



R-8AI-8DIDO



8-CH UNIVERSAL ANALOG INPUTS AND 8-CH DIGITAL I/O's MODBUS RTU/MODBUS TCP-IP MODULE

Highlights

- **Power supply:** 10..40 Vdc;
19..28 Vac
- **Max. isolation:** 1.5 kVac
- **Universal analog input:** Nr.8
channels mA, V, mV, TC J, K,
T, E, N, R, S, B, L, Pt100 / Cold
junction (1 channel)
- **Digital Inputs/Outputs:** No.8
channels PNP, Mosfet, Peer-to-
Peer
- **ADC:** 24 bit
- **Update time:** 25 ms per
channel
- **Communication protocols:**
ModBUS RTU, ModBUS TCP-
IP
- **Integrated networking
functions:** Daisy Chain, Fault-
By-Pass, Pass-Through
- **Configuration:** DIP Switch, Web
Server

The R-8AI-8DIDO is a mixed data acquisition module (analog/digital) from the R Series, designed for flexible wiring needs, compact installation spaces (only 32 mm thick), and high-density I/O applications. The module can handle up to 8 measurement channels for analog signals (mA, V, mV) or temperature sensors (8 thermocouples, 1 Pt100). It also provides 8 PNP/Mosfet digital channels, configurable as inputs or outputs.

The instrument features 5-way isolation up to 1.5 kV. It supports both Modbus TCP-IP communication with dual 100 Mbps Ethernet interfaces and serial RS485 communication with Modbus RTU protocol, accommodating up to 64 nodes without a repeater and a maximum speed of 115 kbps. Configuration of the R-8AI-8DIO-2 can be done through DiP Switch and a Web Server.

Equipped with a high-resolution 24-bit ADC, the module offers a precision class of 0.1%. The update time is 25 ms per single channel. R-8AI-8DIDO supports all advanced networking features of the R Series: daisy chain (Ethernet chain connection), fault-bypass (active communication even in case of failure), passthrough (ModBUS gateway functionality), peer-to-peer (remote replication of digital signals).

MIXED I/O MODULE

R-8AI-8DIDO



8-CH universal analog inputs, 8-CH digital inputs/outputs (2xETH) Modbus TCP-IP / Modbus RTU module

GENERAL DATA

Power supply	10..40 Vdc; 19..28 Vac
Power consumption	3 W max
Status LED indicators	Alimentazione Stato Ingressi / Uscite STS (indirizzo IP / DHCP) IP alimentato / assegnato RX / TX (Ricezione / trasmissione dati su RS485) Ethernet TRF / LNK (Transito pacchetti / connessione Eth)
Isolation	1.500 Vac (3 punti)
Protection degree	IP20
Operating temperature	-25...+65°C
Storage temperature	-30...+85°C
Connections	Morsetti a vite estraibili a 3 vie, passo 3,5 mm Connettori RJ45
Dimension (wxhxd)	106 x 90 x 32 mm
Weight	170 g
Housing	PC/ABS autoestinguente UL94-V0 colore Grigio RAL 7035
Programming	DIP switch Web server
Special features	Doppia connessione Ethernet Daisy Chain LAN fault bypass (dual Ethernet) Max 32 Peer to Peer Rules (I/O Mirror) Modbus Passthrough (TCP-IP to RS485)
Data memory	FeRAM per backup contatori
Certifications	CE, UKCA
Installation	Per guida DIN (IEC EN 60715), a parete / pannello

COMMUNICATION

Ethernet ports	Nr.2 porte Ethernet (con funzione LAN fault-bypass) 100 baseT su RJ45
Serial ports	Nr.1 porta RS485 su morsetti M23-M24-M25
Speed	Fino a 115.200 bps (RS485) / 100 Mbps (TCP-IP)
Supported protocols	ModBUS RTU ModBUS TCP-IP http

ANALOG INPUTS

Channels	8
Type and range	V (± 30 V) mV (± 150 mV) mA (± 24 mA) TC: J, K, T, E, N, R, S, B, L Pt100 / Giunto freddo - ingresso 1 (-200...+650°C)
ADC	24 bit
Update time	25 ms per canale
Thermal drift	50 ppm
Accuracy	0,1% f.s (0,1°C Pt100)

DIGITAL CHANNELS

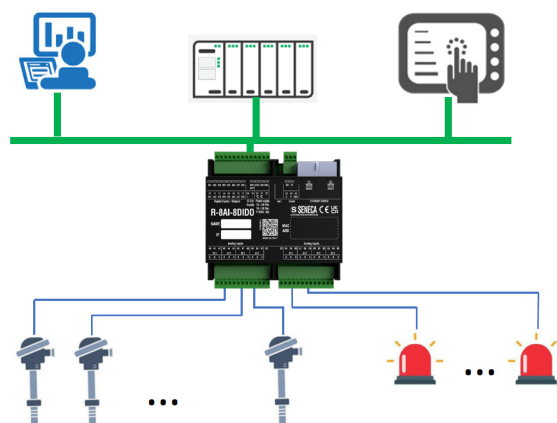
Channels	8 Ingressi/Uscite configurabili individualmente
Type and range	Ingressi: ON/OFF: > 9 V; < 4 V; Vmax: 28 V Uscite: MOSFET, PNP; tensione / corrente max.: 0,2 A / 28 V

ORDER CODES

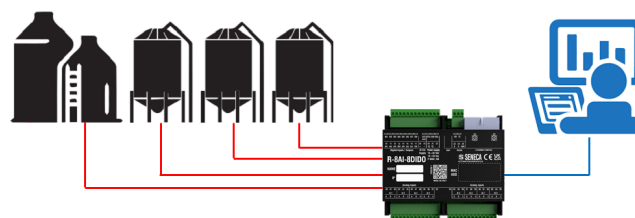
Codes	Description
MIXED I/O MODULE	
R-8AI-8DIDO-2	8-CH universal analog inputs, 8-CH digital inputs/outputs (2xETH) Modbus TCP-IP / Modbus RTU module
ACCESSORIES	
CE-RJ45-RJ45-R	Ethernet cable (RJ45 / RJ45)

APPLICATION EXAMPLES

TEMPERATURE CONTROL



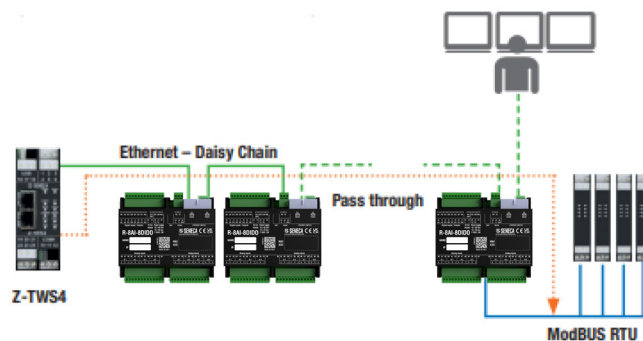
ACQUISITION OF PROCESS MEASURES



SPECIAL FEATURES

DAISY-CHAIN CONNECTION

REDUCED WIRING, MINIMUM INFRASTRUCTURE COSTS AND INSTALLATION FLEXIBILITY



FAULT BYPASS

MAINTAINING THE ETHERNET CHAIN CONNECTION EVEN IN THE EVENT OF A MODULE FAILURE

