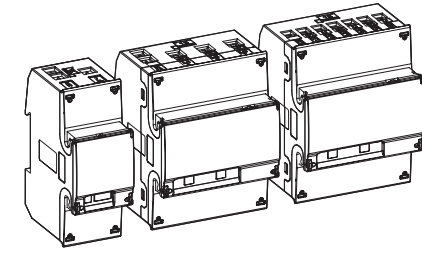


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Specification subject to change without notice.



## B21/B23/B24 INSTALLATION MANUAL

2CMC485019M0201 October 2023 Rev G



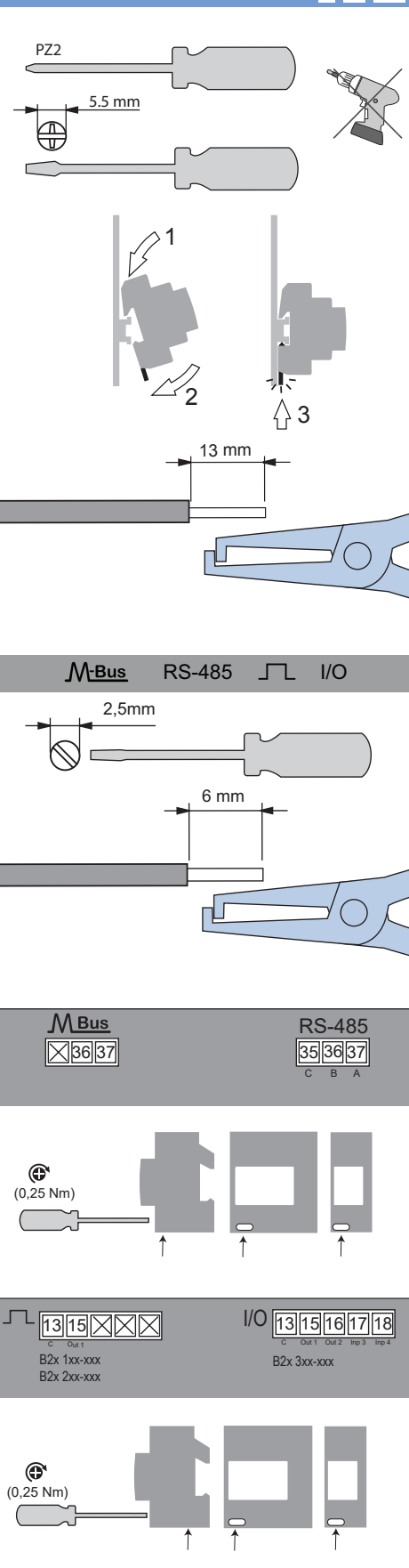
Utilization category as of IEC 62052-31  
B21 and B23:UC2  
B24:UC1

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

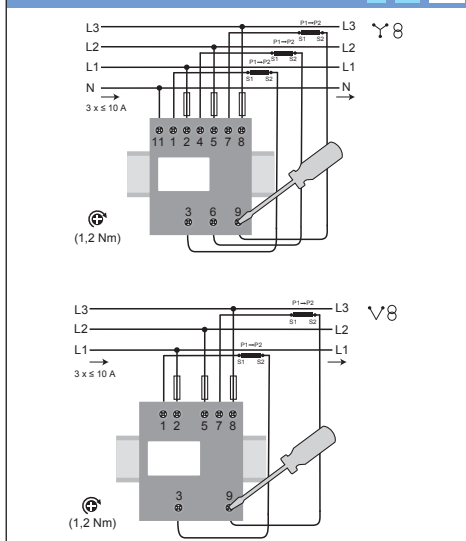
**Warning!** Working with high voltage is potentially lethal. Persons subjected to high voltage may suffer cardiac arrest, burn injuries, or other severe injuries. To avoid such injuries, make sure to disconnect the power supply before you start the installation.

## 1 Mounting

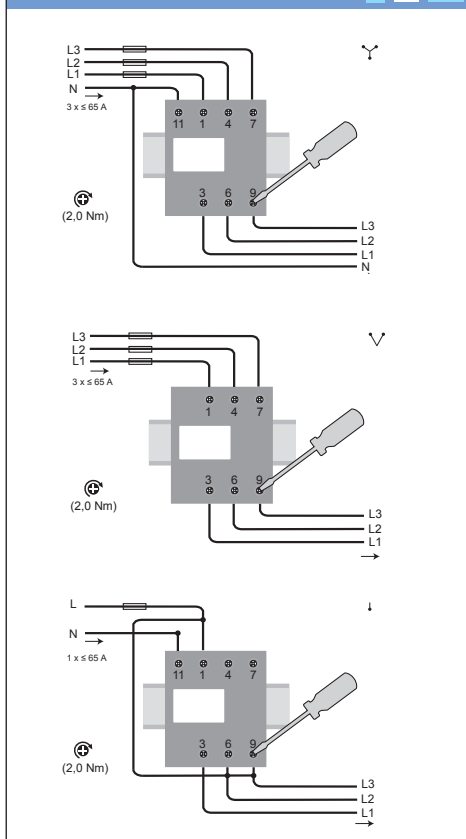
### 1.1 Mounting all model



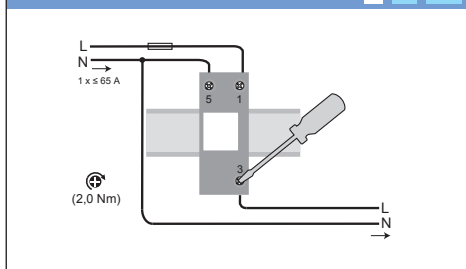
### 1.2 Connection -B24



### 1.3 Connection -B23



### 1.4 Connection -B21



## 2 Explanations

**Table 1** Button instruction

Button	Function
	Down / Up
	OK / Exit
	Set

**Table 2** Symbol instruction

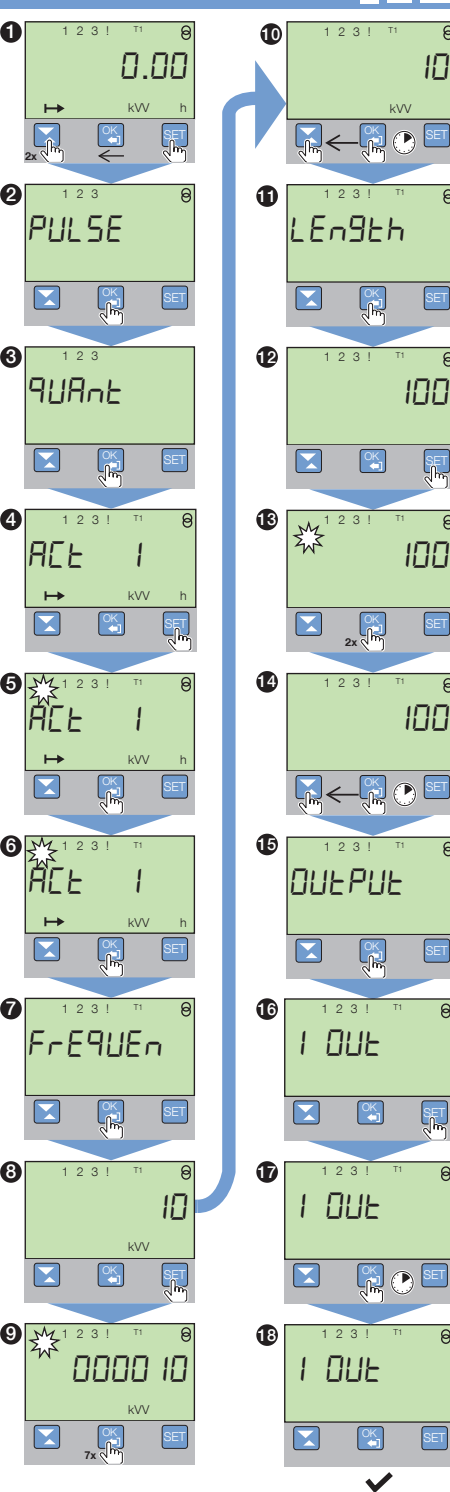
Symbol	Action
	Press this button
	Press and hold button
	Setting sequence
	Screen is flashing
<b>2x</b>	Number of keystrokes
	Setting finished

## 3 Basic settings

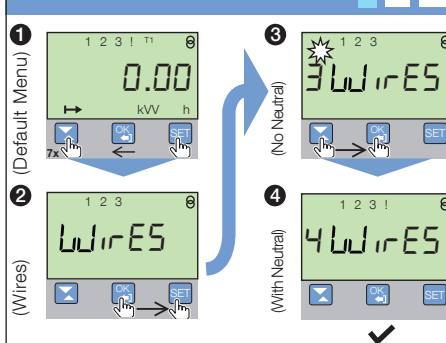
### 3.1 Default settings

B21/B23	B24
<b>Pulse output</b> <b>Pulse 1</b> Quantity : Active Energy Import Frequency: 100 Imp/kWh Length: 100 ms Output: 1 <b>Pulse 2</b> Quantity : Active Energy Export Frequency: 100 Imp/kWh Length: 100 ms Output: 2	<b>Pulse output</b> <b>Pulse 1</b> Quantity : Active Energy Import Frequency: 10 Imp/kWh Length: 100 ms Output: 1 <b>Pulse 2</b> Quantity : Active Energy Export Frequency: 10 Imp/kWh Length: 100 ms Output: 2
<b>Wires</b> Wires: 4 Wires (3 Phases & Neutral)	<b>CT Ratios</b> CT Ratios: 5/5

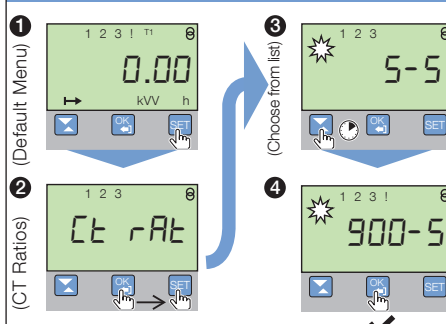
### 3.2 B21/B23/B24 - Pulse output



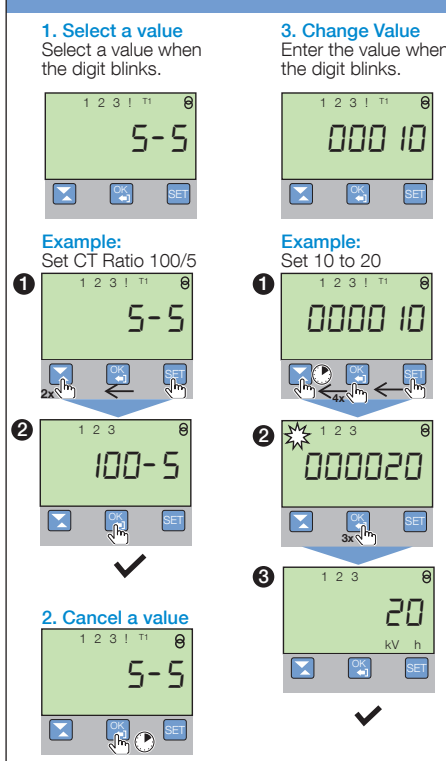
### 3.3 B23/B24 - Wires



### 3.4 B24 - CT Ratios



### 3.5 Change / Select values



**Table 3** Technical data

	B21	B23	B24
<b>Nominal voltage</b>	230 V AC	220-240 V AC	3x230/400 V AC
<b>Voltage range</b>	220-240 V AC (-20% to +15%)	220-240 V AC (-20% to +15%)	3x220-240 V AC (-20% to +15%)
<b>Base current I<sub>b</sub></b>	5 A	5 A	5 A
<b>Rated current I<sub>n</sub></b>	5 A	5 A	1 A
<b>Reference current I<sub>ref</sub></b>	65 A	65 A	6 A
<b>Maximum current I<sub>max</sub></b>	65 A	65 A	6 A
<b>Terminal wire area</b>	1.5 - 25 mm <sup>2</sup>	1.5 - 25 mm <sup>2</sup>	0.5 - 10 mm <sup>2</sup>
<b>Frequency</b>	50 or 60 Hz ± 5%	50 or 60 Hz ± 5%	50 or 60 Hz ± 5%
<b>Accuracy Class</b>	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
<b>Active energy</b>	1%	1%	1%
<b>Environmental</b>			
<b>Operating temperature</b>	-40 to +70°C	-40 to +70°C	-40 to +70°C
<b>Storage temperature</b>	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
<b>Humidity</b>	75% yearly average, 95% on 30 days/year	75% yearly average, 95% on 30 days/year	75% yearly average, 95% on 30 days/year
<b>Resistance to water and dust</b>	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.
<b>Mechanical env.</b>	Class M2 for MID meters	Class M2 for MID meters	Class M2 for MID meters
<b>Electromagnetic env.</b>	Class E2 for MID meters	Class E2 for MID meters	Class E2 for MID meters
<b>LED pulse indicator</b>	Frequency: 1000 Imp/kWh	Frequency: 1000 Imp/kWh	Length: 40 ms
<b>Outputs</b>			
<b>Current</b>	2 - 100 mA	2 - 100 mA	2 - 100 mA
<b>Voltage</b>	5 - 240 V AC/DC	5 - 240 V AC/DC	5 - 240 V AC/DC
<b>Pulse output frequency</b>	5 - 40 V DC. For meters with only 1 output. Programmable: 1 - 999999 Imp/kWh	5 - 40 V DC. For meters with only 1 output. Programmable: 1 - 999999 Imp/kWh	5 - 40 V DC. For meters with only 1 output. Programmable: 1 - 999999 Imp/kWh
<b>Pulse length</b>	Programmable: 10 - 990 ms	Programmable: 10 - 990 ms	Programmable: 10 - 990 ms
<b>Terminal wire area</b>	0.5 - 1 mm <sup>2</sup>	0.5 - 1 mm <sup>2</sup>	0.5 - 1 mm <sup>2</sup>
<b>Inputs</b>			
<b>Voltage</b>	0 - 240 V AC / DC	0 - 5 V AC / DC	0 - 5 V AC / DC
<b>OFF</b>	57 - 240 V AC / 24 - 240 V DC	57 - 240 V AC / 24 - 240 V DC	57 - 240 V AC / 24 - 240 V DC
<b>ON</b>	30 ms	30 ms	30 ms
<b>Min. pulse length</b>	0.5 - 1 mm <sup>2</sup>	0.5 - 1 mm <sup>2</sup>	0.5 - 1 mm <sup>2</sup>
<b>Terminal wire area</b>			
<b>Standards</b>	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 50470-1, 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 50470-1, 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 50470-1, EN 50470-3 category A, B & C
<b>Material</b>	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.



