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

STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL

E - 88

OTTAWA July 13, 1970.

CANADIAN GENERAL ELECTRIC TYPE "I-70S" DUAL RATED SINGLE PHASE WATTHOUR METER

Current Ranges	1.0-100[1], 2.0-200 amperes
Voltage	240 volts
Frequency	60 hz
Wire	3
Disc Constant kh	7.2 watthours per rev.
Register Ratios	138 8/9 4 dial x 10 13 8/9 4/5 dial x 1[2] clock only 13 8/9 5 dial x 1
Register Types	clock and cyclometer[3]

(1) Marked on small removable 1.0-100 tab

(2) Used as a 4-dial only when the meter is rated at 1.0-100 amperes. If the rating is changed to 2.0-200 amperes, the circular mask on the 5th dial must be replaced by a pointer to provide a 5-dial register.
All clock dial registers have test dials.

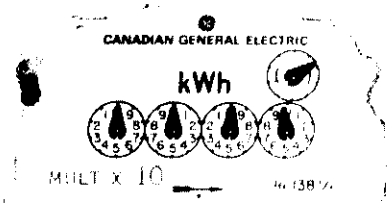
(3) A cyclometer register 4-dial x 10 with test dial may be used on both 1.0-100 and 2.0-200 ampere ratings.
A cyclometer register 5-dial x 1 without test dial may be used on the 2.0-200 ampere rating only.

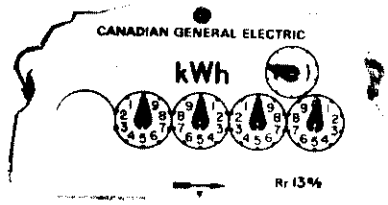
Description

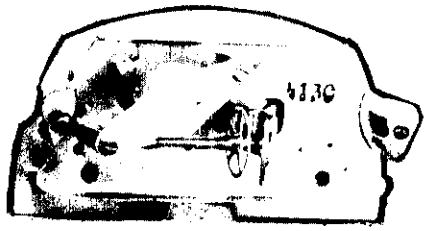
The type I-70S watthour meter has a lower profile than the I-60S meter it supersedes. This is accomplished by a redesign of the electromagnet and the grid, a reduction in the height of the mounting pillars and a shallower glass cover.

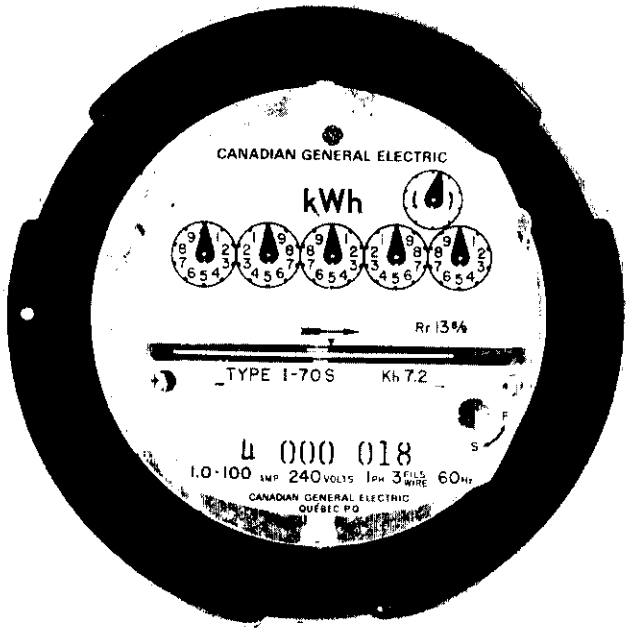
There are two permanent magnets, one on each side of the disc. High load adjustment is a screw acting on a shunt across the right hand magnet.

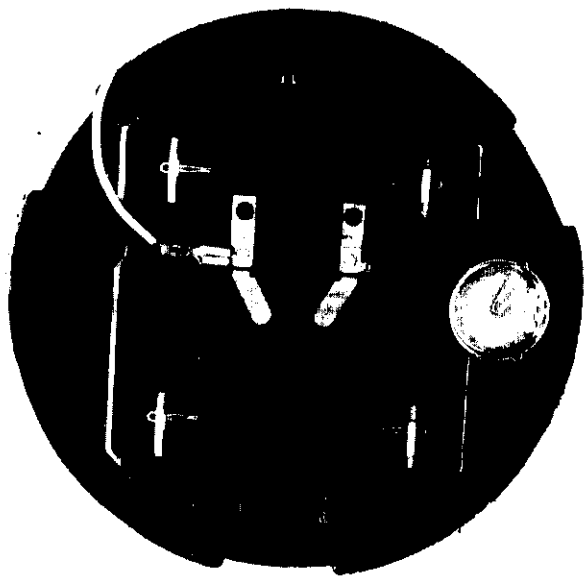
CANADIAN GENERAL ELECTRIC TYPE "I-70-S" DUAL RATED SINGLE PHASE WATTHOUR METER











Low load adjustment is a knurled wheel accessible through a slot at the right hand side of the grid.

The power factor adjustment is factory preset.

The disc is of smaller diameter and slightly thicker than that of the I-60 and is provided with two anti-creep holes that can be used for timing. It is magnetically suspended and has low friction guide bushings.

The register ratio bracket has been changed from a staked construction to a post and plate assembly.

This register may be used on I-60S meters and is hereby approved for such use.

The base has three small bosses on which the glass cover turns and rests. This permits control of the cover assembly torque and of optimum cover gasket compression.

The blades are gasketed and a filter in the lower part of the base permits the meter to breathe.

This meter is provided with two test links that are connected to the voltage coil. Screws passing through clearance holes in these links, where screwed down, connect them to their respective blades.

Each test link is provided with a small tab as shown in the illustration intended to receive connectors on the voltage leads. Alligator clips may also be used but they should be covered with insulating sleeves.

When verifying these meters, care should be taken to ensure that the screws are backed out enough to provide adequate clearance, otherwise a voltage to current short may result, and after verification these screws should be tightened securely.

When dial testing registers having a register ratio of 13 8/9, it is recommended that the test be started with the test dial pointer on the way up.

These registers may have a significant amount of backlash and in many cases very low friction which the weight of the test dial pointer may be able to overcome.

For this reason vertical positions of the test dial pointer should be avoided when dial testing as it is difficult to determine if the backlash has been taken up.

When dial testing new meters as a part of statistical sampling, it is recommended that 3 revolutions of the test dial be taken. At 100 amperes, this will take about 7½ minutes.

Approval granted to:

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