

Bridge LR 2

Bridge LR PSAC, LoRa™ Private (P2P) to Modbus RTU network conversion gateway, AC powered.,

Code: D80112.

Description

Bridge LR 2 is a bidirectional wireless communication gateway that connects RS-485 devices (Modbus RTU or BACnet MS/TP) using radio technology (LoRa Private P2P). It acts as a bridge between the RS-485 bus and the wireless network, allowing installations in any sector to be extended without physical wiring between devices.

This solution simplifies the connection of industrial devices in locations where wiring is complex or costly. Each unit can manage up to 32 RS-485 devices and form part of a LoRa Private network with multiple gateways. In addition, each **Bridge LR 2** operates as a Modbus slave with its own identifier, simplifying integration with compatible master systems.

Main features:

- LoRa Private communication (radio).
- RS-485 port (Modbus RTU or BACnet MS/TP).
- Bidirectional communication between RS-485 and LoRa Private.
- Management of up to 32 RS-485 devices per unit.
- Operation as a Modbus slave with its own identifier.
- Built-in web server accessible via Wi-Fi for configuration.
- Compatible with the MyConfig app.
- Integration with PowerStudio SCADA WAVE.
- Removable external antenna.
- DIN rail installation (1 module).

Application

Bridge LR 2 operates exclusively in Bridge mode
Bridge LR 2 Pro can operate in Bridge, Repeater or Gateway mode:

Bridge: wirelessly connects RS-485 segments (Modbus RTU or BACnet MS/TP) using LoRa Private.
Repeater: extends the coverage of the LoRa Private network by up to one hop, retransmitting the signal to reach more distant locations.
Gateway: maintains a Modbus map of the connected devices, facilitating data access through this functionality.

Typical applications:

- Wireless communication between RS-485 devices in industrial buildings where cable installation is restricted.
- Extension of existing Modbus RTU or BACnet MS/TP networks between different areas, buildings or installations.
- Extension of wireless coverage in distributed installations using Repeater mode.
- Access to Modbus device data through the register map in Gateway mode.
- Monitoring of meters, analysers and other measuring devices in water, irrigation or energy installations. Connection of field devices in photovoltaic or agricultural installations, or remote locations.



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Specifications

AC power supply

Installation category	CAT III 300 V
Consumption	4 ... 5 VA
Frequency	50 ... 60 Hz
Nominal voltage	100 ... 240 V ~

Environmental characteristics

Protection class	IP 20
Relative humidity (without condensation)	5 ... 95 %
Working temperature	-10 ... +60 °C

Mechanical characteristics

Envelope	Plastic UL 94 - V0 self-extinguishing
Fastening	DIN rail
Weight (kg)	0,08

Communication Network

Protocol	Modbus RTU|BACnet MS/TP|LoRa Private

Standards

Electrical safety, Maximum height (m)	2000
Standards	UNE-EN 55016-2-1; UNE-EN 55022; UNE-EN 60068-2-1; UNE-EN 60068-2-2; UNE-EN 60068-2-78; UNE-EN 61000-4-2; UNE-EN 61000-4-4; UNE-EN 61000-4-5; UNE-EN 61000-4-6; UNE-EN 61000-4-8; UNE-EN 61000-4-11; UNE-EN 61000-4-20; UNE-EN IEC 62368-1; ETSI EN 301 489-1 V2.2.3; ETSI EN 301 489-3 V2.3.2; ETSI EN 301 489-17 V3.3.1; EN 300 220-1 V3.1.1; EN 300 220-2 V3.3.1

Electrical safety

Insulation	Double-insulated electric shock protection class II (IEC 61010-1)

User interface

LED	3 LED

Radio communication -Antenna

	Tiltable omnidirectional SMA antenna

Radio communication

Band	Banda ISM de 868 Mhz (9 canales)

Serial communication

Technology / Type	RS-485



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Bridge LR 2
LoRa to RS-485 converter (Modbus/RTU)

CODE	TYPE	Description
LoRa		
D80112.	Bridge LR 2	LoRa to RS-485 Converter (Modbus/RTU) . AC power supply (110...264 Vac)
D80113.	Bridge LR 2 Pro	LoRa to RS-485 Converter (Modbus/RTU) . DC power supply (9 ... 36 Vdc)

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Dimensions