INSTALLATION AND USER'S GUIDE

Language manual	English
Product	**T201DC100**
Description	**Passive transducer of direct current 100 Adc, for 4 – 20 mA current loop**
Series of product	***T***

Contents: ***Pag.***

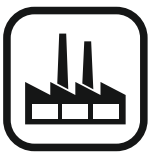
Manufacturer	**SENECA s.r.l.** Via Austria, 26 – 35127 – PADOVA – ITALY Tel.+39.049.8705355 - 8705359 - Fax +39.049.8706287
Web	Manuals and configuration software are available at www.seneca.it
Mail	supporto@seneca.it commerciale@seneca.it

1.0 DISCLAIMER

Before execution any operation it is advised to read all the content of this manual. Only electrical-skilled technicians can use the module described in this installation manual. It's installer's responsibility to assure that the installation is in compliance to the security standards regulated from the law.

Only the Manufacturer is authorized to repair the module or to replace damaged components.

The warranty is void in case of errors resulting from improper use, modifications or repairs carried out by Manufacturer-unauthorised personnel on the module.



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2.0 DESCRIPTION AND GENERAL SPECIFICATIONS

2.1 Description

The T201DC100 is an isolated and passive, contact-less loop powered direct current transducer. The T201DC100 has functions and look very similar to a standard current transformer, but it is enabled to measuring the continuous current component that flowing through it. For its electrical endurance, ease of use and compact dimensions, the T201DC100 fits every kind of current measurement up to 100 Adc.

2.2 General specifications

- Suitable for solar panels, batteries, battery charger,power units and generic DC load.
- No shunt, no power consumption from the measure circuit
- High accuracy rating: class |0.2|
- Loop-powered 4 – 20 mA, 6 to 28 V, protected from reverse polarity and transient up to 120 V, surge up to 1.5 J.
- Eight scales unipolar or bipolar selectable via dip switches
- Damping filter available to improve the stability of reading
- Reading of current pulsed or alternating currents with superimposed components
- Built-in microprocessor system fault check
- Over-temperature protection
- "single wire" possible wiring by powering with the device from the measuring current itself and closing to the system common return.
- Possibility of mounting on the DIN rail through the support provided in the sales package.

3.0 TECHNICAL SPECIFICATIONS

3.1 Input

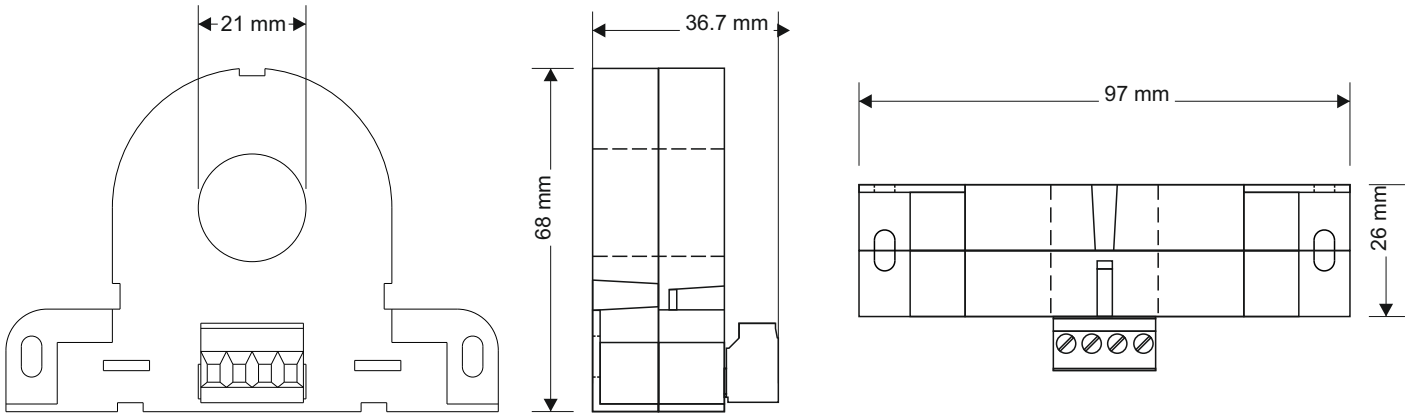
Connection	Passing wire
Hole diameter	21 mm; 0,8 Inch

Range	- Unipolar 0 – 10 A, Bipolar -10 – 0 – +10 A - Unipolar 0 – 25 A, Bipolar -25 – 0 – +25 A - Unipolar 0 – 50 A, Bipolar -10 – 0 – +50 A - Unipolar 0 – 100 A, Bipolare -25 – 0 – +100 A	
AC superimposed (f 35 Hz)	- Allowable peak value: -30 – +120 A - Full-wave rectified: -20 – 80 A - Half-wave rectified: -10 – 40 A	
Over-voltage category	Bare conductor	CAT. III 300V
	Insulated conductor	CAT. III 600V
3.2 Output and power supply		
Type	Passive current loop 4 – 20 mA	
Terminals	Removable screw terminal pitch 5 mm for max 2.5mm² cables	
Limits	Internal fault / Over-temperature: 3,5 mA Under-range / Over renge: 3,6 / 21,0 mA Correct measure: 3,8 / 20,5 mA	
Min. - Max. loop voltage	6 V - 28 V	
Other protections	Polarity reversal Loop current limiting on hardware fault Over-temperature protection	
3.3 Accuracy		
Maximum errors	- Input section: 0,1 % + 14 mA - Output section: 0.05 % + 4 µA	
TempCo	< 150 ppm/K	
Error due to EMI	< 50 µA, test on bare wire Ø 10 mm	
Response time	- Without damping filter: 100 ms - With damping filter: 600 ms	
3.4 Environmental condition		
Index protection	IP20	
Operating temperature	-20 °C – +70 °C	
Humidity	10 – 90% a 40 °C non-condensing	
Storage temperature	- 40 – +85°C	
3.5 Connections		
Connections	Removable screw terminal pitch 5 mm for loop 4 – 20 mA Tightening torque 7.0 Lb•inch = 0.8 N•m	
	21 mm through hole for wire	
3.6 Box		
Dimension	97 x 68 x 26 mm without screw terminals	
Box	PA6, Black color	

3.7 Standards

Standards	EN61000-6-4 (electromagnetic emission, industry).
	EN64000-6-2 (electromagnetic immunity, industry).
	EN61010-1 (safety).
c UL us LISTED 3LUT	Notes: - Use with copper conductor. - Use in Pollution Degree 2 Environment - Power Supply must be Class 2

3.8 Dimensions



4.0 PRELIMINARY INSTRUCTION FOR USE

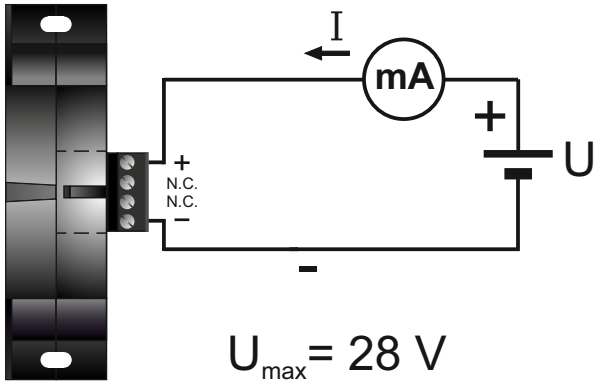
The T201DC100 can be installed in any position and place in accordance to expected environmental conditions. Use the included holder bracket when fixing to a DIN rail.

High-strength static magnetic fields may change the output value: keep away from permanent magnets, electromagnets or iron bulks that cause such a modification of the surrounding magnetic field; try a different orientation if zero error was greater than expected.

5.0 ELECTRICAL CONNECTIONS

Remove power supply before wiring.

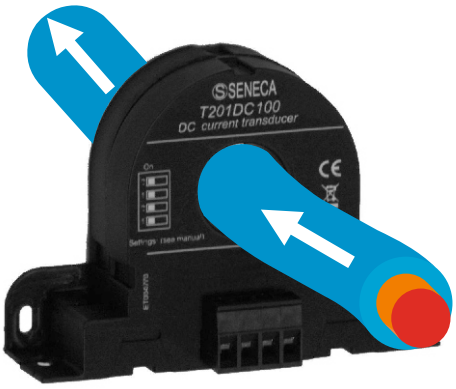
5.1 Output current loop 4 – 20 mA



U_{max}= 28 V

A maximum voltage supply of 28 V can be connected directly to the loop 4 – 20 mA of the T201DC100.

5.2 Connection for reading input current



The current direction is shown in the figure above.

To measure the current flowing through the cable, plug the cable into the center hole of T201DC100 (as shown in the figure).

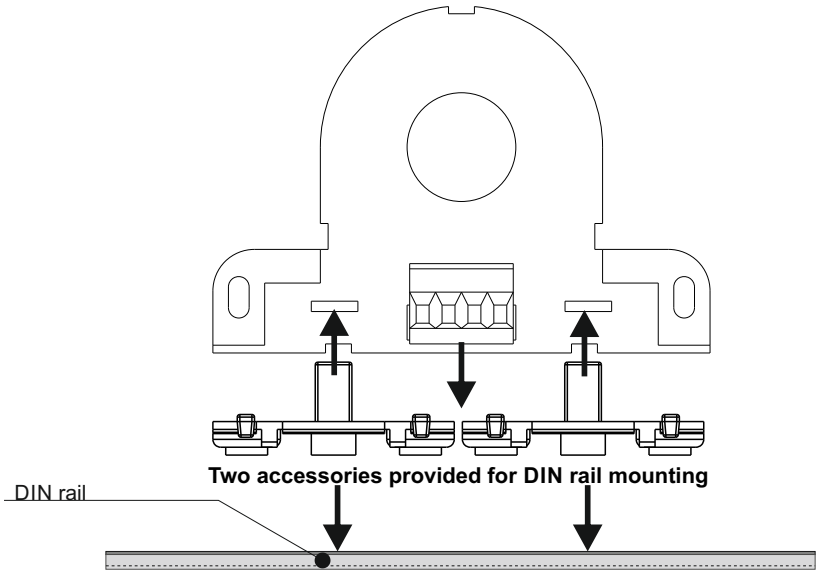
The maximum current that can be measured using T201DC100 is 100A.

To increase the sensitivity of current measurement, insert the wire several times through the center hole T201DC100, creating a series of turns. *The sensitivity of current measurement is proportional to the number of turns.* Example:

Choose the end scale and wrap the wire 5 times around the center hole obtaining 4 turns. The initial end scale will be result 5 times smaller: the measure proves to be more sensitive

Place the coils with symmetry in order to maintain the sensitivity of the device.

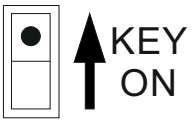
5.3 Installation on DIN rail



6.0 DIP-SWITCH SETTINGS

Set the dip-swich to choose the unipolar or bipolar scale and to enable or disable the filter.

Unipolar scales					Bipolar scales					Filter				
1	2	3	4	Scale	1	2	3	4	Scale	1	2	3	4	Filter
				0–10 A	●				-10–10 A					Disable
		●		0–25 A	●		●		-25–25 A				●	Enable
	●			0–50 A	●	●			-10–50 A					
	●	●		0–100 A	●	●	●		-25–100 A					



Disposal of Electrical & Electronic Equipment (Applicable throughout the European Union and other European countries with separate collections programs). This symbol, found on your producr 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 authorised collection point for the recycling of electrical & electronic equipment. By ensuring this product is didposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of the product, please contact your local city office, waste disposal service of the retail store where you purchased this product.