

EKM METERING

EKM-25IDS(-N) and EKM-15IDS(-N)

SINGLE-PHASE, DIN-RAIL, PASS-THROUGH ELECTRONIC METER INSTRUCTIONS

I . The functions of the product meet all the technical requirements of single phase electronic meter in IEC 61036 standard (static AC active power meter).

II . Functions and characteristics

- 1: Active electricity measuring, without adjustment under long-term functioning.
- 2: With RS485 communication, index in accordance with IEC 62056-21(A mode), which focuses on convenient, intelligent management (If without RS485, there is no such function).
- 3: Wide work temperature range: -30—55°C

III. Technical specifications (** = EKM-15IDS(-N))

1. Rated voltage: 120V/240V ******(120V) +/-30%
2. Rated current Ib(I_{max})A: 5(100)A ******(5(50)A)
3. Impulse constant: 800imp/kWh
4. Rated frequency: 60Hz
5. Class of Accuracy: 1.0
6. Start current: 0.4%I_b(1.0)
7. Creep: logical design of Anti-creep
8. Power consumption: ≤1W (when 220V 20A)
9. Accuracy (see the form bellow)

Load current	Power factor COS Φ	Basic error%		
		Class 0.5	Class 1	Class 2
0.05I _b	1.0	±1.0	±1.5	±2.5
0.1I _b ~I _{max}	1.0	±0.5	±1.0	±2.0
0.1I _b	0.5(L)	±1.0	±1.5	±2.5
	0.8(C)	±1.0	±1.5	—
0.2I _b ~I _{max}	0.5(L)	±0.5	±1.0	±2.0
	0.8(C)	±0.5	±1.0	—

- 10.Environment condition: standard work temperature -20—45°C
limit work temperature -30—55°C
relative humidity ≤85%

11. Weight: 0.32kg

12. Outside dimensions: 78×100×65mm

IV . Working principle

See Fig. 1. When the energy meter is working, the energy consumed by the user is transformed into voltage and current signals, sampled by sample circuits respectively. A pulse signal is then produced by a specialized IC. The pulse signal is directly proportional to power consumption. The MCU records and stores the corresponding energy use. The LCD displays the energy use. Recorded information and data can be transferred by the RS485 communication interface.

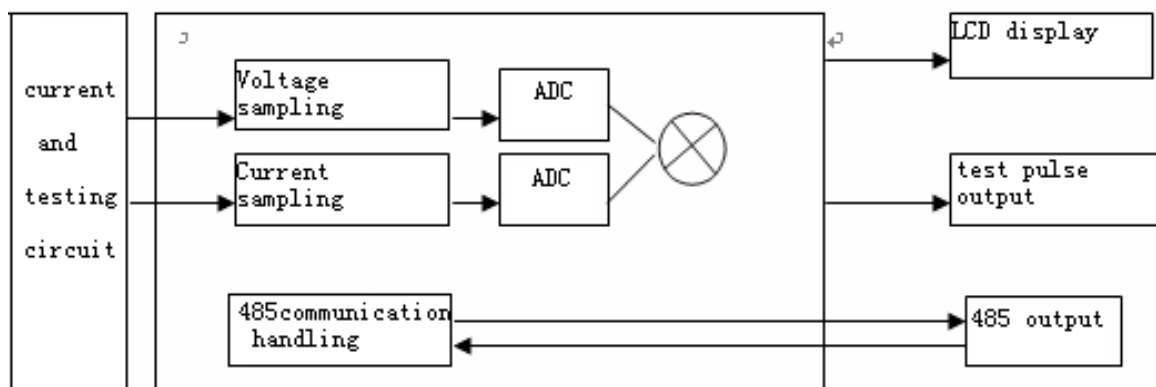


Fig. 1

1. The meter is tested and sealed before leaving the factory.
2. The meter should be installed in a meter enclosure whether indoors or outdoors. The meter should be installed on a solid and fire-resistant backing, and not near any combustible, corrosive or noxious substances or gases.
3. The meter should be connected according to the wiring diagram on meter case. Copper wiring is preferred.
4. The LCD display shows the electricity consumption with units of kWh (kilowatt hours).

5. Fig. 2: Meter case dimensions

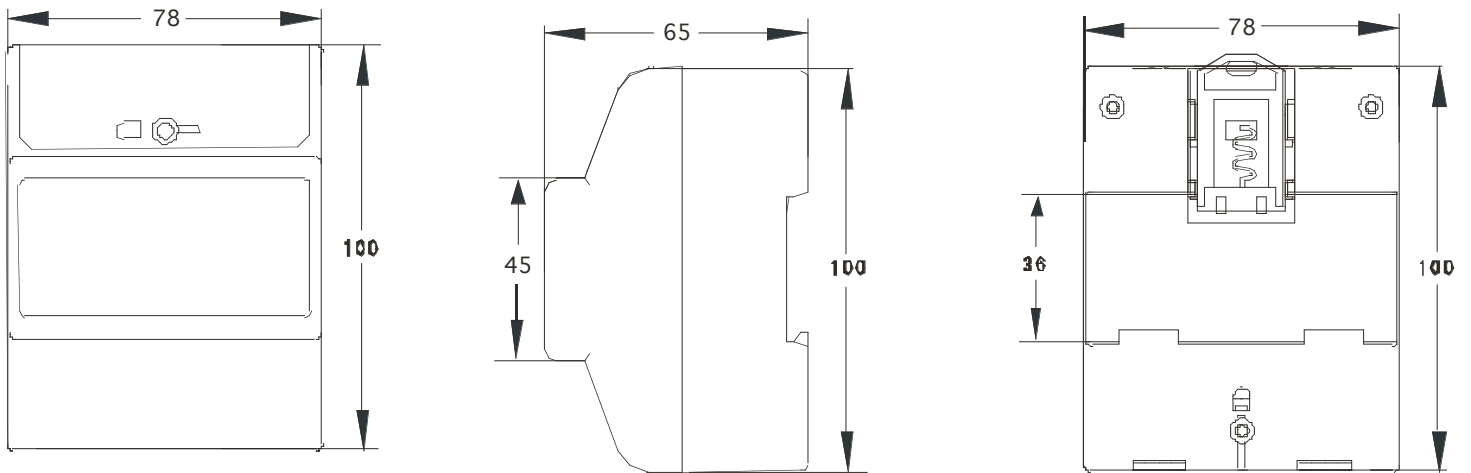


Fig. 2

6. Fig. 3: Meter wiring diagram

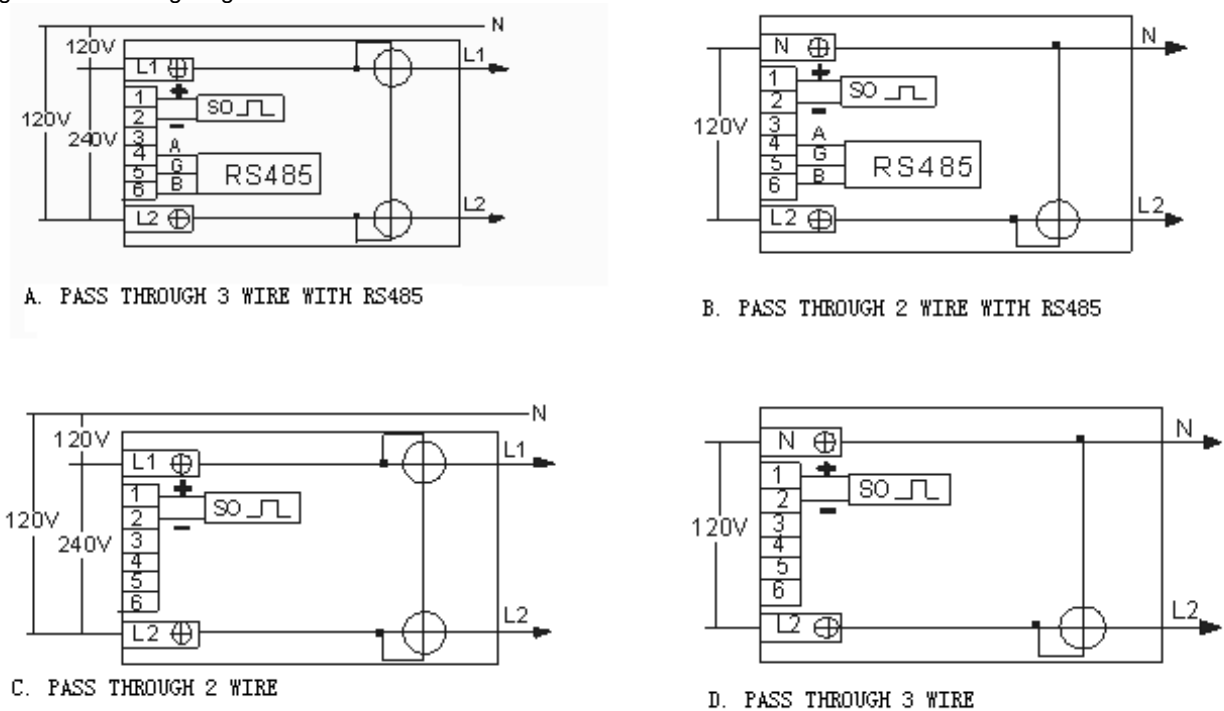


Fig. 3

V. Transportation and handling

1. The meter shall not be subjected to throwing, dropping, kicking or other physical abuse, as there are high precision components inside that will break or make the meter measure inaccurately. The process of transportation, handling and installation should be according to transportation and storage rule of GB/T15464-1995.
2. Keep the meter in the original package when stored. The storage temperature range should be 0—40°C, relative humidity $\leq 85\%$. There shall be no toxic or corrosive substance or gases in the air.
3. The meters shall be stacked on a platform in storage. Do not stack more than 10 units high.

4. Time limit of guarantee.

Within 18 months from the day of sale, and on the condition that the user abide by the specifications and installation procedures, and the sealing is kept completely intact, if the meter does not correspond with the rule of the enterprise standard, the meter shall be repaired free or replaced.