

INSTALLATION MANUAL

T201DC100

Passive direct current transducer 100 Adc
for 4 - 20 mA current loop

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 **SENECA**

 
ISO 9001:2015

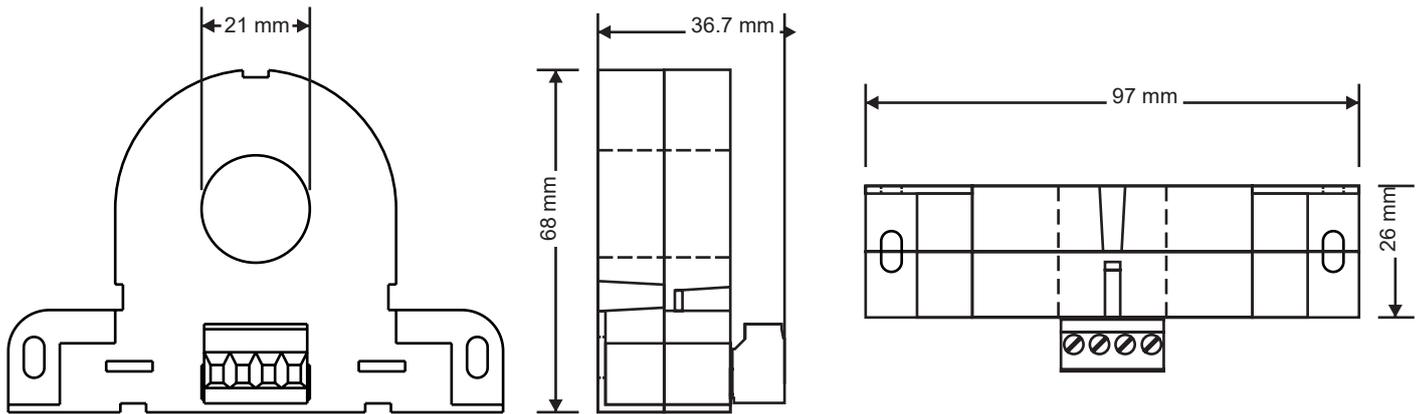
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For manuals in other languages and the configuration software,
visit www.seneca.it/products/t201dc100

MODULE LAYOUT



Container: Material PA6 black colour.

PRELIMINARY WARNINGS

The word **WARNING** preceded by the symbol  indicates conditions or actions that put the user's safety at risk. The word **CAUTION** preceded by the symbol  indicates conditions or actions that could damage the instrument or connected equipment.

The warranty is void in the event of misuse or tampering with the module or the devices supplied by the manufacturer, which are necessary for its correct operation and if the instructions contained in this manual have not been followed.

	<p>WARNING: Before performing any operation it is mandatory to read the entire contents of this manual. The module must only be used by qualified technicians in electrical installations. Specific documentation is available at www.seneca.it/products/t201dc100</p>
	<p>Repair of the module or replacement of damaged components must be carried out by the manufacturer. The product is sensitive to electrostatic discharge, please take appropriate countermeasures during any operation.</p>
	<p>Disposal of electrical and electronic waste (applicable in the European Union and other countries with different collection methods). The symbol on the product or on the packaging indicates that the product must be handed over to the authorised collection point for the recycling of electrical and electronic waste.</p>

PRELIMINARY INSTRUCTIONS FOR USE

T201DC100 can be mounted in any position and place, in compliance with the expected environmental conditions. Use the supplied accessory in the case of DIN rail mounting.

N.B.: Magnetostatic fields of considerable magnitude can alter the measurement: please avoid installing the module permanent magnets, electromagnets or ferrous masses that induce strong alterations in the magnetic field; if the zero error is greater than the declared one, try a different arrangement or orientation.

TECHNICAL SPECIFICATIONS

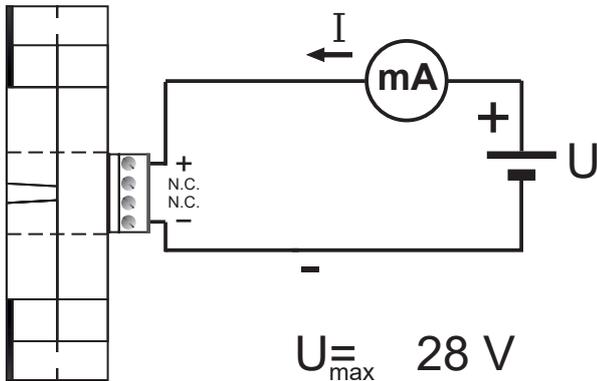
NORMS	EN61000-6-4 Electromagnetic emission, in industrial environment. EN61000-6-2 Electromagnetic immunity, in industrial environment. EN60950 Safety N.B: use with copper conductor, in environments with pollution degree 2 and with class 2 power supply unit.
CONNECTIONS	Removable 4-way screw terminals, 5 mm pitch, for loops: 4 ÷ 20 mA
OVERVOLTAGE CATEGORY	Bare conductor Category III (up to 300 V) Insulated conductor Category III (up to 600 V)
INPUT SCARES	- Monopolar 0 - 10 A, Bipolar -10 - 0 - +10 A - Monopolar 0 - 25 A, Bipolar -25 - 0 - +25 A - Monopolar 0 - 50 A, Bipolar -10 - 0 - +50 A - Monopolar 0 - 100 A, Bipolar -25 - 0 - +100 A
AC OVERRIDE F (35 Hz)	- Measurable peak value: -30 - +120 A - Double half-wave rectified: -20 - 80 A - Single half-wave rectified: -10 - 40 A
ENVIRONMENTAL CONDITIONS	Temperature: -20°C ÷ +70°C Humidity: 10% ÷ 90% non-condensing. Storage temperature: -40°C ÷ + 85°C Protection degree: IP20
CONNECTIONS	Extractable terminal pitch 5 mm, cables ≤ 2.5 mm ² , for loops 4 ÷ 20 mA Tightening torque 7.0 Lb•inch = 0.8 N•m 21 mm through-hole for power cable
POWER SUPPLY OUTPUT	
TYPE	Passive current loop 4 ÷ 20 mA
LIMITS	Internal over-temperature fault: 3.5 mA Under-range / Over-range: 3.6 / 21.0 mA Valid measurement: 3.8 / 20.5 mA
LOOP VOLTAGE MIN. - MAX.	6 V ÷ 28 V
OTHER PROTECTIONS	Reverse polarity Loop current limitation in case of failure Over-temperature protection
PRECISION	
MAXIMUM ERRORS	- Measuring section: 0.1 % + 14 mA - Output section: 0.05 % + 4 μA
TEMPERATURE COEFFICIENT	< 150 ppm/K
ERROR FOR EMI	< 50 μA, test on bare bar Ø 10 mm
SPEED RESPONSE	Without filter: 100 ms With filter: 600 ms

ELECTRICAL CONNECTIONS

⚠ ATTENTION

Please, turn off the power supply before wiring.

CURRENT OUTPUT FOR LOOP 4 ÷ 20 mA

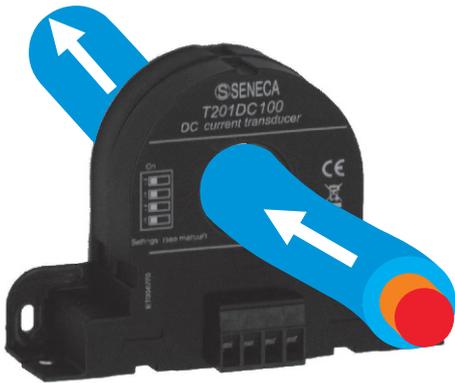


It is possible to connect directly on the 4 ÷ 20 mA loop in T201DC100 output a maximum voltage of 28 V.

CURRENT INPUT

⚠ ATTENTION

Please, install the module as shown in the figure. Pay attention to the direction of the current flow.



To measure the current passing through the cable, insert the cable into the central hole of the T201DC100 (as shown in the figure opposite). The maximum current that can be measured by T201DC100 is 100A. To increase the current measurement sensitivity, insert the cable several times into the central hole of the T201DC100, creating a series of coils. The current measurement sensitivity is proportional to the number of turns. Example: You set the full scale, wrap the wire around the hole 5 times, obtaining 4 coils. The full scale will be 5 times lower and the measurement will be more sensitive.

Arrange the coils symmetrically to preserve the precision of the instrument.

DIP-SWITCH SETTINGS

Use the dip-switches to choose the monopolar or bipolar scale and whether or not to activate the filter.

Monopolar Scale					Bipolar Scale					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					



CONTACT INFORMATION

Technical support	support@seneca.it	Product information	sales@seneca.it
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