sales@wced.co.uk
0161 723 1451

DEM1A001 100A Single phase Bi-Directional Solar Generation Meter Data Sheet

Description

DEM1A001 single phase bi-directional generation meter is required for PV installations with hybrid battery storage and to replace existing old meters if DC storage is retrofitted. It is housed in a compact DIN rail mounted module case and has been MID B+D certified.

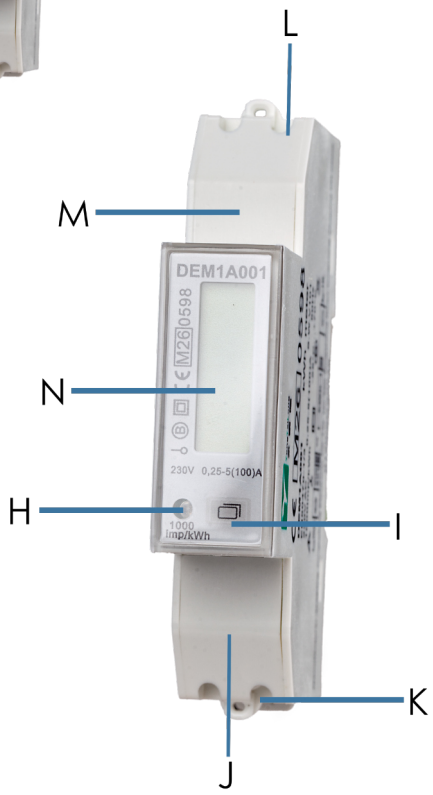
Features

- MID B+D Certified
- Bi-Directional, SO output,with different measurements
- Only 18 mm wide Single Phase 100A Direct connected
- Measures both active and reactive energy accurately
- Rated voltage: 230V
- DIN Rail Mounted
- Protection Class: IP51 (For indoor usage)
- LCD 5+2 = 99999.99kWh Display

Part Code	Description
DEM1A001	100A Single Phase Bi-directional meter SO output (variable constant) with different measurements way

Technical Data

Meter type	Single Phase Bi-Directional Meter
Standard	EN50470-1/3
Rated voltage	230V
Rated current	0,25-5(30)A, 0,25-5(32)A, 0,25-5(40)A,0,25-5(45)A, 0,25-5(50)A, 0,25-5(60)A, 0,25-5(80)A, 0,25-5(100)A
Impulse constant	1000 imp/kWh
Frequency	50Hz/60Hz
Accuracy class	B
LCD display	LCD 5+2 = 99999.99kWh
Working temperature	-25 ~55 ℃
Storage temperature	-30~70℃
Power consumption	<12VA <1W
Average humidity	≤75% (Non Condensing)
Maximum humidity	≤95%
Start current	0.004Ib
Case protection	IP51 indoor
LED flash	Impulse indication
Mounting	On DIN rail EN 60715 (35mm)

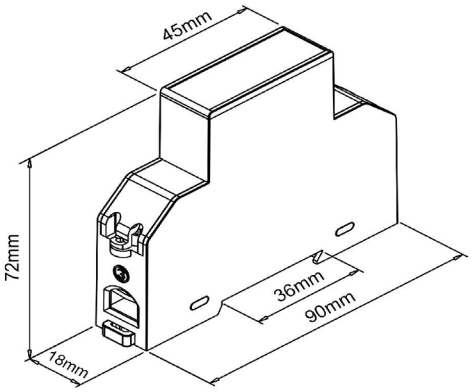


H	Impulse indication
I	Button for data checking
J	SO Output
K	L-Out
L	L-In
M	Neutral wire
N	LCD screen

sales@wced.co.uk
0161 723 1451

Part Code	DEM1A001
Software version	V101
CRC	5A8E
Impulse constant	1000imp/kWh
Communication	N/A
Baud rate	N/A
SO output	SO1 is SO output for kWh(default) or active/reactive forward kWh optional with variable constant 100-2500imp/kWh Divisible by 10000
	SO2 is SO output for kvarh (default) or active/reactive reverse kWh optional with variable constant 100-2500imp/kvarh Divisible by 10000
Pulse width	SO:100-1000:100ms SO:1250-2500:30ms
Backlight	Blue
Li-Battery	N/A
Multi-tariff	N/A
Measurement mode	1-total =forward 2-Total=reverse 3-Total =forward +reverse (default) 4-Total=Forward-Reverse
Button	Touch button
Button function	Page turning, setting, information display
Default setting	1000imp/kWh,100ms 1000imp/kvarh,100ms
Measurement mode setting	Button

Dimensions

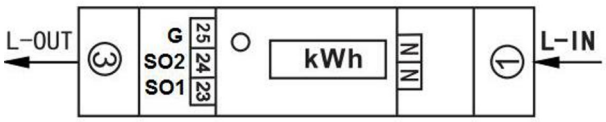


LCD Display Layout

Different values with different indicators

This device must be installed and tested by a qualified electrician in accordance with the current IET Wiring Regulation BS7671.

Wiring Diagram



Notes:

23:SO1 is SO output for kWh or Active/reactive forward kWh optional

24:SO2 is SO output for kvarh or Active/reactive reverse kWh optional

25:G is for GND

For Neutral wire, you can connect one N port and connect both.

sales@wced.co.uk
0161 723 1451

Page	Content	Unit	Display	Remark
1	Total active energy	kWh	5+2 00000.00	
2	Forward active energy	kWh	5+2 00000.00	
3	Reverse active energy	kWh	5+2 00000.00	With indicator of "-"
4	Total reactive energy	kWh	5+2 00000.00	
5	T1 Total active energy	kWh	5+2 00000.00	
6	Resettable Reactive energy	kVArh	5+2 00000.00	
7	Voltage	V	3+2 000.00	
8	Current	A	3+2 000.00	
9	Active power	W	5+0 00000	
10	Reactive power	var	5+0 00000	
11	Apparent power	VA	5+0 00000	
12	Power factor	PF	1+2 0.00	
13	Frequency	Hz	2+2 00.00	
14	Forward active demand	W	5+0 00000	
15	Forward maximum active demand	W	5+0 00000	
16	Reverse active demand	W	5+0 00000	
17	Reverse maximum active demand	W	5+0 00000	
18	Forward reactive power demand	var	5+0 00000	
19	Forward maximum reactive demand	var	5+0 00000	
20	Reverse reactive demand	var	5+0 00000	
21	Reverse maximum reactive demand	var	5+0 00000	

sales@wced.co.uk
0161 723 1451

Long press button for more than 3 seconds at any scrolling display page to enter the information display page

Page	Content	Unit	Format	Remark
	SETUP (Long press and enter the password to enter the setup page)			
1	12-digit serial number of the meter		000000000000	
2	Scrolling time	S	0-99 seconds	0 prohibits scrolling display: press to turn pages
3	Demand calculation method & cycle		1-30minutes	Default 15 minutes
4	Combination code		1.Total =forward 2.Total=reverse 3.Total =forward +reverse (default) 4.Total=Forward- Reverse	
5	SO constant			
6	Software version number			
7	CRC code			

LCD Setting Page

Page	Content	Unit	Format	Remark
1	Reset the clear-able active energy	kWh	5+2 00000.00	
2	Reset clear-able reactive energy	kvarh	5+2 00000.00	
3	Reset clear-able maximum active demand	W		
4	Reset clear-able Maximum reactive demand	W		
5	Date		DD/MM/YY	
6	Time		HH/MM/SS	
7	Scrolling time	S	0-99 S	0 prohibits scrolling display: press to turn pages
8	Demand calculation method & cycle		1-30 minutes	Default 15 minutes
9	Combination code		1-total =forward, 2-Total=reverse 3-Total =forward +reverse (default) 4-Total=Forward- Reverse	
10	SO constant		From 100 to 2500, Divisible by 10000	Default : 1000imp/kWh,100ms 1000imp/kvarh,100ms
11	Password setting			
12	Quit (long press to return to the scrolling display page)			