CANADA

S-EA.621

DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

OTTAWA, May 5, 1964.

TYPE APPROVAL

GENERAL ELECTRIC TYPES "MD-3", "MD-5" AND "MD-4" 2-CIRCUIT TOTALIZER.

The apparatus specified and illustrated herein has been duly approved by the Standards Branch under the provisions of the Electricity Inspection Act, Chapter 94, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Types "MD-3", "MD-5" and "MD-4" 2-circuit totalizers manufactured by the General Electric Company, Somersworth, N.H., U.S.A., and distributed in Canada by the Canadian General Electric Company Limited, 1130 Boulevard Charest, Quebec 8, P.Q.

Rating of Apparatus:

| | |
|---|---|
| *Input Contacts | 3-wire D-5, D-13, D-30 or D-41 |
| Output Contacts | 2-wire D-6 or 3-wire D-7 |
| Incoming Pulse Rate | 60 per minute maximum |
| Duration of Incoming Pulse | 3/4 second minimum |
| Ratio Input/Output Pulses | 2:1 |
| Supply to motor | 115 volts, 60 cycles |

*On transmitting meter. The kwh per impulse from each of the transmitting meters must be the same.

Description: The type MD-3 2-circuit totalizer is used to receive impulses from 3-wire contact devices on watthour meters and through its differential, to transmit such impulses either to a demand register mounted on the totalizer, or to a set of outgoing contacts that can in turn operate a contact-operated demand meter or another totalizer.

The type MD-5 2-circuit totalizer has the same form as the MD-3 except that it is in a rectangular case for switchboard mounting.

The type MD-4 2-circuit totalizer has the same form as the MD-3 except that one circuit is subtractive.

Each of the above 2-circuit totalizers is operated by two synchronous motors which transmit motion to a common gear through a differential. Each motor operates one side of the differential, and is limited in the amount of rotation by 3-wire contacts which are actuated by cams on the differential shaft.

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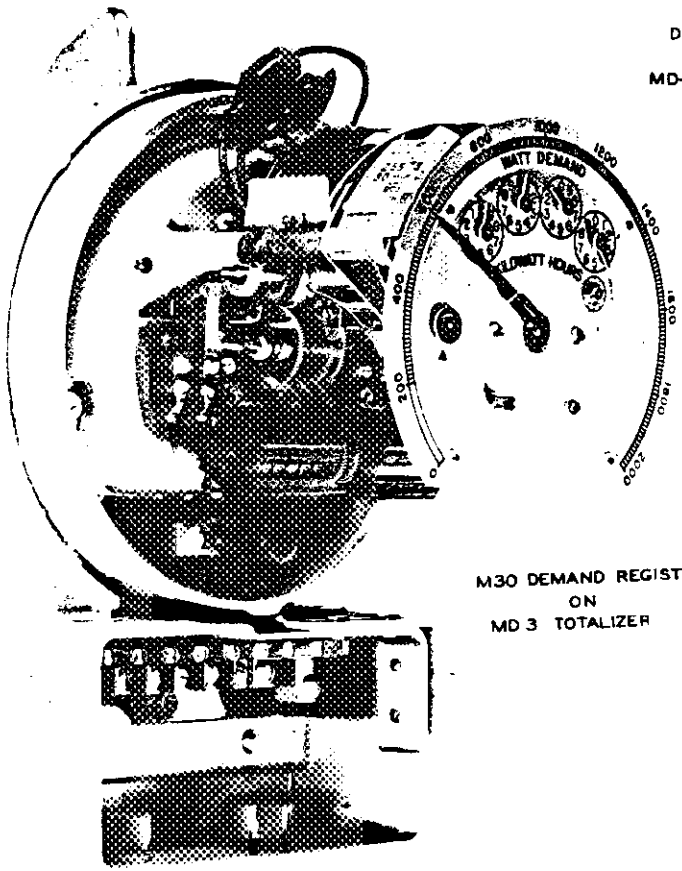
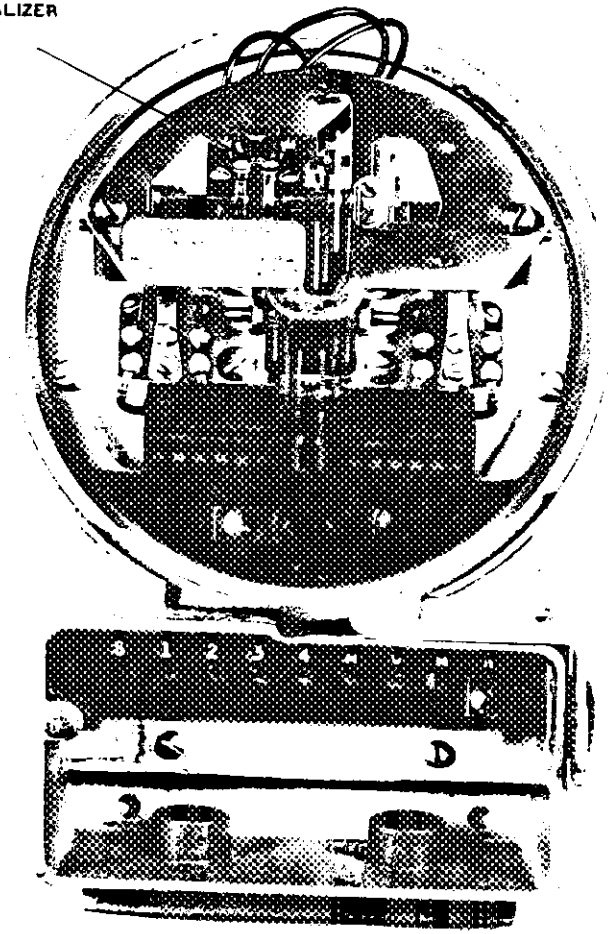



M30 DEMAND REGISTER
ON
MD 3 TOTALIZER

D7 CONTACTS
ON
MD-3 TOTALIZER



Each rotor and each circuit is independent, both operating in the same manner, and the rotation thus imparted to each side of the differential is totalized on the differential gear and thence to a demand register or outgoing contact device.

Counters geared to the differential shaft on each side of the differential gear indicate the number of impulses received from each watthour meter.

The output from one totalizer can be fed into one input of another totalizer so that it is possible to totalize the outputs from several watthour meters. However, for successful totalizing, the value in kilowatthours per contact must be the same.

If the type MD-4 2-circuit totalizer is used, the circuit must be carefully tailored so that the positive pulses exceed the negative pulses at all times.

When used in a billing circuit, the MD-3, MD-5 and MD-4 2-circuit totalizers must be sealed whether equipped with D-6 or D-7 outgoing contacts or a demand register.

The seal pan may be attached to the base with epoxy cement, or may be loose.

W.J.S. Fraser

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Chief, Electricity and Gas Division,
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