INSTALLATION MANUAL

T203PM100-MU
T203PM300-MU
T203PM600-MU

PRELIMINARY WARNINGS

The word **WARNING** preceded by the symbol ⚠ indicates conditions or actions that put the user's safety at risk.
The word **ATTENTION** preceded by the symbol ⚠ indicates conditions or actions that might damage the instrument or the connected equipment. The warranty shall become null and void in the event of improper use or tampering with the module or devices supplied by the manufacturer as necessary for its correct operation, and if the instructions contained in this manual are not followed.

	**WARNING**: The full content of this manual must be read before any operation. The module must only be used by qualified electricians. Specific documentation is available via QR-CODE shown on page 1.
	The module must be repaired and damaged parts replaced by the Manufacturer. The product is sensitive to electrostatic discharges. Take appropriate measures during any operation.
	Electrical and electronic waste disposal (applicable in the European Union and other countries with recycling). The symbol on the product or its packaging shows the product must be surrendered to a collection centre authorized to recycle electrical and electronic waste.

DOCUMENTATION

SENECA

ISO 9001:2015

SENECA s.r.l.; Via Austria, 26 – 35127 – PADOVA – ITALY; Tel. +39.049.8705359 - Fax +39.049.8706287

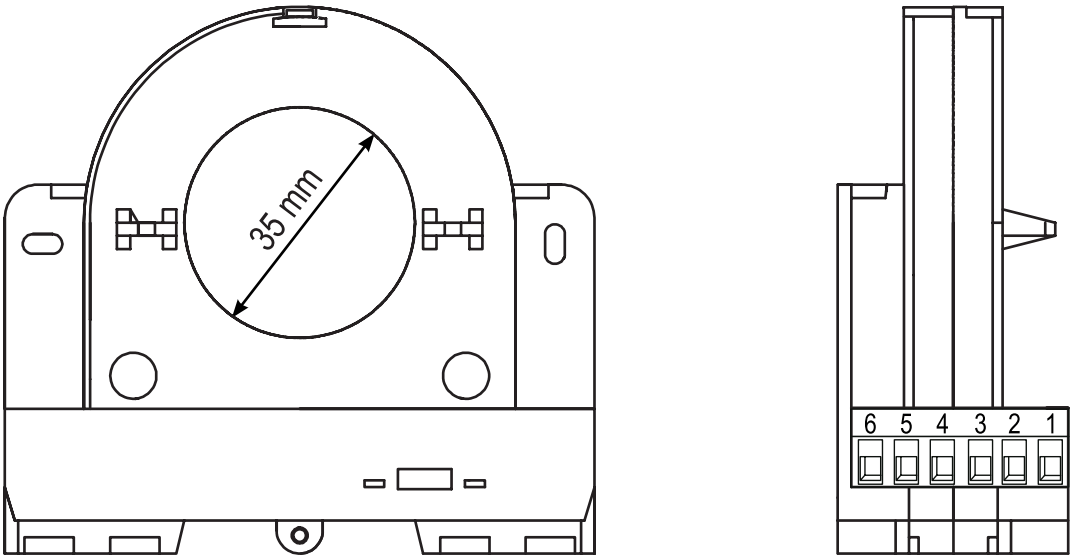
CONTACT INFORMATION

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

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MODULE LAYOUT



Dimensions LxHxD 95 x 75 x 35 mm; **Weight:** ≈ 150 g; **Enclosure:** PA6, black

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR/COM Green	ON	The device is powered correctly
PWR/COM Green	Flashing	Communication via RS485 port
D-OUT Yellow	ON	Digital output activated

ASSEMBLY

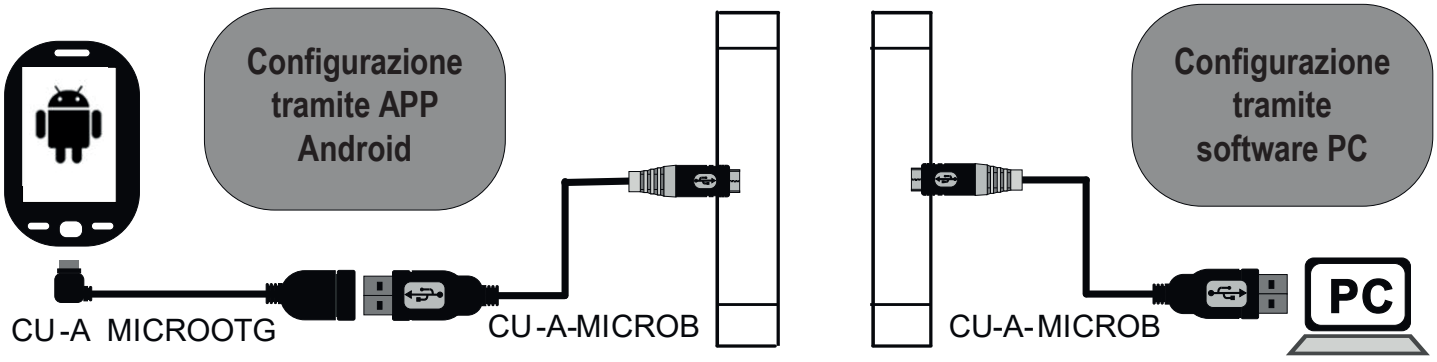
The device can be mounted in any position, in compliance with the expected environmental conditions.

⚠ CAUTION

Magnetic fields of considerable magnitude can alter the measurement: avoid proximity to permanent magnetic fields, solenoids or ferrous masses which induce strong alterations of the magnetic field; possibly, if the zero error is greater than the declared error, try a different arrangement or change orientation.

USB PORT

The front USB port allows easy connection to configure the device using the configuration software. If it is necessary to restore the initial configuration of the instrument, use the configuration software. Through the USB port it is possible to update the firmware (for further information please refer to the Easy Setup 2 software).



Check that the device in question is included in the list of products supported by the Easy Setup APP in the store.

⚠ CAUTION

When the USB port is connected to a cable, communication on the RS485 port is blocked.
To restore communication on the RS485 port, the cable must be physically disconnected from the USB port.

TECHNICAL SPECIFICATIONS

CERTIFICATIONS	CE UKCA	
INSULATION	Using an insulated conductor, its sheath determines the insulation voltage. An insulation of 3 kVac is guaranteed on bare conductors.	
ENVIRONMENTAL CONDITIONS	*Temperature*: -25 ÷ +65 °C *Humidity*: 10% ÷ 90% non condensing. *Altitude:* Up to 2000 m above sea level *Storage temperature:* -30 ÷ +85°C *Degree of protection:* IP20.	
ASSEMBLY	35mm DIN rail IEC EN60715, suspended with ties	
CONNECTIONS	Removable 6-way screw terminals, 5 mm pitch for cable up to 2.5 mm^2 micro USB	
POWER SUPPLY	Voltage: on Vcc and GND terminals, 11 ÷ 28 Vdc; Absorption: Typical: < 70 mA @ 24 Vdc	
COMMUNICATION PORT	RS485 serial port on terminal block with ModBUS protocol (see user manual)	
INPUT	*Type of measurement*: AC/DC TRMS or DC Bipolar Live: 1000Vdc; 290Vac *Crest factor*: 100A = 1.7 ; 300A = 1.9 ; 600A = 1.9 *Pass-band:* 1.4 kHz *Overload:* 3 x IN continuous	
CAPACITY	**AC/DC True RMS**	**TRMS DC Bipolar (DIP7=ON)**
T203PM600-MU	0 – 600A / 0 – 290Vac	-600 – +600A / 0 – +1000Vdc
T203PM300-MU	0 – 300A / 0 – 290Vac	-300 – +300A / 0 – +1000Vdc
T203PM100-MU	0 – 100A / 0 – 290Vac	-100 – +100A / 0 – +1000Vdc
ANALOGUE OUTPUT	*Type*: 0 – 10 Vdc, minimum load R_{LOAD} =2 kΩ. *Protection*: Reverse polarity protection and over voltage protection *Resolution:* 13.5 full scale AC *EMI error:* < 1 % **The type of output can be selected via software**	
DIGITAL OUTPUT	*Type*: active, 0 – Vcc, maximum load 50mA **The type of output can be selected via software**	
ACCURACY	**below 5% of full scale**	1% of full scale at 50/60 Hz, 23°C
	above 5% of full scale	0,5% of full scale at 50/60 Hz, 23°C
	Coeffic. Temperature: < 200 ppm/°C *Hysteresis on measurement*: 0.3% of full scale *Response speed:* 500 ms (DC); 1 s (AC) al 99,5%	
OVERVOLTAGE CATEGORIES	*Bare conductor:* CAT. III 600V *Insulated conductor:* CAT. III 1kV	

ELECTRICAL CONNECTIONS

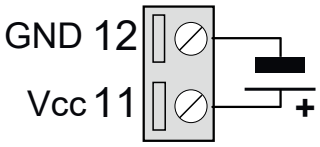
WARNING

Disconnect the high voltage before carrying out any work on the instrument.

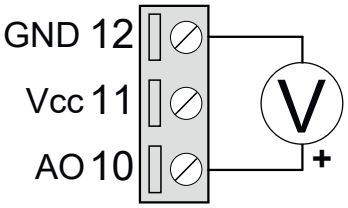
CAUTION

Switch off the module before connecting the inputs and outputs.
To meet electromagnetic immunity requirements:
- use properly insulated and dimensioned cables;
- use shielded cables for signals;
- connect the shield to a preferred instrumentation ground;
- Keep shielded cables away from other cables used for power installations (transformers, inverters, motors, etc.).

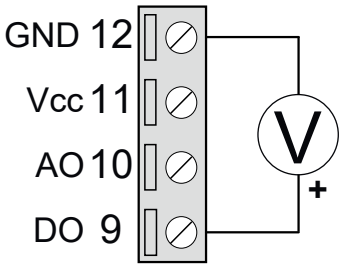
POWER SUPPLY



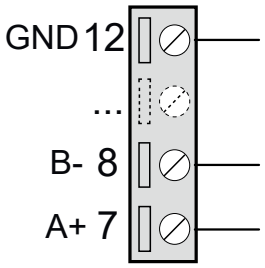
ANALOGUE OUTPUT



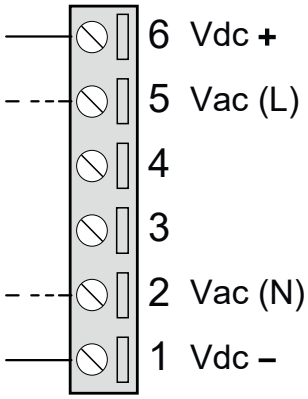
DIGITAL OUTPUT



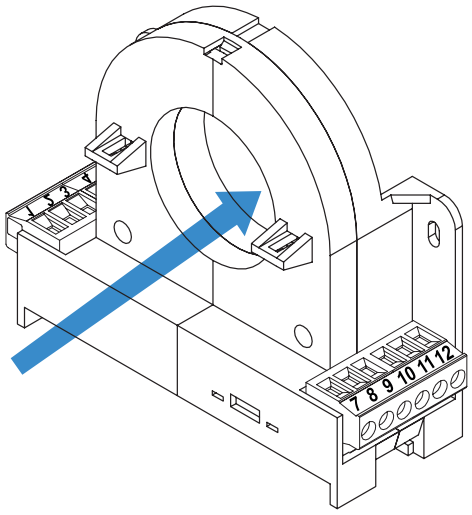
RS485



MEASUREMENT INPUT



Connect just a pair of terminals for the measurement.



CAUTION

Make sure that the direction of the current flowing through the cable is that shown in the figure (incoming).
To increase the sensitivity of the current measurement, insert the cable several times into the central hole of the instrument, creating a series of loops. The current measurement sensitivity is proportional to the number of cable passages through the hole.

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