DEM011 – kWh Meter

Description

The DEM011 single phase, Class 1.0 & Class 2.0, watt-hour meters are designed according to international standard IEC61036 for measuring and registering active energy consumption in single phase AC electrical supply networks.

Measurement uses advanced digital sampling techniques and manufacture is by SMT componentry.

Display of the consumption is made by way of stepper-motor drum register, 5+1 (whole units+decimal). An SO type impulse output relay is also available for remote consumption logging.

The housing is compact DIN profile for ease of installation and space saving.

Summary

- Single phase 2-wire
- Wide range of current rating selections
- Class 1 or Class 2.0 according IEC61036
- 35mm standard DIN rail installation, according to DIN EN5002
- Stepper-motor horizontal register, 5 digit whole numbers + 1 digit decimal
- Continuous impulse output closure during power failure, according to DIN 43864

Type	Accuracy	Rated voltage (V)	Rated current (A)	Starting Current	Insulation Performance
DDS977 (DEM011)	Class 1	220V	2.5(10), 3(15), 5(30), 10(50), 15(90), 20(100), 5(40), 5(100)	0.4%Ib	AC voltage 2KV for 1 minute impulse voltage 6KV
	Class 2			0.5%Ib	

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Safety & Protection

- Installation, maintenance and repair should only be done by a certified electrician.
- Use only insulated tools.
- Do not connect the meter to a 3 ph, 400Vac, network.
- Place the meter only in dry surroundings.
- The wiring should be suitable for the maximum current the meter can measure.
- Ensure the wiring is installed correctly and terminals sufficiently tightened before applying voltage.
- Ensure the protection cover is replaced after installation and has been sealed.
- In locations where lightening is frequent, lightening protect should be provided on the incoming supply.
- Never break the calibration seals or open the meter housing.

Technical Data

Operating humidity	≤ 85%
Storage humidity	≤ 90%
Operating temperature	-10… 50°C
Storage temperature	-30… 65°C
Nominal voltage (Un)	220Vac
Operational voltage	154… 286Vac
Insulation capabilities	- AC voltage withstand; 2KV for 1 minute - Impulse voltage withstand; 6KV - 1,2/50µS
Available models	1.5(6)A, 2.5(10)A, 3(12)A, 5(30)A, 5(65)A, 10(40)A, 10(50)A, 5(100)A , 20(100)A
Operational current range	0.05Ib…Imax
Starting current range	0.004Ib
Over current withstand	1200A for 0.5s
Operational frequency range	50Hz ±10%
Internal power consumption	≤2W / 10VA
Test output flash rate	6400, 3200, 1600, 800 imp/kWh
Power supply indication	Green LED; OK
Red indicator	Red LED ; Pulsing for energy consumption. Continuous for no-load lock
Dimensions	75 x 89 x 73 mm (w x d x h)
Weight	0.2 Kg (net)

Accuracy Data

International standard	EN61036 Class 1.0
0.05Ib, Cosφ 1	±1.5%
0.1Ib, Cosφ 0.5L	±1.5%
Cosφ 0.8C	±1.5%
0.1Ib…Imax, Cosφ 1	±1.0%
0.2Ib…Imax, Cosφ 0.5L	±1.0%
Cosφ 0.8C	±1.0%