

ZDUE-PLC-MUC

MUC controller for remote supply meter reading via PLC

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)
- Easy local integration with house automation, display, etc.
- Approved and scaleable solution with infrastructure for IP-Telemetry
- Easy installation
- Not subject to legislation on calibration

Key Features:

- RS232 interface, alternative RS485
- EDL21 meter (eHZ v1.02, eHZ v1.03, three-point; via optical probe), 1107-meter
- Radio interface (wireless M-Bus, S & T mode) with AES-128-encryption
- WAN-communication via PLC at data concentrator (Renesas DCSK)
- Software platform of Linux Base
- Remote firmware update
- Time server function
- Two Ethernet interfaces
- Switching output
- Operating status signaling via LED
- Mounts on top hat rail in installation cabinet



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

The meters can be connected to the ZDUE-PLC-MUC by wire (RS232) as well as via short-range radio (optional). The establishment or restoration of communication takes place entirely independently. The device is configured by the headquarters. Direct access to the measurement values by the supplier's end customer is also possible.

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

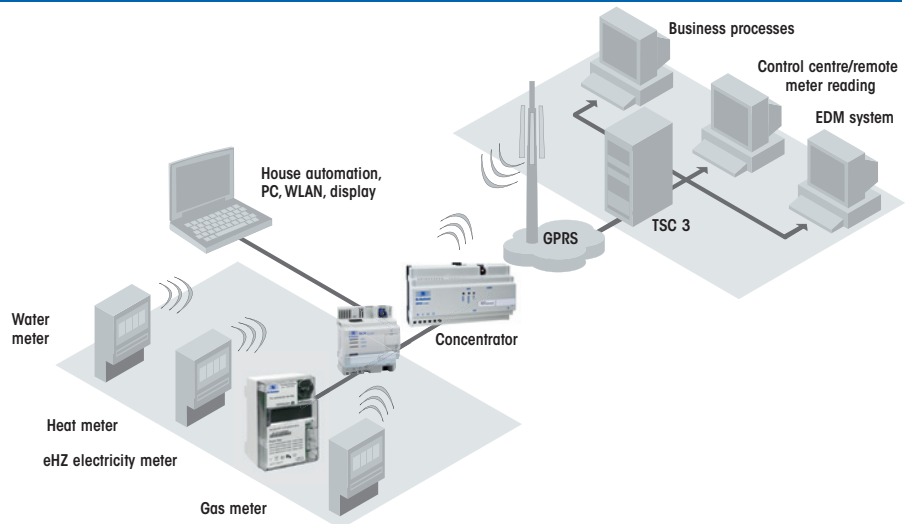


Dr. Neuhaus

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	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;
SyM² interface	SyM ² interface as RJ45 in accordance with SyM ² specification; communication with measurement devices, sensors and actuators (such as breakers)
Customer 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: 2.9 watt (typical), 4.2 watt (peak)
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, no parameterisation to the measurement point necessary; firmware upgrade per remote; via remote; operating status signalling via LED; service sensor
Clock	Real time clock: 48h power reserve; time synchronisation via PLC
Remote shutdown	Switching output / relay: Remote shutdown and connection (incl. security routines), connection via spring terminals; I/O for TSD
Monitoring	Malfunction report to the headquarters: Communication meters & MUC controller interrupted, meter malfunction reports; communication logbook incl status reports
Meter readings	Periodic forwarding of the meter reading to the data concentrator ZDUE-DC-MUC; controlled operation for billing and balancing; smart grid; load profile creation: Only in the measurement device, recording interval in MUC controller (gas, electricity, heat) flexible configurable
RADIO	
Connection	Renesas DCSK; robust / extremely robust mode; single phase
Antenna port	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	- 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; 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, IP2x, ignitability according to UL94-V0, dimensions: approx. 70 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 (applies to all elements except the customer interface, service sensor & LED)
MISCELLANEOUS	
Accessories	Antennas: Wireless M-Bus
Scope of delivery	Device
Order number	ZDUE-PLC-MUC, item no.: 817109

Subject to technical modification. All data are based on manufacturer's specifications. No guarantee or liability for incorrect entries or omissions. All deliveries and services are provided by Dr. Neuhaus Telekommunikation GmbH on the basis of the "General Terms and Conditions" in the current version. All product names are trademarks of their respective owners. Dr. Neuhaus Telekommunikation GmbH 08/2012, Doc.-No.: 8171Q011 Rev. 1.4

