

ZDUE-DC-MUC

Power line data concentrator for meter reading transmission via GPRS

Benefits:

- Standardisation and future prove of investment. Compliant with:
 - MUC performance specs (FNN)
 - IPT Protocol (E-DIN 43863-4)
 - SML specifications
 - OMS wireless M-Bus
- Complied challenges of the EnWG §40
- Maximum safety and data protection
- Flexible integration of meters (Power, Gas, Water, Heat)
- Efficient coverage of households in the centre of area
- Approved and scaleable solution with infrastructure for IP-Telemetry
- Easy installation
- Not subject to legislation on calibration

Key Features:

- Data concentrator for up to 300 MUC controller via PLC (Renesas DCSK), AES-encryption
- WAN-communication via GPRS or connection on a DSL-Router, TCP/IP based
- Interface for wireless M-Bus and EDL21 meter (optional)
- Software platform of Linux Base
- Remote firmware update
- Time server function
- Operating status signaling via LED
- Mounts on top hat rail in installation cabinet



The ZDUE-DC-MUC from Dr. Neuhaus Telekommunikation GmbH enables multi-line wireless remote data reading of domestic supply meters via GPRS. The various consumption values for electricity, gas, water and heat are connected locally in the ZDUE-PLC-MUC and automatically transmitted via PLC to the ZDUE-DC-MUC (data concentrator). This bundles the communication for multiple ZDUE-DC-MUCs to one or more headquarters.

The establishment or restoration of communication takes place entirely independently. The device is configured by the headquarters.

The ZDUE-DC-MUC is designed for the requirements of a large-area installation. Only the cable connections have to be created for the local installation.

The ZDUE-DC-MUC is state-of-the-art in the field of automatic measurement data recording for private customers via open networks.

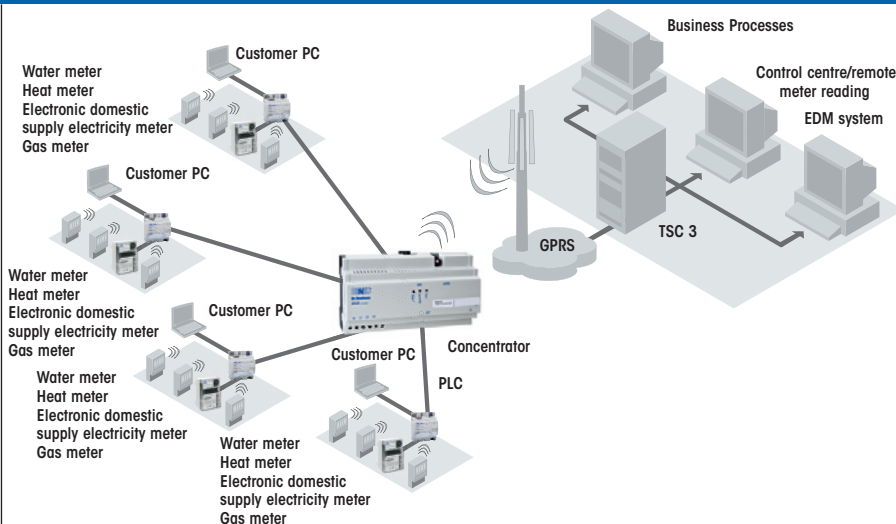


Dr. Neuhaus

System components

- Device: ZDUE-PLC-MUC
- Device: ZDUE-DC-MUC
- Meter: SMARTY ix-130 or others (vide meter list)
- Software: TAINY SwitchingCenter
- Software: SMARTY m.Center

Topology



Technical data

INTERFACE

Interface to elec. supply meter (optional)	RS232 – RJ10(jack) visual scanning unit connection for elec. supply meter: Speed: 1,200 to 115,200 baud (adjustable) data format:Adjustable;
Wireless M-Bus (optional)	Wireless M-Bus: S mode,T mode; bidirectional communication; meter and sensor connection;
Service interface	Ethernet - interface 10/100-Base-T as RJ45; auto crossover; communication:TCP/IP; provision of consumption data
Power supply	Device input voltage: 230 VAC + - 10% (single-phase connection, spring terminals), Fn 50 Hz; power consumption: 4 watt (typical), 9.6 watt (peak); PLC three-phase

FUNCTIONALITY

Configuration	OBIS-T key data; local: customer interface via SML; remote: WAN interface via SML; automated establishment of communication paths: Sensors for MUC controller, MUC controller for headquarters; firmware upgrade per remote; via remote; operating status signalling via LED
Clock	Real time clock: 48h power reserve; time synchronisation via PLC
Monitoring	Malfunction report to the headquarters, communication logbook incl. status reports
Meter readings	Periodic forwarding of the meter reading to the headquarters

RADIO

Connection	GPRS: Class 10, up to 2 uplinks / up to 4 downlinks, max. 5 slots; coding processes: CS-1, CS-2, CS-3, CS-4;
Transmission power	Quad band GSM 850/ 900/1800/1900 MHz;
Antenna port	GSM: Normal impedance: 50 Ohm; jack: Fakra D, pluggable; Wireless M-BUS: Normal impedance: 50 Ohm; jack: Fakra C, pluggable;

APPROVALS

Environmental Conditions	Operation -20 °C to +55 °C; air humidity 0-95 %, non-condensing; storage: -20 °C to +80 °C
Inspection/approval eHZ performance specs – FNN; SyM2 requirement specs -	– Conformity: MUC-C-Papier – MUC Work Group of the BDEW / FNN www.m-u-c.org; OMC (Open Metering Communication) Work Group OpenMetering AG1 and AG2 www.knx.org; SML specifications - www.sym2.org; eHZ performance specs – FNN; SyM2 requirement specs – www.sym2.org; M-Bus Standards Wireless M-Bus; IP-T DIN Work Group AK461.0.14 - Description IP-T - OBIS-T – CE conformity: EN50065-1 (Cenelec A); Electromagnetic Compatibility (1995/5/EC): EN 55022 Class B, EN 55024, EN 61036, ETSE EN 301 489-1 & -7; Electrical Safety (73/23/EEC): EN 60950

MECHANICS

Mechanics	Housing: Standard switching cabinet housing for mounting the top hat rail, IP20, ignitability according to UL94-V0, dimensions: approx. 160 x 60 x 90 mm (L x W x H); weight: approx. 180 g; SIM card accessible from the exterior, sealable opening, SIM card can only be exchanged once the MUC has been deinstalled; operational securing via mounting behind sealed cover in switching cabinet
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MISCELLANEOUS

Accessories	Antennas: GSM, wireless M-Bus
Scope of delivery	Device
Order number	ZDUE-DC-MUC, item no.: 817208

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