

Energy efficiency

Energy meters. The details make the difference.

A series

Key applications

- Facility management installations
- Critical power
- Production lines
- System solutions
- Power quality
- Etc.

Key performance

Single phase or three phase

Direct connected up to 80 A or transformer current- and/or voltage transformers (CTVT)

Active energy measurement

- Class B (Cl. 1) or
- Class C (Cl. 0,5 S) on CTVT connected meters

Wide voltage range

- 100 - 690 V phase to phase
- 57,7 - 400 V phase to neutral

Alarm functions

MID (Module B and D)

Reactive energy measurement

Import/export measurement of energy

Optional communication

- via M-Bus or
- RS-485 (For Modbus RTU or EQ bus)

4 tariffs controlled by inputs,

- communication or
- built-in clock

Previous values by

- day or
- week or
- month

Demand measurement (per period)

- 3 maximum
- 1 minimum

Load profiles

- 8 channels independently configurable
- 40 000 values total

Harmonics measurement up to 16th harmonic

- Current
- Voltage
- and evaluation of THD

Pulse outputs (S0 compatible)

Instrumentation

The A series meters support reading of instrument values. A large number of electrical properties can be read.

Depending on version of the meter the following data is available:

- Active power
- Apparent power
- Reactive power
- Current
- Voltage
- Frequency
- Power factor
- Harmonics (Current and Voltage)
- Total harmonic distortion

B series

Key applications

- Cost transfer/billing
- Solar power
- EV chargers
- Elevators/escalators
- Lighting
- Installation beside machines
- Etc.

Key performance

Single phase or three phase

Direct connected up to 65 A or CT connected (three phase types)

Active energy measurement

- Class B (Cl. 1) or
- Class C (Cl. 0,5 S) on CT connected meters

Alarm functions

MID (Module B and D)

Reactive energy measurement

Import/export measurement of energy

- Optional communication via M-Bus or
- RS-485 (For Modbus RTU or EQ bus)

4 tariffs controlled by

- input or
- communication

Pulse outputs (S0 compatible)

Instrumentation

The B series meters support reading of instrument values.

A large number of electrical properties can be read. Depending on version of the meter the following data is available:

- Active power
- Apparent power
- Reactive power
- Current
- Voltage
- Frequency
- Power factor

C series

Key applications

- HVAC applications
- Stand-alone applications
- Domestic applications
- Camping and Marinas
- Etc.

Key performance

Single phase or three phase

Very compact

- 1 & 3 modules.

Direct connected up to 40 A

Active energy measurement

Accuracy class 1

Alarm functions

MID (Module B and F) as option

Pulse output (S0 compatible)

Instrumentation

The C series meters support reading of instrument values. A number of electrical properties can be read:

- Power factor
- Active power
- Current
- Voltage

G13

Key applications

- Meter management and configuration
- Remote reading of meter data
- Integration of meters in system solutions
- Etc.

Key performance

Connection to meters via

- RS-485 EQ bus or
- M-Bus
- IR (one port)

Ethernet connection

- https, JSON

Upgrade of firmware

- Gateway
- Meters (EQ bus)

Time synchronization

Routing of data

Built-in webserver

Meter readout via webserver

- Individual meters
- Cluster of meters
- CSV export of meter data
- Read instrument values

User authentication

- Administrator
- Restricted user

Gateway settings

- IP address
- Gateway name
- Time and date

Meter communication

- Meter registration
- Scan network
- Register meter
- Add meter access rights
- Read all data, all data found in the meters could be read in the webserver
- Meter settings

Meter configuration via webserver

Basic meter settings

- Ratio
- Time/date
- Pulse output/alarm
- Tariff settings
- Inputs/outputs settings

Advanced function settings

- Demand
- Previous values
- Load profile

Energy efficiency

Selection guide Energy meters.

How do I select the best meter for my application?

There are many versions of Energy meters in order to meet your requests. The EQ program comprises meters with different functionalities such as tariffs, communication interfaces or advanced clock functions. Spend a little time to evaluate the functions and imagine how they could add extra value to your metering. For example, the input counter (from Silver level) on an Energy meter can be used to count products produced by a machine and be read out together with the energy consumption of the same machine. In one easy go you can allocate energy to any produced product from one source. Another useful function is previous values (from Gold level). If you charge users in intervals the meter can secure the data even in the event of a broken communication link. You can collect the correct interval data later and also make it visible for your counterpart immediately on the meters display in case of any discussions.

Make the meter to an asset.

Take the step from passive meter reading to an active user of the data you can retrieve. The meter can be an important asset for you in order to avoid costs like penalties or extra charge for reactive energy (from Bronze level). Keep track of your maximum demand and reduce them to avoid charges. Energy meters can tell you the value of the maximum/minimum demand and also when it occurred. Harmonics is the source of many problems for all sorts of equipment connected to the low voltage network. Use an Energy meter (Platinum level) to measure the THD and isolate the source before you have to take the cost and consequences of poor power quality.

Function	Single phase				Three phase							
	C11	B21	A41	A42	C13	B23	B24	A43	A44			
Direct connected	1	1 3	1 3 4		1	1 2 3		1 2 3	5			
Transformer connected				1 3 5			1 2 3		1 2 3 4 5			
2 element metering						1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
3 element metering					1	1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Accuracy 1 %, Class 1, Class B	1	1 3	1 3 4	1 3	1	1 2 3	1 2	1 2 3	5 1 2 3			
Accuracy 0.5 %, Class 0,5 S, Class C					5		3		3 4 5			
Active energy	1	1 3	1 3 4	1 3 5 1		1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Reactive energy		3	3 4	3 5		2 3	2 3	2 3	5 2 3 4 5			
Apparent energy		3	3 4	3 5		2 3	2 3	2 3	5 2 3 4 5			
Import/Export energy		3	3 4	3 5		2 3	2 3	2 3	5 2 3 4 5			
Tariff registers, 1-4		3	3 4	3 5		3	3	3	5 3 4 5			
Instrument values	1	1 3	1 3 4	1 3 5 1		1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Alarm function	1	1 3	1 3 4	1 3 5 1		1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Harmonics, 2th-16th and THD					5				5			
Previous values - day, week, month			4		5				4 5			
Max and min demand			4		5				5 4 5			
Load profiles - 8 channels					5				5 5			
Pulse output	1	1	1	1	1	1 2	1 2	1 2	1 2			
I/O board - 2 in, 2 out		3	3 4	3		3	3	3	3 4			
Configurable I/O - 4 I/O channels					5				5 5			
Tariffs controlled by input		3	3 4	3 5		3	3	3	5 3 4 5			
Tariffs controlled by communication		3	3 4	3 5		3	3	3	5 3 4 5			
Tariffs controlled by clock			4	5					5 4 5			
MID approved, verified	optional	1 3	1 3 4	1 3 5	optional	1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
IEC approved	1	1 3	1 3 4	1 3 5 1		1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Communication - Infrared (M-Bus)		1 3	1 3 4	1 3 5		1 2 3	1 2 3	1 2 3	5 1 2 3 4 5			
Communication - M-Bus		optional	optional	optional		optional	optional	optional	optional			
Communication - RS-485 Modbus		optional	optional	optional		optional	optional	optional	optional			
Communication - RS-485 EQ bus		optional	optional	optional		optional	optional	optional	optional			

- 1 = Steel
- 2 = Bronze
- 3 = Silver
- 4 = Gold
- 5 = Platinum
- = Not available
- Optional = Available on some order codes

Energy efficiency

Energy meters selection table



	Energy meters C11	Energy meters C13	Energy meters B21	Energy meters B23	Energy meters B24
Overall dimensions	1 DIN module	3 DIN modules	2 DIN modules	4 DIN modules	
Display	LCD		Backlit LCD		
Operating voltage	230 V AC	3x230/400 V AC	220...240 V AC	3x220/380...240/415 V AC	
Frequency	50 / 60 Hz				
Max current	40 A		65 A		6 A
CTVT connection	Direct	Direct	Direct	Direct	CT
Active energy	Standard feature				
Reactive energy	-	-	Optional		
Apparent energy	-	-			
Accuracy	Cl. 1 (B)			Cl. 1 (B), Cl. 0,5 S (C)	
Up to 4 tariffs	-	-	Optional		
Max/min demand	-	-	-	-	-
Previous values	-	-	-	-	-
Load profiles	-	-	-	-	-
Alarm function	Standard feature				
Harmonic analysis	-	-	-	-	-
Event log	-	-	Standard feature		
Active power	Instrumentation parameters (standard)				
Voltage					
Current					
Power factor					
Frequency	-	-	Instrumentation parameters		
Pulse output	Standard feature				
I/O	1 Output*		1 Output* or 2 outputs/2 inputs (optional)		
Built-in serial communication	-	-	IR / M-Bus (optional) / RS-485 (optional)		
Protocols	-	-	M-Bus, Modbus RTU, EQ bus		

*) The pulse output can be assigned as an output if it is not used for pulses

**) For 16,7 Hz meters



Energy meters A41	Energy meters A42	Energy meters A43	Energy meters A44	Energy meters G13
4 DIN modules		7 DIN modules		4 DIN modules
Backlit Pixel (LCD)				No display
57.7...288 V AC	57.7...288 V AC or 100...288** V AC	3x57.7/100 ... 288/500	3x57.7/100 ... 288/500 or 3x57.7/100 ... 400/690	100...240 V AC
50 / 60 Hz	50 / 60 Hz (or 16,7 / 50 / 60 Hz)		50 / 60 Hz	
80 A	6 A	80 A	6 A	-
Direct	CTVT	Direct	CTVT	-
Standard feature				-
optional				-
Cl. 1 (B)	Cl. 1 (B), Cl. 0,5 S (C)	Cl. 1 (B)	Cl.1 (B), Cl. 0,5 S (C)	-
Optional				-
Optional				-
Standard feature				-
Power quality (optional)				-
Standard feature				-
Instrumentation parameters (standard)				-
Instrumentation parameters (optional)				-
Standard feature				-
1 output or 2 outputs/2 inputs (optional) or 4 configurable inputs and outputs (optional)				-
IR / M-Bus (optional) / RS-485 (optional)			IR, RS-485, M-Bus, Ethernet	
M-Bus, Modbus, EQ bus			HTTPS, EQ bus, M-Bus, JSON	

Energy efficiency

Energy meters A series



A-series

Technical features	
A41	
Voltage/current inputs	
Nominal voltage	230 V AC
Voltage range	57.7 - 288 V AC (-20% - +15%)
Power dissipation voltage circuits	1.5 VA (0.6 W) total at 230 V AC
Power dissipation current circuits	0.006 VA (0.006 W) at I_{ref} and I_b
Base current I_b	5 A
Rated current I_n	-
Reference current I_{ref}	5 A
Transitional current I_{tr}	0.5 A
Maximum current I_{max}	80 A
Minimum current I_{min}	0.25 A
Starting current I_{st}	< 20 mA
Terminal wire area	1 - 25 mm ²
Recommended tightening torque	2 Nm
Communication	
Terminal wire area	0.5 - 1 mm ²
Recommended tightening torque	0.25 Nm
Transformer ratios	
Configurable current ratio (CT)	-
Configurable voltage ratio (VT)	-
Pulse indicator (LED)	
Pulse frequency	1000 imp/kWh
Pulse length	40 ms
Frequency	
Accuracy Class	B (Cl.1) and Reactive Cl. 2
Active energy	1%
Display of energy	Pixel oriented display (LCD)
Environmental	
Operating temperature	-40°C - +70°C
Storage temperature	-40°C - +85°C
Humidity	75% yearly average, 95% on 30 days/year
Resistance to fire and heat	Terminal 960°C, cover 650°C (IEC 60695-2-1)
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.
Mechanical environment	Class M2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).

*) For 690 V AC meters:

Power dissipation voltage circuits 2.2 VA (1.0 W) total at 230 V AC

Power dissipation current circuits 0.001 VA (0.001 W) per phase at I_{ref} and I_n

A42	A43	A44
	3x230/400 V AC	
57.7 - 288 or 100 ... 288 V AC (-20% - +15%)	3x57.7/100 ... 288/500 V AC (-20% - +15%)	3x57.7/100 ... 288/500 or 3x100/173 ... 400/690 V AC (-20% - +15%)
	1.8 VA (0.8 W) total at 230 V AC	
0.001 VA (0.001 W) at I_{ref} and I_n	0.006 VA (0.006 W) per phase at I_{ref}	0.001 VA (0.001 W) at I_{ref} and I_n^*
-	5 A	-
1 A	-	1 A
1 A	5 A	1 A
0.05 A	0.5 A	0.05 A
6 A	80 A	6 A
0.02 A	0.25 A	0.01 A
< 1 mA	< 20 mA	< 1 mA
0.5 - 10 mm ²	1 - 25 mm ²	0.5 - 10 mm ²
1.2 Nm	2 Nm	1.2 Nm
		0.5 - 1 mm ²
		0.25 Nm
1/9 - 9999/1	-	1/9 - 9999/1
1/999 - 999999/1	-	1/999 - 999999/1
5000 imp/kWh	1000 imp/kWh	5000 imp/kWh
40 ms		
50 or 60 Hz \pm 5 % (or 16.7 Hz optional)	50 or 60 Hz \pm 5 %	
B (Cl.1), C (Cl. 0,5 S) and Reactive Cl. 2	A (Cl.2), B (Cl.1) and Reactive Cl. 2	B (Cl.1), C (Cl. 0,5 S) and Reactive Cl. 2
0.5%, 1%	1%	0.5%, 1%
-40°C - +70°C		
-40°C - +85°C		
75% yearly average, 95% on 30 days/year		
Terminal 960°C, cover 650°C (IEC 60695-2-1)		
IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.		
Class M2 in accordance with the Measuring Instrument Directive (MID). (2014/32/EU).		
Class E2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).		

Energy efficiency

Energy meters A series

The A series meters ranges from single phase to three phase meters and from basic up to advanced functionality without any comparison. The A series meters are mounted on a DIN rail and are suitable for installation in distribution boards and small enclosures such as consumer units. With the main terminals in accordance with DIN 43857 and accessible from the below the meters, the A series is suitable for many applications.

The low rated or base currents of these products ensures high dynamic performance with superior accuracy even at low currents. The meters support a wide voltage range as well as a wide temperature range. The display is pixel-oriented and can display up to four quantities at the same time. Navigating the meter is easily done via the push-buttons below the display. To configure the meter settings, the set button must be accessed and this button is protected against unauthorized use when the “glass lid” on the front of the meter is closed and sealed. The exceptional low power consumption of the meters makes them economical in the long run - an important feature specially for large meter populations.

Data from the A series meters can be collected via pulse output or serial communication. The pulse output is a solid state relay that generates pulses proportionally to the measured energy. The meters can also be equipped with built-in serial communication interfaces for M-Bus or Modbus RTU (RS-485). Meters with RS-485 interface can also be set to communicate over the new EQ bus with the gateway G13. All meters in the A series come with an infrared port for communication with an external Serial Communication Adapter (SCA)

such as the KNX adapter.

A series supports following instrumentation values dependent on version of meter:

- Active energy
- Current
- Voltage
- Power factor
- Reactive power
- Total harmonic distortion
- Apparent power
- Frequency
- Harmonics

A series meters with a functionality level of Gold or Platinum have an internal clock for advanced functionality:

- Event log
- Previous values
- Load profile
- Maximum and minimum demand

The tariffs are controlled via inputs, via communication or via an internal clock in Gold and Platinum versions.

The A series support up to four I/O's. It can be two inputs and two outputs in a fixed configuration or four I/O points that are freely configured to input or output. Inputs can be used for counting pulses from e.g. a water meter, or reading status from external devices. Outputs can be used as pulse outputs or controlling external apparatus like

a contactor or an alarm (connected via an external relay). The I/O's need an external voltage supply. The A series meters are type approved according to IEC and they are both type approved and verified according to MID. MID is the Measuring Instruments Directive 2014/32/EU from the European Commission. MID type approval and verification is mandatory for meters in billing applications within EU and EEA. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

Energy efficiency

Energy meters A series



A series

Technical features		
	A series	
Outputs		
Type	Transistor or MOSFET	
Current	2 - 100 mA	
Voltage	5 - 240 V AC/DC. For meters with only 1 output, 5 - 40 V DC.	
Pulse output frequency	Programmable: 1 - 999999 imp/kWh	
Pulse length	Programmable: 10 - 990 ms	
Terminal wire area	0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm	
Inputs		
Voltage	0 - 240 V AC/DC	
OFF	0 - 5 V AC/DC	
ON	57 - 240 V AC/24 - 240 V DC	
Min. pulse length	30 ms	
Terminal wire area	0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm	
EMC compatibility		
Impulse voltage test	6 kV 1.2/50 μs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50 μs (IEC 61000-4-5)	
Fast transient burn test	4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance	150 kHz - 80 MHz, (IEC 61000-4-6)	
Immunity to disturbance with harmonics	2kHz - 150kHz	
Radio frequency emission	EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)	
Standards	EC 62052-11, IEC 62053-21 class 1 & 2, IEC 62053-22 class 0,5 S, IEC 62053-23 class 2, IEC 62054-21, GB/T 17215.211-2006, GBT 17215.321-2008 class 1 & 2, GB/T 17215.322-2008 class 0,5 S, GB 4208-2008, EN 50470-1, EN 50470-3 category A, B & C Energy meters.	
Mechanical		
Material	Polycarbonate in transparent front glass, bottom case, upper case and terminal cover, Glass reinforced polycarbonate in terminal block.	
Dimensions		
	A41 / A42	A43 / A44
Width	70 mm	123 mm
Height	97 mm	97 mm
Depth	65 mm	65 mm
DIN modules	4	7

Energy efficiency

Energy meters A series



A41

Direct connected energy meter up to 80 A. Verified and approved according to MID. IEC approval. Instrument values. Alarm function. Communication - Infrared (M-Bus).
Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters single phase electricity meter, 4 DIN with IR port, 80 A

Class B (Cl. 1) with functionality level Steel. Active energy

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
		EAN	Type code	Order code	kg	pc.
57.7...288 V AC, Pulse output	705547		A41 111 - 100	2CMA170554R1000	0.230	1
57.7...288 V AC, Pulse output, RS-485	705004		A41 112 - 100	2CMA170500R1000	0.230	1
57.7...288 V AC, Pulse output, M-Bus	002400		A41 113 - 100	2CMA100240R1000	0.230	1

Class 1 (Reactive Class 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
		EAN	Type code	Order code	kg	pc.
57.7...288 V AC, 2 output, 2 input, RS-485	705035		A41 312 - 100	2CMA170503R1000	0.230	1
57.7...288 V AC, 2 output, 2 input. M-Bus	705042		A41 313 - 100	2CMA170504R1000	0.230	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Gold. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand.

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
		EAN	Type code	Order code	kg	pc.
57.7...288 V AC, 2 output, 2 input, RS-485	705059		A41 412 - 100	2CMA170505R1000	0.230	1

Energy efficiency

Energy meters A series



A42

Transformer CTVT connected energy meter up to 6 A. Verified and approved according to MID. IEC approval. Voltage V - 57...288 V AC. Instrument values. Alarm function. Communication - Infrared (M-Bus). Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters single phase electricity meter, 4 DIN with IR port, 6 A

Class B (Cl. 1) with functionality level Steel. Active energy						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
57.7...288 V AC, Pulse output	705554	A42 111 - 100	2CMA170555R1000		0.200	1
57.7...288 V AC, Pulse output, RS-485	705103	A42 112 - 100	2CMA170510R1000		0.200	1
57.7...288 V AC, Pulse output, M-Bus	002424	A42 113 - 100	2CMA100242R1000		0.200	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
57.7...288 V AC, 2 output, 2 input, RS-485	705127	A42 312 - 100	2CMA170512R1000		0.200	1
Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Platinum. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand, advanced load profiles, harmonics and THD. Versions for 16.7, 50 or 60 Hz.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
57.7...288 V AC, Configurable 4 I/O channels, RS-485	002387	A42 552 - 100	2CMA100238R1000		0.200	1
100...288 V AC, Configurable 4 I/O channels, RS-485 16.7*, 50 or 60 Hz	705189	A42 552 - 120	2CMA100518R1000		0.200	1
100...288 V AC, Configurable 4 I/O channels, M-Bus 16.7*, 50 or 60 Hz	705196	A42 553 - 120	2CMA100519R1000		0.200	1

*) The meters are not tested and approved for placement on rolling stock.

Energy efficiency

Energy meters A series



A43

Direct connected energy meter up to 80 A. Verified and approved according to MID. IEC approval. 2- and 3-element metering. Instrument values. Alarm function. Communication - Infrared (M-Bus). Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters three phase electricity meter, 7 DIN with IR port, 80 A

Class B (Cl. 1) with functionality level Steel. Active energy						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Pulse output	705202	A43 111 - 100	2CMA170520R1000		0.440	1
3 x 57.7/100...288/500 V AC, Pulse output, RS-485	002448	A43 112 - 100	2CMA100244R1000		0.440	1
3 x 57.7/100...288/500 V AC, Pulse output, M-Bus	002455	A43 113 - 100	2CMA100245R1000		0.440	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze. Active and reactive energy, import/export.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Pulse output, RS-485	705226	A43 212 - 100	2CMA170522R1000		0.440	1
3 x 57.7/100...288/500 V AC, Pulse output, M-Bus	705233	A43 213 - 100	2CMA170523R1000		0.440	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, 2 output, 2 input, RS-485	705257	A43 312 - 100	2CMA170525R1000		0.440	1
3 x 57.7/100...288/500 V AC, 2 output, 2 input, M-Bus	705264	A43 313 - 100	2CMA170526R1000		0.440	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Platinum. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand, advanced load profiles, harmonics and THD.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Configurable 4 I/O channels, RS-485	705318	A43 512 - 100	2CMA170531R1000		0.440	1
3 x 57.7/100...288/500 V AC, Configurable 4 I/O channels, M-Bus	705325	A43 513 - 100	2CMA170532R1000		0.440	1

Energy efficiency

Energy meters A series



A44

Transformer CTVT connected energy meter up to 6 A. Verified and approved according to MID. IEC approval. 2- and 3-element metering. Instrument values. Alarm function. Communication - Infrared (M-Bus). Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters three phase electricity meter, 7 DIN with IR port, 6 A

Class B (Cl. 1) with functionality level Steel. Active energy						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Pulse output	705332	A44 111 - 100	2CMA170533R1000		0.350	1
3 x 57.7/100...288/500 V AC, Pulse output, RS-485	002486	A44 112 - 100	2CMA100248R1000		0.350	1
3 x 57.7/100...288/500 V AC, Pulse output, M-Bus	002493	A44 113 - 100	2CMA100249R1000		0.350	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze. Active and reactive energy, import/export.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Pulse output	000130	A44 211 - 100	2CMA100013R1000		0.350	1
3 x 57.7/100...288/500 V AC, Pulse output, RS-485	705349	A44 212 - 100	2CMA170534R1000		0.350	1
3 x 57.7/100...288/500 V AC, Pulse output, M-Bus	705356	A44 213 - 100	2CMA170535R1000		0.350	1
Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, 2 output, 2 input	705363	A44 311 - 100	2CMA170536R1000		0.350	1
Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, 2 output, 2 input, RS-485	705370	A44 352 - 100	2CMA170537R1000		0.350	1
3 x 57.7/100...288/500 V AC, 2 output, 2 input, M-Bus	705387	A44 353 - 100	2CMA170538R1000		0.350	1
Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Gold. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, 2 output, 2 input, RS-485	705400	A44 452 - 100	2CMA170540R1000		0.350	1
Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Platinum. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand, advanced load profiles, harmonics and THD.						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 57.7/100...288/500 V AC, Configurable 4 I/O channels, RS-485	705455	A44 552 - 100	2CMA170545R1000		0.350	1
3 x 57.7/100...288/500 V AC, Configurable 4 I/O channels, M-Bus	705462	A44 553 - 100	2CMA170546R1000		0.350	1
3 x 57.7/100...400/690 V AC, 1 input + 1 output, RS-485	705493	A44 552 - 110	2CMA170549R1000		0.350	1
3 x 57.7/100...400/690 V AC, 1 input + 1 output, M-Bus	705486	A44 553 - 110	2CMA170548R1000		0.350	1

Energy efficiency

Energy meters B series



B series

Technical features	
B21	
Voltage/current inputs	
Nominal voltage	230 V AC
Voltage range	220...240 VAC (-20% - +15%)
Power dissipation voltage circuits	1.1 VA (0.5 W) total at 230 V AC
Power dissipation current circuits	0.012 VA (0.012 W) at I_{ref} and I_b
Base current I_b	5 A
Rated current I_n	-
Reference current I_{ref}	5 A
Transitional current I_{tr}	0.5 A
Maximum current I_{max}	65 A
Minimum current I_{min}	0.25 A
Starting current I_{st}	< 20 mA
Terminal wire area	1 - 25 mm ²
Recommended tightening torque	2 Nm
Communication	
Terminal wire area	0.5 - 1 mm ²
Recommended tightening torque	0.25 Nm
Transformer ratios	
Configurable current ratio (CT)	-
Pulse indicator (LED)	
Pulse frequency	1000 imp/kWh
Pulse length	40 ms
General data	
Frequency	50 or 60 Hz \pm 5%
Accuracy Class	B (Cl. 1) and Reactive Cl. 2
Active energy	1%
Display of energy	6 digit LCD
Environmental	
Operating temperature	-40°C - +70°C
Storage temperature	-40°C - +85°C
Humidity	75% yearly average, 95% on 30 days/year
Resistance to fire and heat	Terminal 960 °C, cover 650°C (IEC 60695-2-1)
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.
Mechanical environment	Class M2 in accordance with the Measuring Instrument Directive (MID). (2014/32/EU).
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).

B23	B24
3x230/400 V AC	
3x220/380...240/415 VAC (-20% - +15%)	
1.7 VA (0.8 W) total at 230 V AC	
0.007 VA (0.007 W) per phase at I_{ref} and I_b	0.0007 VA (0.0005 W) per phase at I_{ref} and I_n
	-
	1 A
	-
	0.05 A
	6 A
	0.02 A
	< 1 mA
	0.5 - 10 mm ²
	1.2 Nm
	1/9 - 9999/1
	5000 imp/kWh
B (Cl. 1) or C (Cl. 0.5 S) and Reactive Cl. 2	
	0.5%, 1%
7 digit LCD	
IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	
Class M2 in accordance with the Measuring Instrument Directive (MID). (2014/32/EU).	
Class E2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).	

Energy efficiency

Energy meters B series

The Energy meters, B series is a range of meters for single phase and three phase metering. The B series meters are mounted on a DIN rail and are suitable for installation in distribution boards and small enclosures such as consumer units. The B series are suitable in applications where there is a need for reliable energy measurements and where space is limited.

The low rated or base currents of these products ensures high dynamic performance with superior accuracy even at low currents. The B series meters are meters for many applications and installations. Navigating the meter is easily done via the push-buttons below the display. To configure the meter settings, the set button must be accessed and this button is protected against unauthorized use when the "glass lid" on the front of the meter is closed and sealed. The exceptional low power consumption of the meters, less than 0.9 VA and 1.6 VA, makes them economical in the long run - an important feature specially for large meter populations.

Data from the B series meters can be collected via pulse output or serial communication. The pulse output is a solid state relay that generates pulses proportionally to the measured energy. The meters can also be equipped with built-in serial communication interfaces for M-Bus or Modbus RTU (RS-485). Meters with RS-485 interface can also be set to communicate over the new EQ bus with the new gateway G13. All meters in the B series come with an infrared port for communication with an external Serial Communication Adapter (SCA) such as the KNX adapter.

The B series meters support reading of instrument values. A large number of electrical properties can be read. Depending on version of the meter the following data is available:

- Active power
- Apparent power
- Reactive power
- Current
- Voltage
- Frequency
- Power factor

Up to 4 tariffs are controlled via inputs or communication.

The B series support two inputs and two outputs in a fixed configuration. Inputs can be used for counting pulses from e.g. a water meter, or reading status from external devices. Outputs can be used as pulse outputs or controlling external apparatus like a contactor or an alarm (connected via an external relay).

The B series meters are type approved according to IEC and they are both type approved and verified according to MID. MID is the Measuring Instruments Directive 2014/32/EU from the European Commission. MID type approval and verification is mandatory for meters in billing applications within EU and EEA. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

Energy efficiency

Energy meters B series



B series

Technical features		
B series		
Outputs		
Type	Transistor or MOSFET	
Current	2 - 100 mA	
Voltage	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC.	
Pulse output frequency	Programmable 1 - 999999 imp/kWh	
Pulse length	Programmable 10 - 990 ms	
Terminal wire area	0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm	
Inputs		
Voltage	0 - 240 V AC/DC	
OFF	0 - 5 V AC/DC	
ON	57 - 240 V AC/24 - 240 V DC	
Min. pulse length	30 ms	
Terminal wire area	0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm	
EMC compatibility		
Impulse voltage test	6 kV 1.2/50µs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50µs (IEC 61000-4-5)	
Fast transient burn test	4kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz (IEC 61000-4-6)	
Immunity to conducted disturbance	150kHz - 80MHz (IEC 61000-4-6)	
Immunity to disturbance with harmonics	2kHz - 150kHz	
Radio frequency emission	EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)	
Standards	IEC 62052-11, IEC 62053-21 class 1 & 2, IEC 62053-22 class 0,5 S, IEC 62053-23 class 2, IEC 62054-21, GB/T 17215.211-2006, GB/T 17215.312-2008 class 1 & 2, GB/T 17215.322-2008 class 0,5 S, GB 4208-2008, EN 50470-1, EN 50470-3 category A, B & C	
Mechanical		
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	
Dimensions		
	B21	B23/B24
Width	35 mm	70 mm
Height	97 mm	97 mm
Depth	65 mm	65 mm
DIN modules	2	4

Energy efficiency

Energy meters B series



B21

Direct connected energy meter up to 65 A. Verified and approved according to MID. IEC approval. Instrument values. Alarm function. - Communication - Infrared (M-Bus).
Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters single phase electricity meter, 2 DIN with IR port, 65 A

For direct connection up to 65 A. Class B (Cl. 1) with functionality level Steel.

Active energy

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
1 x 230 V AC, Pulse output	001496	B21 111 - 100	2CMA100149R1000		0.140	1
1 x 230 V AC, Pulse output, RS-485	001502	B21 112 - 100	2CMA100150R1000		0.150	1
1 x 230 V AC, Pulse output, M-Bus	001519	B21 113 - 100	2CMA100151R1000		0.150	1

For direct connection up to 65 A. Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
1 x 230 V AC, 2 output, 2 input	001540	B21 311 - 100	2CMA100154R1000		0.140	1
1 x 230 V AC, 2 output, 2 input, RS-485	001557	B21 312 - 100	2CMA100155R1000		0.150	1
1 x 230 V AC, 2 output, 2 input, M-Bus	001564	B21 313 - 100	2CMA100156R1000		0.150	1

Energy efficiency

Energy meters B series



B23

Direct connected energy meter up to 65 A. Verified and approved according to MID. IEC approval. 2- and 3-element metering. Instrument values. Alarm function. Communication - Infrared (M-Bus). Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters three phase electricity meter, 4 DIN with IR port, 65 A

Class B (Cl. 1) with functionality level Steel.

Active energy

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
3 x 230/400 V AC, Pulse output	001632	B23 111 - 100	2CMA100163R1000		0.310	1
3 x 230/400 V AC, Pulse output, RS-485	001649	B23 112 - 100	2CMA100164R1000		0.320	1
3 x 230/400 V AC, Pulse output, M-Bus	001656	B23 113 - 100	2CMA100165R1000		0.330	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze.

Active and reactive energy, import/export.

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
3 x 230/400 V AC, Pulse output, RS-485	001663	B23 212 - 100	2CMA100166R1000		0.320	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Description	Bbn	Order details		Price	Weight	Pack
		EAN	Type code			
	7392696			1 piece	1 piece	unit
3 x 230/400 V AC, 2 output, 2 input	001687	B23 311 - 100	2CMA100168R1000		0.330	1
3 x 230/400 V AC, 2 output, 2 input, RS-485	001694	B23 312 - 100	2CMA100169R1000		0.340	1
3 x 230/400 V AC, 2 output, 2 input, M-Bus	001700	B23 313 - 100	2CMA100170R1000		0.350	1

Energy efficiency

Energy meters B series



B24

Transformer CT connected energy meter up to 6 A. Verified and approved according to MID. IEC approval. 2- and 3-element metering. Instrument values. Alarm function. Communication - Infrared (M-Bus). Optional - Communication with M-Bus, RS-485 Modbus, RS-485 EQ bus.

Energy meters three phase electricity meter, 4 DIN with IR port, 6 A

Class B (Cl. 1) with functionality level Steel. Active energy

Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 230/400 V AC, Pulse output	001779	B24 111 - 100	2CMA100177R1000		0.250	1
3 x 230/400 V AC, Pulse output, RS-485	001786	B24 112 - 100	2CMA100178R1000		0.250	1
3 x 230/400 V AC, Pulse output, M-Bus	001793	B24 113 - 100	2CMA100179R1000		0.270	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze. Active and reactive energy, import/export.

Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 230/400 V AC, Pulse output, RS-485	001809	B24 212 - 100	2CMA100180R1000		0.250	1

Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 230/400 V AC, 2 output, 2 input, RS-485	001830	B24 352 - 100	2CMA100183R1000		0.270	1
3 x 230/400 V AC, 2 output, 2 input, M-Bus	001847	B24 353 - 100	2CMA100184R1000		0.290	1

Energy efficiency

Energy meters C series

The Energy meters, C series are truly compact meters for single phase and three phase metering. The C series is mounted on a DIN rail and is suitable for installation in distribution boards and small consumer units.

Only one or three module wide, the C series is a very compact meter for single phase and three phase applications. The meters have an LCD with large digits showing energy register and instrumentation values. The meters have a wide temperature range which makes it possible to install the meters in many locations. Navigating the meters are easily done via the push-button below the display. The exceptional low power consumption of the meters, less than 0,3 W and 0,6 W at 230 V AC, makes them economical in the long run - an important feature specially for large meter populations.

The C series meters support reading of instrument values. A number of electrical properties can be read:

- Power factor
- Active power
- Current
- Voltage

The C series meters have an output that can be used as pulse output or alarm output. The alarm quantity and levels is easily configured on the meter with the push button. The output can be used for controlling external apparatus like a contactor or an alarm indicator (connected via an external relay).

The C series meters are type approved according to IEC and MID. MID is the Measuring Instruments Directive 2014/32/EU from the European Commission. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

MID versions have initial verification according to annex F of the Measuring Instruments Directive.

Energy efficiency

Energy meters C series



C series

Technical features		
	C11	C13
Voltage/current inputs		
Nominal voltage	230 V AC	3x230/400 V AC
Voltage range	230 V AC (-20% - +15%)	3x230/400 V AC (-20% - +15%)
Power dissipation voltage circuits	7.4 VA (0.3 W) at 230 V	1.5 VA (0.6 W) total at 230 V
Power dissipation current circuits	0.04 VA (0.04 W) at I_b and I_{ref}	0.04 VA (0.04 W) per phase at I_b and I_{ref}
Base current I_b	5 A	
Rated current I_n	-	
Reference current I_{ref}	5 A	
Transitional current I_{tr}	0.5 A	
Maximum current I_{max}	40 A	
Minimum current I_{min}	0.25 A	
Starting current I_{st}	< 20 mA	
Terminal wire area	0.5 - 10 mm ²	0.5 - 10 mm ²
Recommended tightening torque	0.8 Nm	
General data		
Frequency	50 or 60 Hz ± 5%	
Accuracy Class	B (Cl.1)	
Active energy	1%	
Display of energy	6 digit LCD	7 digits LCD
Communication		
Terminal wire area	-	
Recommended tightening torque	-	
Pulse indicator (LED)		
Pulse frequency	1000 (imp/kWh)	
Pulse length	40 ms	
Environmental		
Operating temperature	- 25°C - +70°C	
Storage temperature	- 25°C - +85°C	
Humidity	75% yearly average, 95% on 30 days/year	
Resistance to fire and heat	Terminal 960°C, cover 650°C (IEC 60695-2-1)	
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	
Mechanical environment	Class M2 in accordance with the Measuring Instrument Directive (MID). (2014/32/EU).	
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2014/32/EU).	

Energy efficiency

Energy meters C series

Technical features		
	C11	C13
Outputs		
Type	Transistor	
Current	2 - 100 mA	
Voltage	5 - 40 V DC	
Pulse output frequency	100 or 1000 (imp/kWh)	
Pulse length	100 ms	
Terminal wire area	0.5 - 10 mm ²	0.5 - 6 mm ²
Recommended tightening torque	0.8 Nm	0.25 Nm
EMC compatibility		
Impulse voltage test	6 kV 1.2/50 μs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50 μs (IEC 61000-4-5)	
Fast transient burn test	4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance	150 kHz - 80 MHz, (IEC 61000-4-6)	
Immunity to disturbance with harmonics	2kHz - 150kHz	
Radio frequency emission	EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)	
Standards	IEC 62052-11, IEC 62053-21 class 1, GB/T 17215.211-2006, GBT 17215.321-2008 class 1, GB 4208-2008, EN 50470-1, EN 50470-3 category B	
Mechanical		
Material	Glass reinforced polycarbonate	
Dimensions		
Width	17,5 mm	54 mm
Height	111 mm	122 mm
Depth	65 mm	65 mm
DIN modules	1	3

Energy efficiency

Energy meters C series



C11

Direct connected energy meter up to 40 A. IEC approval. Instrument values.
Alarm function. Optional - Verified and approved according to MID.D.

Energy meters single phase electricity meter, 1 DIN, 40 A

Class B (Cl.1) with functionality level Steel. Active energy						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
1 x 230 V AC, Pulse output 1000 imp/kWh	035712	C11 110 - 101*)	2CMA103571R1000		0.070	1
Class 1 with functionality level Steel. Active energy						
1 x 230 V AC, Pulse output 1000 imp/kWh	035729	C11 110 - 301	2CMA103572R1000		0.070	1



C13

Direct connected energy meter. IEC approval. 3 element metering. Instrument values.
Alarm function. Optional - Verified and approved according to MID.

Energy meters three phase electricity meter, 3 DIN, 40 A

For direct connection up to 40 A. Class B (Cl.1) with functionality level Steel. Active energy						
Description	Bbn	Order details		Price	Weight	Pack
	7392696			1 piece	1 piece	unit
	EAN	Type code	Order code		kg	pc.
3 x 230/400 V AC, Pulse output 1000 imp/kWh	035743	C13 110 - 101*)	2CMA103574R1000		0.170	1
For direct connection up to 40 A. Class 1 with functionality level Steel. Active energy						
3 x 230/400 V AC, Pulse output 1000 imp/kWh	035750	C13 110 - 301	2CMA103575R1000		0.170	1

*) MID approval according to Module
B and F

Energy efficiency

ABB EQmatic and Energy meters G series



QA/S 3.16.1

Energy Analyzer, M-Bus, MDRC

NEW

Compact and web-based stand-alone devices for energy management applications. For monitoring, logging, displaying and analyzing consumption data of up to 16 or 64 electricity, gas, water or heat meters via M-Bus. Automatic detection for ABB Energy meters (A/B-Series). Access to the device via web browser. The user interface provides graphical analysis functions, e.g. dashboard, historical data, instantaneous values, benchmark functions, cost allocation according to consumer groups and more.

Description	Order details			Price	Weight	Pack
	EAN	Type code	Order code	1 piece	1 piece	unit
				kg	pc.	
64 Devices	4016779997768	QA/S 3.64.1	2CDG110227R0011	0.15	1	
16 Devices		QA/S 3.16.1	2CDG110226R0011	0.15	1	



QA/S 3.64.1

Energy Analyzer, Modbus RTU, MDRC

NEW

Compact and web-based stand-alone devices for energy management applications. For monitoring, logging, displaying and analyzing consumption data of up to 16 or 64 electricity, gas, water or heat meters via Modbus RTU. Automatic detection for ABB Energy meters (A/B-Series). Access to the device via web browser. The user interface provides graphical analysis functions, e.g. dashboard, historical data, instantaneous values, benchmark functions, cost allocation according to consumer groups and more.

Description	Order details			Price	Weight	Pack
	EAN	Type code	Order code	1 piece	1 piece	unit
				kg	pc.	
Modbus RTU, 16 Devices		QA/S 4.16.1	2CDG110228R0011	0.15	1	
Modbus RTU, 64 Devices		QA/S 4.64.1	2CDG110229R0011	0.15	1	



QA/S 4.xx.1