kamstrup

USB Meter Reader

For reading Kamstrup consumption meters

- Reading system for reading Kamstrup MULTICAL® meters via M-Bus and wireless M-Bus Mode C1, 434 MHz radio as well as flowIQ® water meters via radio
- Commissioning time of only 15 minutes
- Up to 4000 meters in one system
- Configurable import and export formats

CE

Application

Kamstrup USB Meter Reader is used for fast and easy reading of Kamstrup consumption meters. USB Meter Reader can read meters with both wired and wireless communication.

The PC program is downloaded from Kamstrup's homepage and is easy to install on a PC with Windows 10 operating system.

Radio reading

In its simplest form, a reading system consists of meters provided with one of the following communication options:
Wireless M-Bus, Kamstrup two-way radio version 1.0 as well as all flowIQ® water meters with built-in radio transmitter.

In relation to reading, one or more USB Meter Reader units and a PC program are used.

The individual meter is automatically created in the PC program either by means of a meter file which the PC program retrieves via the internet on Kamstrup's server or by importing or entering the required information.

If the system includes many meters or more than one USB Meter Reader, the meters can be grouped and linked to a specific USB Meter Reader. The meter list is transferred to USB Meter Reader when it is connected to the PC or wirelessly when it is connected to a USB power supply.

If more than one USB Meter Reader is used, it will be an advantage to have one USB Meter Reader permanently mounted in the PC. In this way, meter lists and reading data are exchanged wirelessly between each USB Meter Reader and the PC program.

The wireless data exchange is carried out fast and automatically. In order to save current, USB Meter Reader has a built-in movement sensor which switches it off automatically when not in motion or when all meters have been read.

Reading of meters

USB Meter Reader is connected to a USB power source, e.g. Kamstrup Power Pack, and is briefly moved. A green and an orange LED inform you about the current reading status.

Wired M-Bus reading

In its simplest form, a wired M-Bus system consists of MULTICAL® meters with M-Bus communication interface, Kamstrup M-Bus Master MultiPort 250 and a PC program for reading.

Each meter is created in the PC program either by entering the meter number or by importing a meter file, e.g. from a billing program. Likewise, any installation address can be entered or imported. The meters can be grouped and linked to a specific M-Bus master.

Reading of meters

When a meter is created and the M-Bus master is connected to the PC, the meter can be read immediately. It is not necessary to search for the meter via an M-Bus scanning or to determine the communication speed; the PC program automatically ensures this.

It is possible to connect up to 250 meters to M-Bus Master MultiPort 250, and it is possible to connect up to 32 M-Bus masters. As the PC program reads all connected masters at the same time, an unprecedented reading speed is achieved.

Reading of wired M-Bus must be activated through a license.

The PC program

Handling meter data

In the PC program, you can choose between viewing the data of one individual meter or of all meters in a total view.

Data can be exported in XLS format to spreadsheet programs, in CSV format to billing programs or to a file in PDF format. Furthermore, data can be sent to a printer.

Update

USB Meter Reader can be updated with new functionality via the PC program and is thus prepared for e.g. future meter types and new functions.

Program extensions

For the USB Meter Reader program, a number of program extensions with further functionality can be purchased.

Number of meters in the system

By default, the system contains up to 800 meters, but by using flexible program extensions, the system can be upgraded to contain 1600, 2400, 3200 or 4000 meters.

Configurable import and export formats

With this program extension, it is possible to configure import and export formats.

With the configurable import format, master data such as customer addresses can be imported and connected with the meter numbers, thus making manual entry of addresses unnecessary. With the configurable export format, individual formats can be configured, and with the flexible user interface, the data export can be limited to contain e.g. only heat meters, only water meters or only meters with info codes.

Configuration of Radio Link Repeater

With this program extension, it is possible to configure Radio Link Repeater* which is used as a "wireless antenna" for Kamstrup's hand-held solutions where it increases the range for difficultly accessible meters such as well meters and thus eases the mobile reading. Is used together with meters with Wireless M-Bus.

Reading of meters with wired M-Bus

This is used for reading meters with wired M-Bus via M-Bus Master MultiPort 250D/L. The master must be connected via its RS-232 or its USB connection. As communication form, secondary addressing is used.

* Not available in all countries

Technical data

System specifications for wireless reading

Number of meters on each USB Meter Reader:

– with internal antenna	200
– for external antenna	4000
Data export	XLS, CSV, DFF, PDF
Data security	Up to 128-bit Advanced Encryption Standard
Software update	Via Kamstrup web

Variants, USB Meter Reader	Frequencies	Standards / Approvals
With internal antenna	434,42 MHz	Kamstrup RF Version 1.0
With internal antenna	868,95 MHz	EN 13757, CE
For external antenna	868,95 MHz	EN 13757, CE
For external antenna	865,50 MHz	India, GSR 564 E
For external antenna	915,00 MHz	USA, FCC Part 15.247
For external antenna	923,00 MHz	Australia, New Zealand, AS/NZS 4268:2012

USB

USB Meter Reader	Dimensions LxWxD	Weight	Operating temperature range
	79 x 23 x 14 mm	15 g	-10 to +60 °C
	84 x 23 x 14 mm	15 g	-10 to +60 °C 14 to 140 °F

Technical data

Supported meter types

Wireless M-Bus and one-way radio	Two-way radio	Wired M-Bus
flowIQ® 21xx	MC Compact	MC 302 - Integrated M-Bus
flowIQ® 31xx	MC 401	MC 402 M-Bus modules:
MC 21 with Wireless M-Bus Mode C1	MC 402	- 402020
MC 61 with Wireless M-Bus Mode C1	MC III	- 402021
MC 62 with Wireless M-Bus Mode C1	MC 66	MC 403 – all M-Bus modules
MC 302 with Wireless M-Bus Mode C1	MC 601	MC 61/62/601/602/801
MC 402 with Wireless M-Bus Mode C1	MC 602	M-Bus modules:
MC 403 with Wireless M-Bus Mode C1	MC 801	- 670020
MC 601 with Wireless M-Bus Mode C1	MC 41	- 670027
MC 602 with Wireless M-Bus Mode C1	MC 61	- 6707
MC 801 with Wireless M-Bus Mode C1	MC 62	MC 602 M-Bus module:
	Kamstrup 162 with KM RF ver. 1.0	- 670028
	Kamstrup 382 with KM RF ver. 1.0	
	Kamstrup 351 with KM RF ver. 1.0	

Registers which can be read from meters with wired and wireless M-Bus

For more detailed information, please refer to the data sheets of the respective products.

Registers which can be read from water, heat and cooling meters with 434 MHz radio module

Energy display in kWh, MWh and GJ

Current data	Monthly data	Yearly data
Heat energy E1	Heat energy E1	Heat energy E1
Cooling energy E3	Cooling energy E3	Cooling energy E3
Energy E8 (m^3 x T1)	Volume V1	Volume V1
Energy E9 (m^3 x T2)	Pulse input A	Pulse input A
Volume V1	Pulse input B	Pulse input B
Pulse input A	Date	Date
Pulse input B		
Info		
Operating hour counter		
Date		

Note: In the PC program, you can select between monthly or yearly data.
Some meter types do not support all the shown registers.

Technical data

Registers which can be read from electricity meters with 434 MHz radio module with country code 319

	K162/282/382	K162/282/382 (B, C, D, E)	K162/282/382 (K, L, M)	K351	K251/351 (A)	K251/351 (B)	K251/351 (C)
Active energy – A+	✓	✓	✓	✓	✓	✓	✓
Active energy – A+ / T1	✓	✓	✓	✓	✓	✓	✓
Active energy – A+ / T2	✓	✓	✓	✓	✓	✓	✓
Active energy – A+ / T3	-	✓	-	-	-	✓	-
Active energy – A+ / T4	-	✓	-	-	-	✓	-
Active energy – A-	-	✓	✓	-	-	✓	✓
Active energy – A- / T1	-	✓	-	-	-	✓	-
Active energy – A- / T2	-	✓	-	-	-	✓	-
Active energy – A- / T3	-	✓	-	-	-	✓	-
Active energy – A- / T4	-	✓	-	-	-	✓	-
Reactive energy – R+	-	✓	✓	-	✓	✓	✓
Reactive energy – R-	-	✓	✓	-	-	✓	✓
Active max power – P+ max	-	-	✓	-	-	-	✓
Date of P+ max	-	✓	✓	✓	✓	✓	✓
Hour counter	✓	✓	✓	✓	✓	✓	✓
Debit log – A+	-	-	✓	-	-	-	✓
Debit log – A+ / T1	-	-	✓	-	-	-	✓
Debit log – A+ / T2	-	-	✓	-	-	-	✓
Debit log – A-	-	-	✓	-	-	-	✓
Debit log – R+	-	-	✓	-	-	-	✓
Debit log – R-	-	-	✓	-	-	-	✓
Debit log - Max power	-	-	✓	-	-	-	✓
Debit log – Time of max power	-	-	✓	-	-	-	✓
Debit log – Date of max power	-	-	✓	-	-	-	✓
Status log – Status	-	-	✓	-	-	-	✓
Status log – Time of status	-	-	✓	-	-	-	✓
Event log - Voltage event	-	-	✓	-	-	-	✓
Event log – Time of event	-	-	✓	-	-	-	✓

Note: Some meter types do not support all the shown registers.

Accessories

External antenna for "drive-by"

Amplification	3 dB
Weight	300 g
Height	33.2-36.0 cm (incl. magnet foot)
Diameter	ø6 cm
Cable length	3.5 m

Stubby antenna for "walk-by"

Amplification	0 dB
Weight	5 g
Height	4.2 cm
Diameter	ø1.2 cm

Power Pack

Output voltage	5 V
Battery	2200 mAh lithium ion
Micro USB charging cable	60 cm
Height	9.8 cm
Diameter	2 cm
Weight	70 g
Operating temperature range	10 to 40 °C, 50 to 104 °F

System specifications for wired M-Bus

M-Bus master	Kamstrup M-Bus Master MultiPort 250D/L
Connection	Via USB or RS-232 cable
Max number of meters on each M-Bus master	250
Max number of connected masters	32 (via USB hub)

Computer requirements

Windows® 10 – 32 bit and 64 bit

Ordering details

USB Meter Reader, 434 MHz

USB-010000	USB Meter Reader with internal antenna
USB-010100	USB Meter Reader with internal antenna incl. battery package

USB Meter Reader for Wireless M-Bus Mode C1, 868 MHz

USB-030000	USB Meter Reader with internal antenna
USB-030100	USB Meter Reader with internal antenna incl. battery package
USB-040000	USB Meter Reader for external antenna
USB-040100	USB Meter Reader for external antenna incl. battery package
USB-042000	USB Meter Reader with external antenna
USB-042100	USB Meter Reader with external antenna and battery package
USB-046000	USB Meter Reader with stubby antenna
USB-046100	USB Meter Reader with stubby antenna and battery package

USB Meter Reader, 915 MHz (USA)

USB-054000	USB Meter Reader with stubby antenna
USB-054100	USB Meter Reader with stubby antenna and battery package
USB-053000	USB Meter Reader with external antenna
USB-053100	USB Meter Reader with external antenna and battery package

USB Meter Reader, 865 MHz (India)

USB-066000	USB Meter Reader with stubby antenna
USB-066100	USB Meter Reader with stubby antenna and battery package
USB-062000	USB Meter Reader with external antenna
USB-062100	USB Meter Reader with external antenna and battery package

USB Meter Reader, 923 MHz (Australia, New Zealand)

USB-076000	USB Meter Reader with stubby antenna
USB-076100	USB Meter Reader with stubby antenna and battery package
USB-072000	USB Meter Reader with external antenna
USB-072100	USB Meter Reader with external antenna and battery package

PC program

USB-PCSW0020	Licence for reading of up to 1,600 metering points
USB-PCSW0030	Licence for reading of up to 2,400 metering points
USB-PCSW0040	Licence for reading of up to 3,200 metering points
USB-PCSW0050	Licence for reading of up to 4,000 metering points
USB-PCSW0060	Licence for advanced import/export
USB-PCSW0080	Licence for configuration of Radio Link Repeater (868 MHz)
USB-PCSW0090	Licence for reading of M-Bus Master

M-Bus Master

MBM-M200000	M-Bus Master MultiPort 250L
MBM-M210000	M-Bus Master MultiPort 250D
6699-336	USB cable, 145 cm