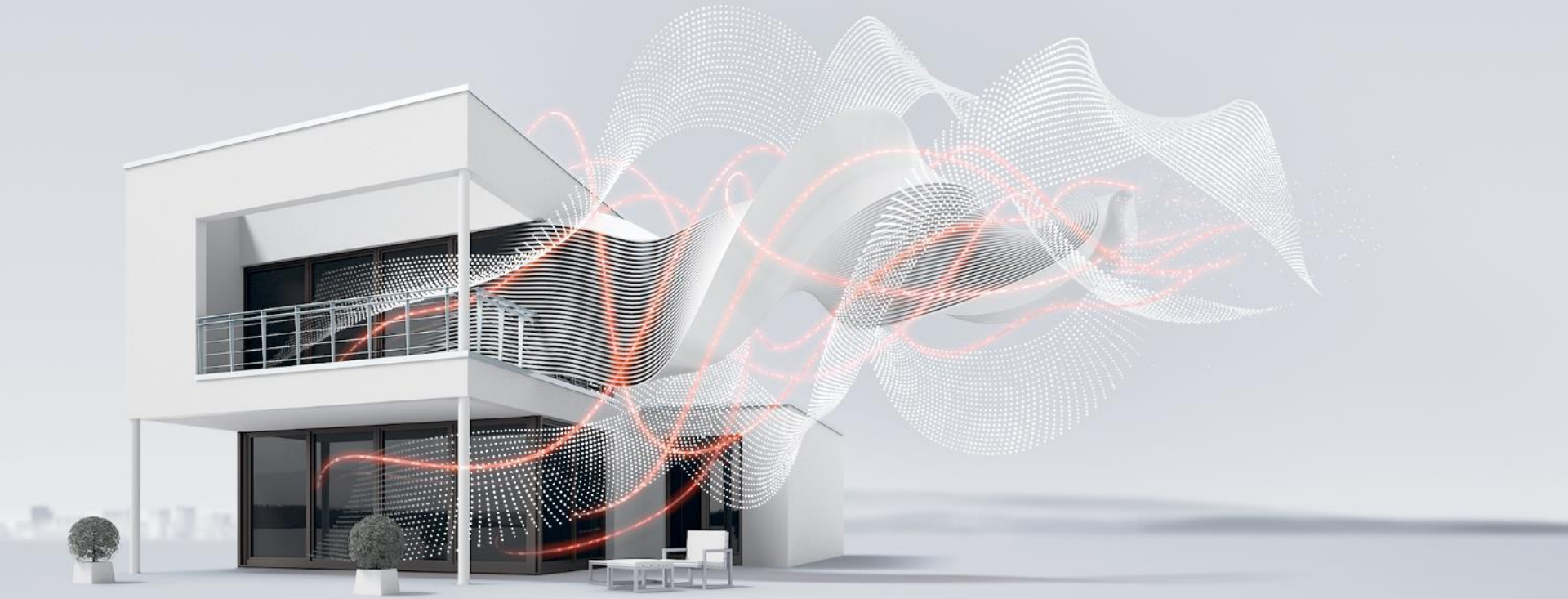


HEIDELBERG, OCTOBER 2017

Webinar Energy Analyzer QA/S 3.x.1

ABB EQmatic

Global Application and Solution Team

Agenda

Introduction

Commissioning

– Connecting to the device and commissioning wizard
– “Management” main menu
– “System” main menu
– “Dashboard” main menu
– “Analytics” main menu

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

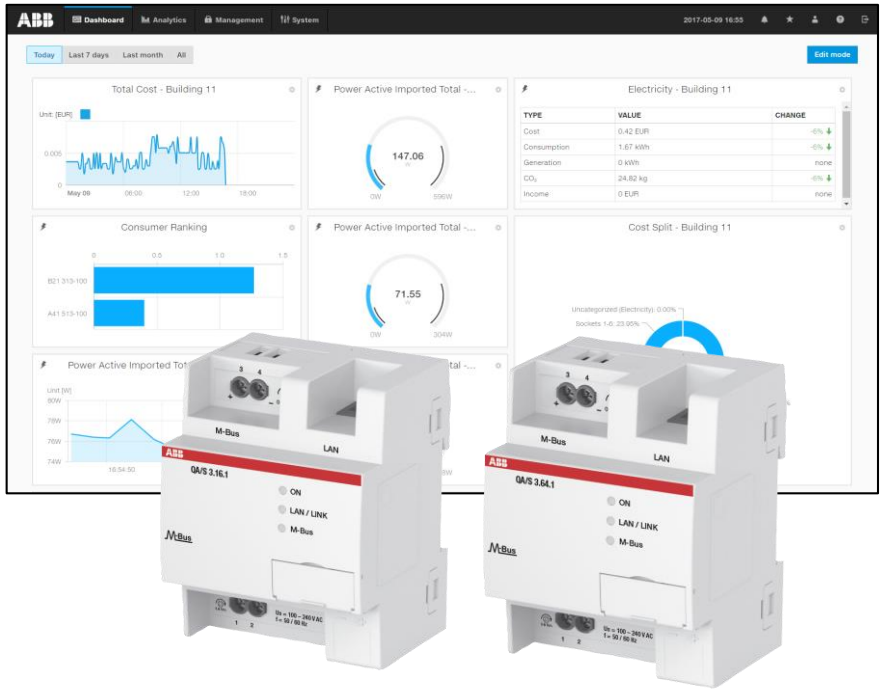
Energy measurement

The recording of energy variables and values, as well as their processing, is continually gaining in significance

This is not just due to the rising energy costs but also due to the frequently demanded evaluation and reading possibilities via a decentralized reading station

The features of the EQmatic series help to meet these requirements and can provide operators and users with convenient, cost-effective solutions for modern energy management

ABB offers a wide range of devices and solutions specially designed for these applications



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

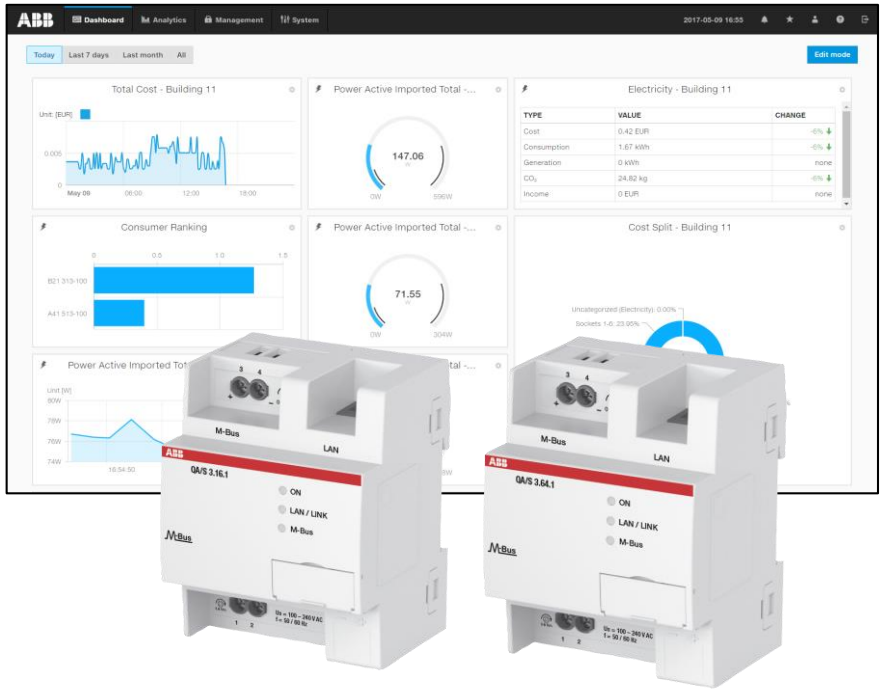
EQmatic

EQmatic series devices are compact modular installation devices designed to monitor and display consumption and measured values

They log and store consumption data for electricity, gas, water or heat meters

This means that they can help those operating purpose-built premises or commercial buildings (offices, hotels, schools, public buildings) to implement energy management systems such as ISO 50001 or to put in place low-voltage installations compliant with VDE 0100-801

As a result, they make building energy flows and costs transparent



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

Device technology

ABB EQmatic collects data from M-Bus meters and saves them locally in the device database

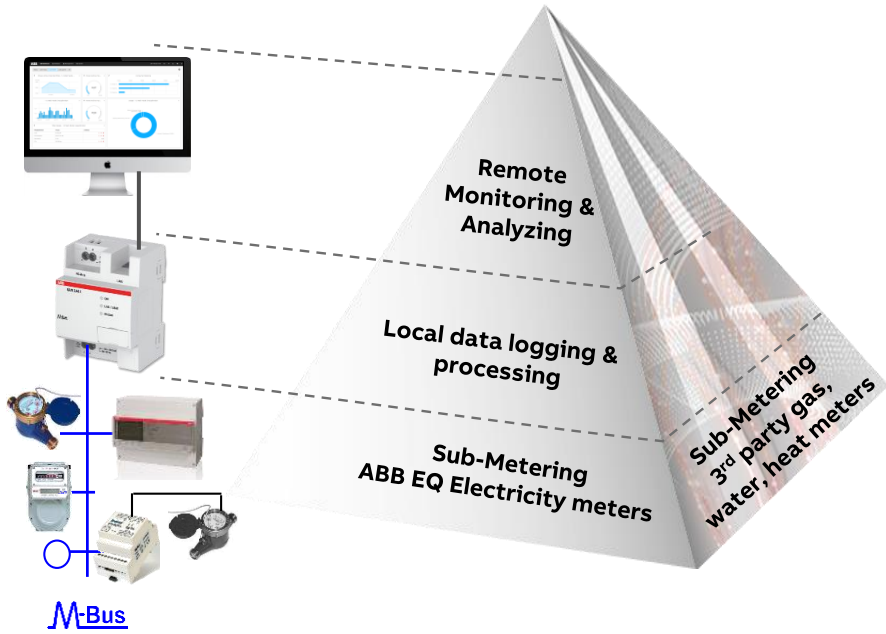
They are compact, web-based standalone devices for energy management applications in M-Bus networks

They log, store, display and analyze consumption data for up to 16 or 64 electricity, gas, water or heat meters

They automatically detect ABB A and B series energy meters during commissioning

Other M-Bus meters or M-Bus pulse adapters must be manually configured and added to the system

They are accessed via web browser (integrated web server)



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

A, B and C series ABB energy meters

The ABB EQ energy meters are designed as intermediate meters and offer a wide range of functions for countless applications

The meters are available in various variants: Meters for single- or three-phase measurement, as well as meters for direct connection or transformer rated

The energy meters are optionally available with integral serial interfaces for M-Bus or Modbus RTU (RS-485)

The ABB A and B series energy meters are automatically detected and configured during configuration

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

Device technology – software

- Display and evaluation of historical consumption and measured data via configurable charts
- Cost and consumption analysis for media such as electricity, water, heat and gas
- Display of CO_2 emission and Energy Performance Indicator (EnPI)
- Storage of metering data from up to 64 meters for at least 3 years
- Data export to xls, csv, pdf, etc.
- User addition and administration functions (simultaneous access for up to 10 users)
- Notifications/alarms when connected meters fail

QA/S 3.16.1

QA/S 3.64.1

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Overview

Device technology – hardware

- Modular installation device (MDRC)
- Mounting width: 4 space units
- Display elements (LEDs)
- LAN connection
- Auxiliary voltage 100…240 V AC
- M-Bus master to DIN EN 13757-2
- Max. number of connectable M-Bus devices
  - QA/S 3.16.1: 16 meters (slaves)
  - QA/S 3.64.1: 64 meters (slaves)

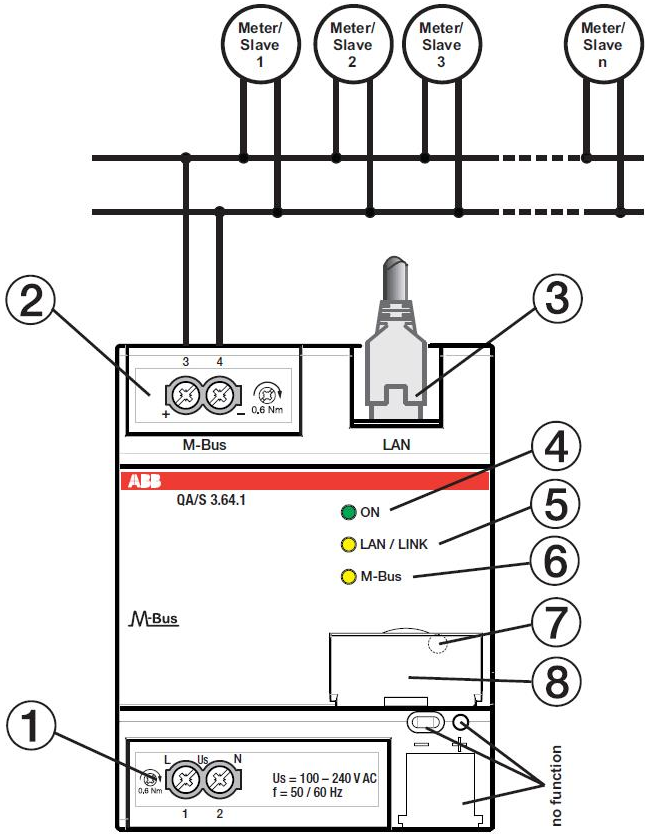
QA/S 3.16.1

QA/S 3.64.1

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Hardware – connection diagram

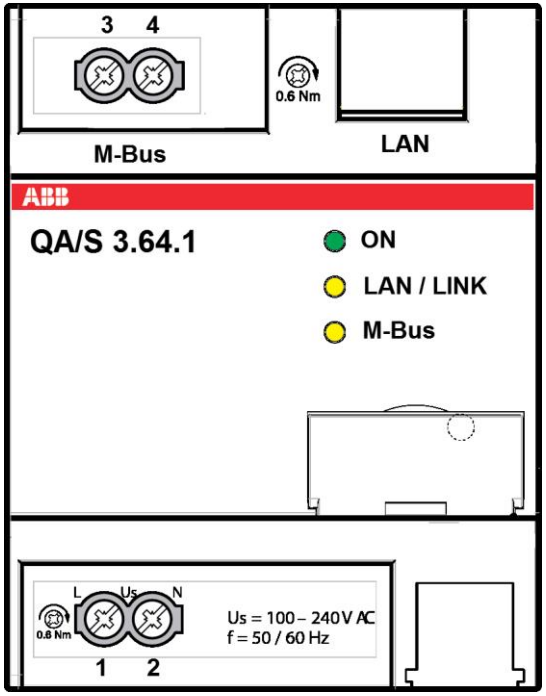
1	Power supply connection U_s
2	M-Bus slave/meter connection
3	Ethernet/LAN connection
4	ON LED (green)
5	LAN/LINK LED (yellow)
6	M-Bus LED (yellow)
7	Reset button (behind label carrier)
8	Label carrier



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Display elements

LED	Function	Description
ON	ON	Operating system initialization process complete. Supply voltage on. The device is ready for operation.
	OFF	No supply voltage during operating system initialization process.
	Flashing (1 Hz)	During initialization.
	FLASHING (3 Hz)	Resetting network settings and restarting the device
	FLASHING (10 Hz)	Factory reset; internal error.
LAN/Link	OFF	No supply voltage. No network connection.
	FLASHING	Network connection OK. Telegram traffic.
M-Bus	ON	Supply voltage OK, device ready for operation and M-Bus connected.
	OFF	No supply voltage. M-Bus disconnected.
	FLASHING (1 Hz)	Scanning process for M-Bus devices.
	FLASHING (3 Hz)	Resetting network settings and restarting the device.
	FLASHING (10 Hz)	Resetting to factory settings.



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

User interface

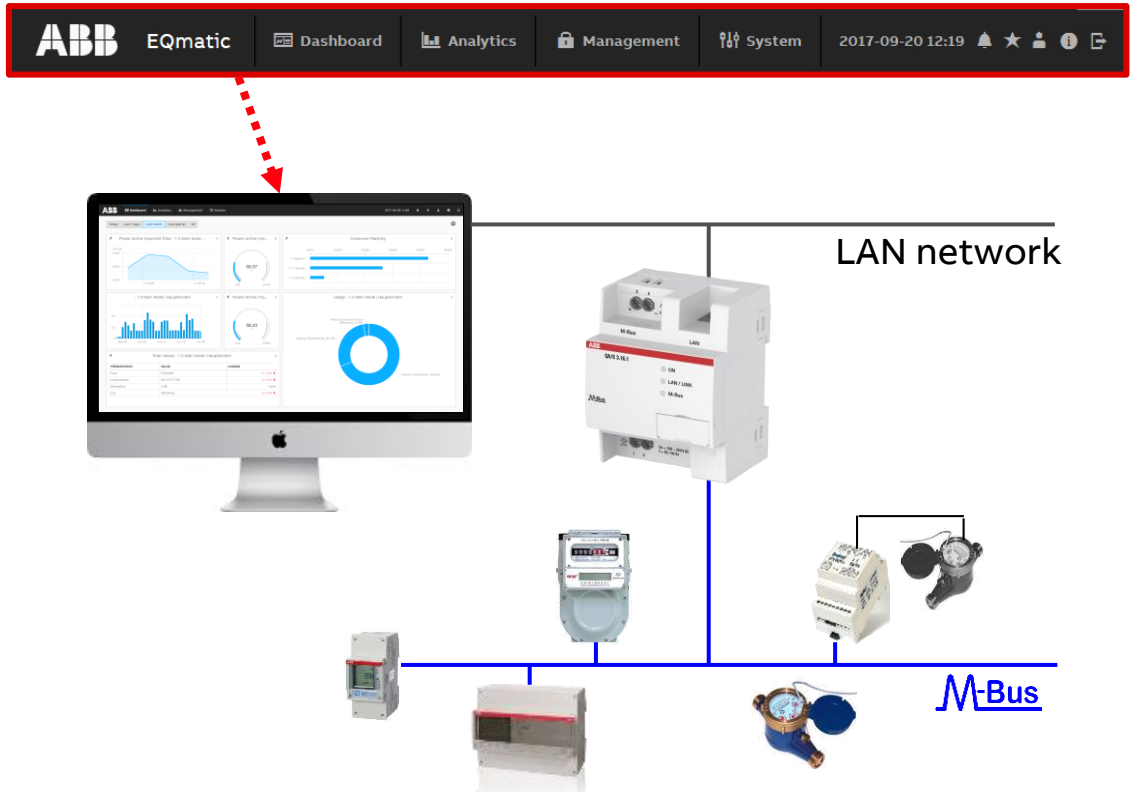
Main menu

The device has a user interface for commissioning and operating purposes

To access the user interface there must be an IP connection to the device

The user interface offers

- A configurable dashboard
- Graphical analysis functions (historical data, benchmark - period, instantaneous values, …)
- Management
- System settings



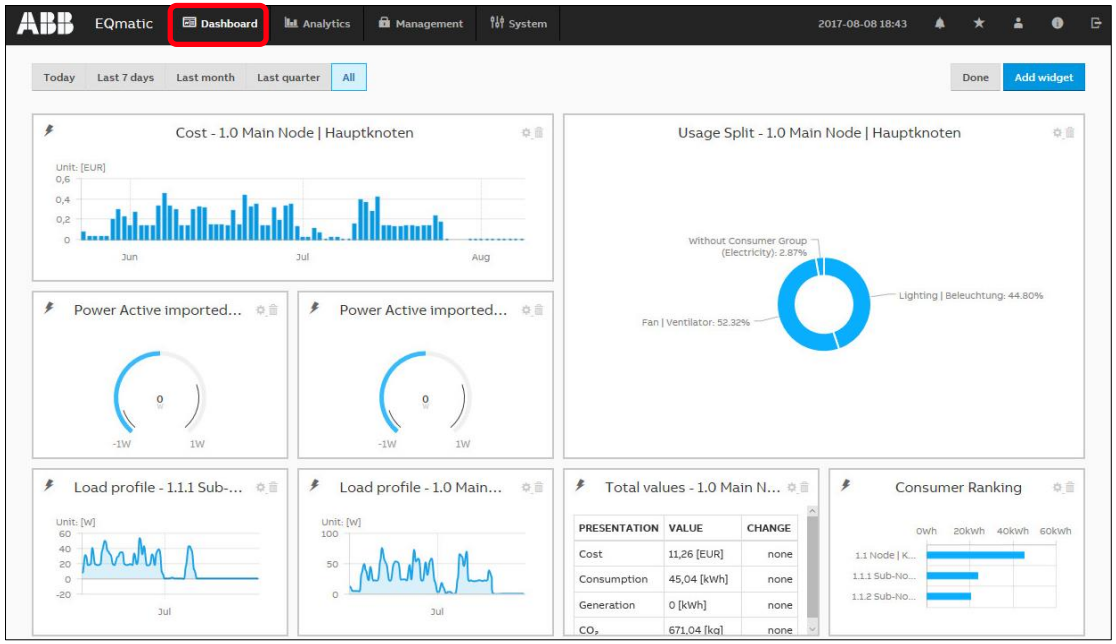
Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

Dashboard

The dashboard provides a rapid overview of costs and consumers in the building

In the dashboard you can configure user-defined views using widgets (graphical display elements)

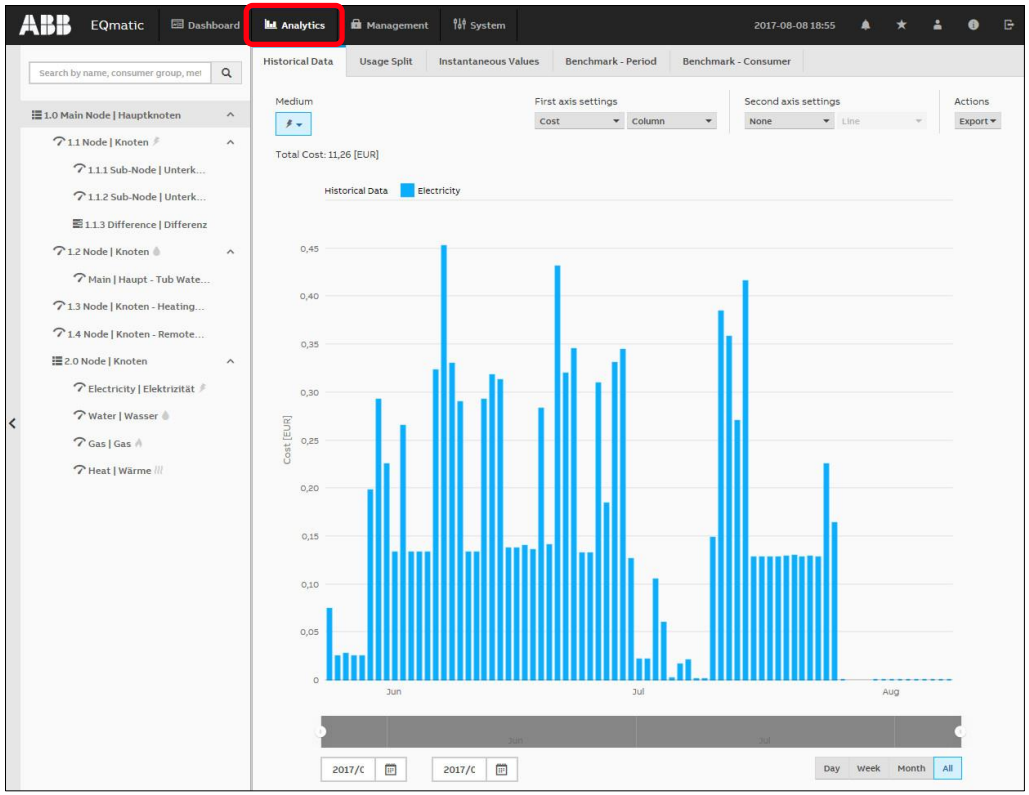


Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

Analytics – Historical Data

For analysis and display of historical measured data



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

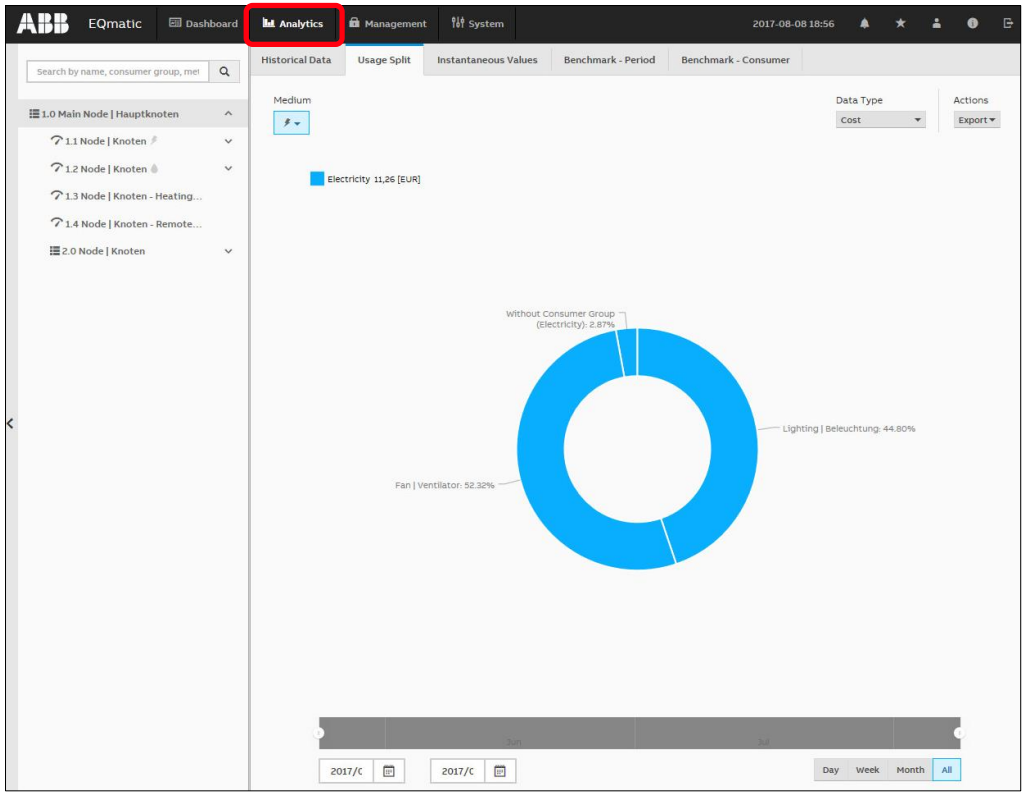
Analytics – Usage

For analysis and display of

- Cost
- Consumption
- Generation
- Rebate
- …

per medium or consumer group

- Lighting
- Cooling
- Ventilation
- …



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

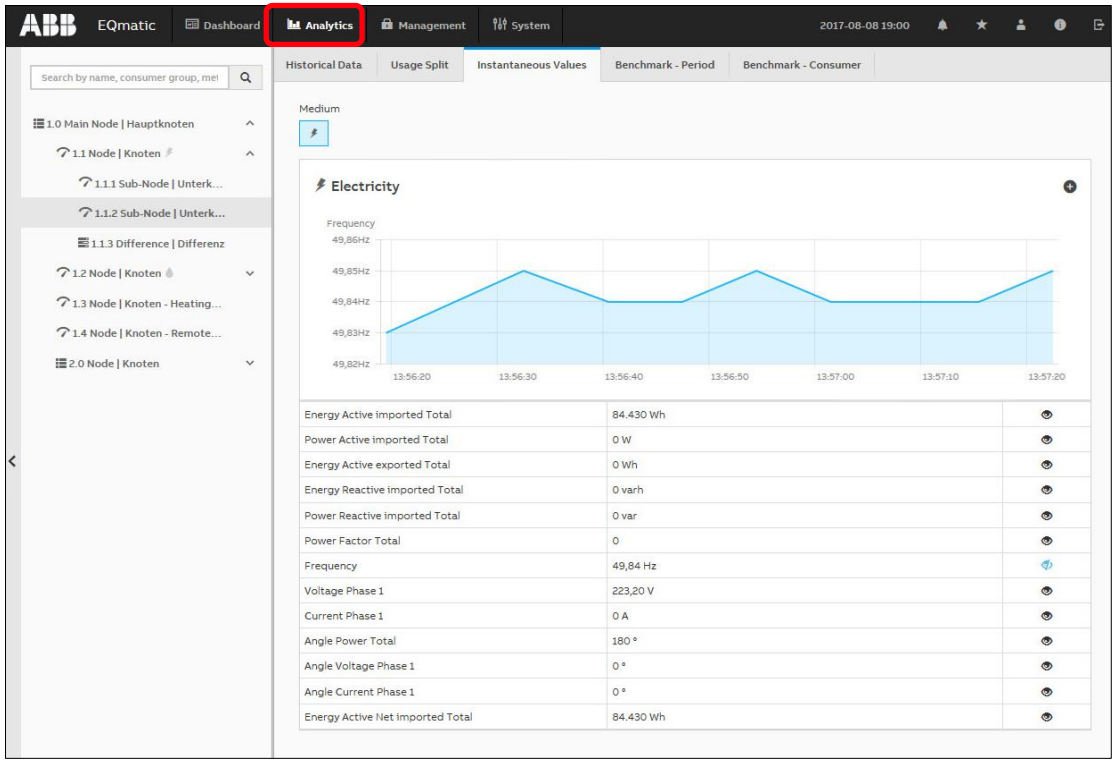
Main menu

Analytics – Instantaneous Values

This function displays the instantaneous value of a single data point in real time

The desired metering point or meter must first be selected in the metering structure

Depending on the meter's scope of functions, various data points are available for display

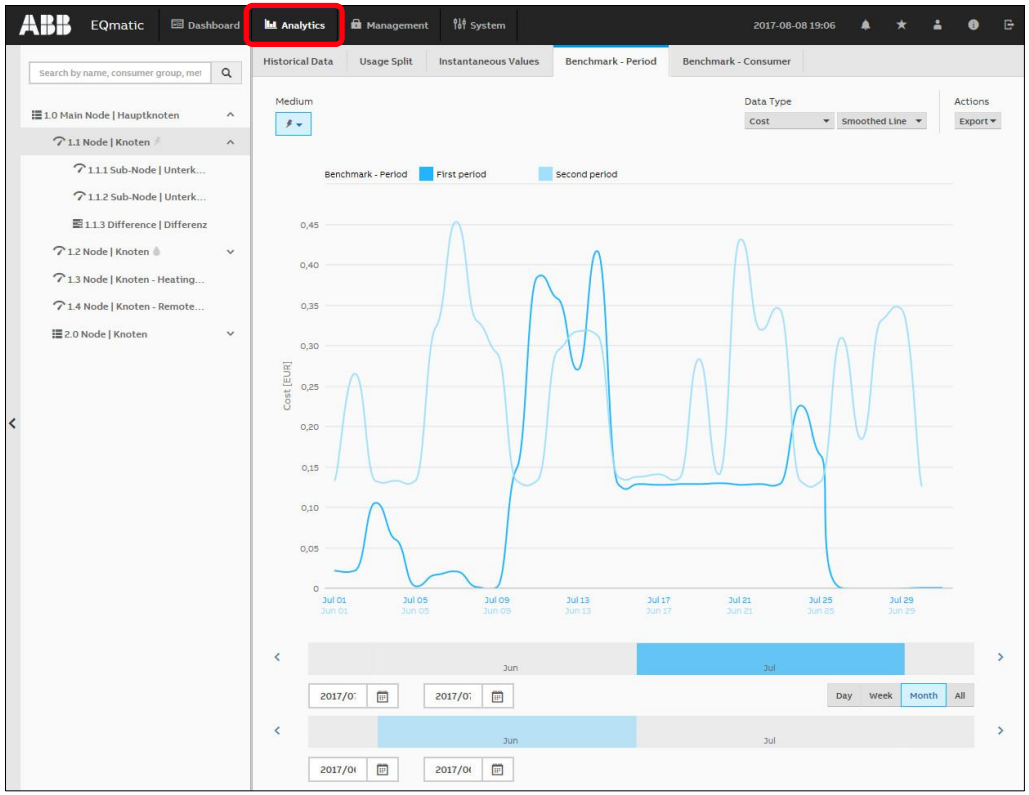


Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

Analytics – Benchmark - Period

To compare a consumer or node referred to two periods (e.g. current month and previous month)

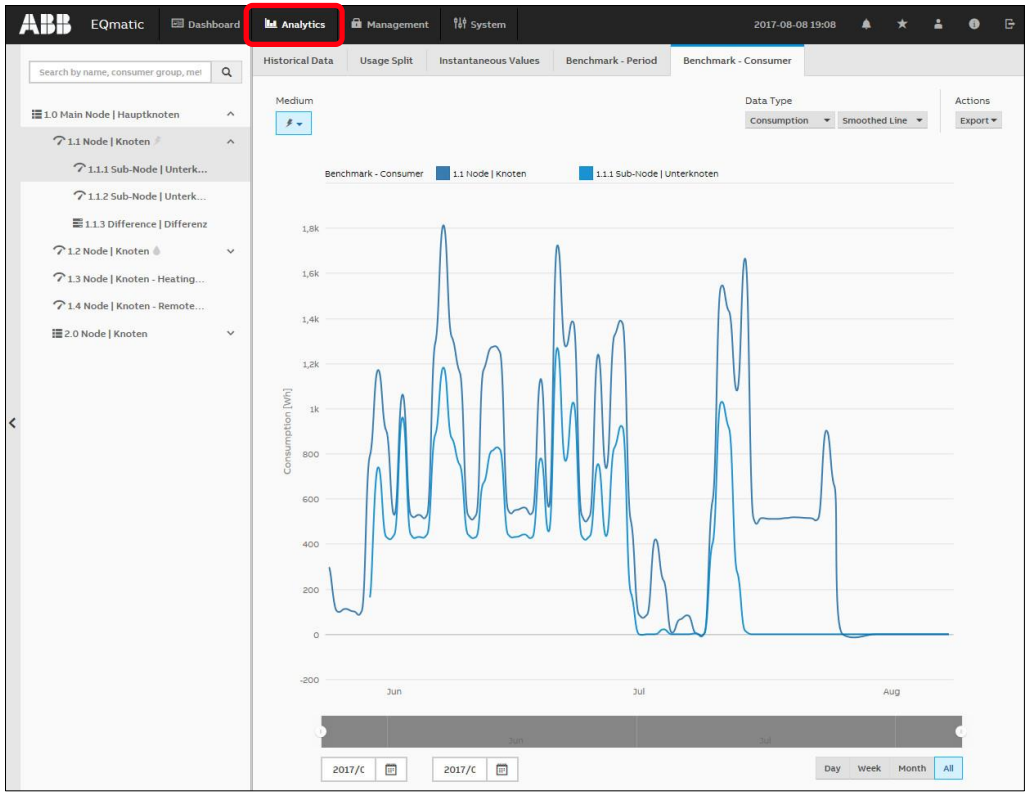


Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

Analytics – Benchmark - Consumer

To compare up to five consumers or nodes referred to a period



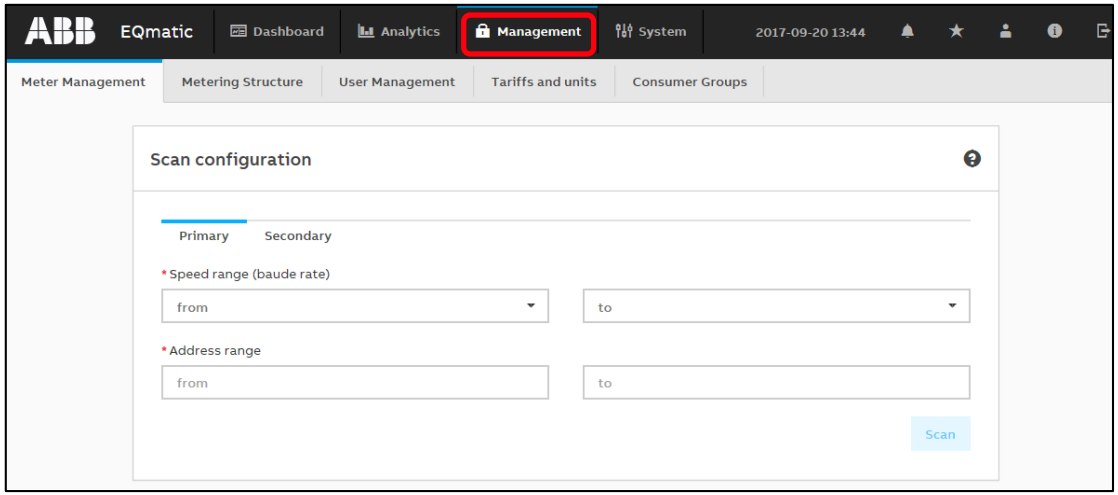
Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

Management

The Management menu can be used to make settings

- M-Bus device configuration
- Metering structure set-up
- User administration
- Tariff and unit settings
- Consumer group set-up



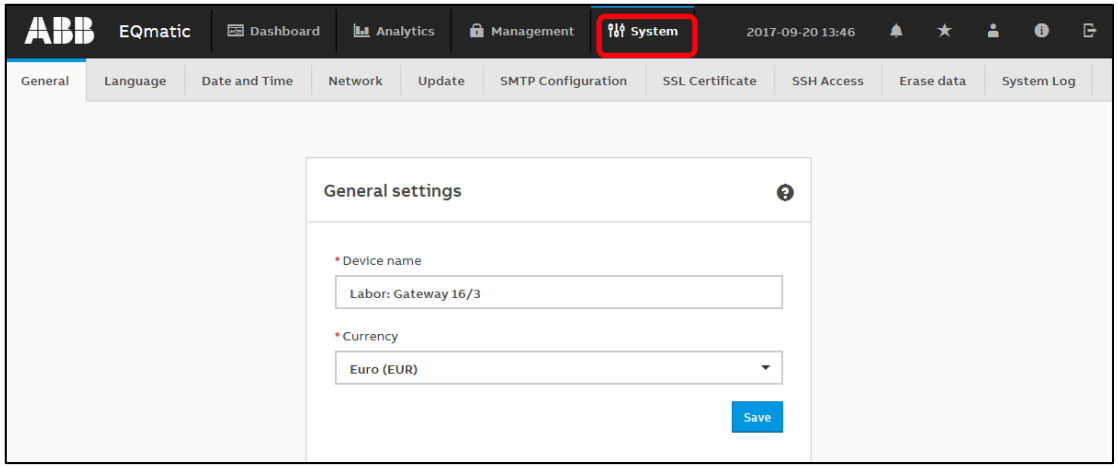
Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Main menu

System Settings

Basic settings are made in the system settings

- General Settings
- Language Settings
- Date and Time
- Network Settings
- Update
- SMTP Configuration
- SSL Certificate
- SSH Access
- Factory Settings
- System Log

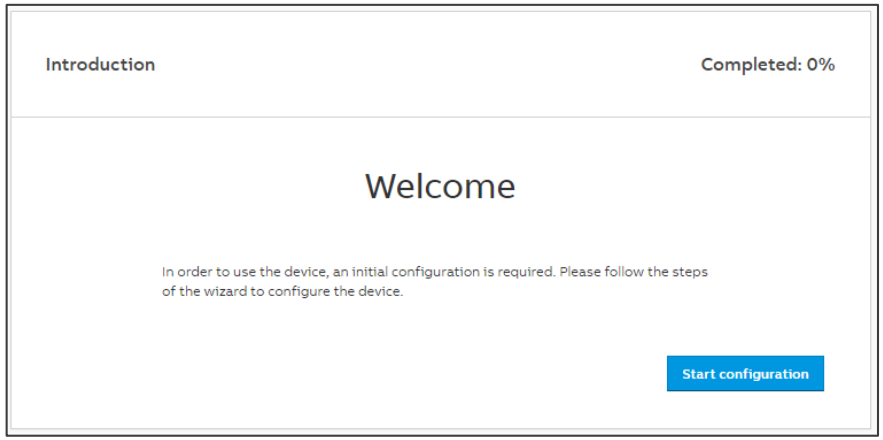


Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Commissioning Wizard

Once a connection to a **new** device is established, the commissioning wizard starts for the first time.

It guides the user through the steps and basic settings required for initial commissioning



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

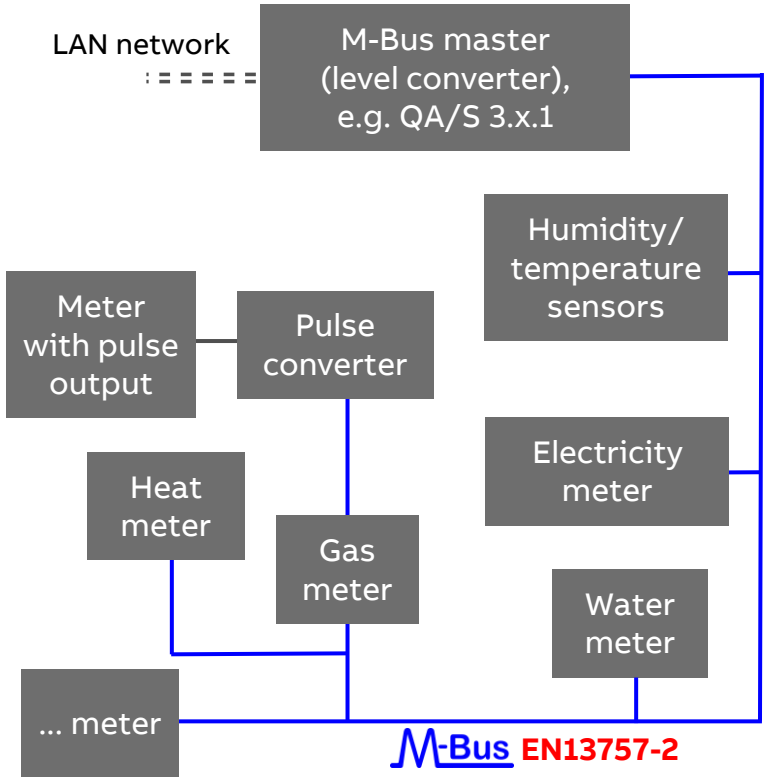
M-Bus

M-Bus (Meter-Bus) is a technical standard (EN 13757-2), applying its rules, e.g. in electricity meters, allows the electricity consumption to be transmitted as measured data

The gas, heat or water consumption can also be measured and transmitted by meters with M-Bus

The special feature here is remote reading, which involves additional connected devices transmitting their collected data over the Internet or the mobile telecommunications network. This can eliminate the need for humans to read the meters

Source: WIKIPEDIA



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

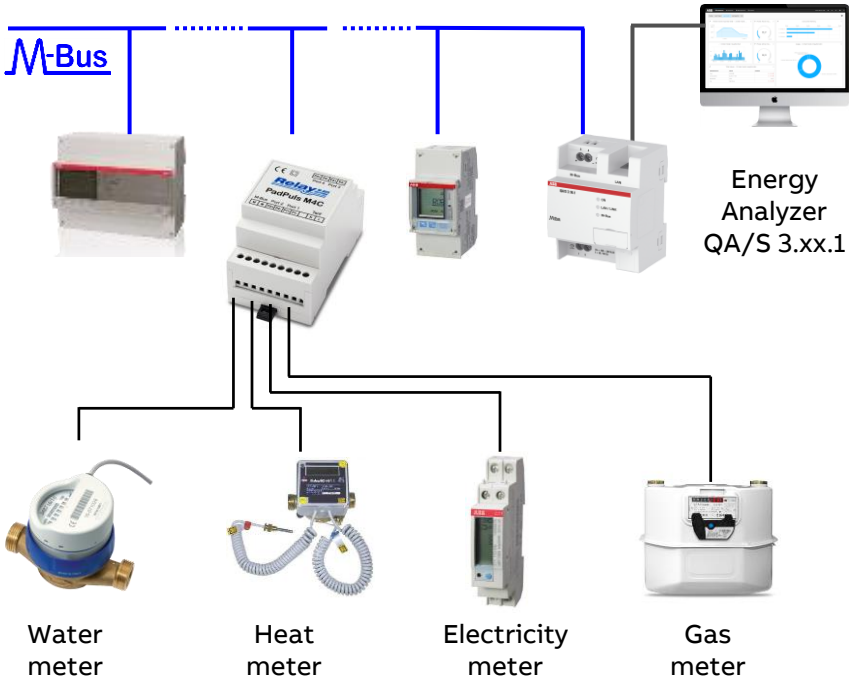
M-Bus pulse adapter

A pulse adapter is used to adapt consumption measuring devices, e.g. electricity, gas or water meters, to the M-Bus system

The measuring devices must feature a floating pulse output or a mounted pulse module for sensing

Pulse adapters with different numbers of channels are available as rail-mounted devices and in surface mounted enclosures, etc.

Configuration (primary address, medium, unit, …) is performed using a programming adapter and software



Meter with pulse output or pulse module for scanning

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Device overview

	QA/S 3.16.1	QA/S 3.64.1
Design	Modular installation device (MDRC) Pro M design	Modular installation device (MDRC) Pro M design
Order code	2CDG 110 226 R0011	2CDG 110 227 R0011
List price	699.- €	1,199.- €
Launch	available	available

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Product documentation

Product Manual

Technical datasheet

Installation and operating instructions

…

Training & Qualification Database

- Presentation slides
- Webinar slides
- Webinar recording (English)
  (MP4 file on YouTube)

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Technical documents

www.abb.com/KNX
→ Product category
→ Energy management
→ QA/S 3.xx.1 Energy Analyzer

- Product Manual
- Technical datasheet
- Installation and operating instructions
- Specification Text
- Product information
- Presentation slides
- CE declaration of conformity
- • •

Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Commissioning requirements

A PC/laptop with web browser

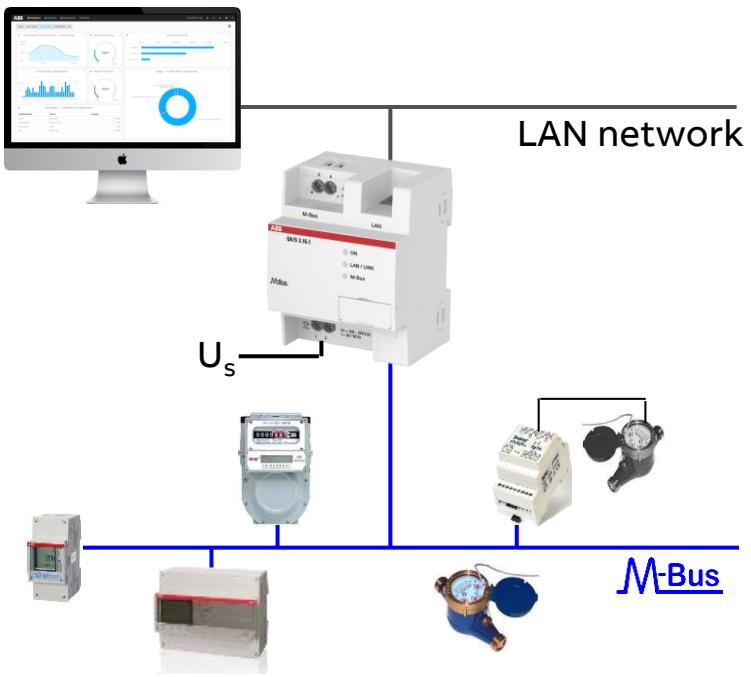
The QA/S is ready for operation, and a LAN connection is established

The PC/laptop and the QA/S are in the same IP network

The meters are operating and connected to the M-Bus terminal on the QA/S

The M-Bus devices are connected and configured according to manufacturer's instructions (e.g. baud rate, primary address)

M-Bus devices comply with the current M-Bus standard



Energy Analyzer M-Bus QA/S 3.16.1 and QA/S 3.64.1

Connecting to the Energy Analyzer

Access via the ABB i-bus® Tool

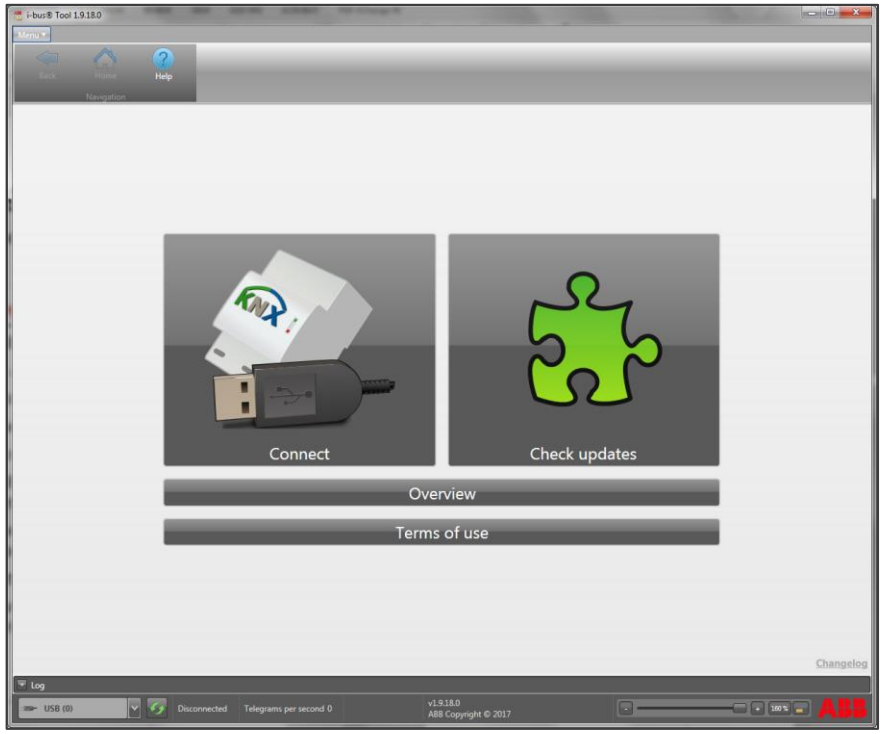
The ABB i-bus® Tool is free software that provides help with commissioning

The device can be accessed with the ABB i-bus® Tool during initial commissioning

IP address assignment in the QA/S is set to automatic addressing (DHCP/autoIP) at the factory, and the IP address can be read with the ABB i-bus® Tool

Download the ABB i-bus® Tool and install it on the Windows PC/laptop

Download link: www.abb.com/knx



Webinar “EQmatic Energy Analyzer M-Bus QA/S 3.xx.1”

KNX Certified Training

Certified KNX Courses in Heidelberg

– Tutor Course 09th to 13th October

And many more training courses in the calendar “International Training Dates 2017”

Webinar “EQmatic Energy Analyzer M-Bus QA/S 3.xx.1”

Next Webinar

New ABB i-bus® KNX devices

Wednesday 22nd November 2017

- Morning 09:00 am Europe Time (Berlin, UTC + 1h)
- Afternoon 03:00 pm Europe Time (Berlin, UTC + 1h)

Blind/ Roller Shutter Actuator with Binary Inputs JRA/S 6.230.3.1

Air Quality Sensor with RTC LGS/A 1.2

Time Receiver GPS TR/A 1.1

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