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B21/B23/B24  
INSTALLATION MANUAL

2CMC485019M0201 May 2016 Rev B



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Specification subject to change without notice.

Warning! Installation by person with electrotechnical expertise only.

Warnung! Installation nur durch elektrotechnische Fachkraft.

Avvertenza! Fare installare solo da un elettricista qualificato.

Avertissement! Installation uniquement par des personnes qualifiées en électrotechnique.

Advertencia! La instalación deberá ser realizada únicamente por electricistas especializados.

1 Mounting

### 1.1 Mounting all model

PZ2  
5.5 mm  
13 mm

### 1.2 Connection -B24

L3  
L2  
L1  
N  
3 x ≤ 10 A  
(1,2 Nm)

### 1.3 Connection -B23

L3  
L2  
L1  
N  
3 x ≤ 65 A  
(2,0 Nm)

### 1.4 Connection -B21

L  
N  
1 x ≤ 65 A  
(2,0 Nm)

### 1.5 Mounting RS-485 and I/O

2,5mm  
6 mm  
(0,25 Nm)

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
	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

1. 0.00 kVh  
2. PULSE  
3. QUANT  
4. ACT 1  
5. ACT 1  
6. ACT 1  
7. FREQUEN  
8. 10 kVh  
9. 0000 10 kVh  
10. 10 kVh  
11. LENGTH  
12. 100  
13. 100  
14. 100  
15. OUTPUT  
16. 1 OUT  
17. 1 OUT  
18. 1 OUT

### 3.3 B23/B24 - Wires

1. 0.00 kVh  
2. Wires  
3. 3 Wires  
4. 4 Wires

### 3.4 B24 - CT Ratios

1. 0.00 kVh  
2. CT Rat  
3. 5-5  
4. 900-5

### 3.5 Change / Select values

#### 1. Select a value

Select a value when the digit blinks.

Example: Set CT Ratio 100/5

#### 2. Cancel a value

Example: Set 10 to 20

#### 3. Change Value

Enter the value when the digit blinks.

Example: Set 10 to 20

### Table 3 Technical data

	B21	B23	B24
Nominal voltage	230 V AC	230 V AC	3x230/400 V AC
Voltage range	220-240 VAC (-20% to +15%)	220-240 VAC (-20% to +15%)	3x220-240 V AC (-20% to +15%)
Base current I <sub>b</sub>	-	5 A	-
Rated current I <sub>n</sub>	-	-	1 A
Reference current I <sub>ref</sub>	-	5 A	-
Maximum current I <sub>max</sub>	-	65 A	6 A
Terminal wire area	1.5 - 25 mm <sup>2</sup>	50 or 60 Hz ± 5%	0.5 - 10 mm <sup>2</sup>
Frequency	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%	0.5%, 1%
Environmental	-	-	-
Operating temperature	-40 to +70°C	-	-
Storage temperature	-40°C to +85°C	-	-
Humidity	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.	-	-
Mechanical environment	Class M2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	-	-
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	-	-
Outputs	-	-	-
Current	2 - 100 mA	-	-
Voltage	5 - 240 V AC/DC. 5 - 40 V DC. For meters with only 1 output.	-	-
Pulse output frequency	Programmable: 1 - 999999 imp/kWh	-	-
Pulse length	Programmable: 10 - 990 ms	-	-
Terminal wire area	0.5 - 1 mm <sup>2</sup>	-	-
Inputs	-	-	-
Voltage	0 - 240 V AC/DC	-	-
OFF	0 - 12 V AC/DC	-	-
ON	57 - 240 V AC/24 - 240 V DC	-	-
Min. pulse length	30 ms	-	-
Terminal wire area	0.5 - 1 mm <sup>2</sup>	-	-
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	-	-
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	-	-



