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Data Sheet

DEM4B Series

DIN Rail Multifunctional Three phase M-BUS Power Meter

DEM4B409: IR+Power outage display+LCD backlight+SO output (variable constant)+,with different measurements

DEM4B009:IR+SO output (variable constant),with different measurements

DEM4B009-1:IR+LCD backlight+SO output (variable constant),with different measurements

DEM4B409-1:IR+Power outage display+SO output (variable constant),with different measurements

DEM4B403:RS485+Power outage display+LCD backlight+SO output (variable constant),with different measurements

DEM4B003:RS485+SO output (variable constant),with different measurements

DEM4B003-1:RS485+LCD backlight+SO output (variable constant),with different measurements

DEM4B403-1:RS485+Power outage display+SO output (variable constant),with different measurements

More options to meet different requirements from market !



Three Phase Multifunctional Meter

The DEM4B Series Digital Power Meter works directly connected to a maximum load 80A AC circuit

This meter will be applied the MID B&D Certified by SGS, proving both it's accuracy and quality. This certification allows this model to be used for any sub-billing application

1. Specifications

Technical Parameters

Content	Parameters
Standard:	EN50470-3: 2022 EN IEC62052-11: 2021/A11:2022 IEC62052-31 2015
Rated Voltage:	3*230/400V
Rated impulse voltage	6kv
Rated Current:	0.25-5(80)A
Impulse Constant:	1000imp/kWh(LED)
Frequency:	50Hz/60Hz
Accuracy Class:	Active 1.0
LCD Display:	LCD 6+2
Power Consumption:	≤2W/10VA
Current circuit of meter	When measured at nominal current. For all classes:≤1 VA per phase.
Current Consumption:	0.55W
Maximum Humidity:	≤95%
Start Current:	0.4% （20mA）
Case Protection	IP51 indoor
Protective class	Protective class II equipment （Double-or reinforced insulation）
UC class	UC2
operation temperature	-25℃-70℃
storage temperature	-40℃-80℃
Usage environment	Dry environment
Connection	Three-phase four-wire
pollution level	2
Altitude	≤2000 meters
Wire model	The range cross-sectional area of the terminal wiring conductor is 1-25 mm ² Recommended size and torque: Current line: 1.5~16mm ² , torque distance 2N. m Signal line: 0.5~2.5mm ² , torque distance 0.4N m

2. Meter Series Dtails

Type	DEM4B409	DEM4B009	DEM4B009-1	DEM4B409-1	DEM4B403	DEM4B003	DEM4B003-1	DEM4B403-1
Li-Battery	YES	N/A	N/A	YES	YES	N/A	N/A	YES
Backlight	YES	N/A	YES	N/A	YES	N/A	YES	N/A
Communication	IR				RS485			
Software Version	1.0.01							
CRC	1D75							
Impulse Constant	1000imp/kWh							
SO output	SO output for Active kWh with variable constant(default 1000)							
Pulse width	For pulse periods less than 180ms, high and low levels each occupy half a cycle; For pulse periods greater than 180ms, only output a high level of 90ms.							
Multi-tariff	N/A							
Measurement Mode	1.total =forward 2.Total=reverse 3.Total =forward +reverse (default) 4.Total=Forward-Reverse 5.Total=Forward- reverse							
Button	N/A							

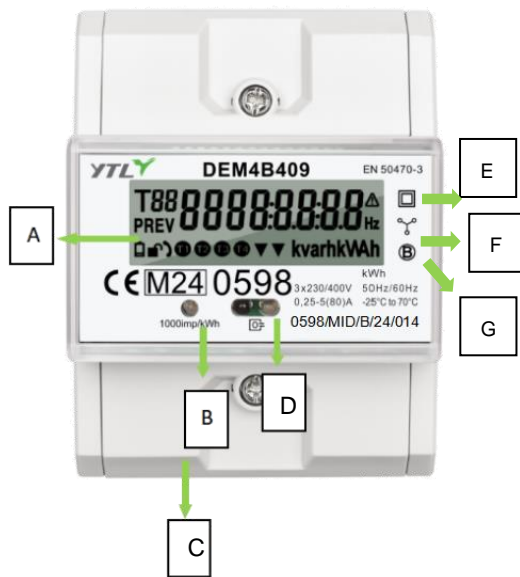
3. LCD Display layout

T880000:00:00 
PREV 0000:00:00 Hz
        **kvarh kWh**

Different values with different indicator

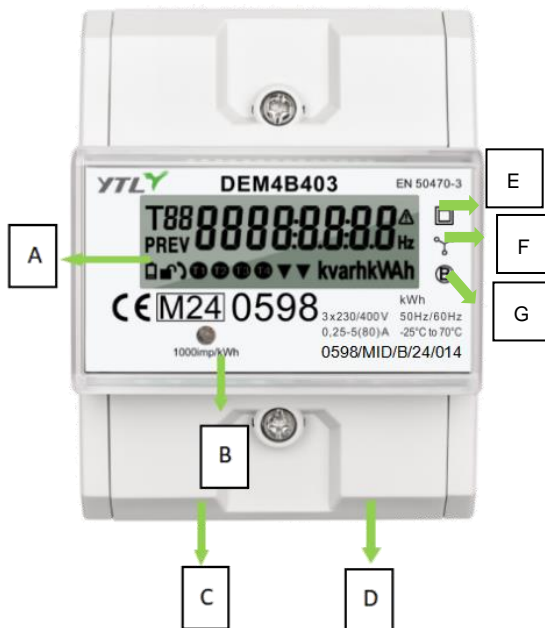
DEM4B series			
LCD Scrolling Display Page			
Page	Content	Format	Remark
1	Total active energy	6+2(7+1)kwh	With indicator of “-”
2	Re-settable Active energy	6+2(7+1)kwh	
3	Forward active energy	6+2kwh	
4	Reverse active energy	5+2(6+1)kwh	With indicator of “-”
5	Total active power	2+3 kw	With indicator of “-”
6	Total Forward active power	2+3 kw	
7	Total Reverse active power	2+3 kw	With indicator of “-”
8	Phase A active power	2+3 kw	With indicator of “-”
9	Phase A Forward active power	2+3 kw	
10	Phase A Reverse active power	2+3 kw	With indicator of “-”
11	Phase B active power	2+3 kw	With indicator of “-”
12	Phase B Forward active power	2+3 kw	
13	Phase B Reverse active power	2+3 kw	With indicator of “-”
14	Phase C active power	2+3 kw	With indicator of “-”
15	Phase C Forward active power	2+3 kw	
16	Phase C Reverse active power	2+3 kw	With indicator of “-”
17	<i>A-N voltage</i>	3+2 V	
18	<i>B-N voltage</i>	3+2 V	
19	<i>C-N voltage</i>	3+2 V	
20	<i>Phase A current</i>	3+3 A	With indicator of “-”
21	<i>Phase B current</i>	3+3 A	With indicator of “-”
22	<i>Phase C current</i>	3+3 A	With indicator of “-”
23	Total frequency	2+1Hz	
24	Baud rate		
25	Stop bit		

4. Description



DEM4B409/409-1/009/009-1

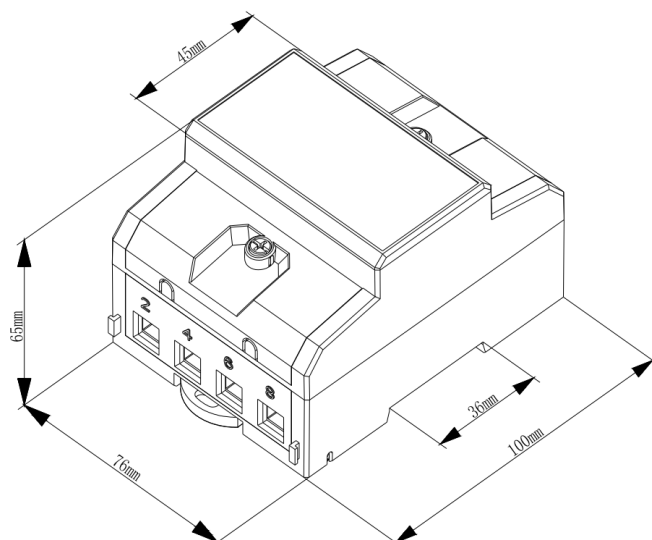
- A LCD screen
- B Impulse indication for active energy
- C SO pulse output
- D Infrared communication
- E Protection class
- F Three measuring elements
- G Class B



DEM4B403/403-1/003/003-1

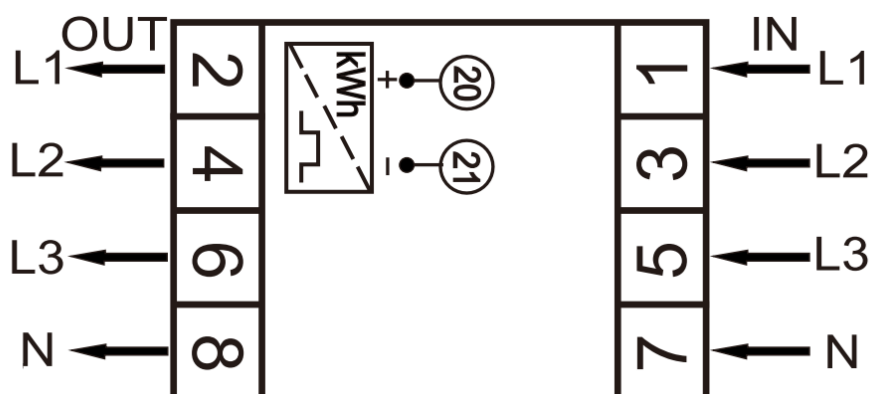
- A LCD screen
- B Impulse indication for active energy
- C SO pulse output
- D RS485 communication
- E Protection class
- F Three measuring elements
- G Class B

5. Meter Dimensions

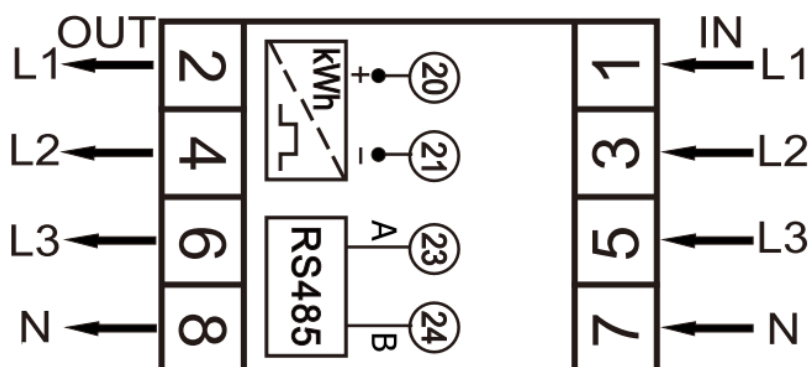


6. Wiring Connection

DEM4B409/409-1/009/009-1



DEM4B403/403-1/003/003-1



7. Safety Instructions

- Case is sealed, do not open the meter. No warranty if case is opened.
- The meter should be installed indoor or in the outdoor electric meter box.
- The meter is intended to be installed in a Mechanical Environment 'M1', with Shock and Vibrations of low significance, as per 2014/32/EU Directive.
- The meter is intended to be installed in Electromagnetic Environment 'E2', as per 2014/32/EU Directive.
- Isolation safety information: The electricity meter uses local power generation, and the overall power supply needs to be disconnected before installation and disassembly. Incorrect operation can cause injury to personnel or damage to equipment.
- This meter is a direct type meter and can directly use the UC rated value, which is UC2 ($\leq 100A$).

Information for Your Own Safety

This manual does not contain all of the safety measures for operation of this equipment (module, device) because special operating conditions, local code requirements or local regulations may necessitate further measures. However, it does contain information which must be adhered to for your own personal safety and to avoid damage to the equipment. This information is highlighted by a warning triangle with an exclamation mark or a lightning bolt depending on the severity of the warning.



Warning

Means that failure to observe the instruction can result in death, serious injury or considerable material damage.



Caution

Means hazard of electric shock and failure to take the necessary safety precautions will result in death, serious injury or considerable material damage.

Qualified personnel

Installation and operation of this equipment described in this manual may only be performed by qualified personal.

Only people that are authorized to install, connect and use this equipment and have the proper knowledge about labeling and grounding electrical equipment and circuits and can do so according to safety and regulatory standards are considered qualified personnel in the manual.

Use for the intend purpose

The equipment (device, module) may only be used for the application cases specified in the catalog and the user manual and only in connection with devices and components recommended and approved by YTL.

Exclusion of liability

We have checked the contents of this publication and every effort has been made to ensure that the descriptions are as accurate as possible. However, deviations from the description cannot be completely ruled out, so that no liability can be accepted for any errors or omissions in the information given. The data in this manual is checked regularly and the necessary corrections will be included in subsequent editions. If you have any suggestions, pls let us know.

Subject to technical modifications without notice.

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General Warning

After removing the packaging make sure the integrity of the unit. If in doubt don't use the equipment and contact technical staff.

Mounting of electric appliances must be carried out only by skilled electricians. It is imperative to observe the generally applicable safety measures.

In case of failure and /or malfunctioning of the device, turn off it. For any repair only contact technical staff. Failure to comply with the above may compromise the device safety.

Warranty

The manufacturer will repair or exchange the products while the lead seal is still exited, within 18 months, when discovering the products not accordance with the technical specification.

Technical support

For any problems of our products please contact:

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