

# ←NEW PRODUCTS→

## FUJI SINGLE PHASE WATTHOUR METERS/FA SERIES

### I. INTRODUCTION

FUJI first started the production of watthour meters in 1937, and up to August 1980 over 20 million units had been sold.

An increasing number is being exported overseas, and shipments of over 6 million units have been made to over 70 countries.

FUJI meters have earned an excellent reputation for their accuracy, rugged construction and stable performance in extended service.

### II. OUTLINE OF FUJI WATTHOUR METER

The FA series are based on FUJI's advanced design techniques, the use of the latest production facilities and materials. They are 2.0 class watthour meters for single-phase 2-wire or single-phase 3-wire balanced circuit use and are available with overload capacities from 200% to 400% of their basic current rating.

Case, cover, registers and terminal arrangements are interchangeable so that the FA series can easily be modified to meet the requirements of such major international standards as IEC, VDE, JIS or user's own specifications.

### III. FEATURES

- **Rigid aluminum alloy die-cast frame**  
The frame design has been simplified to give increased mechanical strength and durability.
- **Highly efficient brake magnet assembly**  
Two bipolar magnets produce a uniform field to provide the retarding torque. Since a temperature compensator is built-in it continues to operate accurately regardless of changes in the ambient temperature.
- **Simple adjustment**  
Low load, inductive load and full load adjustments can easily be carried out from the front of the meter using simple tools.
- **Robust base plate**  
The base plate assembly is pressed from sheet steel and then receives a surface coating of anti-corrosion paint using an electrostatic spray system.



Fig. 1 Watthour meter

- **Dust-proof terminal covers**

The terminal cover is sealed by means of a rubber gasket. This prevents dust from entering the terminal box.

- **A wide selection of types and cases**

Both metal and glass meter covers are available. There is also an option of terminal covers, cyclometer registers and lower bearings.

### IV. VERSIONS

#### Registers

- **Cyclometer type**

The standard register has either 5 or 6 easy-to-read numeral wheels which are also available in versions with decimal point. Wheels are made of pressed anodized aluminum and rotate smoothly as they are light in weight. Little power is needed to advance them.

- **Slanted type cyclometer registers**

In this type of meter the registers and dials slope downwards by about 18°. This makes reading easier when meters are located above head height. The name plate also differs from that used in normal types, and the register window is also inclined.

- **Uni-directional register (Patent applied for)**

Even if the disk is run backwards due to misconnection or tampering the cyclometer continues to add thanks to the "uni-directional mechanism".

- **Non-reverse running device**

This device prevents the meter running backwards due to misconnection or tampering of the WHM.

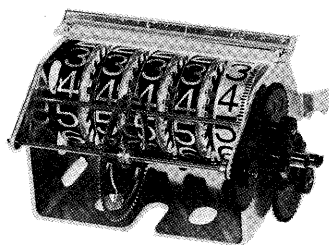


Fig. 2 Uni-directional register

#### Lower bearings

- **Double-jewel type**

The FUJI double-jewel bearing consists of two cap-shaped synthetic jewels and a stainless-steel ball. The rotor shaft is free to rotate on this assembly, which is enclosed in

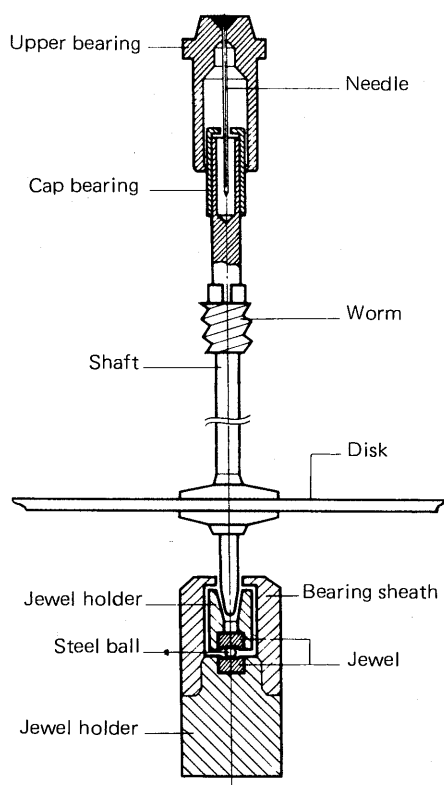


Fig. 3 Double-jewel type

a dust-tight housing.

The bearing maintains its excellent friction-free characteristics even when used under dusty and other severe conditions.

- **Magnetic floating type**

FUJI's magnetic thrust bearing is of the repulsion type and two annular barium ferrite magnets are mounted, one on the frame and the other on the rotor assembly. The magnets repel one another so that the rotor shaft is pressed against the upper bearing cap, with an air gap of about 1mm between the magnet faces.

The lower part of the rotor shaft is centered by a needle bearing.

The dependability of this system has been proven in over one million FUJI watthour meters.

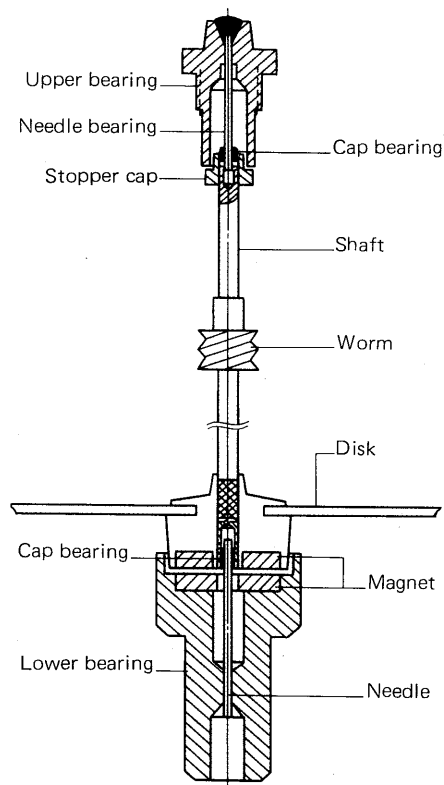


Fig. 4 Magnetic floating type