INSTALLATION MANUAL

R-2AI-6DIDO

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 using the 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

QUALITY MANAGEMENT SYSTEM
ISO 9001:2015

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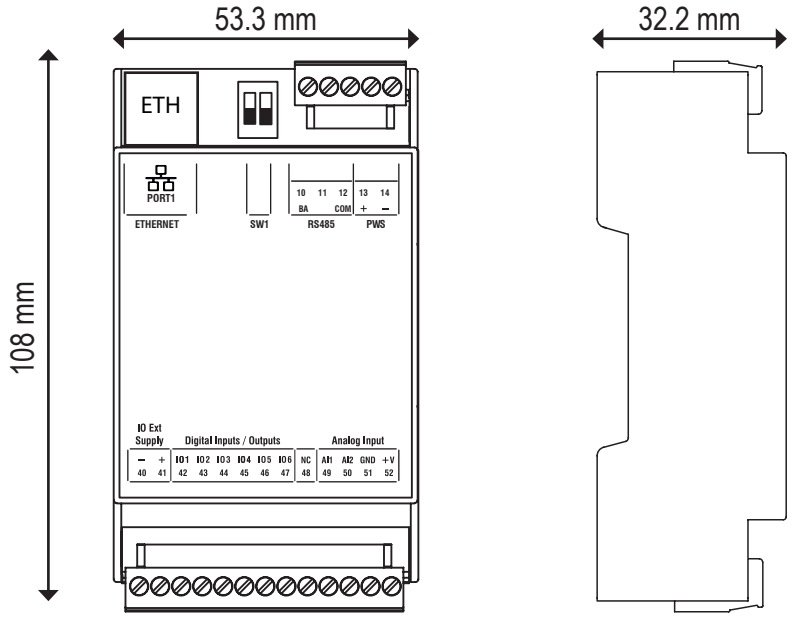
CONTACT INFORMATION

Technical support	supporto@seneca.it	Product information	commerciale@seneca.it

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MODULE LAYOUT



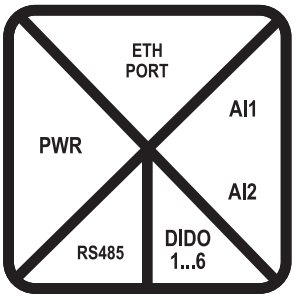
Dimensions (LxHxD)	53.3 x 90 x 32.2	**Weight**	80 g.	**Case**	Self-extinguishing UL94-V0 PC / ABS material

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
IO1/IO6	On	Digital input/output active
	Off	Digital input/output not active
OUT SUP	On	Digital inputs/outputs powered
	Off	Digital inputs/outputs not powered
STS (Status only version R-2AI-6DIDO)	On	IP address set
	Flashing	Waiting for the IP address from the DHCP
STS (Status only version R-2AI-6DIDO-P)	On	IP address set
	Flashing	No configured IP address (DEFAULT)
COM (only version R-2AI-6DIDO-P)	Off	No Profinet communication
	Flashing	Profinet communication present
FAIL	On	Analog input out of range
RX (only version R-2AI-6DIDO)	On	RS485 port wiring error
	Flashing	Reception of data packet completed on RS485
TX (only version R-2AI-6DIDO)	Flashing	Reception of data packet completed on RS485
ETH TRF (Yellow)	Flashing	Packet transit on Ethernet port
ETH LNK (Green)	Flashing	Ethernet port connected

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TECHNICAL SPECIFICATIONS

CERTIFICATIONS	CE UKCA
INSULATION	 — **1500 Vac**
POWER SUPPLY	Voltage: 10 ÷ 40 Vdc; Absorption: 1.5 W
ENVIRONMENTAL CONDITIONS	Operating temperature: from -25°C to +65°C Humidity: 10% ÷ 90% non condensing. Storage temperature: from -30°C to +85°C Protection rating: IP20
ASSEMBLY	35mm DIN rail IEC EN60715
CONFIGURATION	With built-in WEB server (only version R-2AI-6DIDO)
CONNECTIONS/ COMMUNICATION PORTS	3.5 mm pitch terminal block, 1.5 mm^2 max cable section 1 Ethernet (RJ45) 1 RS485 port on terminals
DIGITAL INPUTS	Number of channels: 6; Voltage: Threshold ON: > 11 V; Threshold OFF:< 4 V; Vmax: 28 V; Impedance 9 kΩ Compliant with IEC61131-2 type 3 (as an alternative to the outputs)
DIGITAL OUTPUTS	Number of channels: 6, MOSFET, PNP; Max voltage/current: 0.2 A ; 9 ÷ 28 V (as an alternative to the inputs)
ANALOG INPUT	Number of channels: 2; Type: voltage,current, Measuring range: Voltage: 0 V ÷ +30 V; Current: 0 mA ÷ +24 mA
COUNTERS	Number of counters: 6, maximum frequency 250 Hz, backup to non-volatile memory.

SETTING THE DIP-SWITCHES

⚠ WARNING

The DIP-switch settings are read only at boot time. At each change, perform a restart.

For use and settings via DIP-SWITCH, see the user manual available on the website on the web page dedicated to the product.

DIP-SWITCH SW1:
DEFAULT SETTINGS

SW1		
DIP1	**OFF**	DEFAULT SETTINGS
DIP2	**OFF**	

DIP-SWITCH SW1 is located on the front of the device.

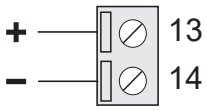
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ELECTRICAL CONNECTIONS

⚠ CAUTION

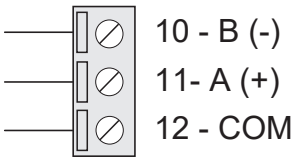
The upper power supply limits must not be exceeded, as this could cause serious damage to the module.
Switch the module off before connecting inputs and outputs.
To meet the electromagnetic immunity requirements:
- use shielded signal cables;
- connect the shield to a preferential instrumentation earth system;
- separate shielded cables from other cables used for power installations (transformers, inverters, motors, etc.).

POWER SUPPLY



Voltage: 10 ÷ 40 Vdc
Absorption: 1.5 W

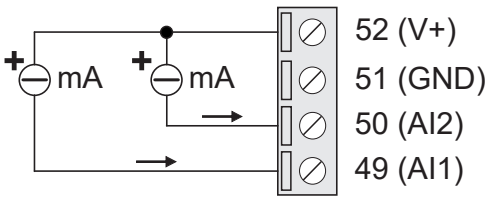
RS485 SERIAL PORT



Connection to the RS485 port. Polarity is not standardised; in some devices of other manufacturers it may be inverted.

CURRENT (mA)

Passive transmitter (2 wires), with power supplied by R-2AI-6DIDO.

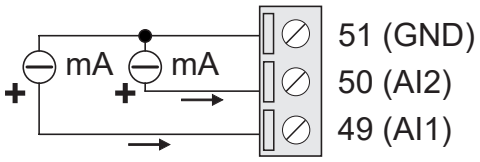


ATTENTION: V+ = 13 V.

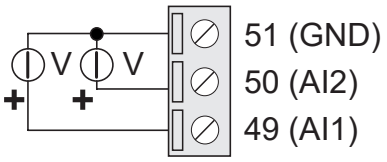
ANALOG INPUTS: <u>The device has 2 analog inputs that can be configured.</u>

CURRENT (mA)

Active transmitter (SOURCE), passive inputs.

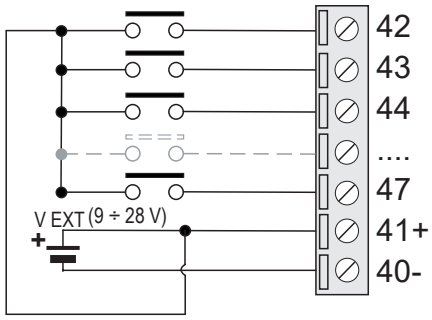


VOLTAGE (V)



DIGITAL INPUTS (PNP)

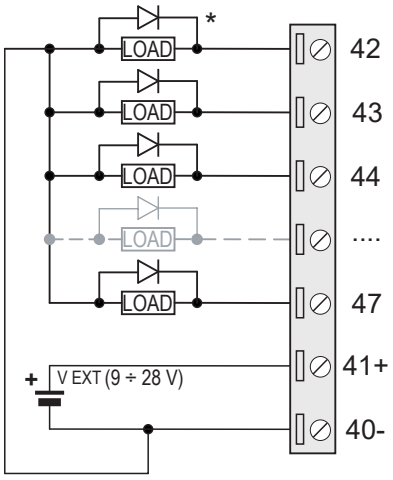
With external power



The digital inputs must be powered externally to function properly.

DIGITAL OUTPUTS (PNP)

With external power



The digital I/O must be powered externally to function properly (V EXT). It is possible to use the same source used to power up the device R-2AI-6DIDO.

⚠ CAUTION

* It is mandatory to use a protection DIODE for coils / relays for inductive loads, otherwise the device may fail and the manufacturer's warranty will be voided. The DIODE is normally supplied as an accessory by manufacturers of coils, relays, etc.

⚠ WARNING

The product is not suitable for connection to a dangerous voltage conductor.
The maximum allowable voltage is 50 Vac / 75 Vdc with respect to earth.

FEATURE SUMMARY

ANALOG INPUTS					
	Range	**Effective resolution (at 400 ms)**	**Impedance**	**Precision**	**Temperature drift**
Voltage (V)	0 ÷ +30 Vdc	1 mV	> 200 kΩ	0.1% f.s.	50 ppm
Current (mA)	0 ÷ +24 mA	1µA	< 60 Ω	0.1% f.s.	50 ppm

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