



BROCHURE

BTR102

Bridge · Gateway · Datalogger Modbus

English · Revision 0



1 OVERVIEW

The BTR102 connects the RS485 bus of the instruments to the network: a PLC or SCADA reads all Modbus RTU slaves as if they were Modbus TCP. In the gateway versions it polls up to 20 requests to RTU or TCP slaves, collects the values in a register map and makes them available via Modbus TCP, HTTPS and MQTT, with logging on SD and USB. A single DIN module, with colour display and touch button.



1.1 Key features

- **Transparent bridge:** every Modbus TCP request on port 502 is forwarded to the RTU bus.
- **Up to 20 requests:** to RTU slaves on RS485 or TCP slaves on Ethernet, WiFi STA and WiFi AP.
- **Ethernet and WiFi:** RJ45 10/100, WiFi client and Access Point for configuration.
- **Logging on SD and USB:** CSV files, immediate or scheduled start; firmware update from USB stick.
- **MQTT:** data publishing to a broker with mutual TLS, read-only remote commands.
- **Security:** HTTPS with TLS certificates, two access roles, Modbus TCP allowlist, security log.

1.2 Applications

- Bringing energy meters and any Modbus RTU slave onto the network
- Plant data collection to SCADA and cloud
- Stand-alone datalogger on SD or USB stick
- Connecting Modbus TCP "satellite" boards via the gateway WiFi AP

2 VERSIONS

Four versions, one hardware: choose according to what the device has to do.

Functions by version				
Function	BTR102.B	BTR102.BG	BTR102.BGM	BTR102.BGML
Transparent Modbus TCP ↔ RTU bridge	●	●	●	●
Gateway: up to 20 RTU/TCP requests and register map	—	●	●	●
Logging on SD/USB, HTTPS API	—	●	●	●
Cloud connection via MQTT	—	—	●	●
LoRa expansion	—	—	—	●

Functions by version to be confirmed.

3 TECHNICAL SPECIFICATIONS

Interfaces	
Ethernet	RJ45 10/100 Mb/s, static IP or DHCP
WiFi	2.4 GHz, Station (client) and Access Point
Modbus RTU	RS485, 3-pole plug-in terminal, 3.5 mm pitch
Modbus TCP	Server, configurable port (default 502)
HTTPS · MQTT	Web interface and API with authentication · MQTT broker with mutual TLS
Storage	microSD and USB stick, FAT32
Front panel	Colour TFT display, capacitive button

Characteristics	
Power supply	10–36 Vdc, 2-pole plug-in terminal, 3.5 mm pitch
Maximum consumption	1,6 W
RS485 common-mode voltage	60 Vdc
Operating temperature	–20 ... +60 °C
Humidity	max 95%, non-condensing
Format	1 DIN module

4 ORDER CODES

Order codes	
Code	Description
BTR102.B	Modbus TCP ↔ RTU bridge
BTR102.BG	Bridge and gateway with logging
BTR102.BGM	Bridge and gateway with logging and MQTT
BTR102.BGML	Bridge and gateway with logging, MQTT and LoRa expansion

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