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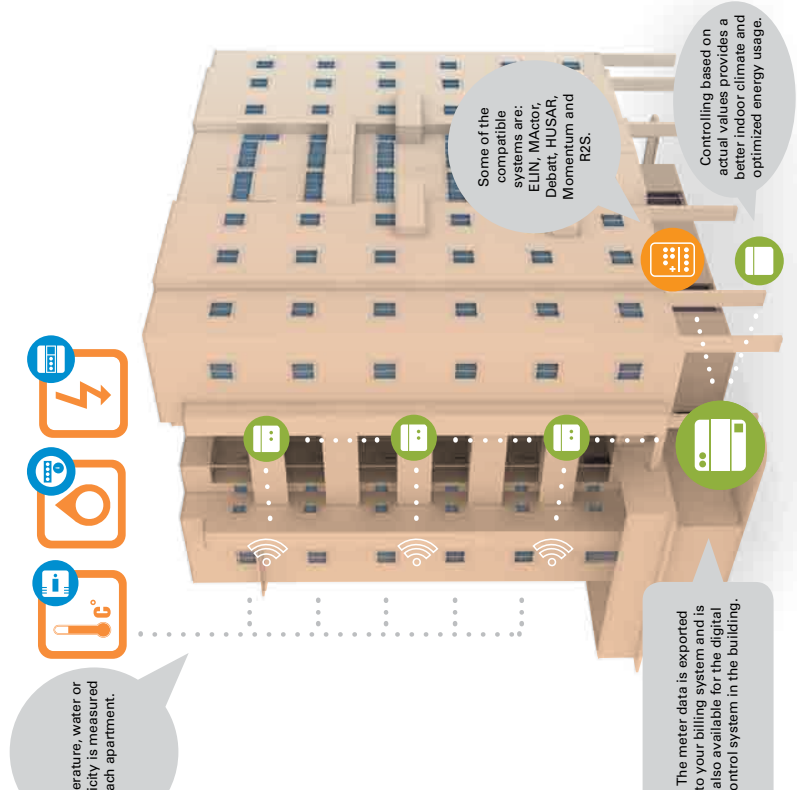
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Manufacturer and independent supplier of communication equipment and action, processing and presentation of metering data. We deliver high quality products for reading of electricity meters, heat meters, water meters and other meter following the M-Bus standard protocol.

Elvaco provides

all flexible products that are certified and tested for long lasting and maintenance-free operation in any type of M-Bus meter in your project.

cost-effective solutions without committing to a specific provider. Technical competence of communication solutions and product development. Equipment for quality-conscious energy and real estate companies.



the field without special tools, point-to-point communication from the meter and masters with the ability to sense loss.



District heating companies

Elvaco delivers a complete solution for remote reading of district heating and cooling. Our collaboration with manufacturers and integration of GPRS masters deliver provide a cost effective alternative as well as an efficient reading process. With our monitoring function, we deliver error messages from the meter directly to the customer or e-mail.



Gas companies

Elvaco offers a complete system for measuring of gas. We supply meter values to be used for billing and pulse meters for gas can be read.



Water industries

Elvaco delivers complete systems for measuring of water in industries and real estates. All types of M-Bus meter for water can be read.



Real estate companies

Elvaco offers a complete solution for measuring of temperature and temperature in real estates. We have the ingredients for metering project, whether it is in submetering or remote temperature.



Other industries

Elvaco's products for remote reading offer a wide range of possibilities. For example, our products are used for charging stations, solar power and climate control.

high quality meters for electricity, water, heat and temperature. We
one of the largest meter manufacturers to provide flexible and cost-
s to meet all customer needs.

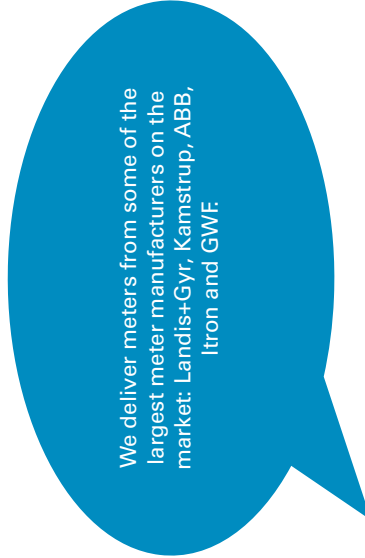
erature and heat

ature temperature sensors designed to
climate of a property. We also deliver heat
various sizes from some of the largest meter
ers on the market.

lectricity

vide range of electricity meters from our
cover all needs in electricity metering.

meters for cold and hot water in various
rough our partners, we offer vane wheel
umetric meters and ultrasonic meters for all



ased and only have positive experiences from our collaboration with
ts, such as engineering, installation, education, support and operation
' well."

ty and energy engineer, Bostads AB VätterHem

ivaco develops and manufactures temperature and humidity sensors for indoor and outdoor use. The products allow you to easily and cost-effectively control your property based on actual indoor climate. This provides a better indoor climate and an optimized energy usage. The products are available Wireless M-Bus communication.

CMa Series



CMa10/CMa10w

CMa10 is an M-Bus temperature and humidity sensor and an ideal product for comfort level billing. It contains an M-Bus, has a display and uses a message function to provide information to residents. The product is available with Wireless M-Bus communication in CMa10w.

CMa11/CMa11w

CMa11 is an M-Bus temperature and humidity sensor and an ideal product for comfort level billing. The product is available with Wireless M-Bus communication in CMa11w.

CMa12w

CMa12w is a temperature sensor for indoor use with Wireless M-Bus.

CMa20/CMa20w

CMa20 is a temperature and humidity sensor for outdoor use. It communicates by Wired M-Bus. It is also available with Wireless M-Bus communication in CMa20w.

Product	Area
Indoor use	
CMa10 temperature and humidity sensor with display (1T)	10
CMa10w temperature and humidity sensor Wireless M-Bus with display	10
CMa11 temperature and humidity sensor (1T)	10
CMa11w temperature and humidity sensor Wireless M-Bus	10
CMa12w temperature sensor Wireless M-Bus	10
Outdoor use	
CMa20 temperature and humidity sensor (1T)	10
CMa20w temperature and humidity sensor Wireless M-Bus	10

Landis+Gyr UH50



Landis+Gyr UH50 (T550 ULTRAHEAT)

Landis+Gyr UH50 is a complete meter for measurement of heating and cooling, available in flow ranges from Qp 0.6 to Qp 60. The meter is easy to install and operate and has an "easy-to-read" display. The meter has two slots for communication, such as M-Bus and GPRS, and an analog output through option boards. The meter has several options for power-up, such as battery and 230 V and battery backup.

Product	Wired		Wireless		Art. No
	M-Bus		M-Bus		
L+G UC50, PT100, 230 VAC					
L+G UC50 incl. M-Bus slave (1 T)	X				9950104
L+G UC50 incl. Wireless M-Bus slave			X		9950384
L+G UC50 incl. GSM/GPRS M-Bus master CMI2110				X	1100075
L+G UC50, PT100, 230 VAC					
L+G UC50 incl. M-Bus slave (1 T)	X				9950386
L+G UC50 incl. Wireless M-Bus slave			X		9950387
L+G UC50 incl. GSM/GPRS M-Bus master CMI2110				X	1100076
Meter Connectivity Modules					
L+G UC50 M-Bus slave (1 T)	X				9950364
L+G UC50 Wireless M-Bus slave			X		9950399
GSM/GPRS M-Bus master CMI2110A				X	1050012
Wireless M-Bus master external antenna CMI5110E *			X		1050064
Wireless M-Bus master internal antenna CMI5110I			X		1050067
Power modules					
Power supply L+G UH50 100-240 V CMip2110M					1050053
Power supply L+G UH50 24 VAC CMip2110					1050055
Battery backup L+G UH50 CMip2110					1050056
Retrofit kit					
L+G UH50 GPRS CMI2110A Retrofit 230 VAC, wall-mount antenna					1100027
L+G UH50 GPRS CMI2110A Retrofit 230 VAC, magnet-mount antenna					1100028
L+G UH50 GPRS CMI2110A Retrofit 24 VAC, wall-mount antenna					1100031
L+G UH50 GPRS CMI2110A Retrofit 24 VAC, magnet-mount antenna					1100032

* Antenna ordered separately

Landis+Gyr UC50



Landis+Gyr UC50 (calculator)

Landis+Gyr UC50 is a calculator for heating or cooling flow sensor. It is easy to install and operate and has a display. The calculator has two slots for communication and GPRS, and an analog output through option boards. The calculator has several options for power-up, such as battery backup. It comes with the possibility of connecting a 4-wire measuring of the temperature sensor. The calculator is available for glycolic water.

Product	Wired		Wireless		Art. No
	M-Bus		M-Bus		
L+G UC50, PT100, 230 VAC					
L+G UC50 incl. M-Bus slave (1 T)	X				9950104
L+G UC50 incl. Wireless M-Bus slave			X		9950384
L+G UC50 incl. GSM/GPRS M-Bus master CMI2110				X	1100075
L+G UC50, PT500, 230 VAC					
L+G UC50 incl. M-Bus slave (1 T)	X				9950386
L+G UC50 incl. Wireless M-Bus slave			X		9950387
L+G UC50 incl. GSM/GPRS M-Bus master CMI2110				X	1100076
Meter Connectivity Modules					
L+G UC50 M-Bus slave (1 T)	X				9950364
L+G UC50 Wireless M-Bus slave			X		9950399
GSM/GPRS M-Bus master CMI2110A				X	1050012
Wireless M-Bus master external antenna CMI5110E *			X		1050064
Wireless M-Bus master internal antenna CMI5110I			X		1050067
Power modules					
Power supply L+G UH50 100-240 V CMip2110M					1050053
Power supply L+G UH50 24 VAC CMip2110					1050055
Battery backup L+G UH50 CMip2110					1050056
Retrofit kit					
L+G UH50 GPRS CMI2110A Retrofit 230 VAC, wall-mount antenna					1100027
L+G UH50 GPRS CMI2110A Retrofit 230 VAC, magnet-mount antenna					1100028
L+G UH50 GPRS CMI2110A Retrofit 24 VAC, wall-mount antenna					1100031
L+G UH50 GPRS CMI2110A Retrofit 24 VAC, magnet-mount antenna					1100032

* Antenna ordered separately

is from the American company Itron. For these meters, Lveco has developed the integrated module CMI2130, a Gateway which is mounted directly in the meter, allows for meter readouts and t reports by for example the standard protocols ftp, http, and e-mail. CMI2130 is compatible with 1/55 and the Itron heat meter CF ECHO II

ECHO II



Itron CF ECHO II

CF ECHO II is a compact meter from Itron's latest generation of ultrasonic heat meters. Electronic data processing results in high precision through the measuring area and has a higher precision than a class C meter. The meter has a flow range from Qp 0.6 to Qp 15m3/h (Dn 15 to Dn 50) with high accuracy. A complete range of flow sensors make the CF ECHO II flexible to use. All meters have a resistance to facilitate installation and removal. Other advantages of the meter include the high accuracy in measurement of both high and low values, easy readings and that the meter is prepared for communication.

	Art. No
3/4", 110 mm, PT100, 230 VAC	
-Bus slave (1 T)	9950389
SM/GPRS M-Bus master CMI2130A	1100079
1", 130 mm, PT100, 230 VAC	
-Bus slave (1 T)	9950391
SM/GPRS M-Bus master CMI2130A	1100081
Modules	
Slave (1 T)	9950395
Master CMI2130A	1050030
MA Retrofit 230 VAC magnet-mount antenna	1100005
HOII 100-240 VAC CMip2130	1050018

ding antenenas and cables, see page 40-41

Itron CF 51/55



Itron CF 51/55 (calculator)

CF 51/55 is a calculator for heating or cooling that has a flow sensor. It is easy to install and operate and has a display. It is compatible with Itron's other products for heating or cooling and has a modular design that can be easily adapted to future needs. CF 51/55 can be connected to any open pulse output.

Product
Itron CF 51 PT100, 230 VAC
Itron CF 51 incl. M-Bus slave (1 T)
Itron CF 51 incl. GSM/GPRS M-Bus master CMI2130A
Itron CF 51 PT500, 230 VAC
Itron CF 51 incl. M-Bus slave (1 T)
Itron CF 51 incl. GSM/GPRS M-Bus master CMI2130A
Itron CF 55 PT100, 230 VAC
Itron CF 55 incl. M-Bus slave (1 T)
Itron CF 55 incl. GSM/GPRS M-Bus master CMI2130A
Itron CF 55 PT500, 230 VAC
Itron CF 55 incl. M-Bus slav (1 T)
Itron CF 55 incl. GSM/GPRS M-Bus master CMI2130A
Meter Connectivity Modules
Itron CF M-Bus slave (1 T)
GSM/GPRS M-Bus master CMI2130A
Retrofit kit
Itron GPRS CMI2130A Retrofit 230 VAC magnet-based antenna
Accessories
Power supply CF/ECHOII 100-240 VAC CMip2130

For information regarding antenenas and cables, see page 40-41

rT230



Landis+Gyr T230

Landis+Gyr T230 belongs to the new generation of heating and cooling meters, based on ultrasonic technology. The meter is made of composite materials and is lightweight, durable, affordable and user friendly. The meter is delivered with the calculator mounted on the flow pipe. It can easily be taken apart and mounted on a wall to facilitate the reading and avoid condensation when the meter is used to measure cooling. The meter is available with both wired and wireless M-Bus communication.

Art. No	
00, OP 0.6, 11 years battery	
r M-Bus (1T)	9950451
r Wireless M-Bus	9950518

ABB B-Series



ABB B21, B23

B21 (1-phase) and B23 (3-phase) are compact electricity meters with a connection of up to 65 A, designed for DIN-rail mounting in small enclosures. The meters have clear markings for the phase indicator terminal and a backlit easy-to-read display. They measure active power, current, voltage, power factor and energy among other types of values.

ABB B24

B24 is an electrical meter (3-phase) with a compact design, suitable for mounting on DIN-rail. It is designed for measurement of active power, current, voltage, power factor, energy and power quality. The meter is suitable for applications where space is high and direct measurement is not possible. The constant is easily changed directly on the meter. It features a sturdy connector terminal and a backlit display.

CMeX20

CMeX20 is mounted next to the ABB electricity meter and communicates with the IR interface. The Meter Connectivity Module (MCM) conveys data to the M-Bus protocol and conveys it by Wireless (CMeX20w) M-Bus. It is designed to initiate communication immediately after startup.

Product
1-phase
ABB B21 incl. built-in M-Bus (1T)
ABB B21 incl. Wireless M-Bus module CMeX20w
3-phase
ABB B23 incl. built-in M-Bus (1T)
ABB B23 incl. Wireless M-Bus module CMeX20w
Current transformer
ABB B24 incl. built-in M-Bus (1T)
ABB B24 incl. Wireless M-Bus module CMeX20w
Meter Connectivity Modules
M-Bus slave CMeX20
Wireless M-Bus module for ABB electricity meter CMeX20w
GSM/GPRS M-Bus master CMe2100
TCP/IP M-Bus master CMe3000

connected electricity meters from Landis+Gyr, a Swiss company with more than 100 years of manufacturing. For these meters, Elvaco has developed the Integrated Meter Connectivity Module as alternative CMi1020w.

r E350



Landis+Gyr E350

L+G E350 ZCF AC and ZCF AB (1-phase) or L+G E350 ZMF AC and ZMF AB (3-phase), are electricity meters for mounting directly on the wall or a meter board. The energy resolution is Wh, which meets the need for high resolution for accurate energy analysis on an hourly basis. Other available data are current, power, number of power outages etc. The meters are offered with or without breaker functionality.

CMi1020, CMi1020w

CMi1020 is mounted directly in the Landis+Gyr E350 electricity meter, where it converts metering data to the M-Bus protocol and transmits it using Wired (CMi1020) or Wireless (CMi1020w) M-Bus. It is developed to initiate conversion of data immediately after startup.

Product	Wired		Wireless		Breaker	Art. No	E number
	M-Bus	M-Bus	M-Bus	M-Bus			
incl. M-Bus slave CMi1020 (1T)	X					1100036	0981823
incl. M-Bus slave CMi1020 (1T)	X				X	1100037	0981824
incl. Wireless M-Bus slave CMi1020w			X			1100231	0981853
incl. M-Bus slave CMi1020 (1T)	X					1100038	0981825
incl. M-Bus slave CMi1020 (1T)	X				X	1100039	0981826
incl. Wireless M-Bus slave CMi1020w			X			1100230	0981855
Modules							
350, Wireless M-Bus, 1-phase						1050020	0981816
350, Wireless M-Bus, 3-phase						1100229	0981854
						1050021	0981852

ding antennas and cables, see page 40-41

Kamstrup 162, 382, 351



Kamstrup 162, 382, 351

Kamstrup 162M (1-phase) and Kamstrup 382M (3-phase) connected electricity meters for registration of electricity consumption optimized for Smart Metering. The meter is also available as a transformer in Kamstrup 351C. All Kamstrup meters are electronic, i.e. does not contain any movable parts. The measurement is not affected by eventual impacts on the meter mounting.

CMi2140

For the meters mentioned above, Elvaco has developed the Connectivity Module CMi2140, an Integrated Meter Connectivity Module which is mounted directly in the Kamstrup meter. It initiates readouts and generates measurement reports for standard protocols ftp, http, and e-mail.

Product	Wired M-Bus	Wireless M-Bus	GSM/GPRS
1-phase			
Kamstrup kWh 162 incl. M-Bus slave (1 T)	X		
Kamstrup kWh 162 incl. Wireless M-Bus slave		X	
Kamstrup kWh 162 incl. CMi2140E*			X
Kamstrup kWh 162+breaker incl. M-Bus slave (1 T)	X		
Kamstrup kWh 162+breaker incl. Wireless M-Bus slave		X	
Kamstrup kWh 162+breaker incl. CMi2140E*			X
3-phase			
Kamstrup kWh 382 incl. M-Bus slave (1 T)	X		
Kamstrup kWh 382 incl. Wireless M-Bus slave		X	
Kamstrup kWh 382 incl. CMi2140E*			X
Kamstrup kWh 382+breaker incl. M-Bus slave (1 T)	X		
Kamstrup kWh 382+breaker incl. Wireless M-Bus slave		X	
Kamstrup kWh 382+breaker incl. CMi2140E*			X
Current transformer			
Kamstrup 351C CT incl. M-Bus slave (1 T)	X		
Kamstrup 351C CT incl. Wireless M-Bus slave		X	
Kamstrup 351C CT incl. CMi2140E*			X
Meter Connectivity Modules			
GSM/GPRS terminal with backup CMi2140E*			
Accessories - See page 41			
GSM/GPRS antenna for CMi2140E			

* Antenna ordered separately

Unimag, Aquadis+

Unimag with Equascan (warm water)

Unimag is a compact vane wheel meter with single-jet technology which is easy to install and has high reliability. The register is easy to read and can be rotated in 360° for comfortable reading in any position. The meter is pre-equipped for Wireless M-Bus communication with Itron's Equascan technology.



Aquadis+ with Equascan (warm water)

Aquadis+ is a volumetric water meter designed for measuring with very high accuracy. The register is easy to read and can be rotated in 360° for comfortable reading in any position. The meter can be used in apartment-, residential- and industrial applications and it meets the need with good margins. The meter is pre-equipped for Wireless M-Bus communication with Itron's Equascan technology. Also available with wired communication.



Itron Unimag, Aquadis+

Unimag with Equascan (cold water)

Unimag Cyble is a compact vane wheel meter with single-jet technology which is easy to install and has high reliability. The register is easy to read and can be rotated in 360° for comfortable reading in any position. The meter is pre-equipped for Wireless M-Bus communication with Itron's Equascan technology.



Aquadis+ with Equascan (cold water)

Aquadis+ is a volumetric water meter designed for measuring with very high accuracy. The register is easy to read and can be rotated in 360° for comfortable reading in any position. The meter can be used in apartment-, residential- and industrial applications and it meets the need with good margins. The meter is pre-equipped for Wireless M-Bus communication with Itron's Equascan technology. Also available with wired communication.



Product
Unimag Q3 2,5, Dn 15, G 3/4", L 110 mm
Unimag cold water incl. Equascan wireless communication module (1T)
Aquadis+ Q3 2,5, Dn 15, G 3/4", L 110 mm
Aquadis+ cold water incl. Cyble Wired M-Bus slave (1T)
Aquadis+ cold water incl. Equascan Wireless communication module (1T)
Check valve
Check valve DN15 Unimag Equascan
Check valve DN15 Aquadis/Flodis meter

	Art. No	RSK No
Unimag Q3 2,5, Dn 15, G 3/4", L 110 mm	1100177	5182256
Unimag cold water incl. Equascan wireless communication module (1T)		
Aquadis+ Q3 2,5, Dn 15, G 3/4", L 110 mm	1100069	5181660
Aquadis+ cold water incl. Cyble Wired M-Bus slave (1T)	1100210	N/A
Aquadis+ cold water incl. Equascan wireless communication module (1T)		
Check valve DN15 Unimag Equascan	9950668	N/A
Check valve DN15 Aquadis/Flodis meter	9950705	N/A

Multical 21



Kamstrup Multical 21 (warm water)

Multical 21 is an ultrasonic meter used for measuring warm water consumption in apartments, residential areas and industries. Ultrasonic flow measurement is based on the time difference method, and all measurements, readings, calculations and data communications are controlled by an advanced custom-designed electronic circuit. Multical 21 is easy to install and consumption data can be read directly from the display, optical interface or via the built-in Wireless M-Bus slave. The meter contains no moving parts, which excludes mechanical wear and effects from particles in the water. It is also vacuum sealed, which prevents moisture and condensation from entering the meter. Multical 21 has a unique combination of very high accuracy, long life and built-in radio communication through wireless M-Bus.

The meter is also available in encrypted version.

	Art. No	RSK No
Water 1,6m³/h, ¾" x 110 mm unencrypted	9950502	5181690
Water 2,5m³/h, ¾" x 110 mm unencrypted	9950458	5181689
Water 2,5m³/h, 1" x 105 mm unencrypted	9950585	5181693
Water 2,5m³/h, 1" x 130 mm unencrypted	9950532	5181692
Water 4,0m³/h, 1" x 130 mm unencrypted	9950505	5181691
	9950539	N/A

Kamstrup Multical 21



Kamstrup Multical 21 (cold water)

Multical 21 is an ultrasonic meter used for measuring cold water consumption in apartments, residential areas and industries. Ultrasonic flow measurement is based on the time difference method, and all measurements, readings, calculations and data communications are controlled by an advanced custom-designed electronic circuit. Multical 21 is easy to install and consumption data can be read directly from the display, optical interface or via the built-in Wireless M-Bus slave. The meter contains no moving parts, which excludes mechanical wear and effects from particles in the water. It is also vacuum sealed, which prevents moisture and condensation from entering the meter. Multical 21 has a unique combination of very high accuracy, long life and built-in radio communication through wireless M-Bus.

The meter is also available in encrypted version.

Product
Multical 21
Multical 21 cold water 1,6m³/h, ¾" x 110 mm unencrypted
Multical 21 cold water 2,5m³/h, ¾" x 110 mm unencrypted
Multical 21 cold water 2,5m³/h, 1" x 105 mm unencrypted
Multical 21 cold water 2,5m³/h, 1" x 130 mm unencrypted
Multical 21 cold water 4,0m³/h, 1" x 130 mm unencrypted
Check valve
Check valve

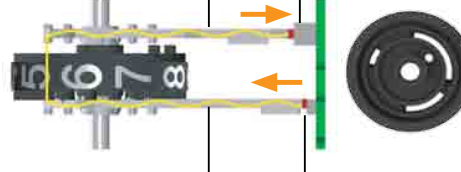
UNICOcoder

GWF UNICOcoder (warm water)

UNICOcoder is a single-jet consumption meter with high accuracy even at low flows. The meter can be mounted both horizontally and vertically and the meter's register can be rotated for easy readings in all positions. The value in the register is optically read for high accuracy. Through patented technology, the meter requires no battery. The meter communicates via M-Bus.



	Art. No	RSK No
UN15 L110 mm		
Water G¾B DN15 L110 mm incl. M-Bus slave (2T)	9950507	5181659
	9950537	N/A



Batteryless register with exact reading thanks to number wheels that are scanned through light pipes connected to light emitting diodes.

GWF UNICOcoder

GWF UNICOcoder (cold water)

UNICOcoder is a single-jet consumption meter with high accuracy even at low flows. The meter can be mounted both horizontally and vertically and the meter's register can be rotated for easy readings in all positions. The value in the register is optically read for high accuracy. Through patented technology, the meter requires no battery. The meter communicates via M-Bus.



Product
UNICOcoder Q3 2,5 G3/4B DN15 L110mm
UNICOcoder cold water Q3 2,5 G3/4B DN15 L110mm incl. M-Bus slave (2T)
Check valve
Check valve



Elvaco develops and manufactures integrated meter connectivity modules for meters from Landis+Gyr, ABB and Itron. These allow for meter readouts, conversion of data to the M-Bus protocol and delivery of measurement reports.

Meter Connectivity Modules



MCM for electricity and heat meters

Elvaco delivers meters from some of the largest meter manufacturers in the world to the M-Bus market. For these, Elvaco has developed Meter Connectivity Modules (MCM) for meters from Landis+Gyr, ABB and Itron. These allow for meter readouts, conversion of data to the M-Bus protocol and delivery of measurement reports.

Product	Meter
MCM for electricity meters	
M-Bus slave CMi1020	Landis+Gyr E350
Wireless M-Bus slave CMi1020w	Landis+Gyr E350
GSM/GPRS terminal with backup CMi2140E	Kamstrup 162, 382, 351
M-Bus slave CMex20	ABB B21, B23, B24
Wireless M-Bus module for ABB-electricity meters CMex20w	ABB B21, B23, B24
GSM/GPRS M-Bus master CMex2100	ABB B21, B23, B24
TCP/IP M-Bus master CMex3000	ABB B21, B23, B24
MCM for heat meters	
L+G UH50 M-Bus slave	Landis+Gyr UH50, UC50
L+G UH50 Wireless M-Bus slave	Landis+Gyr UH50, UC50
GSM/GPRS M-Bus master CMi2110A	Landis+Gyr UH50, UC50
Wireless M-Bus master external antenna CMi5110E	Landis+Gyr UH50, UC50
Wireless M-Bus master internal antenna CMi5110I	Landis+Gyr UH50, UC50
Itron CF M-Bus slave	Itron CF ECHO II, CF 51/55
GSM/GPRS M-Bus master CMi2130A	Itron CF ECHO II, CF 51/55

For information regarding antennas and cables, please see page 40-41

ans the way our products are communicating. We offer different alternatives; both within a facility, and from facility to end user and

and external communication

communication (LAN) refers to the way that the products inside communicate with each other. We offer solutions using both Wireless M-Bus communication, depending on the conditions also offer solutions for building automation, for example Modbus and JSON-RPC.

communication (WAN) refers to the way that meter values are sent to the property to the end user or the billing system. We offer communication solutions using GSM/GPRS and TCP/IP.



part of meter data

ts make it possible to deliver values to a large real estate and billing systems. We offer products directly integrated in ELIN and Mactor, which means deliver values of the correct format directly into the We also export meter values to Debatt, V-Store, R2S, n, GS2, HUSAR, HOGIA, Generis, KeepAnEye and systems.

Our products are the only ones on the market that can deliver export files directly to billing systems in correct format without using expensive collection systems.



Gateway

The Gateway is a vital part of your metering system. It is mounted on a suitable location in the building and connects to the meters through Wired or Wireless M-Bus. The Gateway performs readouts of meters and sends meter values to the recipients via sms, ftp, http or e-mail.

The Gateway also plays an important role within building automation, where it delivers meter values to the control system by some chosen protocols, for example Modbus, JSON and REST.



"One of the main reasons why we chose Elvaco as a supplier is because we are aware of the needs of the market and offer cutting edge technical development. We are pleased with how our collaboration have played out, their response, and the feedback we give for our development needs, both over short and long term."

Boris Karlsson, Revenues and measurement, E.ON Heat

For turn-key solutions, specially developed to be quickly and easily integrated into a
Each package consists of a Gateway, an M-Bus Master and a protective case. Wireless M-Bus
able as an add-on option.

Network Gateway solution with CMe3000



Turn-key solution in protective case TCP/IP

The box contains the Fixed Network Gateway CMe3000, an extender from the CMeX10 Series which makes it possible to connect up to 256 meters. It also has a breaker functionality which facilitates service work. The box may be equipped with a CMeX50 to enable Wireless M-Bus communication with meters.

Art. No	
	protective case for up to 8 meters
1100019	CM-box 5
	protective case for up to 32 meters
1100007	s CM-box 5
1100024	s with RS232 CM-box 12
	protective case for up to 64 meters
1100011	s CM-box 5
1100104	s with RS232 CM-box12
	protective case for up to 128 meters
1100015	rs with RS232 CM-box 12
	protective case for up to 256 meters
1100017	rs with RS232 CM-box 12
	protective case Wireless M-Bus
1100101	rs Wireless M-Bus CM-box 12
	Wireless M-Bus CM-Box 12
1100225	r and amplifying kit incl. power supply
1100219	r and amplifying kit incl. CM Box 5 and power supply
1100227	

ding cables, see page 42

Fixed Network Gateway solution with CMe3100



Turn-key solution in protective case TCP/IP

The box contains the Fixed Network Gateway CMe3100, an extender from the CMeX10 Series which makes it possible to connect up to 256 meters. It also has a breaker functionality which facilitates service work. The box may be equipped with a CMeX50 to enable Wireless M-Bus communication with meters.

Product	
	Turn-key solution in protective case 8-256 meters, incl. M-Bus Extender
	CGc IP M-Bus for 8 slaves CM-Box 12
	CGc IP M-Bus for 32 slaves CM-Box 12
	CGc IP M-Bus for 64 slaves CM-Box 12
	CGc IP M-Bus for 128 slaves CM-Box 12
	CGc IP M-Bus for 256 slaves CM-Box 12
	CGc IP 1x8 Enhanced Wireless M-Bus CM-Box 12 incl. CMe3100 and CMeX50
	CGc IP 1x8 Wireless M-Bus CM-Box 12 incl CMe3100 and CMeX50 *
Accessories	
	Wireless M-Bus filter and amplifying kit incl. power supply
	Wireless M-Bus filter and amplifying kit incl. CM Box 5 and power supply

* It is possible to extend the amount of slaves with up to 256. See page 28 for more information.

For information regarding cables, see page 42

Für information regarding Add-ons and slave upgrades, see the CMe3100 section on page 28

the M-Bus masters or Livaco make it possible to extend the number of meters a Gateway of the series can communicate with.

Network Gateway solution with CMe2100

Turn-key solution in protective case GSM/GPRS

The box contains the Mobile Network Gateway CMe2100, an extender from the CMeX10 Series which makes it possible to connect up to 256 meters. It also has a breaker functionality which facilitates service work. The box may be equipped with a CMeX50 to enable Wireless M-Bus communication with meters.



CMeX10 Series



DIN-mounted RS232/IR M-Bus Masters

The CMeX10 Series makes it possible to extend your M-Bus system up to 256 extra M-Bus slaves. The unit can also be used as an M-Bus master with any existing M-Bus system by connecting it to the unique IR Pass Through products stackable.

Product	Number of loads	RS232	Cable length	Number of DIN modules
CMeX10	32 T		1000 m	2
CMeX11	64 T		1000 m	2
CMeX10S	32 T	X	5000 m	6
CMeX11S	64 T	X	5000 m	6
CMeX12S	128 T	X	5000 m	6
CMeX13S	256 T	X	5000 m	6

	Art. No
protective case for up to 8 meters Meters CM-box 3	1100022
protective case for up to 32 meters Meters CM-box 5	1100023
Meters with RS232 CM-box 12	1100109
protective case for up to 64 meters Meters CM-box 5	1100105
Meters with RS232 CM-box 12	1100106
protective case for up to 128 meters Meters with RS232 CM-box 12	1100025
protective case for up to 256 meters Meters with RS232 CM-box 12	1100026
protective case Wireless M-Bus Meters Wireless M-Bus CM-box 12	1100095
Wireless M-Bus CM-Box 12	1100223
Power supply kit incl. power supply	1100219
Power supply kit incl. CM Box 5 and power supply	1100227

connecting antennas and cables, please see page 40-41

DIN-mounted intelligent TCP/IP M-Bus Gateway

CMe3100 is a unique Gateway which enables easy and reliable integration between meters and system. CMe3100 has the same functionalities as the other M-Bus Gateways of Elvaco, such as: full M-Bus decoder, storage functionality, delivery of meter values via e-mail, ftp and http as well as the ability to connect to accessories or slaves by the IR interface. Unique features for CMe3100 include the ability to connect any M-Bus meter and then, through the different interfaces, utilize it in existing measuring systems. Systems can use the CMe3100 to connect to the meters by e.g. Modbus ,TCP, JSON-RPC, REST and M-Bus. By using the “Measurement series” functionality, meter values can be used to regulate a system variable, for example in a building’s control system. CMe3100 gives you total control over the project based on wireless M-Bus. Of course it has full support for all of Elvaco’s wireless M-Bus masters.

CMe3000

DIN-mounted TCP/IP M-Bus Gateway

The CMe3000 is a flexible and cost-effective TCP/IP M-Bus gateway. It is compatible with all ABB DIN-mounted electricity meters. The CMe3000 uses an internal web interface which allows you to configure and update remotely.



Product	Article number
CMe3000 TCP/IP M-Bus Gateway	1060000

For information about general cables, see page 42

	Art. No	E number
TCP/IP M-Bus Gateway 8 slaves	1100232	0981856
TCP/IP M-Bus Gateway 32 slaves	1100129	0981844
TCP/IP M-Bus Gateway 64 slaves	1100130	0981845
TCP/IP M-Bus Gateway 128 slaves	1100131	0981846
TCP/IP M-Bus Gateway 256 slaves	1100132	0981847
Slave 8-32 slaves	1060004	N/A
Slave 8-64 slaves	1060005	N/A
Slave 8-128 slaves	1060006	N/A
Slave 8-256 slaves	1060007	N/A
Slave 32-64 slaves	1060008	N/A
Slave 32-128 slaves	1060009	N/A
Slave 32-256 slaves	1060010	N/A
Slave 64-128 slaves	1060011	N/A
Slave 64-256 slaves	1060012	N/A
Slave 128-256 slaves	1060013	N/A
ModBus	1060014	0981848
REST	1060015	0981849
ON	1060016	0981850
MS	1060020	0981857

CMi-Box



DIN-mounted GSM/GPRS M-Bus Gateway

The CMi2100 is a flexible and cost-effective GSM/GPRS M-Bus Gateway with logging functionality. It is ready to use with all ABB DIN-mounted electricity meters using the IR interface and all meters using the M-Bus protocol. The CMi2100 uses standard open protocol for fast and easy integration in existing system. The CMi2100 is configurable remotely by SMS and can receive software updates over the air. Its flexible and versatile design makes it the most powerful GSM/GPRS M-Bus master on the market.



Turn-key solution in protective case Wireless M-Bus
The box contains the Wireless M-Bus Master CMi2100, which is equipped with GSM/GPRS or Wired M-Bus for internal or external system. The box is available with a 24 V or a 230 V power supply as well as with internal or external antenna.

S M-Bus master	Art. No		E number
	1050006		0981800

For information regarding antennas and cables, see page 40-41

Product	
Turn-key solution in protective case Wireless M-Bus internal antenna + GPRS	
CMi-Box Wireless M-Bus + GPRS 24 V internal antenna	
CMi-Box Wireless M-Bus + GPRS 230 V internal antenna	
Turn-key solution in protective case Wireless M-Bus external antenna + GPRS	
CMi-Box Wireless M-Bus + GPRS 24 V external antenna *	
CMi-Box Wireless M-Bus + GPRS 230 V external antenna *	
Turn-key solution in protective case Wireless M-Bus internal antenna + GPRS	
CMi-Box Wireless M-Bus + GPRS 24 V 2 x internal antenna	
CMi-Box Wireless M-Bus + GPRS 230 V 2 x internal antenna	
Turn-key solution in protective case Wired M-Bus internal antenna + GPRS	
CMi-Box Wired M-Bus + GPRS 24 V external antenna *	
CMi-Box Wired M-Bus + GPRS 230 V external antenna *	

* Antenna ordered separately

For information regarding antenna and cables, see page 40-41

... wireless M-Bus receivers. These allow for Gateways of the CMe Series to communicate with M-Bus protocol, but may also be integrated in a M-Bus system where wired meters are used.



DIN-mounted Wireless M-Bus Receiver

CMeX50 is a wireless M-Bus Receiver which can be used in an existing wired M-Bus system or with Elvaco CMe Series products. The CMeX50 communicates with slaves by the Wireless M-Bus modes S1, S2, T1, T2, C1 and C2, and is compatible with all M-Bus slaves on the market. The CMeX50 handles up to 500 wireless M-Bus slaves, which can be individually secured by encryption keys. It also has a built-in M-Bus master for communication with up to 32 wired M-Bus slaves.

	Art. No	E number
-Bus Receiver	1050062	0981835
...r and amplifying kit incl. power supply	1100219	N/A
...r and amplifying kit incl. CM Box 5 and power supply	1100227	N/A

... antennas and cables, see page 40-41

CMi-Box



Turn-key solution in protective case Wireless M-Bus
The box contains the Wireless M-Bus master CMeX50 equipped with GSM/GPRS or Wired M-Bus for communication end systems. The box is available with a 24 V or 230 V power supply as well as with internal or external antenna.

Product
Turn-key solution in protective case Wireless M-Bus internal antenna
CMi-Box Wireless M-Bus 24 V internal antenna
CMi-Box Wireless M-Bus 230 V internal antenna
Turn-key solution in protective case Wireless M-Bus external antenna
CMi-Box Wireless M-Bus 24 V external antenna
CMi-Box Wireless M-Bus 230 V external antenna

For information about antennas and cables, see page 40-41

service for collection, quality assurance and presentation of meter data to the customer's wishes and needs. We can deliver everything from complete readings to be used for invoicing. The service includes the communication cost, regardless of whether the customer uses one or several thousand.

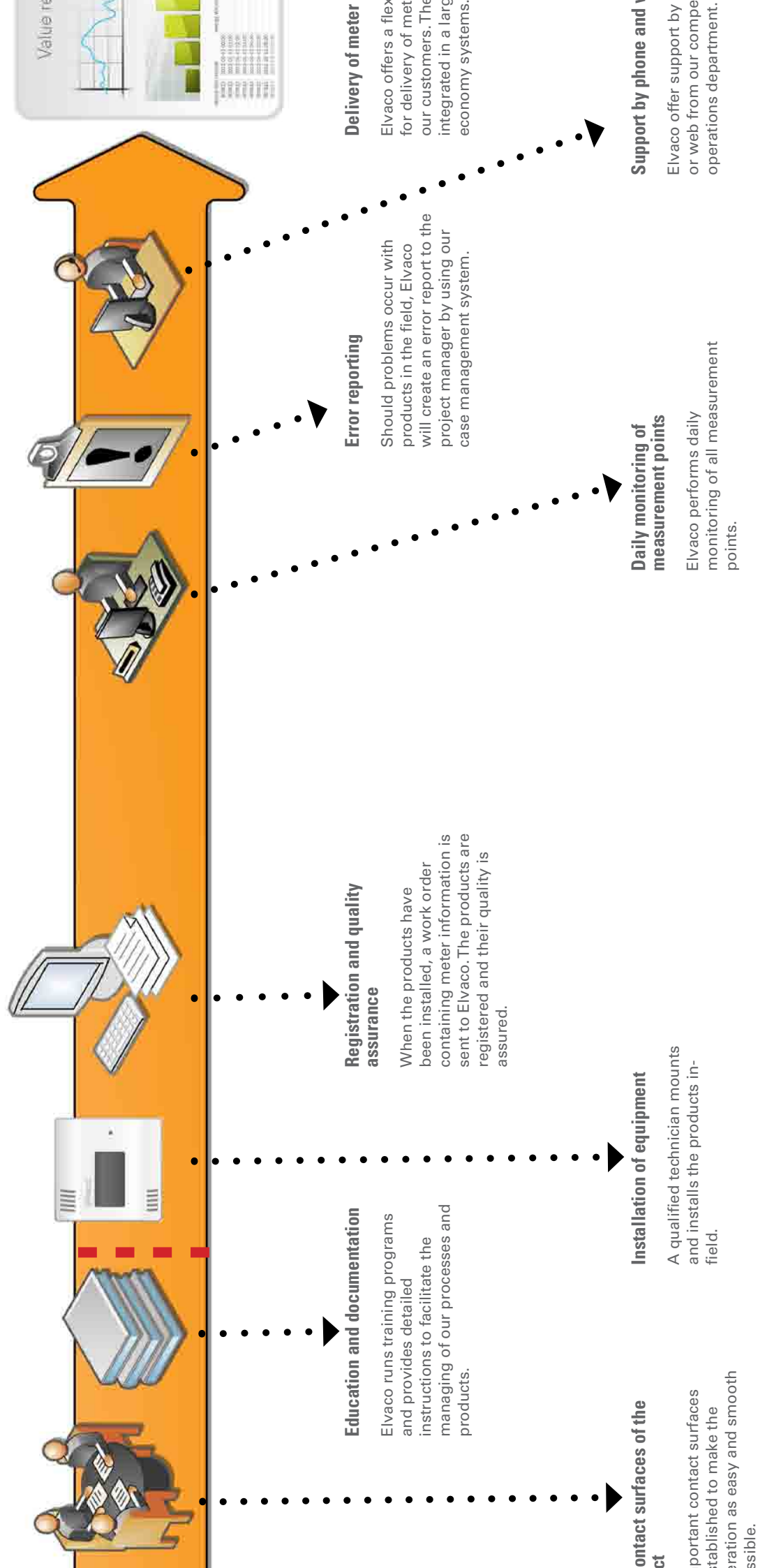


Compatible systems

We deliver information for invoicing to more than 40 different systems on the market, e.g. ELIN, MIActor, Debatt, HUSAR, Momentum, Summarum, Vitec and R2S.

START-UP PHASE

OPERATIONAL PHASE





Operation and data collection service

The products of Elvaco make it possible to get meter data sent directly to your existing billing system, data base or energy analysis tool by e-mail, ftp or http. All of our products with GPRS communication are integrated in ELIN and Mactor. We also export data to Debatt, V-Store, R2S, Momentum, GS2, HUSAR, HOGIA, Generis and KeepAnEye.

For customers who do not want to manage their products and meters themselves, Elvaco offers a service for collection and presentation of meter data in accordance with the customer's needs. The service includes everything, even communication costs, regardless of whether the customer only has a few meters or several thousand. Elvaco delivers a complete concept with all components for a successful project. Our support system and work order system simplifies and minimizes the workload for you.

Elvaco have collaborated for a long time in the meter value collection has worked very well. It is important to ensure high quality readings, you need a partner who understands your specific needs. Elvaco is such a partner."

Verkaufschef Mätarservice Elnät, VEAB



Level 1

At level 1, you buy products from Elvaco, but manage them yourself.



Level 2

At level 2, you buy products and a master unit from Elvaco. The Master delivers meter values to your system. You manage the products and the Master yourself.



Level 3

At level 3, you buy products, a Master unit and the software Metering from Elvaco. Metering offers a overview of your properties, and you can easily get access to statistics and measurement values from your meters. You manage everything yourself.



Level 4

At level 4 you buy products, a Master unit and sign a services agreement with Elvaco. We manage everything and take responsibility for collection and presentation of meter readings according to your wants and needs.

Our solution is fully standardized, which gives the customers the opportunity to choose among suppliers.

ers and infrastructure, Elvaco delivers all accessories needed for a
allation. This includes everything from advanced products for controlling
ore basic products, such as cables and antennas.

controlling

or example make it possible to
an monitor and send alarms at
can be useful in laundries and in
pre-heaters.

All products sold by Elvaco have
undergone extensive testing to minimize
the risk of errors in-field. The hardware is
produced by subcontractors, certified with
ISO 14001.

reshooting

ially developed and designed
ables easy reading and
simplifies service and

main meter

allows two parties to gain access
. This might for example be very
companies that must access a main



Wall-mounted antenna

Wall-mounted antenna Wireless M-Bus

The wall-mounted antenna is connected to products using the Wireless M-Bus to increase the range of communication. Its durable design and low profile makes it ideal to use where a discrete and reliable option is required. The antenna can be used both indoors and outdoors.

Product

Art. No

Antenna Wireless M-Bus wall-mounted

9950627

Omni antenna Wireless M-Bus

The Omni antenna is an external omnidirectional antenna which is connected to products using the Wireless M-Bus to increase the range of communication. The antenna can be mounted on horizontal or vertical mast tubes of sizes between 16 and 54 mm in outer diameter.

Product

Art. No

Omni antenna 868 MHz 0 dBi 45 cm

9950500

Omni antenna 868 MHz 8 dBi 145 cm

9950472

Magnetic base antenna

Magnetic base antenna Wireless M-Bus

The magnetic base antenna, which has a swivel functionality for flexible mounting, is connected to products using the Wireless M-Bus to increase the range of communication.

Product

Art. No

Antenna 868 MHz magnetic base swivel 1,5 m

9950470

Antenna cable for Omni antenna

The antenna cable is used together with the CMex50 or the CMi-box to connect an Omni antenna. The cable is of high quality to minimize cable losses. It is available in three different lengths: 5, 10 and 15 meters.

Product

Art. No

Antenna cable SMAm-Nm for Omni antenna (5 m)

9950453

Antenna cable SMAm-Nm for Omni antenna (10 m)

9950454

Magnetic base antenna

Magnetic base antenna GSM/GPRS

The magnetic base antenna is a GSM/GPRS antenna mounted on metallic surfaces. It is delivered with

Product

GSM/GPRS antenna magnetic base 10 cm 2.5 m

Wall-mounted antenna

Wall-mount antenna GSM/GPRS

The wall-mounted antenna is a GSM/GPRS antenna for the industrial demands on high performance and capabilities. Its durable design and low profile make it a discrete and reliable option is required. The antenna is independent allowing installation on different materials with a cable of 1.5 or 3 meters.

Product

GSM/GPRS antenna LP901G 1.5 m

GSM/GPRS antenna LP901G 3 m

GSM/GPRS antenna LP901 1.5 m MCX for CMi21

Disc antenna

Disc antenna GSM/GPRS

The disc antenna is a GSM/GPRS antenna designed for industrial demands on high performance and multiple capabilities. It has a durable design, low profile and an internal nut, making it ideal to use when a discrete installation is required. It is delivered with a cable of 0.5 or 2.5 m

Product

GSM/GPRS antenna disc 0.5 m

GSM/GPRS antenna disc 2.5 m

Cable

Antenna cable

The antenna cable is often used when the antenna is connected due to poor signal conditions. The cable is of high quality to minimize cable losses and is available in two lengths, 5 and 15 meters.

Product

Antenna cable SMAf-SMAm (5 m)

Antenna cable SMAf-SMAm (10 m)

amplifier kit



Filter and amplifier kit

The filter and amplifier kit is used to filter interferences for example from nearby cell towers. The kit also increases the communication range for Wireless M-Bus Receivers.

	Art. No
r and amplifier kit incl. power supply	1100219
r and amplifier kit incl. CM Box 5 and power supply	1100227

General cables

Patch cable

The patch cable is used for connection between M-Bus Masters using ethernet and the existing network. The cable is available in two different lengths, 1 and 3 meters.



	Art. No
Me3100	
5e blue (1 m)	9950211
5e blue (3 m)	9950155

CMa35



USB optical eye

CMa35 is an optical eye for readout and configuration of M-Bus systems via a serial optical interface. The manufacturer and software design makes the CMa35 the perfect choice for many applications.

Product	
CMa35 Optical eye	

CMa30



USB M-Bus master

CMa30 is specifically designed for mobile service. On a laptop, it is suitable for setup of individual M-Bus systems. The clear LED display makes the reading of M-Bus systems simple. CMa30 can operate up to 30 M-Bus slaves, making it ideal for many applications. USB cable is included.

Product	
CMa30 USB M-Bus master	

Share up to 4 M-Bus slaves

The M-Bus Splitter allows two parties to gain access to the same main meter. Two M-Bus masters can be connected to the meter and register readings individually. This might for example be useful for real-estate companies who need to access a main meter through M-Bus.



Product		
Art. No	E number	
1050013	0981815	

Pulse converter to M-Bus

PadPuls M2 makes it possible to convert pulses to M-Bus. It has two pulse inputs to connect for example water or electricity meters and an optional rate functionality for energy and volume. PadPuls M2 is easy to install and is delivered in an enclosure for wall-mounting.



Product		
Art. No	E number	
9950074	N/A	

converter to M-Bus

DIN-mounted M-Bus D/A module

CMex30 is a digital-to-analog converter with an output from 0-10 V or current output from 0-20 mA. It is used by the IR interface, and is equipped with a unique functionality which makes it stackable.



Product		
CMex30 M-Bus D/A module		

DIN mounted M-Bus I/O module

CMex40 is an M-Bus slave unit with one input and one output. It can be used to control a controlled device with a digital input signal. It uses standard M-Bus and is supplied with power from an external source.



Product		
CMex40 M-Bus I/O module		

10

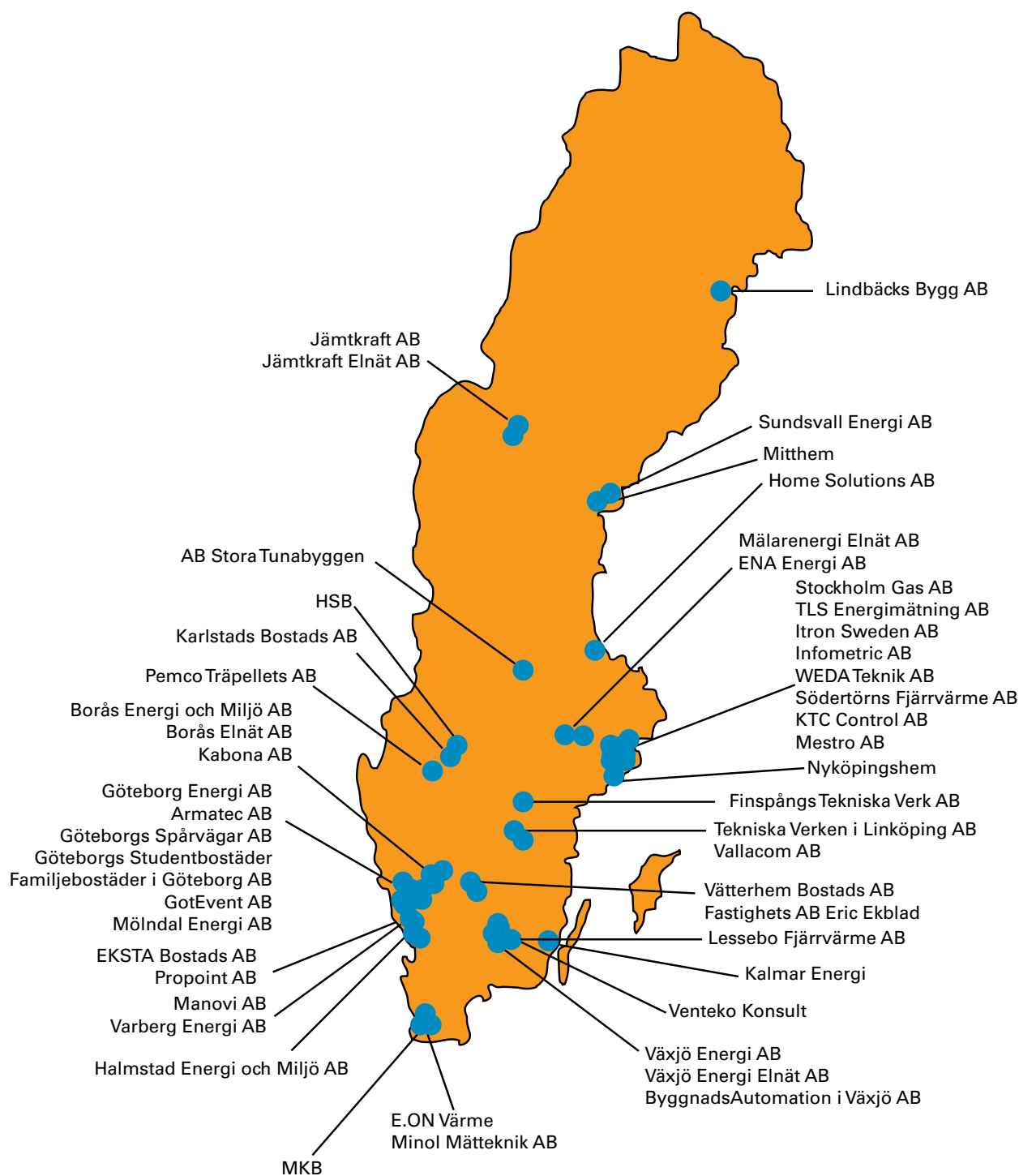


Enclosures

Enclosures of protection class IP55 in different sizes (3-12 module widths). The enclosures are made out of grey durable and halogen-free polystyrene. They are flexible, easy to mount and can be sealed. The enclosures have several knockout holes where the appurtenant bushings can be mounted to allow for safe cable installment. The products are delivered with terminal block and DIN rail.

	Art. No
3 mm transparent door	1040065
3 mm grey door	1040116
6 mm transparent door	1040066
6 mm transparent door	1040102
12 mm transparent door	1040082

Some of our customers



version: 2016_1_en

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