Smart data concentrator

Smart Metering can be easy and intuitive: the data concentrators of the MUC.easyplus series in a compact design, with various meter interfaces and an intuitive and flexible operating software facilitate the automatic acquisition of consumption and load profiles in your property. Real plug'n'play saves your time and effort.

Integral functionality

The MUC.easyplus serves as a powerful data concentrator. It reads out data autonomously from sensors and utility meters for all types of media. The incoming data is processed, stored and provided automatically. The MUC.easyplus comes with an M-Bus, wM-Bus and a RS-485 interface. M-Bus and wM-Bus are implemented according to EN 13757. The wired master can deal with up to 80 unit loads on the bus. The wM-Bus receiver supports the OMS-specification. The RS-485 interface can be used directly for i.e. IEC 62056-21 (61107) protocol or other meters or measurement systems. Other serial protocols are also available.

The integrated software for meter reading is very comprehensive. All types of meters on the market which are compliant to EN 13757 can be read out without extensive configuration. The values, their units and meta data are interpreted automatically and are available at the MUC.easyplus.

Your automated metering system can be connected via the integrated Ethernet interface, alternatively also via LTE (4G) or NB-IoT. You have the choice.

Compact design

The very compact design and the power of the MUC.easyplus are unique and one of its strengths. With a modular width of only 4 units, it fits in almost every switching cabinet. The power supply is already included.

Smart data management

The MUC.easyplus supports different XML data formats. So, it is compatible to many systems for automated meter reading (AMR) and energy data management

(EDM). It is also possible to generate CSV data, the most general data format to exchange data between different systems.

For data bases and cloud connectivity a JSON format is at your disposal. The export interface has been extended by a scripting system. This allows the customer to use a versatile tool to individualize the data export even more and to make it more flexible.

The MUC.easyplus uses services like TCP, HTTPS, FTPS, SFTP, MQTT or email communication for transferring the data to a remote system and can be secured by VPN if necessary. An access for requesting the log data can still be done via FTP(S). The devices come with 4 GB memory for local data storage.

The MUC.easyplus has a so-called system meter, which offers monitoring or logging system states like M-Bus load, S0-states or the device temperature in addition to the meter values. For a better fault analysis, the time of the last readout is visualized. With the MUC.easyplus, an index column now provides a quick overview of the amount of parameterized / configured meters.
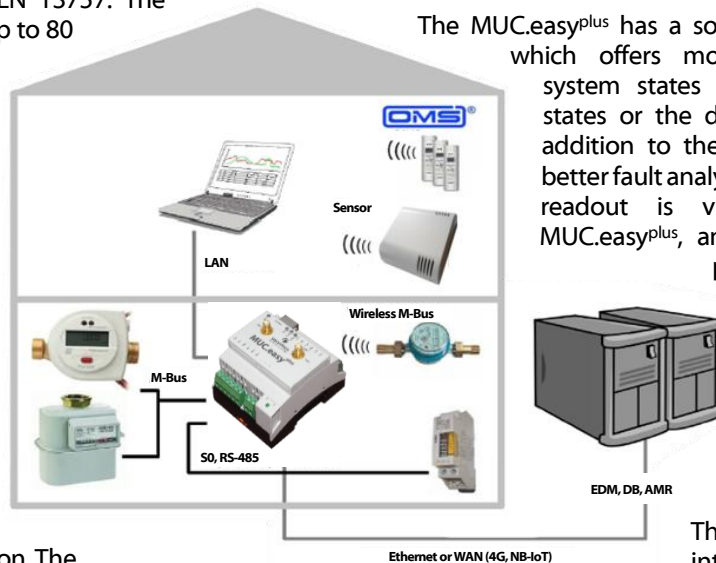

Easy operation

The MUC.easyplus has an integrated web server. This offers the possibility to configure the whole device by simply using a common web browser. There is no need for additional software.

The intuitive and clear navigation on the website enables a fast set-up of the devices even without profound previous knowledge. Usually, the standard configuration as supplied to the customer is sufficient to read out the meters and the sensors for gathering the data.

The website also facilitates service and maintenance of the MUC.easyplus. There is status information available, like warnings for communication errors. It also eases remote access.

Access rights to this website can be set for different users. This allows customization or role-based views and also meets demands regarding privacy.

We are also offering customization of this website. So, additional functions can be integrated into the MUC.easy^{plus} depending on your needs.

Transparent mode

The transparent mode enables the direct access to the M-Bus meters to parameterize them. For example, it is possible to set the primary address or the baud rate remotely from the PC.

MUC.easy^{plus} goes NB-IoT

NB-IoT is a mobile narrowband technology specifically geared towards applications in the "Internet of Things" (IoT). With their scalability and the cost-effective stable communication, they are perfect for smart metering applications.

Whereas the common mobile network provides a high data rate in short time and low latency, the focus is reversed in the narrowband technology. Small amounts of data are transmitted, and this only rarely. This results

in a very good (10 times superior) network coverage at low power demand. The building penetration is very high. Thus, data can also be transmitted via NB-IoT in hard-to-reach premises like basements.

The quantity of connected devices per network cell is far larger in NB-IoT than in broadband LTE. Addressing of up to 50,000 participants is feasible. NB-IoT is a good alternative especially in densely populated areas with LTE networks already under full capacity.

Further, the transmission costs are low because less data are sent in general. Most providers offer "smaller packets" at lower cost.

Essentials:

Radio penetration is key in basements or utility rooms characterized by poor radio pickup and which are often void of networks.

Ideal is our MUC.easy^{plus} with NB-IoT as NB-IoT offers a significantly better signal reception. What is more, high data rates are not required for consumption data as no large amounts of data need to be transmitted. A better range and accessibility are more important.

Variants

MUC.easy^{plus}	Standard	4G	NB-IoT
Article number (with 868 MHz)	500361	500367	500373
Integrated power supply for 230 VAC	x	x	x
M-Bus	x	x	x
wM-Bus, preselect on order: 169/433/868 MHz for S-, T-, C-, C/T- mode	x	x	x
S0 inputs	3	3	3
RS-485	x	x	x
Ethernet	x	x	x
Modem	-	4G, 2G/3G fallback	NB-IoT
Digital output	1	1	1
Magnet mount antennas supplied	1	2	2
Option	Software extension: Modbus TCP, BACnet/IP or BACnet/SC, wM-Bus slave, load profile		

You can find the vast software functionalities on the information sheet: "Overview of the software features for our data concentrators (data loggers) and gateways".