

JBOX – Junction Box with signals board and ModBus interface (Rev.0 010921)



Description

The JBOX Geoves consists of a watertight outdoor container with **IP65** protection degree inside which a power supply, wiring and derivation system for the signals coming from Geoves meteorological sensors or other measurement instruments is created.

JBOX can be customized, according to the various types of external power supply present, with power supplies with **220Vac** or **110Vdc** direct current input and **24Vdc/60W (standard)** or **12Vdc** stabilized output in low voltage (optional on request or with Geoves datalogger) which it is used to power the measurement sensors. The power supply system is equipped with an isolator, fuse protection and earth terminal.

The analog signals coming from the sensors, in **current (typically 4 ... 20mA)** or in **voltage (typically 0 ... 5Vdc)**, are wired to a convenient branch terminal board from which the analog signals can be directly taken or connected to one or multiple digital interfaces with **ModBus RTU RS485** or **TCP / IP** output.

The analog signals can also be galvanically isolated to protect the connection line between the external instrumentation and the datalogger.

JBOX is equipped with a lockable door, two or more cable glands for power supply and the input / output of signal cables, brackets for fixing to a pole or wall.

Options / accessories

Input power	a) 220Vac b) 110Vdc c) 24Vac/dc
Output power	1) 24Vdc stabilized (default) 2) 12Vdc stabilized (option)
Outdoor containers	IP65 enclosure, in polycarbonate with anti-radiation treatment, key enclosure, crossarms for fastening on poles (ø50...150mm) or on walls. <u>Dimensions (Lxhxp)</u> Box1: 250x350x160mm Box2: 300x500x160mm Box3: 300x500x200mm
Modbus Interfaces	) N.4 analog inputs, RS485 MODBUS RTU slave output, power 12Vdc. Mounting on din bar) N.8 analog inputs, RS485 MODBUS RTU slave output, power 12Vdc. Mounting on din bar) MODBUS RS485 RTU / TCP/IP bi-directionnal converter, power 10...40Vdc or 19...28Vac. Mounting on din bar
Galvanic insulators	ISO420-I Interface with n.1 0-4...20mA/0-4...20mA analog channel with galvanic insulation. DIN bar mounting ISO420-V Interface with n.1 0-4...20mA/0-1...5Vdc analog channel with galvanic insulation. DIN bar mounting ISODIG Interface with 2 digital channel (frequency, pulses) with galvanic insulation. DIN bar mounting

Interface with 4 or 8 inputs for analog sensors and Modbus RTU RS485 output

DESCRIPTION:	8-CH analog input module / RS485
POWER SUPPLY:	10...40 Vdc, 19...28 Vac
AUXILIARY SUPPLY:	Up to 8 current loop
INSULATION:	1 500 Vac
INPUT:	Nr 8-CH voltage / current signal type
RANGE:	12.5 Vdc, 10 Vdc, ± 10 Vdc, 1.20 mA
RESOLUTION:	16 bit
COMMUNICATION:	RS485 2 wires, ModBUS RTU slave protocol, max 64 nodes
SETTINGS:	DIP switch, software

Furthermore other interfaces are available with 2 analog inputs and ModBus TCP/IP output.



Interface with Modbus RTU RS485 input / Modbus TCP-IP output

POWER SUPPLY	10...40 Vdc, 19...28 Vac
POWER CONSUMPTION	~1 W
INSULATION	1.5 kVdc
LED STATUS INDICATORS	Power supply Rx-Tx serial communication Ethernet Link and data transfer
CONNECTIONS	Morsetti a vite estraibili a 7/2 vie, passo 5 mm
ETHERNET PORT	Nr 1 fast Ethernet port 100 Tx, RJ45 (max 8 Client TCP/IP / max 10 Server TCP/IP)
SERIAL PORT	Nr 1 serial port RS232/RS485 commutable, baud rate max 115k
INDUSTRIAL PROTOCOLS SUPPORTED	ModBUS TCP/IP, ModBUS RTU, ModBUS ASCII
MODBUS BRIDGE FUNCTION	from ModBUS TCP/IP to Modbus RTU/ASCII from ModBUS RTU/ASCII to Modbus TCP/IP



Galvanic insulators for voltage, current and frequency analog signals



IS0420-I Interface with n.1 0-4...20mA/0-4...20mA analog channel with galvanic insulation. DIN bar mounting

IS0420-V Interface with n.1 0-4...20mA/0-1...5Vdc analog channel with galvanic insulation. DIN bar mounting



ISODIG Interface with 2 digital channel (frequency, pulses) with galvanic insulation. DIN bar mounting