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DD450 long life kwh meter



The DD450 single-phase meter is designed to meet latest IEC62053-21, IEC62052-11. With accuracy of class 2, it measures active energy in single-phase two-wire alternating current power grids. It is a reliable long life meter. The designed service life is 20 years and the maximal overload capacity is 800%I_b. The construction of the meter complies with BS5685 and protection class IP53 of IEC30529.

Construction

Meter case

Two types of cases are available One is the insulating case of protective-class II and the other is the weather-proof case complying to IEC60529 and Ip54.

Terminal block

The terminal block is molded of Bakelite . The voltage test link can be located inside or out-side of the meter case. The maximum diameter of the terminal hole is 8.5mm.

Driving element

The driving element consists of a voltage element and a current element, both of which are fixed to the frame. The voltage element has a low load adjustment mechanism, and the current element has an inductive load adjustment mechanism.

Rotor

The rotor shaft is made of aluminum alloy with a small hole in the upper end for storing lubrication and for fitting a brass bearing The worm is turned of brass, and is acid-cleaned or nickel-plated. The worm and shaft can be detached.

Braking element

The magnet is made of AlNiCo5 alloy and designed as U-shaped so that the effect of short-time over current upon the magnet is negligible. The full load error can be fine controlled by adjustment mechanism.

Frame

The frame is die-casted by high-quality Al alloy of stable property to avoid distortion. The application of static



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spray-painting on the surface prevents the frame from oxidation.

Upper bearing

The pin is made of high-quality abrasion-proof stainless steel and is embedded on the brass pin base.

Lower bearing

Both double jewel bearing and magnetic bearing are available.

Register

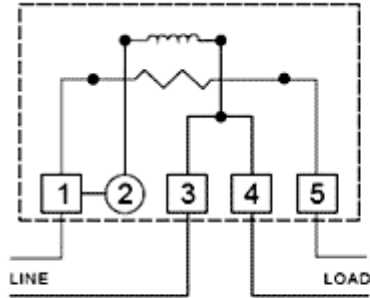
The register adopts heat-and abrasion-proof plastic gears and bearings. No lubrication of bearings is needed during the service life. The drum is made of polycarbonate, printed by UV resistant alumina to ensure non-depigmentation.

Technical Parameter

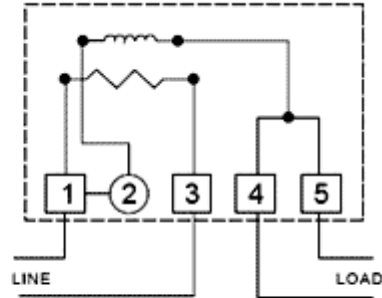
1	Meter type	DD450
2	Applicable Standards	IEC60521、BS5685
3	Accuracy	Class 2 (according to IEC60521)
4	Average service life (MTTF)	20 years
5	Basic current (Ib) A	5 10 15
6	Maximum current (Imax) A	20 30 40 60 80 100
7	Reference voltage Un	110V,120V,220V,230V,240V
8	Reference frequency fn	50Hz, 60Hz
9	Power losses in voltage circuit at 50Hz Un	For over load capacity of 800%Ib:1.3W/6VA others:1.0W/5VA
10	Power losses in current circuit at 50Hz Un Ib	<0.5VA
11	Non-running with no-load	0.8~1.1Un
12	Starting current	0.5%Ib
13	Mean temperature change Form 0.1Ib to Imax at unity PF Form 0.2Ib to Imax at unity 0.5lagging	<0.08%/°C <0.12%/°C
14	Insulation level: Withstanding A.C. voltage for 50Hz, 1min Withstanding impulse voltage 1.2/50us	>4kV >8kV
15	Rated load torque at unity PF, Ib	Over load capacity 800%Ib:350uNm Over load capacity 400~600%Ib:400uNm
16	Weight of rotor	23.5g
17	Weight of meter	1.6kg
18	Main case	Bakelite base/PC cover/Bakelite terminal cover
19	Register	Cyclometer single, unidirectional, Jumping
20	Option	Reverse running stopper



Typical connection diagram

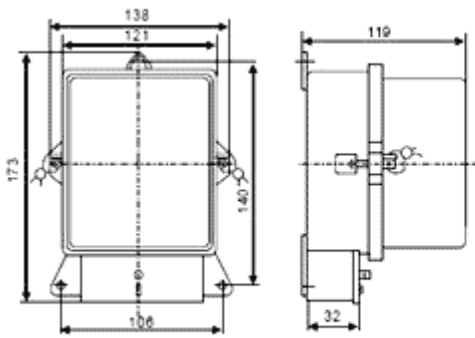


Symmetrical connection
for single-phase two-wire

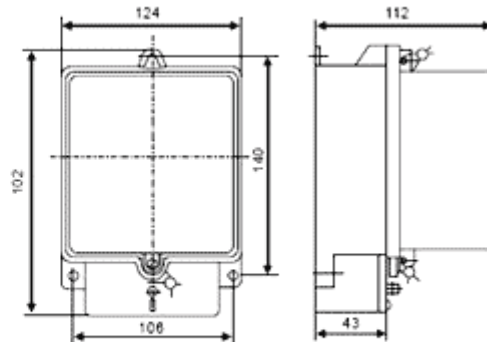


Asymmetrical connection
for single-phase two-wire

Outline & installation size



Metallic base



Bakelite base