

Department of consumer and corporate affairs / Ministère de la consommation et des corporations



STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL

E-79

OTTAWA May 13, 1969.

CANADIAN GENERAL ELECTRIC TYPE "M-30" DEMAND REGISTER

Apparatus

Full Scale Demand Scale Multipliers ① ②

As required, according to the rating of the watt-hour or var-hour meter on which it is mounted subject to the limitations of Table I "Limits of Full Scale Values."

Register Ratios ③

All ratios used on approved Canadian General Electric single and polyphase watt-hour and var-hour meters.

Timing Motor Voltages
Time interval
Frequency
Timing Motor Burden

120, 208, 240, 345, 480 and 600 volts.
15 and 30 minutes
25, 50 and 60 hz (same as the meter)
3.4 W, 5.1 va (at 120 v. 60hz)

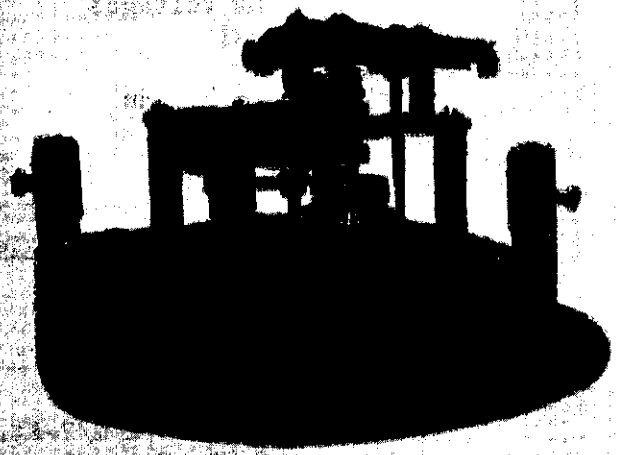
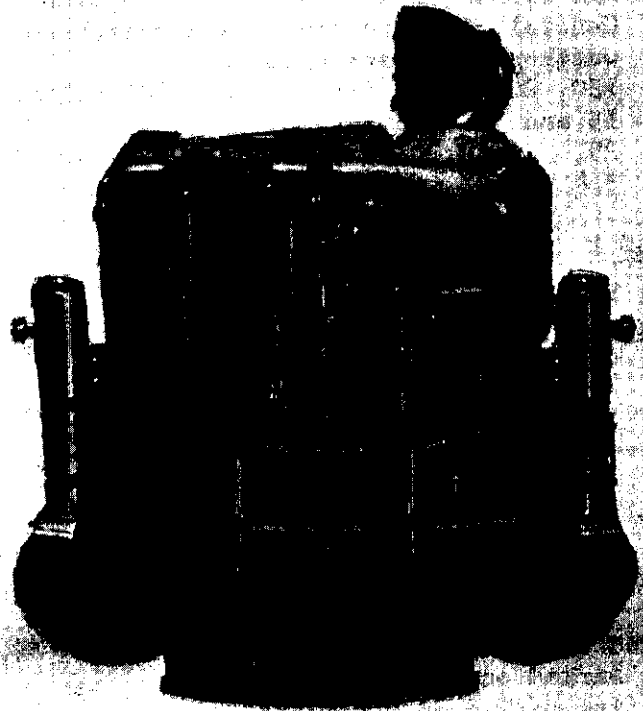
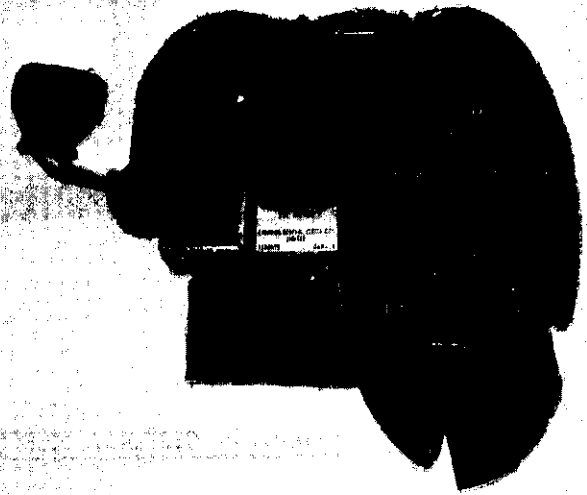
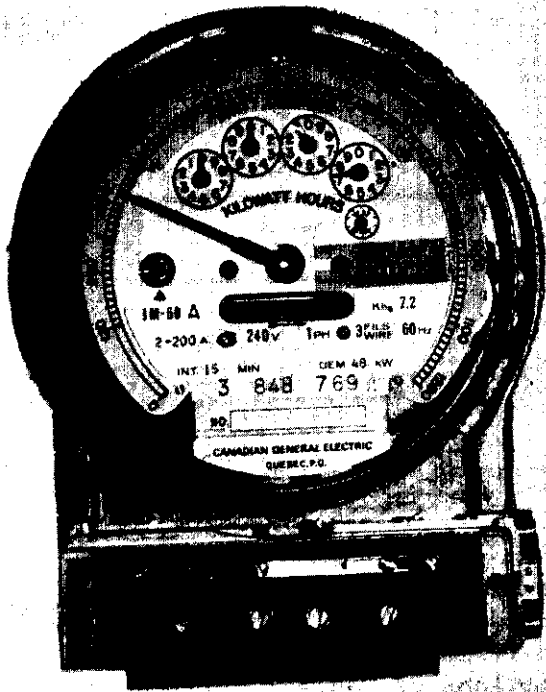
TABLE I ①

Limits of Full Scale Values for Mechanical Integrating Combination Meters

Meter	Full Scale Value	
	Lower Limit	Upper Limit
Single-Phase	$50V \times I_L \times 1$	$1.05V \times I_M \times 1$
Polyphase 2-El. & 2 1/2-El. Delta	$50V \times I_L \times \sqrt{3}$	$1.05V \times I_M \times \sqrt{3}$
Polyphase 2-El. Network	$50V \times I_L \times 2$	$1.05V \times I_M \times 2$
Polyphase 2 1/2-El. Y and 3-El. Y	$50V \times I_L \times 3$	$1.05V \times I_M \times 3$

Where V = Rated voltage marked on nameplate
I_L = Low-current rating marked on nameplate
I_M = Maximum-current rating marked on nameplate.

CANADIAN GENERAL ELECTRIC TYPE "M-30" DEMAND REGISTER



- ② ③ The multiplier applies to both watthour and demand readings. All registers are 4-dial. When these registers are used on varhour meters, the dials will be marked in "kilovar hours" and the scale in "vars" or "kilovars".

Description

This is a reissue of circular SD-EA.18 to cover the use of these demand registers on all approved ratings of Canadian General Electric watthour and varhour meters.

This circular also covers certain changes in design that were originally made by the General Electric Company in the United States and are now incorporated in demand registers produced in Canada.

These changes are modifications to the Back Plate Assembly, the Pointer Pusher Assembly, the Cam Shaft Assembly and the Clutch Shaft Assembly.

The type "M-30" Demand Register is the block interval type, in which a pointer pusher is geared directly to the disc shaft through a suitable gear reduction and carries the indicating pointer with it as it moves up scale. In this gear train is a clutch which opens at the end of each demand period permitting the pointer pusher to return to zero. The indicating pointer remains at the highest point reached by the pointer pusher from where it may be lowered by means of the sealable reset knob.

The progress of the time interval may be noted by the position of a small black disc on the front of the register. This disc makes one complete revolution during each time interval.

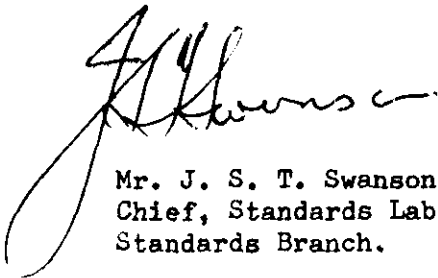
The M-30 Register may be supplied in any register ratio that is standard for approved ratings of Canadian General Electric watthour and varhour meters. The demand scale may be direct reading or it may have a multiplier according to the requirements of the utility.

The limits of the full scale value of the demand section are given in Table I on page 1 of this circular.

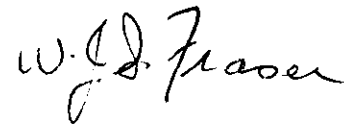
The "M-30" register is available as a kit for installation on existing meters.

The power supply to the timing motor is by means of a plug and screw-in connectors, one red, the other black. The red connector should be attached to the marked terminal on the plug.

Approval granted to: Canadian General Electric Company Limited,
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