INTEGRA
METERING

WEBLOG 250 V2

Table of contents

www.relay.de

1. Performance features

The WebLog250 is an M-Bus data logger and web server. Up to 250 meters (= standard loads á 1.5mA) can be connected directly to the internal M-Bus level converter. The device can manage and read out a total of up to 1000 devices if corresponding M-Bus repeaters (PW100 / PW250) are used as an extension.

The integrated web server enables complete set-up and operation via the network interface (LAN) or the optional WLAN module with a web browser. No additional software is required. Alternatively, the device can also be set up and operated via the display with the touchscreen. Access to the Internet can be realised via LAN or WLAN using an additional DSL or mobile router. Access to the WebLog250 via the Internet generally requires a port forward or VPN connection.

The device offers structured user management with various access rights, from administrators to tenants who can only read their own meters.

Further properties:

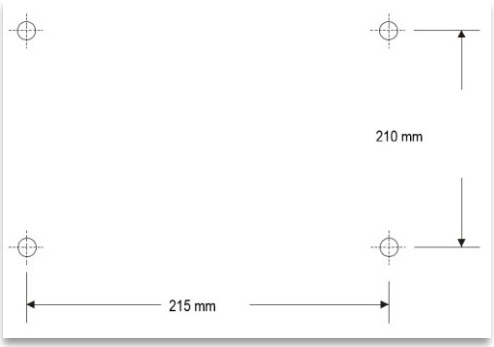
- M-Bus data centre for 250 end devices
- Integrated ARM-NXP i.MX 8M CPU(1.6GHz, Quad-Core) with 1GB RAM and 4GB eMMC Flash
- Operation via integrated 7" colour touchscreen or a web browser
- Hierarchical access management (administrator, meter reader, tenant)
- M-Bus remote meter display and data logger
- Automatic export of data to USB memory stick, FTP server or by e-mail
- Various export formats (CSV, XLSX or XML)
- Extensive range of interfaces (RS232, USB device, USB master, Ethernet, optional WLAN):

Principle representation

2. Installation

2.1 Assembly

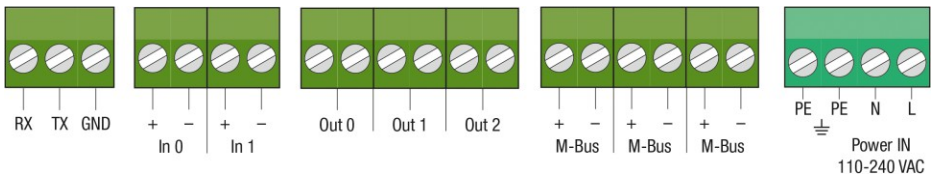
The housing can be mounted on a wall using 4 screws. The drilling pattern is rectangular (215 mm horizontal, 210 mm vertical). The drill holes have a diameter of 5
mm. Alternatively, mounting rail brackets can be attached to the housing to enable mounting on a TS35 rail.



2.2 Connect

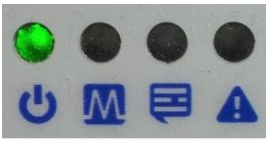
The connection compartment accessible at the front of the housing contains the plug-in screw terminals for the signals ar

Three equivalent 2-pole plug-in screw terminals are available for connecting the M-Bus. The mains supply of 110 to 240VAC should be connected by an electrician in the plug-in screw terminal on the outside right. The phase, neutral conductor and protective conductor are labelled L, N and PE. The remaining plug-in terminals are intended for future extensions.



2.3 LED displays

2.3.1 Front LEDs



There are 4 LEDs on the front of the WebLog250 which provide information about the power supply to the CPU and important system events.

CPU			
Power	M-Bus	Event log	M-Bus overcurrent
green	yellow	orange	red

Power Supply voltage of the CPU
M-Bus CPU uses the M-Bus communication channel **Event log** new unread error message(s) in the event log **M-Bus overcurrent**
Overcurrent / short circuit on the M-Bus

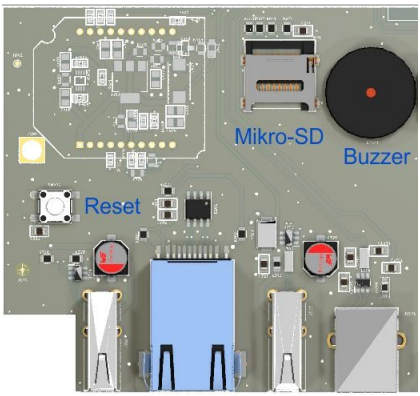
2.3.2 LEDs in the terminal compartment

M-BUS				
ON	MASTER	SLAVE	MAX	SHORT
green	green	yellow	orange	red

In the upper centre of the terminal compartment there are 5 LEDs next to each other which indicate the status of the M-Bus. When lit, the LEDs have the following meaning:

ON The M-Bus output voltage is switched on
MASTER The master sends data
SLAVE At least one counter responds with data
MAX The maximum number of connected meters has been exceeded (warning current) M-Bus
SHORT overcurrent / short circuit (2 Hz flashing)

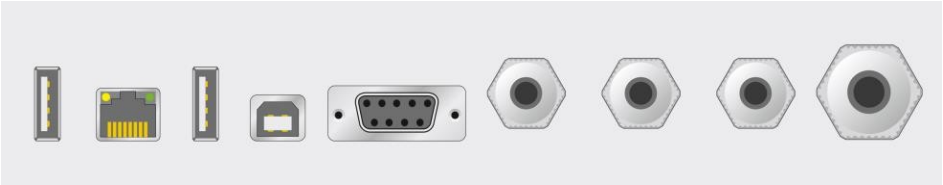
2.4 RESET button and signalling device



In the rare event that the WebLog cannot be operated via touchscreen or web browser, a system restart can be forced by pressing the RESET button in the top left-hand corner of the terminal compartment.

The terminal compartment also contains a piezo signalling device (buzzer) and a holder with a hinged locking mechanism (hinge) for an optional micro SD card.

2.5 Interfaces on the housing



USB1 Host | Ethernet | USB2 Host | USB Device | RS232C | Cable glands for mains connection, M-Bus and I/Os

RS232C RS232C D-SUB 9-pin socket for using the WebLog250 as a level converter. Please note that the log function of the WebLog250 should not be active!

USB device USB connection of a built-in USB-RS232 converter (FTDI). Can be used like the RS232 socket to use the WebLog250 as a level converter. A USB A/B cable is required for connection to a laptop or PC. The virtual COM port driver can be found on the Relay Tools+Docs CD or from the chip manufacturer www.ftdichip.com

USB host 1 / 2 USB host interfaces, e.g. for connecting a USB memory stick to transfer exported logger data or to carry out a firmware update or to connect a computer mouse or keyboard.

Ethernet 10/100 MBit RJ45 Ethernet socket for a network connection **Cable glands** for mains connection, M-Bus and I/O cables

3 Order information

Item number	Description of the
WEBLOG250	M-Bus control centre for 250 end devices
GHZ TSH35-2	TH35 mounting rail bracket set for WebLog250 housing incl. screws
GHZ Lock	Cylinder lock for front cover WebLog250 housing incl. 2 keys
KA003	Mains cable 2m (German plug), internal
IWLAN	WLAN adapter, internally installed, with external antenna

4. Technical data

Operating voltage	110 to 240 VAC, 47 to 63 Hz
Power consumption	max. 100W
Temperature range	0 .. 45°C
M-Bus voltage	42 V (Mark)
M-Bus quiescent current	max. 375 mA
Overcurrent threshold	500 mA
Bus internal resistance	8 Ohm
Transmission rate	300 to 9600 baud
Galvanic isolation	available
Housing	Light grey ABS plastic, protection class IP52 H x W x D: 264 x 234 x 86 mm Wall mounting, optionally on top-hat rail (accessory: GHZ TSH35-2) Optional cylinder lock available (GHZ Lock)
LED status indicators	Front: Power, M-Bus, Event, Overcurrent M-Bus Terminal compartment: Power, communication master, slave, warning current, overcurrent M-Bus
CPU and memory	Integrated ARM-NXP i.MX 8M CPU (1.6GHz, Quad-Core) with 1GB RAM and 4GB eMMC Flash. The log database uses up to 750 MB of this.
Display	7" LED display with capacitive touch, 1024 x 600 pixels
Interfaces	10/100 Mbit Ethernet, USB host, USB device, RS232, **optional:** WLAN
Clamps	3 plug-in terminals for M-Bus, 3 plug-in terminals for relay outputs and 2 plug-in terminals for potential-free contacts, plug-in terminal for mains connection

The operation of the device via the touch display and the web interface is described in a separate manual, which is available for download on our homepage.