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<https://new.abb.com/low-voltage>

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Warning! Installation by person with electrotechnical expertise only.
Warnung! Installation nur durch elektrotechnische Fachkraft.
Avvertenza! Fare installare solo da un elettricista qualificato.

1 Mounting

1.1 Mounting all model

PZ2
5.5 mm
13 mm
2.5mm
6 mm
0,25 Nm

RS-485
I/O
B2x 1xx-xxx
B2x 2xx-xxx
B2x 3xx-xxx

B21/B23/B24
INSTALLATION MANUAL

2CMC485019M0201 November 2025 Rev H



Utilization category as of IEC 62052-31
B21 and B23:UC2
B24:UC1

Working with high voltage is potentially lethal.
Persons subjected to high voltage may suffer cardiac arrest, burn injuries, or other severe injuries. To avoid such injuries, make sure to disconnect the power supply before you start the installation.

2 Explanations

Table 1 Button instruction

Button	Function
	Down / Up
	OK / Exit
	Set

Table 2 Symbol instruction

Symbol	Action
	Press this button
	Press and hold button
	Setting sequence
	Screen is flashing
2x	Number of keystrokes
	Setting finished

3 Basic settings

3.1 Default settings

B21/B23
Pulse output
Pulse 1
Quantity : Active Energy Import
Frequency: 100 Imp/kWh
Length: 100 ms
Output: 1
Pulse 2
Quantity : Active Energy Export
Frequency: 100 Imp/kWh
Length: 100 ms
Output: 2

B24
Pulse output
Pulse 1
Quantity : Active Energy Import
Frequency: 10 Imp/kWh
Length: 100 ms
Output: 1
Pulse 2
Quantity : Active Energy Export
Frequency: 10 Imp/kWh
Length: 100 ms
Output: 2

3.2 B21/B23/B24 - Pulse output

3.3 B23/B24 - Wires

3.4 B24 - CT Ratios

3.5 Change / Select values

Table 3 Technical data

	B21	B23	B24
Nominal voltage	230 V AC	3x230/400 V AC	3x230/400 V AC
Voltage range	220-240 VAC (-20% to +15%)	3x220-240 V AC (-20% to +15%)	3x220-240 V AC (-20% to +15%)
Base current I _b	5 A	5 A	1 A
Rated current I _n	5 A	5 A	1 A
Reference current I _{ref}	65 A	65 A	6 A
Maximum current I _{max}	65 A	65 A	6 A
Terminal wire area	1.5 - 25 mm ²	1.5 - 25 mm ²	0.5 - 10 mm ²
Frequency	50 or 60 Hz ± 5%	50 or 60 Hz ± 5%	50 or 60 Hz ± 5%
Accuracy Class	B (Cl. 1) and Reactive Cl. 2	B (Cl. 1) and Reactive Cl. 2	B (Cl. 1) or C (Cl. 0.5 S) and Reactive Cl. 2
Active energy	1%	1%	0.5%, 1%
Environmental			
Operating temperature	-40 to +70°C	-40 to +70°C	-40 to +70°C
Storage temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Humidity	75% yearly average, 95% on 30 days/year	75% yearly average, 95% on 30 days/year	75% yearly average, 95% on 30 days/year
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.
Mechanical env.	Class M2 for MID meters	Class M2 for MID meters	Class M2 for MID meters
Electromagnetic env.	Frequency 1000 Imp/kWh	Frequency 1000 Imp/kWh	Length 40 ms
LED pulse indicator	1000 Imp/kWh	1000 Imp/kWh	40 ms
Outputs			
Current	2 - 100 mA	2 - 100 mA	2 - 100 mA
Voltage	5 - 240 V AC/DC	5 - 240 V AC/DC	5 - 240 V AC/DC
OFF	0 - 5 VAC/DC	0 - 5 VAC/DC	0 - 5 VAC/DC
ON	57 - 240 V AC / 24 - 240 V DC	57 - 240 V AC / 24 - 240 V DC	57 - 240 V AC / 24 - 240 V DC
Min. pulse length	30 ms	30 ms	30 ms
Terminal wire area	0.5 - 1 mm ²	0.5 - 1 mm ²	0.5 - 1 mm 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 17215.211-2008, GB/T 17215.312-2008 class 1 & 2, GB/T 17215.322-2008 class 0,5 S, GB 4208-2008, EN 50470-3 category A, B & C	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 17215.211-2008, GB/T 17215.312-2008 class 1 & 2, GB/T 17215.322-2008 class 0,5 S, GB 4208-2008, EN 50470-3 category A, B & C	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 17215.211-2008, GB/T 17215.312-2008 class 1 & 2, GB/T 17215.322-2008 class 0,5 S, GB 4208-2008, EN 50470-3 category A, B & C
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.

[illegible]