SOLVIMUS
METERING SOLUTIONS

DATA SHEET MUC500 M

1. Product

- MUC500 M 125, Art. No. 500410
- MUC500 M 250, Art. No. 500411
- MUC500 M 500, Art. No. 500405



2. Application

Data concentrator for readout of meters and data transmission to distant meter data management systems via Ethernet.

3. Interfaces

M-Bus

Compliant to EN 13757-2/-3/-7 (all M-Bus meters are compatible), max. number of unit loads (UL):

- 125 (MUC500 M 125, Art. No. 500410)
- 250 (MUC500 M 250, Art. No. 500411)
- 500 (MUC500 M 500, Art. No. 500405)

Baud rate: max. 9600 bps, screw terminals, primary, normal and reversed secondary search (wildcard search), automatic and direct creation of meters, transparent mode

Ethernet

Compliant to IEEE 802.3, 10/100-Base-TX, RJ45 connector incl. status LEDs, Auto-MDIX

Modbus

Readout of meters via Modbus TCP, compliant to IEC 61158, using the Ethernet interface

4. LED indicators

2 status LEDs and 3 LEDs signalling sending, receiving and collision/overload on the M-Bus

5. Software functions

The user interface of the software is available only in English.

As indicated for the firmware in the manal, update of the firmware via Ethernet incl. integrity check and authentication

Configuration

- Complete configuration via browser with HTTPS (HTTP possible) or SSH
- Creation of the meter list
- Mass deployment via HTTPS (HTTP possible) with Netdiscover
- Unequal readout intervals for meters
- Multi Channel Reporting with 10 independent Report instances
- Usage of OBIS codes
- Integrated OpenVPN client
- Extensive management of user access rights
- Configurable password directive
- Export and import of the configuration including certificate and key files
- Update via the web page (manually or semi-automatic via update server) or Netdiscover
- Print page for error analysis and documentation
- Extensive logging function

Data transmission to servers:

- TCP (unencrypted)
- TLS (encrypted)
- SMTP (encrypted and unencrypted)
- FTP (encrypted and unencrypted)
- MQTT (encrypted and unencrypted)
- Local file storage (local file)
- User-specific scripts, for instance with usage of cURL

Data transmission to clients:

- Modbus TCP[1]
- BACnet/IP or BACnet/SC[1]

File formats:

CSV (various variants), XML (various variants), JSON, user-specific formats (by transformation language XSLT)

6. Processing unit

The processing unit is a microprocessor system:

- CPU: ARM9 architecture, 454 MHz clock frequency
- Memory: 128 MB RAM, 4 GB internal eMMC Flash
- Operating system: Linux
- Integrated RTC: backed-up for up to 7 days

7. General properties

- Dimensions: 54 x 90 x 60 mm (W x H x D), 3 modules wide
- Installation: DIN rail 35 mm (IEC 60715), arbitrary orientation
- Mass: 150 g

8. Power supply

- 12..36 VDC, screw terminals
- Power consumption: 2 W (idle state), max. 40 W (MUC500 M 500)
- Peak inrush-current: ca. 4 A

9. Environmental conditions

- Operation: 0..50 °C (daily average); -20..70 °C (short-time)
- Transport and storage: -20..70 °C
- Air humidity: 0..95 %, non-condensing

10. Conformity and safety

- 2014/30/EU EMV Directive
- 2014/35/EU Low Voltage Directive
- 2011/65/EU RoHS Directive (incl. amendment 2015/863)
- Overvoltage protection (transient)
- Protection class III (IEC 61140)
- Degree of protection IP30 (IEC 60529)

11. Scope of delivery

- MUC500 M 125 (Art. No. 500410) or
  MUC500 M 250 (Art. No. 500411) or
  MUC500 M 500 (Art. No. 500405)
- Quick Start Guide (print, in the packaging)
- Individual packaging with solvimus logo
- Dimensions: 108 x 67 x 62 mm (W x H x D)

12. Contact

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Further contacts can be found on our website at:
https://www.solvimus.de/en/company/solvimus/

A comprehensive description of the device is provided in the manual that can be accessed via the Help button on the configuration website of the device and can be downloaded free of charge and without registration from our homepage:

https://www.solvimus.de/en/products/downloads-2/

Our Quick Start Guide is also available upon request.

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[1] Separate licence can be acquired.