



DEPARTMENT OF TRADE AND COMMERCE
STANDARDS BRANCH

E-29

OTTAWA April 25, 1966.

NOTICE OF APPROVAL

FOR

FERRANTI TYPE "FMF2" DUAL 2-ELEMENT TOTALIZING WATTHOUR METER
AND INDUCTIVE TRANSMITTING PULSE GENERATOR

Apparatus

Current Range	0.25 - 10 amperes each element
Voltage	120 volts <i>and 240 volts</i>
Elements	two pairs, left and right
Circuit	two 3 phase 3 wire circuits from the same bus
Frequency	60 cycles
Secondary disc constant (Kh)	2.5
Register	4 - dial clock-type with test dial
Register ratio	66 - 2/3

Description

The type FMF2 is a dual 2-element watthour meter designed for use with instrument transformers and is intended to totalize the loads on two separate 3 phase 3 wire circuits fed from a common bus.

It has two discs on a common shaft, each acted on by one coil of each of the elements. The meter can thus be considered as being divided vertically so that one element is on the left and the other on the right.

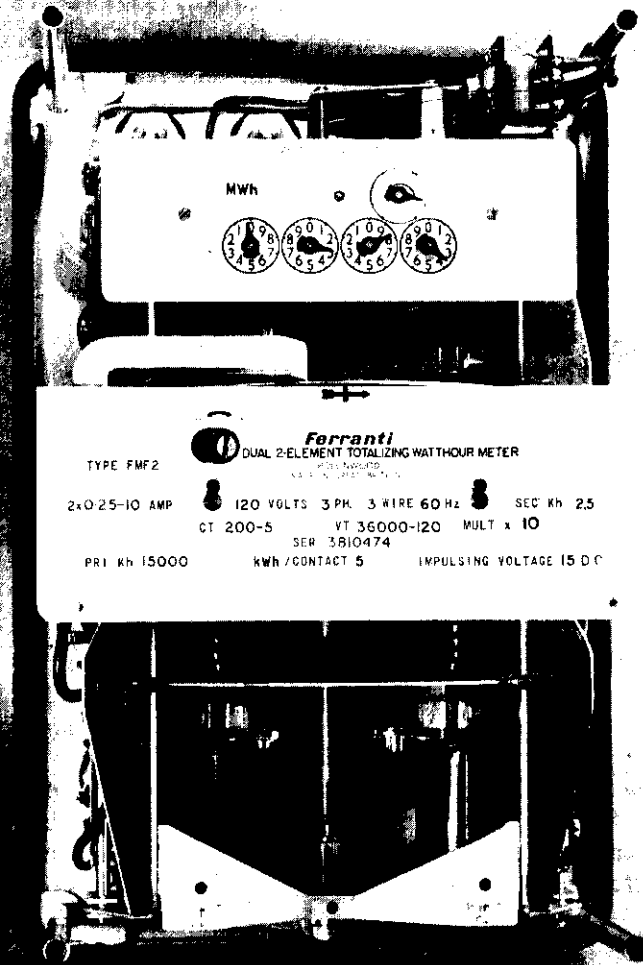
The type FMF2 is identical to the type FMF covered by circular "E-3" except that the four current coils are brought out to eight separate studs at the rear of the case. As this meter totalizes from a common bus, there are only three voltage leads going to it. Of the four voltage studs two are common.

A ratchet device for preventing reversal of disc rotation will be fitted to the top of the disc shaft to prevent the generation of false pulses.

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The pulse generator fitted to this meter differs from that approved for use with the type "FMF" in that it operates from inductive pickup from a transistorized oscillator coil by means of a slotted disc gear-driven from the disc shaft. It has a "flip-flop" action with the output pulses fed to two terminals of the back of the case. Either terminal may be used to feed the type "CE" summator, but both terminals are required when feeding into a type "PE" Summator as the latter requires a "two-way" output.

This inductive transmitting pulse generator is also approved for use with type FMF watt-hour meter and type FMFR reactive energy meter.

Also the type FMF2 dual 2-element totalizing watt-hour meter is approved when equipped with the pulse generator covered by circular E-3.

The power to supply the pulse generator is provided by the Electronic Summator type CE (circular E-30), which has three power output terminals marked +15, 0, -15 which are to be connected to similarly marked terminals at the rear of the totalizing watt-hour meter. A single return line provides the path for the pulse from the meter to this summator.

A meter with the inductive transmitter should be installed within a short distance of the summator, as capacitance in the connecting lead degrades the edge of the metering pulse.

A wide variety of gear ratios and discs having different numbers of slots are available, so that a combination may be chosen to fit a wide range of instrument transformer ratios to give suitable values of kilowatt hours per contact. This value will be shown on the nameplate.

This dual 2-element totalizing watt-hour meter is to be verified as two (2), 2-element meters with series and separate current coil tests on each element, for which tests potential must be applied to all four voltage coils.

The type FMF2 dual 2-element totalizing watt-hour meter is only available in switchboard mounting, and its use is restricted to temperatures between 0°C and 50°C.

Approval granted to: Ferranti-Packard Electric Limited,
St. Catharines, Ontario.

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