.
Suitable for batteries , battery chargers, solar panels, power units and generic dc loads.
Compact size: overall dimensions equal to 41 x 44 x 26 mm.

SENECA s.r.l.
Via Austria, 26 - 35127 - PADOVA - ITALY
Tel. +39.049.8705355 - 8705359 - Fax +39.049.8706287
e-mail: info@seneca.it - www.seneca.it

Technical features	
INPUT	
Limit values	0.. 50A DC/AC (polarity does not affect the measure)
Measure type	TRMS
Range	0-50 Arms or 0-25Arms, selectable by dip-switch
Peak factor	2
Pass-band	2.5 kHz
Insultation	When a sheathed wire is used, the insulation voltage is set by sheath properties. With a bare wire, it's stated 3 kVac.
Over-current	2000 A impulsive, 300 A permanent
OUTPUT AND POWER SUPPLY	
Type	0..10 Vdc, min load R_{LOAD}=2 kΩ. Output has the negative in common with the power supply. Screw terminals: Vout, GND
Terminals	Screw terminal pitch 5.08mm for max 2.5 mm_2 cables
Tightening torque	7 lb·inch (0.08 kg·m)
Hole diameter	12.3 mm
Power supply	11.5..28 Vdc (between Vcc and GND) (UL: Use with a class 2 power supply)
Protections	- Polarity reversal. - Over-temperature.
Current consumption	21 mA (without load)
ACCURACY	
Precision class (over the 2% of end scale)	- If the range is 50 A: 0.5% of end scale - If the range is 25 A: 1% of end scale
Precision class (under the 2% of end scale)	- If the range is 50 A: 1% of end scale - If the range is 25 A: 2% of end scale
Resolution	12 bit (4000 points)
Temperature coefficient	< 200 ppm/°C.
Error due to EMI	< 0.5%
Response time	- Fast filter: 800 ms. - Slow filter: 2000 ms.
Measure hysteresis	0.15% of the end scale
OVERVOLTAGE CATEGORY	
Bare conductor	CAT. III 300V
Insulated conductor	CAT. III 600V

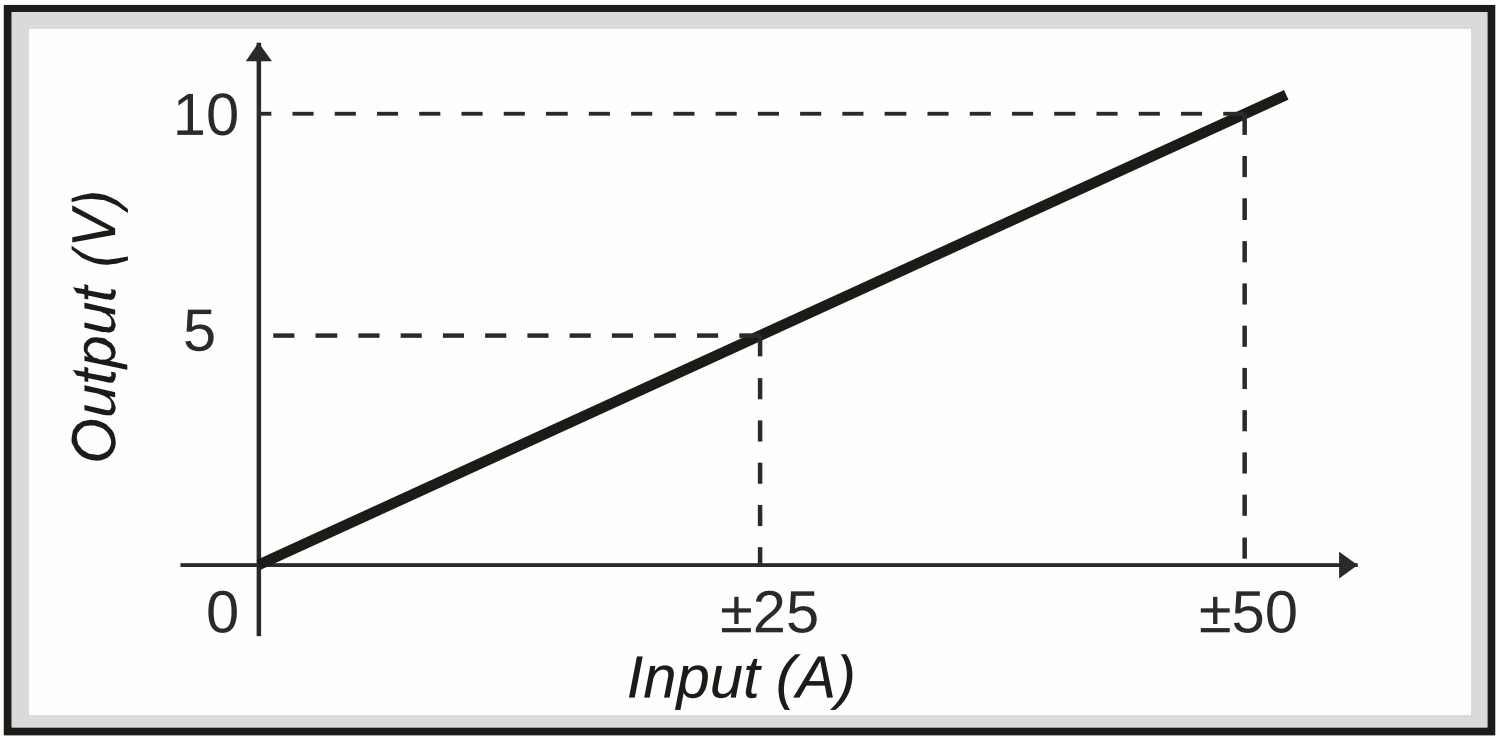
OPERATING CONDITION	
Protection index	IP20.
Temperature	-10..+70 °C.
Storage Temperature	-40..+85 °C.
Humidity	10..90 % non-condensing.
Altitude	Up to 2000 m a.s.l.
CASE	
Weight	47 g.
Overall dimensions	41 x 44 x 26 mm (without terminals).
Box material	PA6, black
STANDARDS	
Standards	EN61000-6-4 (electromagnetic emission, industry). EN64000-6-2 (electromagnetic immunity, industry). EN61010-1 (safety).

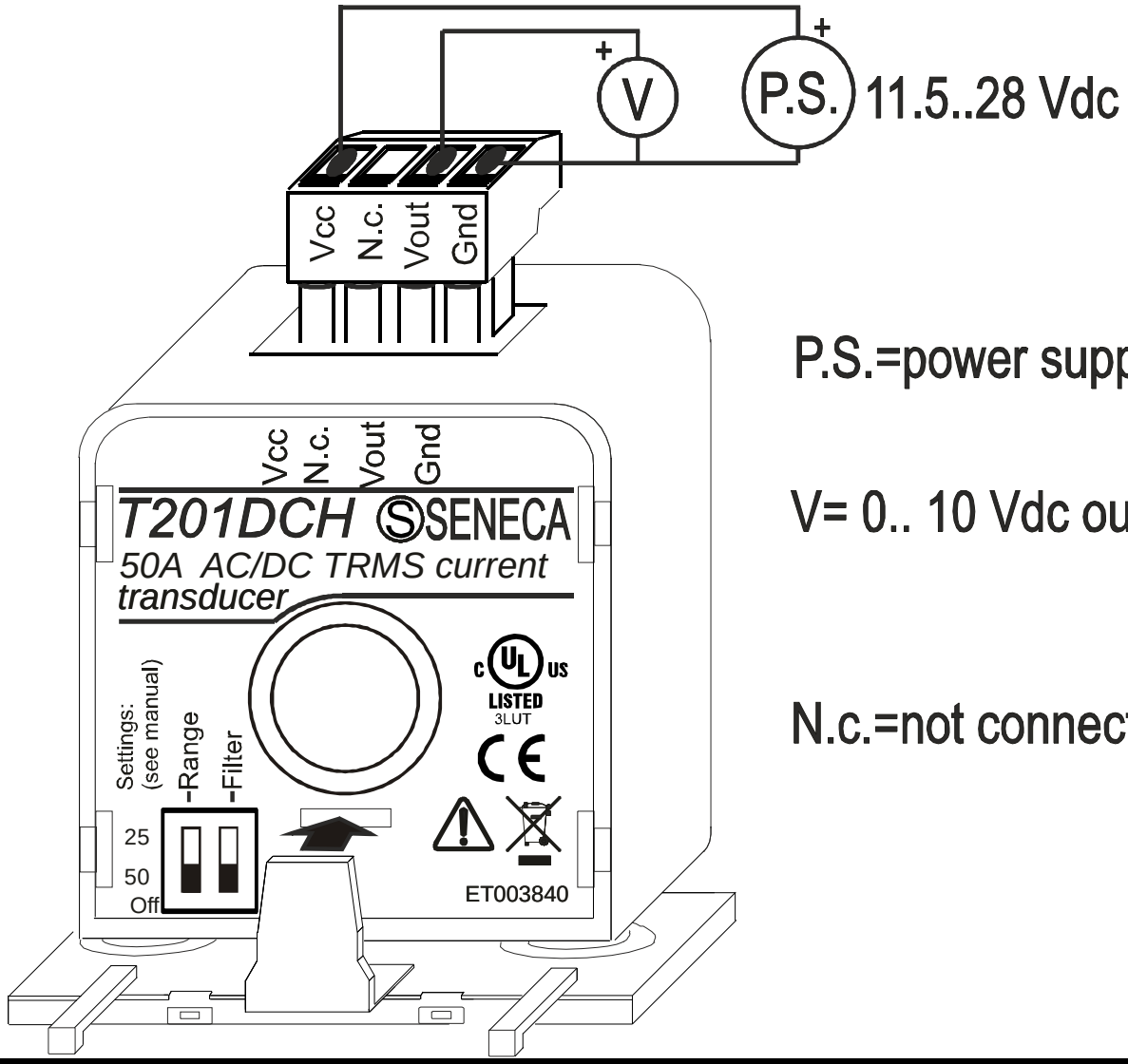
DIP-switches

Range			
DIP-SWITCH	1	2	
			0.. 50A
	•		0.. 25A

Filter			
DIP-SWITCH	1	2	
			Filter 10%-90% =800ms
		•	Filter 10%-90% =2000ms

The symbol • in the table above means switch in ON position; the T201DCH factory setting is 50A, filter 800ms.





Mounting

The T201DCH 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 static 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 T201DCH 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.