

INSTALLATION MANUAL

R-32DIDO R-32DIDO-P

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
R-32DIDO



DOCUMENTATION
R-32DIDO-P



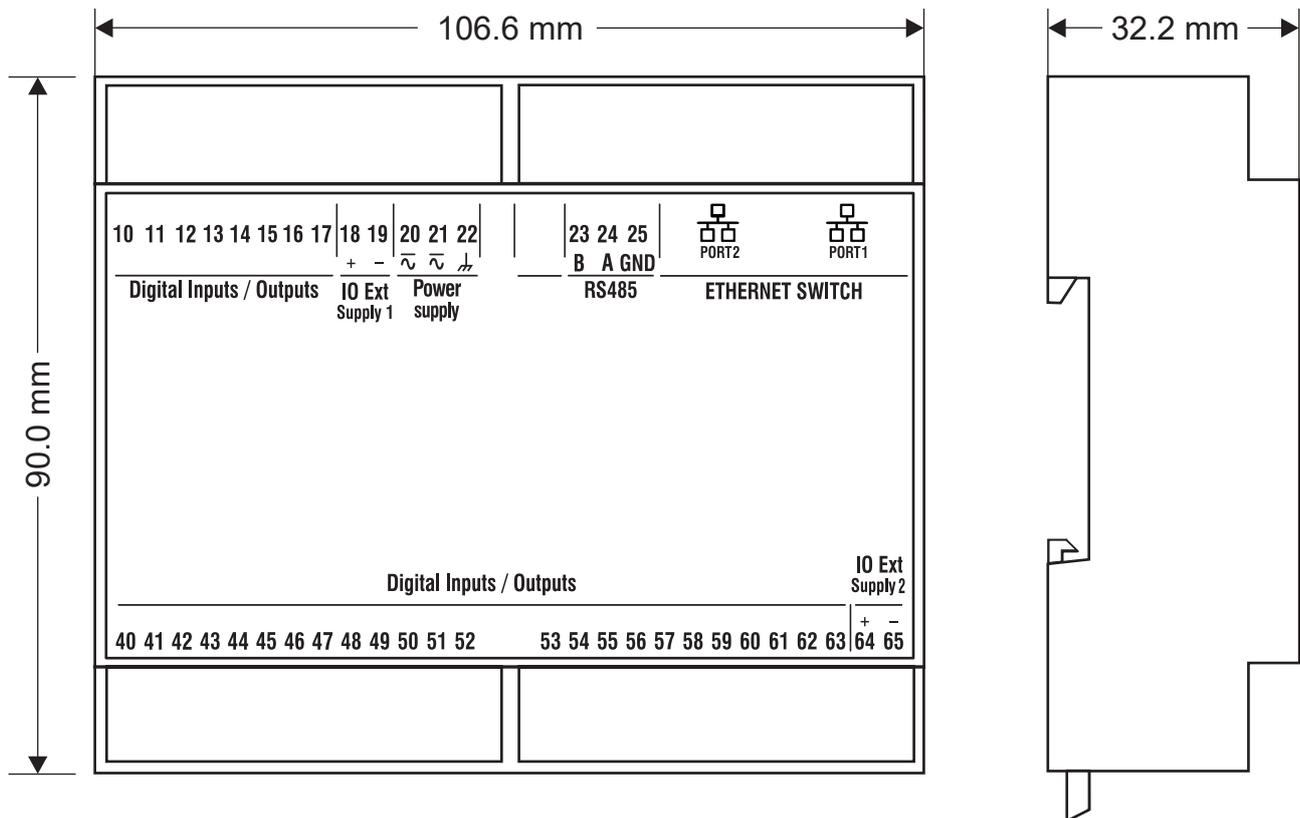
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CONTACT INFORMATION

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MODULE LAYOUT



Weight: 170 g; **Enclosure:** UL94-V0 self-extinguishing PC/ABS material, black.

SIGNALS VIA LED ON FRONT PANEL

LED	STATUS	LED meaning
PWR	On	Device powered
	Off	Device not powered
IO1/IO32	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)	On	IP address set
	Flashing	Waiting for the IP address from the DHCP
COM (R-32DIDO-P version only)	Off	No Profinet communication
	Flashing	Profinet communication present
FAIL	On	Digital output in FAIL
	Off	Digital output OK
RX (R-32DIDO version only)	On	RS485 port wiring error
	Flashing	Reception of data packet completed on RS485
TX (R-32DIDO version only)	Flashing	Transmission of data packet completed on RS485
ETH TRF (Yellow)	Flashing	Packet transit on Ethernet port
ETH LNK (Green)	Flashing	The Ethernet port is connected (LINK)

TECHNICAL SPECIFICATIONS

CERTIFICATIONS			
	https://www.seneca.it/products/r-32dido/doc/CE_declaration		

INSULATION	
POWER SUPPLY	Voltage: 10÷40Vdc; 19÷28Vac; 50÷65Hz; Absorption: 3W max; Dissipation: 6.5W max
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
CONFIGURATION	With integrated WEB Server
CONNECTIONS/ COMMUNICATION PORTS	3.5 mm pitch terminal block, 1.5 mm ² max cable section 1 Ethernet (with LAN fault-bypass function) 100 base T on RJ45 (R-32DIDO-1 model) 2 Ethernet (with LAN fault-bypass function) 100 base T on RJ45 (R-32DIDO-2 model) 1 RS485 port on terminals 23-24-25 (only R-32DIDO-1/ R-32DIDO-2 versions)
DIGITAL INPUTS	Number of channels: 32; Voltage: Threshold ON: >9V; Threshold OFF: < 4 V; Vmax: 24 V; Impedance 9kΩ Individually configurable
DIGITAL OUTPUTS	Number of channels: 32, MOSFET, PNP; Max voltage/current: 0.2 A / 24 V Individually configurable
COUNTERS:	Number of counters: 32 at 32 bit, maximum speed: 50 Hz

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.).

<p>POWER SUPPLY</p>	<p>RS485 SERIAL PORT</p> <p>Connection to the RS485 port. Polarity is not standardised; in some devices of other brands it may be inverted.</p>		
<p>DIGITAL INPUTS (PNP) Inputs from 1 to 8</p>	<p>DIGITAL INPUTS (PNP) Inputs from 9 to 32</p>	<p>DIGITAL OUTPUTS (PNP) Outputs from 1 to 8</p>	<p>DIGITAL OUTPUTS (PNP) Outputs from 9 to 32</p>

⚠ CAUTION

The power supply must be sized according to the expected load at the outputs. Terminals 18-64 and 19-65 can be connected together on the same power supply.

⚠ CAUTION

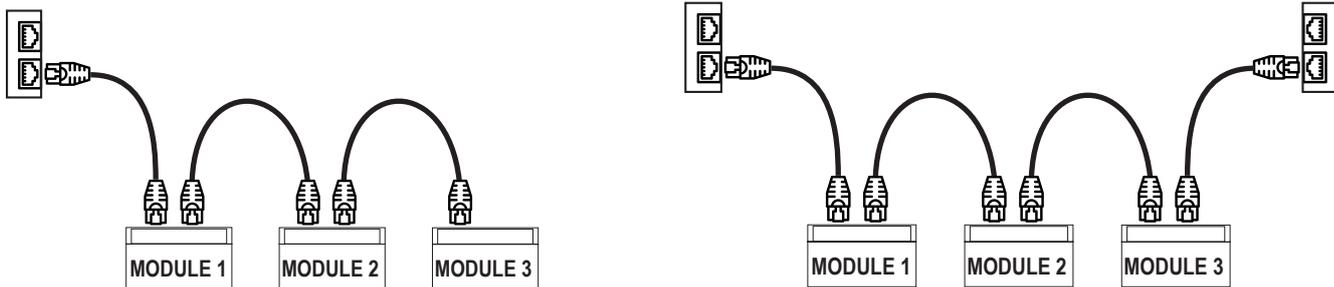
*For correct instrument operation, power the I/Os via the I/O Ext Supply 1 and 2 terminals at the same time.

DAISY-CHAIN (R-32DIDO-2 / R-32DIDO-2-P ONLY)

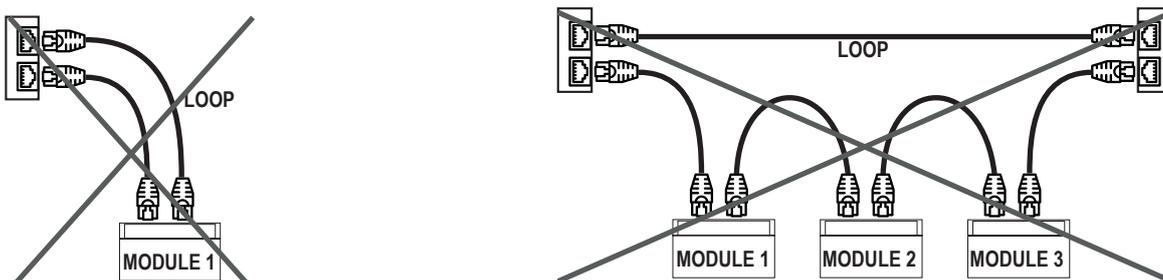
⚠ CAUTION

IT IS NOT ALLOWED TO CREATE LOOPS WITH ETHERNET CABLES

Using the daisy-chain connection it is not necessary to use switches to connect the devices. The following examples show the correct connections.



There must be no loops in the Ethernet cabling, otherwise the communication will not work. The modules and switches must be connected eliminating any loops. The following examples show the incorrect connections.



The LAN fault-bypass function allows you to keep the connection between the two Ethernet ports of the device ON, in the event of a power failure. If a device turns off, the chain is not interrupted and the devices downstream of the switched-off one will still be accessible. This function has a limited duration: the connection remains active for a few days, typically 4. The fault-bypass function requires that the sum of the lengths of the two cables connected to the switched off module is less than 100m.

ETHERNET CONNECTION RULES

For the Ethernet cabling between the devices, the use of the unshielded CAT5 or CAT5e cable is required. CAT6 for industrial environments.

FACTORY IP ADDRESS

The default module IP address is static: 192. 168. 90. 101

WEB SERVER

To access the maintenance Web Server with the 192.168.90.101 factory IP address (Default user: admin; Default password: admin) <http://192.168.90.101>

⚠ CAUTION

DO NOT USE DEVICES WITH THE SAME IP ADDRESS IN THE SAME ETHERNET NETWORK.

DIP - SWITCH SETTINGS

⚠ WARNING

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

DIP- SWITCH SW1: through DIP-SWITCH-SW1 it is possible to set the IP configuration of the device:

DESCRIPTION	DIP 1	DIP 2
To obtain the configuration from the Flash memory, both SW1 DIP switch selectors must be set to OFF	<input type="checkbox"/>	<input type="checkbox"/>
To reset the device to factory settings both SW1 DIP switches must be set to ON	<input type="checkbox"/>	<input type="checkbox"/>
To force the device's IP address to the standard value of SENECA Ethernet products: 192.168.90.101	<input type="checkbox"/>	<input type="checkbox"/>
Reserved	<input type="checkbox"/>	<input type="checkbox"/>

⚠ WARNING

DIP-SWITCHES are located on the back of the device.
To access the DIP-SWITCH it is necessary to remove the bottom of the instrument.