

# ABB THREE PHASE ELECTRICITY METERS B23/B24 EQ METERS IN STEEL VERSION



**VWV metering** is het platform waarop wij onze producten aanbieden. VWV metering biedt een ruim scala aan meters en toebehoren. Centraal hierbij staan het leveren en plaatsen van oplossingen waarbij draadloos en op afstand uitlezen en monitoren van meterstanden mogelijk wordt gemaakt. De oplossingen zijn uiterst flexibel en schaalbaar; en of het nu gaat om 20 dan wel 2000 verbruikers, VWV metering heeft een pasklare formule om in de gegeven omstandigheden tegemoet te komen aan de meest specifieke wensen van de klant. Wij kunnen daarom ook referenties voorleggen van verenigingen van eigenaren, syndicussen, woningbouwverenigingen tot en met energiebedrijven. **T.** 09 265 02 72 - **E.** [service@vwvgroup.be](mailto:service@vwvgroup.be)



## ABB THREE PHASE ELECTRICITY METERS

The compact and versatile EQ meters B23 and B24 are three phase meters with outstanding performance. They can be used in most of the common applications for reliable and trustworthy metering of energy usage. EQ meters B23/B24 in Steel version can be used in stand-alone applications or metering network installations with the option of inbuilt M-Bus or Modbus.

## GENERAL FEATURES

B23 is a three phase direct connected meter up to 65 A and B24 is a three phase transformer connected for 5 A. The B23 and B24 are measuring active energy with accuracy class B (Cl. 1). The low rated or base currents of these products ensures high dynamic performance with superior accuracy even at low currents. Navigation of the meters is easily done via the push-buttons below the display. The exceptional low power consumption of the meters, less than 1.6 VA, makes them economical in the long run-an important feature specially for large meter populations.

## COMMUNICATION

Data from B23 and B24 can be collected via pulse output or serial communication. The meters are equipped with a

transistor output for 5-40 VDC external supply. It can be used for pulses proportionally to the measured energy or various alarms. The meters are also available with built-in serial communication interfaces for Modbus RTU (RS-485) or M-Bus as options.

## INSTRUMENTATION

The B23 and B24 meters support reading of instrument values. A large number of electrical properties can be read.

- Active power - Total and per phase
- Voltage - Total and per phase
- Current - Total and per phase
- Power factor
- Frequency

## APPROVALS

The B23 and B24 meters are type approved according to IEC as well as type approved and verified according to MID. MID is the Measure Instruments Directive 2004/22/EC from 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.

## ORDERING DETAILS

### 65 A direct connected, 4 DIN

Voltage V	Communication	Type	Order code	Weight 1 pc
<b>Steel</b> Active energy, pulse output, class B (Cl. 1)				
3 x 230/400 V AC	-	B23 111 - 100	2CMA10C163R1000	0.31
	RS-485	B23 112 - 100	2CMA10C164R1000	0.32
	M-Bus	B23 113 - 100	2CMA10C165R1000	0.33

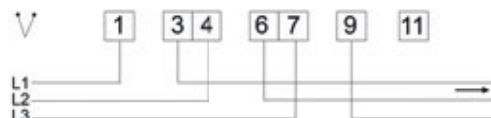
### 6 A transformer connected, 4 DIN

Voltage V	Communication	Type	Order code	Weight 1 pc
<b>Steel</b> Active energy, pulse output, class B (Cl. 1)				
3 x 230/400 V AC	-	B24 111 - 100	2CMA10C177R1000	0.25
	RS-485	B24 112 - 100	2CMA10C178R1000	0.25
	M-Bus	B24 113 - 100	2CMA10C179R1000	0.27

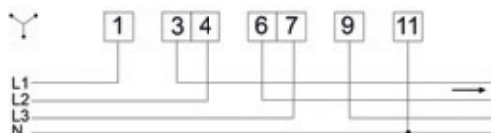
	B23	B24
<b>Voltage/current inputs</b>		
Nominal voltage	3x230/400 V AC	
Voltage range	3x220-240 VAC (-20% - +15%)	
Power dissipation voltage circuits	1.6 VA (0,7 W) total	
Power dissipation current circuits	0.007 VA (0,007 W) per phase at 230 V AC and $I_b$	
Base current $I_b$	5 A	-
Rated current $I_r$	-	1 A
Reference current $I_{ref}$	5 A	-
Transitional current $I_t$	0.5 A	0.05 A
Maximum current $I_{max}$	65 A	6 A
Minimum current $I_{min}$	0.25 A	0.02 A
Starting current $I_s$	< 20 mA	< 1 mA
Terminal wire area	1 - 25 mm <sup>2</sup>	0.5 - 10 mm <sup>2</sup>
Recommended tightening torque	3 Nm	1.5 Nm
<b>Communication</b>		
Terminal wire area	0.5 - 1 mm <sup>2</sup>	
Recommended tightening torque	0.25 Nm	
<b>Transformer ratios</b>		
Configurable current ratio (CT)	-	1/9 - 9999/1
<b>Pulse indicator (LED)</b>		
Pulse frequency	1000 imp/kWh	5000 imp/kWh
Pulse length	40 ms	40 ms
<b>General data</b>		
Frequency	50 or 60 Hz ± 5%	
Accuracy Class	B (Cl. 1)	
Active energy	1%	
Display of energy	7 digit LCD	
<b>Environmental</b>		
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 M1 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).	
<b>Outputs</b>		
Current	2 - 100 mA	
Voltage	5 - 40 VDC.	
Pulse output frequency	Programmable: 1 - 999999 imp/kWh	
Pulse length	Programmable: 10 - 990 ms	
Terminal wire area	0.5 - 1 mm <sup>2</sup>	
Recommended tightening torque	0.25 Nm	
<b>EMC compatibility</b>		
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 burst 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, GB/T 17215.211-2006, GB/T 17215.312-2008 class 1, CE 4208-2008, EN 50470-1, EN 50470-3 category B	
<b>Mechanical</b>		
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	
<b>Dimensions</b>		
Width	70 mm	
Height	97 mm	
Depth	65 mm	
DIN modules	4	

### Wiring diagram B23

#### 3 wire connection, 2 elements

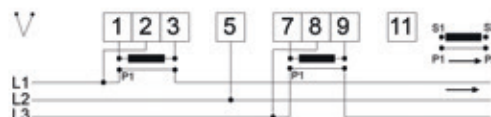


#### 4 wire connection, 3 elements



### Wiring diagram B24

#### 3 wire connection, 2 elements



#### 4 wire connection, 3 elements



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# VOLLEDIG GRIP OP UW EIGEN METERPARK MET ONERGY

VOOR HET ACTUELE UITLEZEN VAN ALLE  
METERSTANDEN OP AFSTAND

De ervaring is dat syndicussen, exploitanten, VME's, vastgoedbeheerders, de volledige grip willen houden op hun meterpark. Er is meer en meer behoefte om dagelijks, wekelijks, maandelijks, niet alleen inzage te krijgen in de verbruiken maar bv. ook automatische meldingen te krijgen van eventuele storingen enz. Dit alles zonder afhankelijk te zijn van het betreffende meetbedrijf die de meetapparatuur geleverd heeft. Het ONERGY-platform kan dan ook alle meters inlezen en automatisch rapporteren onafhankelijk van het meterfabricaat.



HET ONERGY PLATFORM  
ZOVEEL MEER DAN HET METEN  
VAN VERBRUIK ALLEEN.

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