CONTAX D-10043-BUS S0 MID

DIN Rail Multifunctional Three phase Power Meter (MID Certified)



Warnings

Important Safety Information is contained in the Maintenance section. Familiarize yourself with this information before attempting installation or other procedures.

Risk of Danger: These instructions contain important safety information. Read them before starting installation or servicing of the equipment.

Caution: Risk of Electric Shock

Product Introduction

CONTAX D-10043-BUS S0 MID is a 3 Phase din rail AC meter, it's a multi-function energy monitoring meter, functions as follows:

- Postpaid metering mode
- Max current 100A
- Support RS485 communication
- Multi-Tariff (Optional)
- Bi-directional Metering
- Meet RE test
- Comply with MID EN50470-1/3 Certificate
- It is suitable for home, commercial electricity distribution system, and PV metering system, such EV Charger and solar energy generation.

Module	CONTAX D-10043-BUS S0 MID
Impulse constant	1000imp/kWh , 1000imp/kvarh
Communication	IR, RS485 Modbus
Baud rate	9600\19200\38400\115200
SO output	SO1 refers to the total active energy (default) or active/reactive forward energy (optional) The pulse constant can be set and can be divided by 96000
	SO2 refers to total reactive energy (default) or active/reactive reverse energy (optional) The pulse constant can be set and can be divided by 96000
Backlight	Blue
Lithium battery	YES
Multi-rate	YES
Measurement mode	total =forward Total =forward +reverse (default) Total =Forward-Reverse
Button	Touch type
Button function	Left button: last page Flip Page Right button: next page Flip Page
Default setting	1000 imp/kWh 1000 imp/kvarh 9600/EVEN/8/1
Measurement mode settings	RS485

Main Functions

- Measurable Instantaneous Parameter: Voltage, Current, active power, reactive power, apparent power, frequency, power factor, etc.
- Measurable Energy Parameter: Total active energy, Total reactive energy, Total forward active energy, Total reverse active energy, T1-T4 forward active energy, T1-T4 forward reactive energy, T1-T4 reverse active energy, T1-T4 reverse reactive energy, T1-T4 active energy, T1-T4 reactive energy, T1-T4 four-quadrant reactive energy, resettable active and reactive total energy, forward and reverse active and reactive energy demand and maximum demand, etc.
- LCD backlight display, data scrolling display, manual page turning through buttons
- Support RS485 communication, reading meter parameters.
- Stand din rail installation method.

Specification Parameter

3.1 Normal Specification

Voltage AC (Un)	3x230(400) V
Current	5(100) A
Start Current	0.4%Ib
Power Consumption	<12VA <1W
Accuracy	B
Frequency	50Hz
Pulse Output	1000 imp/kWh (LED) 1000 imp/kvarh (LED)
Display	LCD 6+2 = 999999.99kWh
Working Temperature	-40 ~ 70°C
Relative Humidity	≤75% (Non Condensing)
Protection Level	IP51 (Only for indoor use)
Reference Standard	EN50470-1/3

3.2 Communication

- Support RS485 communication, mod-bus protocol and DLT645-2007 protocol are compatible, meter can be used by RS485 communication to read and read meter parameters.
- Baud rate 9600\19200\38400\115200, it can be set, default 9600.
- Default setting 9600/NONE /8/1.

3.3 Accuracy

Voltage	1%
Current	1%
Frequency	1%
Active Power	1%
Reactive Power	2%
Active Energy	1%
Reactive Energy	2%

3.4 Environment

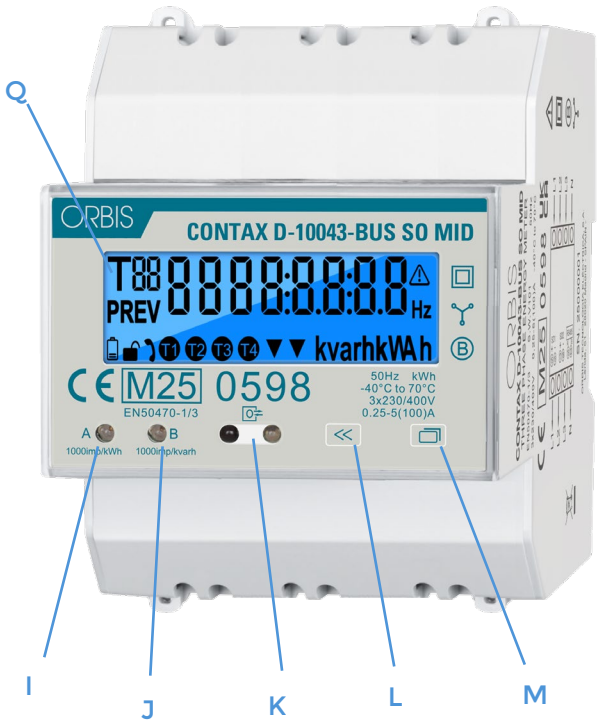
Working Temperature	-40 ~ 70°C
Storage/Transportation Temperature	-40 ~ 70°C
Referring Temperature	23 ± 2°C
Relative Humidity	≤75% (Non Condensing)
Preheating Time	10s
Vibration	10 Hz to 50 Hz, IEC 60068-2-6,2g

*Maximum operating and storage temperatures are in the context of typical daily and seasonal variation.

3.6 Standard Measurement Conditions (Reference Conditions)

Environment Temperature	23 ± 2 °C
Frequency	50 Hz ± 5%
Current	100 A
Voltage	230 V ± 5%

Product Appearance



I	Active Energy Pulse Indicator Light
J	Reactive Energy Pulse Indicator Light
K	IR
L	Parameter Viewing Button
M	Parameter Setting Button
N	Active Energy SO1 Output (Default)
Q	LCD Display

LCD Display



5.1 Introduction of Full display

1	Total
2	Page indication
3	LCD 8 digit number display
4	/ (this meter not available)

5	Frequency indication
6	Measuring unit
7	/ (this meter not available)
8	Current tariff indication
9	/ (this meter not available)
10	/ (this meter not available)
11	/ (this meter not available)
12	Total

5.2 Startup Page Introduction

LCD Display	Means
	After power on, the full display page can be displayed for 1 second, and then the page scroll display starts.

5.3 Button Function Introduction

(1) Turn pages by buttons (can be scroll, can be turned manually)

(2) Long press on the cyclic display interface for 3 seconds to enter the information interface. On the information interface and within the SETUP interface, long press the button for 3 seconds (enter the default password 0000) to enter the settings page.

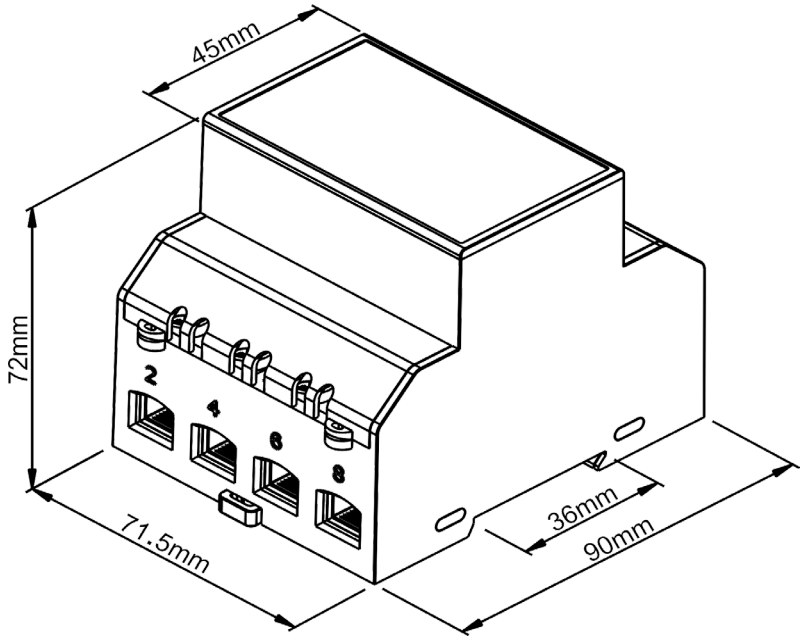
(3) Quit (Long press to return to the scroll display page).

5.4 Introduction page by page

Pages	Content	Unit	Format
1	Time		XX-XX-XX
2	Date		XX:XX:XX
3	Total active energy	kWh	6+2 000000.00
4	T1 active energy	kWh	6+2 000000.00
5	T2 active energy	kWh	6+2 000000.00
6	T3 active energy	kWh	6+2 000000.00
7	T4 active energy	kWh	6+2 000000.00
8	Total reactive energy	kVarh	6+2 000000.00
9	T1 reactive energy	kVarh	6+2 000000.00
10	T2 reactive energy	kVarh	6+2 000000.00
11	T3 reactive energy	kVarh	6+2 000000.00
12	T4 reactive energy	kVarh	6+2 000000.00
13	L1 voltage	V	3+1 000.0

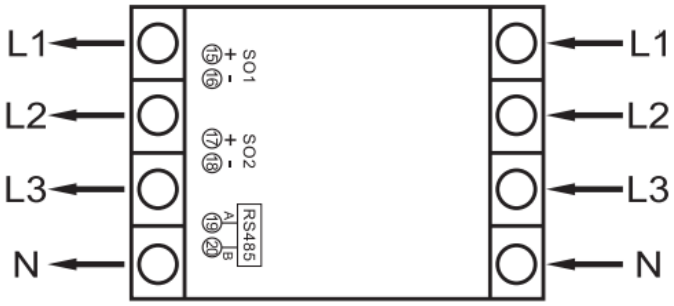
14	L2 voltage	V	3+1 000.0
15	L3 voltage	V	3+1 000.0
16	L1 current	A	4+2 0000.00
17	L2 current	A	4+2 0000.00
18	L3 current	A	4+2 0000.00
19	Total active power	kW	5+3 00000.000
20	L1 active power	kW	5+3 00000.000
21	L2 active power	kW	5+3 00000.000
22	L3 active power	kW	5+3 00000.000
23	Total reactive power	kVA	5+3 00000.000
24	L1 reactive power	kVA	5+3 00000.000
25	L2 reactive power	kVA	5+3 00000.000
26	L3 reactive power	kVA	5+3 00000.000
27	Total power factor		1+2 0.00
28	L1 power factor		1+2 0.00
29	L2 power factor		1+2 0.00
30	L3 power factor		1+2 0.00
31	Frequency	Hz	2+2 00.00
32	Active resettable energy	kWh	6+2 000000.00
33	Status word		S 11 111
34	Rotation Time		Lcd-t 05
35	SO Constant		S0 1000
36	Combined Code		COdE 01
37	Serial Number		12345678
38	Modbus ID		Id 255
39	Baud rate		bd 9600
40	Version Number		V 1.02

Overall Dimension



Recommended wire:
Neutral /Phase terminal: 2.5-25mm², torque 2.5N.m
Communication terminal: 0.5-1.5mm², torque 0.4N.m

Wiring Diagram



Note:

15 16: SO1 can indicate total active energy or the forward active/reactive energy (optional).

17 18: SO2 can indicate total reactive energy or the reverse active/reactive energy (optional).

19 20: RS485 port

Installation Instruction

- The casing is sealed. Do not open the meter casing. If the casing is opened, the warranty will be void.
- The meter should be installed in an indoor or outdoor meter box.
- According to Directive 2014/32/EU, the meter is intended to be installed in a mechanical environment 'M1' with low levels of shock and vibration.
- According to Directive 2014/32/EU, meters are intended for installation in electromagnetic environment 'E2'.
- Isolation safety information: The meter uses local power generation and needs to be disconnected from the main power supply before installation and removal. Improper operation may cause personal injury or equipment damage.
- This meter is a direct meter and can directly use the UC rated value, that is, UC2 (≤100A).

Safety Instructions

For your safety, please read the following information:
This manual does not contain all safety measures for the operation of this energy meter, as special operating conditions, local code requirements or local regulations may require further measures. However, for your personal safety and to avoid damage to the energy meter, this manual contains important information that is highlighted by a warning triangle with an exclamation point or lightning bolt, depending on the severity of the warning.

Warning

Before installing the meter, make sure the power supply has been cut off, otherwise it will be life-threatening. The circuit breaker should be disconnected and placed in a safe place to avoid accidental power-on.

Compliance Operator

The installation and operation of the meter described in this manual can only be performed by qualified personnel.
Only personnel who are authorized to install, connect and use this meter, have relevant knowledge of electrical equipment, circuit labels and grounding, and can operate in accordance with safety regulations and standards can be considered as qualified personnel as specified in this manual.

Exemption Liability

We have checked the contents of this manual and have made every effort to ensure that the description is as accurate as possible, but deviations of the product from the description cannot be completely excluded and avoided. Therefore, we do not assume any liability for any errors or omissions in the information provided. The data in this manual will be checked regularly and the manual version will be updated if necessary.

Other Clarifications

After unpacking the meter, make sure the meter is intact. If in doubt, do not use the meter immediately, and contact the relevant IVY technician.
If the meter malfunctions, disconnect the meter immediately. If repair is required, please contact IVY technical support.
Failure to comply with the above may jeopardize the safety of the equipment.

Transportation & Storage

- The energy meter shall not be subject to severe impact during transportation and storage and shall be transported and stoned in accordance with GB13384-2008.
- The energy meter should be kept in the original package, and the temperature range of the environment of the place where it is kept is -40~70°C, the relative humidity does not exceed 75%, and there is no corrosive gas in the air.
- The energy meters shall be stored in the warehouse and placed on the bench. The stacking height shall not exceed 10 boxes. After unpacking, the stacking height of single packaged

energy meters shall not exceed 5 layers.

Quality Assurance

11.1 Calculation method of warranty period:
The warranty is handled according to the commercial invoice issued by our company, and the time is 18 months from the date when the meter is shipped from the warehouse, minus the maintenance time and delivery time for no spare parts.

Warranty coverage

12.2.1 When the user fully follows up the transportation, storage, installation and application of the electric energy meter, and the company's conditions of sealing integrity (in the case of no printing and dis-assembly), the electric energy meter that does not meet the quality requirements and valid evidence (For example, desks, certificate photos, feedback documents from customers' local users, relevant government departments, documents, etc.) should be provided by the customer.

11.2.2 We will repair, replace or return the meter in the following cases:

- No demonstration and no prior explanation
- Does not meet the implementation standards indicated on the product or its packing;(If the standard on the product/package is required by the customer, but does not meet the company's product implementation standard, the customer should make a corresponding responsibility commitment).
- Does not meet the quality status indicated by product instructions, physical samples, etc.

Unqualified meters should be determined in consultation with the user. Generally, we will repair or replenish in the next order. Special circumstances shall be determined through consultation between the two parties.
Note: The quality guarantee is not applicable. If there is no valid invoice, the evidence corresponding to the quality problem of the order cannot be provided, and the damage caused by force majeure or the warranty beyond the validity period, but can be recovered for repair (transportation and other related costs need to be borne by the customer)