



## T Series - Field transducers

EN

# T201

2 Wire - Loop alternated current transducer

### General Specifications

- The T201 instrument is an AC current transducer (CT) for 4 – 20 mA current loops (loop powered 2 wires technology).
- High precision.
- Extremely compact size.
- Wide configurability: eight pre-calibrated ranges, DIP-switch selected.
- Extremely low consumption.
- Low output ripple and quick response to variations.
- Damping filter (DIP-switches activable) to reduce the response time (damping starts, unstable loads, etc.).



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Manuals and configuration software are available at website: [www.seneca.it/products/t201](http://www.seneca.it/products/t201)

Technical support: [support@seneca.it](mailto:support@seneca.it) Product Informations: [sales@seneca.it](mailto:sales@seneca.it)







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## Technical features

### INPUT

Measure type	AC rectified average
Range	5 A, 10 A, 15 A, 20 A, 25 A, 30 A, 35 A, 40 A (DIP-switch selected).
Peak factor	2
Bandwidth	20 – 1000 Hz
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	800 A permanent



### OUTPUT AND POWER SUPPLY

Type	4 – 20 mA, max. load $R_{LOAD}=600 \Omega$ . Screw terminals:  and  .
Terminals	Screw terminal pitch 5.08mm for max 2.5 mm <sup>2</sup> cables
Hole diameter	12.3 mm
Power supply	5 – 28 V $\overline{=}$ (between  and  .)
Protections	- Polarity reversal - Over-Voltage.
Max. indication	< 28 mA

### ACCURACY (1)

	Frequency: 40 – 400 Hz	Frequency: 20 – 1000 Hz
Range < 5 A	0.1 % o.m. + 0.1 % o.t.s.	0.1 % o.m. + 0.3 % o.t.s.
Range > 5 A	0.2 % o.m. + 0.1 % o.t.s.	0.2 % o.m. + 0.3 % o.t.s.
Resolution	Infinity.	
Temperature coefficient	< 150 ppm/°C.	
Error due to EMI	< 40 $\mu$ A	
Response time	- Filter «fast»: 100 ms - Filter «slow»: 2500 ms	
Residue ripple	< 10 $\mu$ A rms @ 20mA and 50 Hz	
Self-Consumption	< 50 mW	
Notes (1)	These acronyms apply: o.m. = of measurement, o.t.s. = of the scale.	

### STANDARDS

 	<b>EN60688+A1+A2</b>
	<b>EN61000-6-4</b> (electromagnetic emission, industrial environment).
	<b>EN61000-6-2</b> (electromagnetic immunity, industrial environment).
	<b>EN61010-1</b> (safety).

**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 a.s.l.

**CASE**

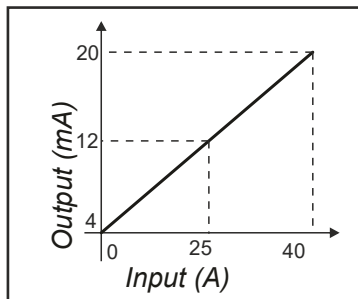
Weight	47 g.
Overall dimensions	41 x 44 x 26 mm (without terminals).
Box material	PA6, black.

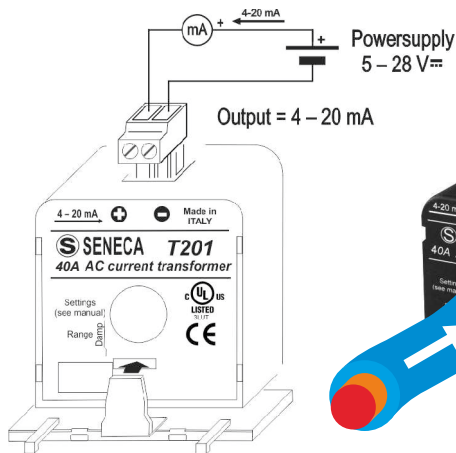
**DIP-switches**

Input Range										Filter (*)		
SW 1	1	2	3	Range	SW 1	1	2	3	Range	SW 1	4	
				5 A		↑			25 A		↑	Present
			↑	10 A		↑		↑	30 A			Absent
		↑		15 A		↑	↑		35 A			
		↑	↑	20 A		↑	↑	↑	40 A			

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

The instrument is factory delivered with range 5A, 100ms filter. (\*)The input filter slows down the response time to about 2.5 s and stabilizes the measurement.





### 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 it to a DIN rail.

**WARNING:** High-strength magnetic fields may change the output value. 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 40 A range, you get an equivalent sensibility of 8 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, 60° with 6 turns, 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.