SOLVIMUS
METERING SOLUTIONS

DATA SHEET MUC.EASY^{PLUS} NB

1. Product

MUC.easy^{plus} NB, Art. No. 500373



2. Application

Data concentrator for readout of meters and data transmission to distant meter data management systems via Ethernet or NB-IoT (narrowband mobile radio communication).

3. Interfaces

M-Bus

Compliant to EN 13757-2/-3/-7 (all M-Bus meters are compatible), max. 80 unit loads (UL), baud rate: max. 19200 bps, screw terminals, primary, normal and reversed secondary search (wildcard search), automatic and direct creation of meters, transparent mode

wM-Bus

Compliant to EN 13757-4/-3/-7 and OMS (modes: S, T, C, C/T), SMA connector for external antenna, frequency: 868 MHz, Listen mode (automatic creation of meters), transparent mode, handling of keys, decryption of meters

Ethernet

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

NB-IoT (WAN)

Mobile radio: NB-IoT modem, LTE Cat-M1/LTE Cat-NB1, SMA connector for external antenna, slot for mini SIM card, bands: LTE B1/B2/B3/B4(b)/B5/B8/B12/B13/B14(b)/B17(a)/B18/B19/B20/B25/B26/B27(b)/B28/B66; (a)=only Cat-NB1; (b)=only Cat-M1

RS-485

Compliant to EIA-485, up to 32 remote units, screw terminals, directly supported protocols: Modbus RTU, EN 62056-21, SML, transparent mode

Modbus

Readout of meters via Modbus TCP (using the Ethernet interface, compliant to IEC 61158) or Modbus RTU (using RS-485)

S0

Compliant to EN 62053-31, number: 3, screw terminals

Digital output

24 VDC, 50 mA, number: 1, screw terminals

4. LED indicators

3 LEDs signalling power supply, status, activity and 2 LEDs for WAN information: Link, Mode

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: 72 x 91 x 61 mm (W x H x D, without antenna sockets), 4 modules wide
- Installation: DIN rail 35 mm (IEC 60715), arbitrary orientation
- Mass: 185 g

8. Power supply

- 90..260 VAC, 50..60 Hz, screw terminals
- Power consumption: 2 W (idle state), max. 10 W
- Peak inrush-current: <40 A
- Galvanic isolation of interfaces and mains: >3 kV

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

- 2014/53/EU Radio Equipment Directive
- 2011/65/EU RoHS Directive (incl. amendment 2015/863)
- Overvoltage category III (EN 60664-1)
- Protection class II (IEC 61140)
- Degree of protection IP30 (IEC 60529)
- Recommended backup fuse for circuit protection: circuit breaker 6 A or 10 A, tripping characteristic B

11. Scope of delivery

- MUC.easy^{plus} NB
- 1 antenna for wM-Bus
- 1 antenna for NB-IoT
- Quick Start Guide (print, in the packaging)
- Individual packaging with solvimus logo
- Dimensions: 150 x 77 x 140 mm (W x H x D)

12. Contact

solvimus GmbH
Ratsteichstr. 5
98693 Ilmenau
Germany
Phone: +49 3677 7613060
E-Mail: info@solvimus.de
www.solvimus.de

Sales:

Phone: +49 3677 7613066
E-Mail: sales@solvimus.de

Support:

Phone: +49 3677 7613065
E-Mail: support@solvimus.de

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.