



指ZHIMING® Tel: 86-577-62870600 / E-mail: wangdewey80@yahoo.com [http:// www.chinameter.cc](http://www.chinameter.cc)

DT8 three phase kwh meter



The DT8 three-phase fore-wire meter is designed to meet the latest IEC62053-21, IEC62052-11 standards for measuring active energy in three-phase four-wire alternating current power grids. Connection is direct or by instrument transformers. The meter is KEMA certified. It has an average service life (MTTF) of 20 years and maximum overload capacity of 600%I_b.

Construction Meter case

It meets the protection requirements set by protection class IP53 of IEC62053-21. The series types of cases and terminal covers are available.

Terminals

The connection terminals are made for nickel-plated brass with features of high mechanical strength, good conductivity and corrosion-resistance.

Terminal block

The terminal block is injection molded of heat- and fire-resistant Bakelite. The voltage test link can be located inside or outside of the meter case.

Driving system

The driving system employs three single electromagnet elements, all of which are mounted on the meter frame with three screws. Each electromagnet element consists of voltage element, current element and connection board. In addition, the voltage electromagnet has low load and inductive load adjustment mechanisms. The current element employs a simple and reliable load curve compensation mechanism to ensure the flat characteristic curve.

Rotor

The rotor shaft is turned of high strength aluminum alloy. The upper end of the shaft is pressed with a worm which is made of thermoplastic, and the lower end is embedded with a graphite bearing which is self-lubricative and friction-resistant to ensure long service life of the meter.

Braking element

The magnet is made of AlNiCo5 alloy and designed as U-shaped so that the effect of short-time over currents upon the magnet is negligible. A temperature compensation plate, made of a special alloy, is embedded in the braking magnet. The rotor speed can be adjusted largely and continuously by rotating the whole magnet.

Frame

The frame is die-casted by high quality Si Al alloy. Its structure is designed as W-shaped of stable property to avoid



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distortion, and its surface is treated with chromate to achieve reliable and durable coating against oxidation.

Upper bearing

The pin is made of abrasion-proof stainless steel, and pressed into the brass sleeve. It is the rotor guide and runs in the plastic worm of the rotor.

Lower bearing

The magnetic suspension bearing consists of two ring shaped magnets, a guide pin and a bearing base. The pin made of stainless steel runs in the graphite sleeve of the rotor. No lubrication is needed.

Register

The cyclometer type register consists of six drums. It can be read directly. The drum is made of polycarbonate. The framework is embedded with a high-strength self-lubricating plastic bearing. No lubrication of bearings is needed during the service life.

Technical data

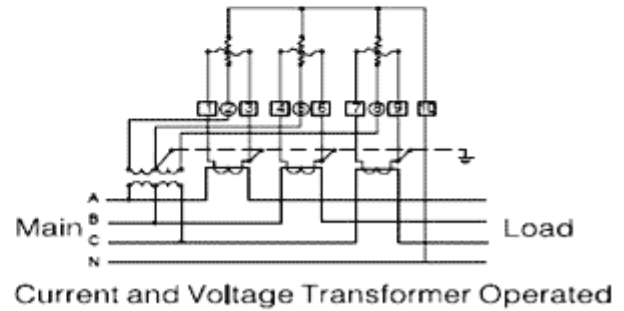
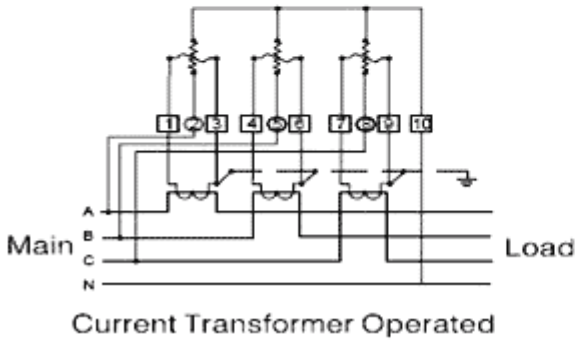
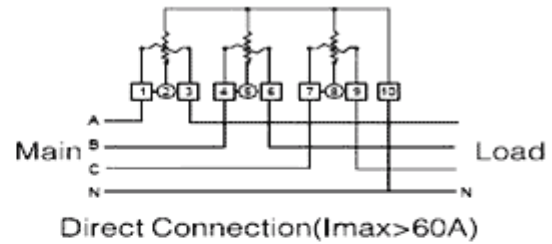
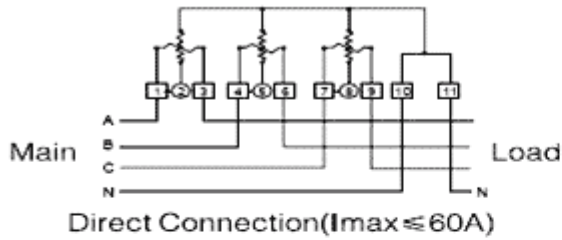
1	Meter type	DT8	
2	Applicable Standards	IEC60521、IEC514	
3	Accuracy class (according to IEC 60521)	Transformer operated: Class 1	Direct connected: Class2
4	Average service life (MTTF)	20 years	
5	Basic current (Ib) A	1.5 3 5 5 10 15 20 30	
6	Maximum current (I _{max}) A	6 6 10 20 40 60 80 100	
7	Rating current of transformer I _n	5A Direct connection	
8	Reference voltage U _n	3×57.7/100V,3×220/380V 3×230/400V,3×240/415V	
9	Reference frequency f _n	50Hz,60Hz	
10	Power losses in voltage circuit at 50Hz U _n	1.0W/4.5VA	
11	Power losses in current circuit at 50Hz U _n I _b	<0.5VA	
12	Non-running with no-load	0.8~1.1U _n	
13	Starting current	0.4%I _b 0.5%I _b	
14	Mean temperature coefficient From 0.1I _b to I _{max} at unity PF From 0.2I _b to I _{max} at unity 0.5 lagging	<0.08%/°C <0.12%/°C	
15	Insulation level Withstand A. C. Voltage for 50Hz, 1min	>2kV(when bakelite base>4kV) >6KV(when bakelite base>8kV)	
16	Rated load torque at unity PF, I _b	>800μMn	
17	Weight of rotor	48g	
18	Weight of meter	≈3.5kg	
19	Meter base	Steel, Bakelite, PC	
20	Meter cover	Bakelite, transparent PC	
21	Terminal cover	ABS, Bakelite, PC	
22	Register	Cyclometer single, Unidirectional, Jumping	
23	Option	Reverse running stopper	



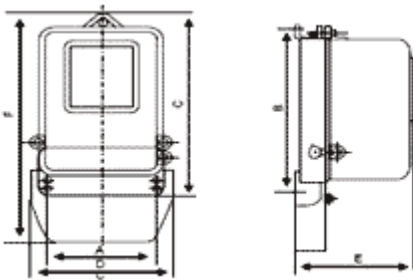
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Typical connections diagrams

Specification(A)	A	B	C	D	E	F
$I_{max} \leq 40$	128	236	253	165	126	320
$I_{max} > 40$	132	242	260	165	128	320



Outline & installation size



Specification (A)	A	B	C	D	E	F
$I_{max} \leq 40$	128	236	253	165	126	320
$I_{max} > 40$	132	242	260	165	128	320