

# T201 SERIES

ISOLATED, CONTACT-LESS, LOOP POWERED CURRENT TRANSDUCERS



- Input: Selectable range through dip-switches from 5A to 40 / 100 A, single or double polarity
- Output: Voltage (V) or Current (mA)
- Loop power supply
- Low consumption < 21 mA
- Hall effect or Magnetic Principle (patented technology)
- Rectified average, Magnetic balance, TRMS Measurement
- Accuracy class: 0,2 / 0,5 %
- Wide configuration range
- Direct use without shunt for pulse current
- Compact dimension

 Made in Italy 

 **SENECA**  
[www.seneca.it](http://www.seneca.it)

# T201 SERIES

## Loop powered standard and magnetic induction Current Transducers

	T201	T201DC	T201DC100
		<b>PATENED TECHNOLOGY</b> 	<b>PATENED TECHNOLOGY</b> 
	AC Current transformer to DC current (4..20 mA - loop powered)	DC Current transducer to DC current (4..20 mA - loop powered)	Passive current transducers 100 Adc for 4..20 mA current loop

Order Codes	T201	T201DC	T201DC100
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### TECHNICAL SPECIFICATIONS

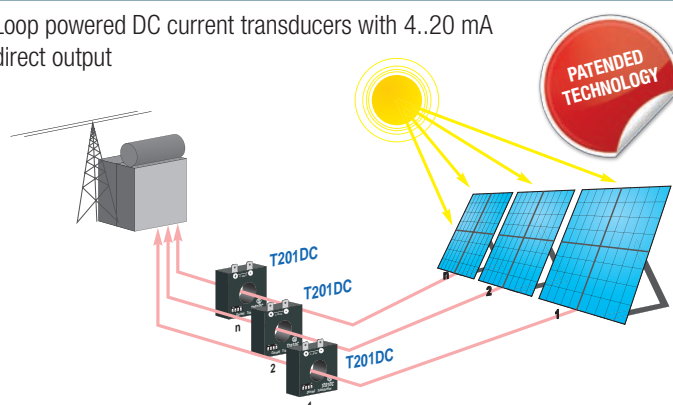
GENERAL DATA			
Power Supply	Loop powered (5..28 Vdc)	Loop powered (6..100 V)	Loop powered (6..100 V)
Consumption	< 21 mA	< 21 mA	< 21 mA
Isolation	1 kVdc (bare conductors)	1 kVdc (bare conductors)	1 kVdc (bare conductors)
Protection Degree	IP20	IP20	IP20
Response Time	100 ms (without filter) 2.5 s (with filter)	100 ms (without filter) 600 ms (with filter)	100 ms (without filter) 600 ms (with filter)
Accuracy Class	0,2%	0,2%	0,2%
Thermal Drift	< 150 ppm/K	< 150 ppm/K	< 150 ppm/K
Setting	DIP switches	DIP switches	DIP switches
Operating Temperature	-20..+65°C	-10..+65°C	-10..+65°C
Connectors	Removable terminals	Removable terminals	Faston (6,3 x 0,8 mm)
Max Conductor Diameter	12,5 mm	12,5 mm	17 mm
Dimension (w x h x d)	40 x 40 x 20 mm	40 x 40 x 20 mm	68 x 97 x 26 mm
Mounting	35 mm DIN rail	35 mm DIN rail	35 mm DIN rail / screws
INPUT DATA			
Channel Nr	1	1	1
Range	AC Current: 5, 10, 15, 20, 25, 30, 35, 40 A	DC Current: 0..5, 0..10, 0..20, 0..40, -5..5, -10..10, -5..20, -10..40 A	DC Current: 0..10 A, 0..25 A, 0..50 A, 0..100 A (unipolar); -10..0..+10 A, -25..0..+25 A, -10..0..+50 A, -25..0..+100 A (bipolar)
Measuring Type	Rectified Average	Magnetic Balance	Magnetic Balance
Max Overcurrent	800 A	800 A	2000 A (pulse)
Bandwidth / Frequency	20..1.000 Hz		
Crest Factor	2	1,2	1,2
OUTPUT DATA			
Channel Nr	1	1	1
Range	4..20 mA (2 wires)	4..20 mA (2 wires)	4..20 mA (2 wires)
Resolution	infinita	12 bit	12 bit
STANDARD			
Approvals	CE	CE, european patent	CE, european patent
Norms	EN60688/1997 +A1 +A2 EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001	EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001	EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001

### MAGNETIC INDUCTION




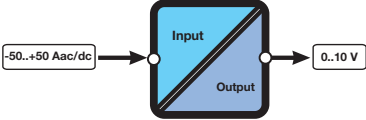
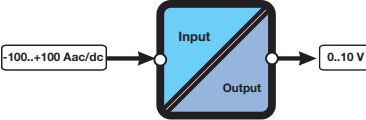
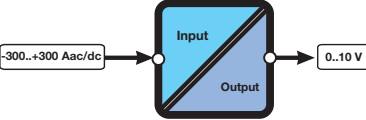
Current Transducers who use magnetic induction technology (international patent N ° Seneca PD2009A000005) are long-life devices due to the principle of measurement which avoids thermal drift and that exploits the generation of an induced current of the transducer output, through the variation of a magnetic field. It's possible their direct use without external shunts, even for pulse currents.

### APPLICATION NOTE

Loop powered DC current transducers with 4..20 mA direct output



# Loop powered Hall effect Current Transducers

	T201DCH	T201DCH100	T201DCH300
			
	AC/DC contactless TRMS direct and alternate current ( $\pm 50$ A) transformers	AC/DC contactless TRMS direct and alternate current ( $\pm 100$ A) transformers, Hall Effect	AC/DC contactless TRMS direct and alternate current ( $\pm 300$ A) transformers, Hall Effect
			
Order Codes	T201DCH	T201DCH100	T201DCH100

## TECHNICAL SPECIFICATIONS

### GENERAL DATA

	T201DCH	T201DCH100	T201DCH300
Power Supply	12..28 Vdc	12..28 Vdc	12..28 Vdc
Consumption	< 21 mA	< 21 mA	< 21 mA
Isolation	1 kVdc (bare conductors)	1 kVdc (bare conductors)	1 kVdc (bare conductors)
Protection Degree	IP20	IP20	IP20
Response Time	Fast filter: 800 ms Slow filter: 2.000 ms	Fast filter: 800 ms Slow filter: 2.000 ms	Fast filter: 800 ms Slow filter: 2.000 ms
Accuracy Class	0,5 % f.s.	0,5% (over 2% of f.s.); 1 % under 2% of f.s.)	0,5% (over 2% of f.s.); 1 % under 2% of f.s.)
Thermal Drift	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K
Setting	DIP switches	DIP switches	DIP switches
Operating Temperature	-10..+65°C	-10..+65°C	-10..+65°C
Connectors	Removable terminals	Removable terminals	Removable terminals
Max Conductor Diameter	20,5 mm	20,5 mm	20,5 mm
Dimension (w x h x d)	68 x 97 x 26 mm	68 x 97 x 26 mm	68 x 97 x 26 mm
Mounting	35 mm DIN rail / screws	35 mm DIN rail / screws	35 mm DIN rail / screws

### INPUT DATA

	T201DCH	T201DCH100	T201DCH300
Channel Nr	1	1	1
Range	AC/DC Current A -50..+50 A	AC/DC Current -100..+100 A	AC/DC Current -300..+300 A
Measuring Type	TRMS	TRMS	TRMS
Hysteresis	0,1 % f.s.	0,1 % f.s.	0,1 % f.s.
Max Overcurrent	2000 A (pulse)	2000 A (pulse)	2000 A (pulse)
Bandwidth / Frequency	1 kHz	1 kHz	1 kHz
Crest Factor	1,2	2	2

### OUTPUT DATA

	T201DCH	T201DCH100	T201DCH300
Channel Nr	1	1	1
Range	0..10 V	0..10 V	0..10 V
Resolution	12 bit	12 bit	12 bit

### STANDARD

	T201DCH	T201DCH100	T201DCH300
Approvals	CE	CE	CE
Norms	EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001	EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001	EN61000-6-4/2002-10 EN61000-6-2/2006-10 EN61010-1/2001

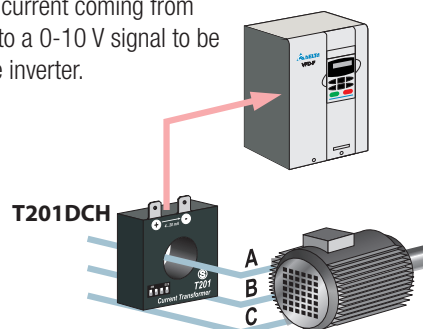
## HALL EFFECT



When a magnetic field is applied perpendicularly to a conductor, a transverse voltage is generated to the direction of current flow. Hall effect transducers are used as alternative to the shunt when dealing with high voltages and high galvanic isolations.

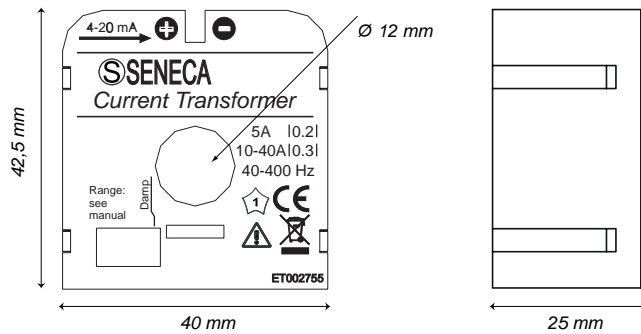
## APPLICATION NOTE

The Hall effect Current Transformer turns the output current coming from electric motor into a 0-10 V signal to be connected to the inverter.

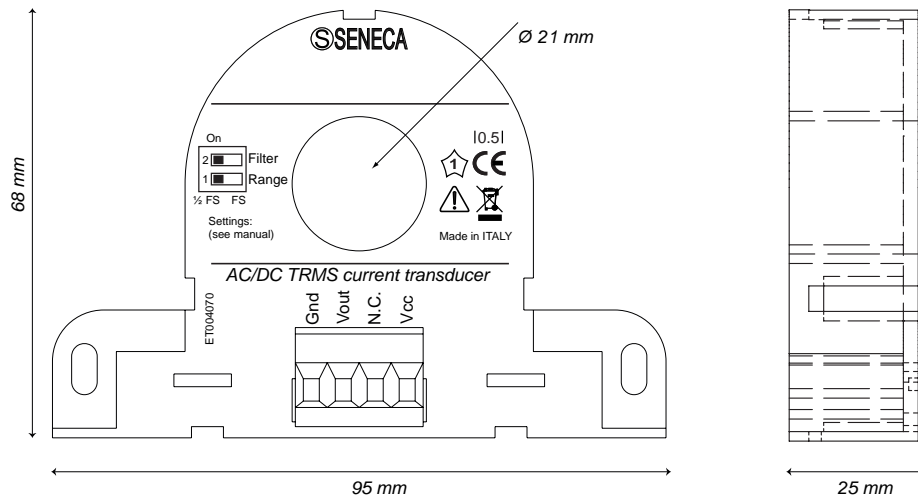


## DIMENSION


### T201 - T201DC - T201DCH



### T201DC100 - T201DCH100 - T201DCH300



## ACCESSORIES / SPARE PARTS

Order Code	Description
 A-DIN-T201	Plastic clip for DIN rail guide for T-Line products, 45x17 mm



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