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

STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL E - 88-2

OTTAWA February 16, 1972

CANADIAN GENERAL ELECTRIC TYPES "I-70A" AND "I-70S" DUAL RATED SINGLE PHASE WATTHOUR METERS

Current Ranges	1.0-100①, 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 clock and cyclometer②
	13 8/9 4/5-dial x 1 clock③
	13 8/9 5-dial x 1 clock and cyclometer④
	138 8/9 4-dial x 10 clock (low backlash)⑤
	13 8/9 5-dial x 1 clock (low backlash)⑤
Modification Serial Number⑤	4,200,000

① Marked on small removable 1.0-100 tab.

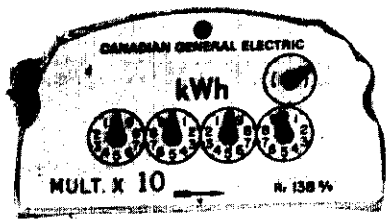
② Cyclometer register 4-dial x 10 with test dial may be used on both 1.0-100 and 2.0-200 ampere ratings.

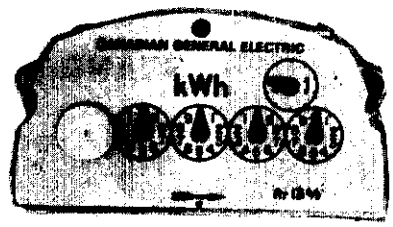
③ Used as a 4-dial when the meter is rated at 1.0-100 amperes. If the rating is changed to 2.0-200 amperes, the circular mask on the 5th dial must be replaced by a pointer to provide a 5-dial x 1 register.

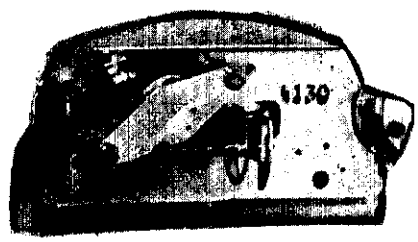
④ A cyclometer register 5-dial x 1 without test dial may be used on the 2.0-200 ampere rating only.

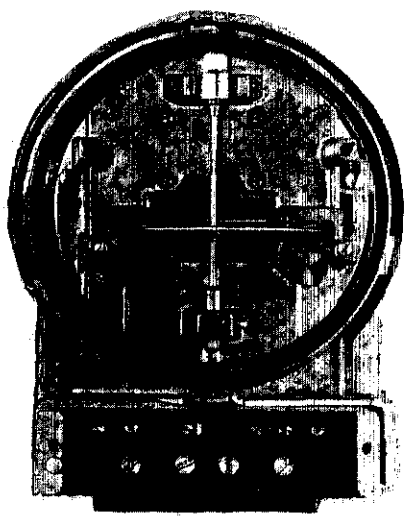
⑤ Meters above serial number 4,200,000 have a single pair of permanent braking magnets located near the right-hand side of the disc with a screw acting as a shunt to provide the high load adjustment, these meters will also be equipped with one of the registers covered by circular E-110.

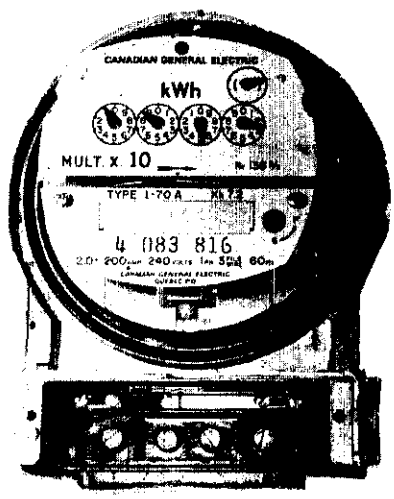
All clock registers have test dials.

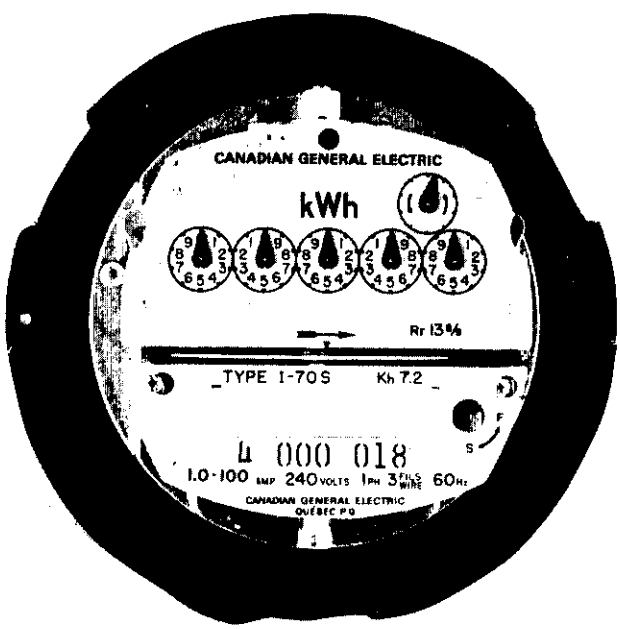

CANADIAN GENERAL ELECTRIC
kWh
MULT. X 10

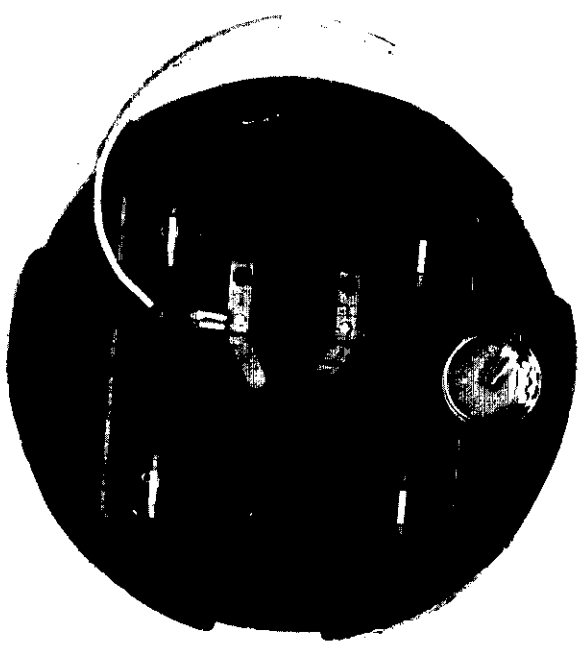

kWh






CANADIAN GENERAL ELECTRIC
kWh
MULT. X 10
TYPE 1-70 A
Kh 7.2
4 083 816


CANADIAN GENERAL ELECTRIC
kWh
Rr 13⅓
TYPE 1-70 S
Kh 7.2
4 000 018
1.0-100 AMP 240 VOLTS 1PH 3 WIRE 60Hz
CANADIAN GENERAL ELECTRIC
QUÉBEC P.Q.



DESCRIPTION

The types I-70A and I-70S watthour meters have a lower profile than the I-60 meters they supersede. This is accomplished by a redesign of the electromagnet and grid, a reduction in the height of the pillars and a shallower glass cover.

Meters prior to serial 4,200,000 have two pairs of permanent braking magnets situated near the LH and RH sides of the disc with the high load adjustment being a screw-operated shunt across the RH magnet.

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

The power factor adjustment is factory preset.

The disc is smaller in 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 I-70S 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.

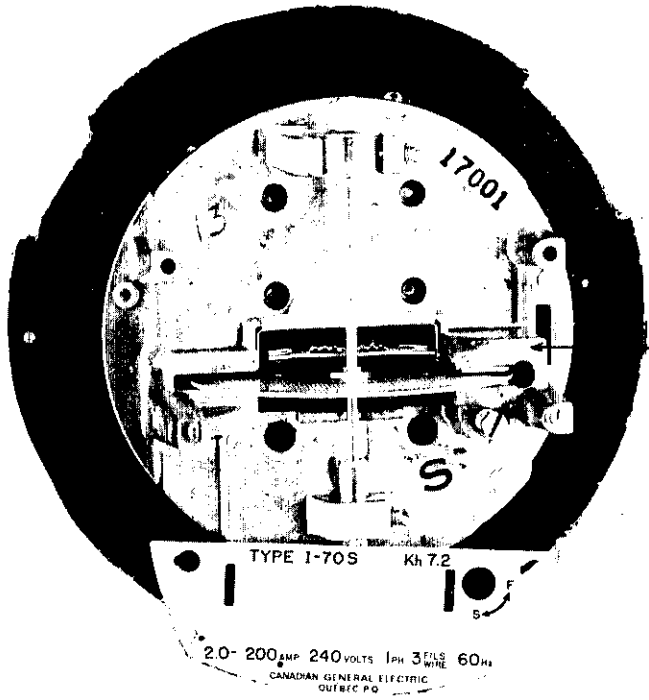
The blades of the I-70S arefitted with a gasket and a filter in the lower part of the base permits the meter to breathe.

The I-70A meter has no filter.

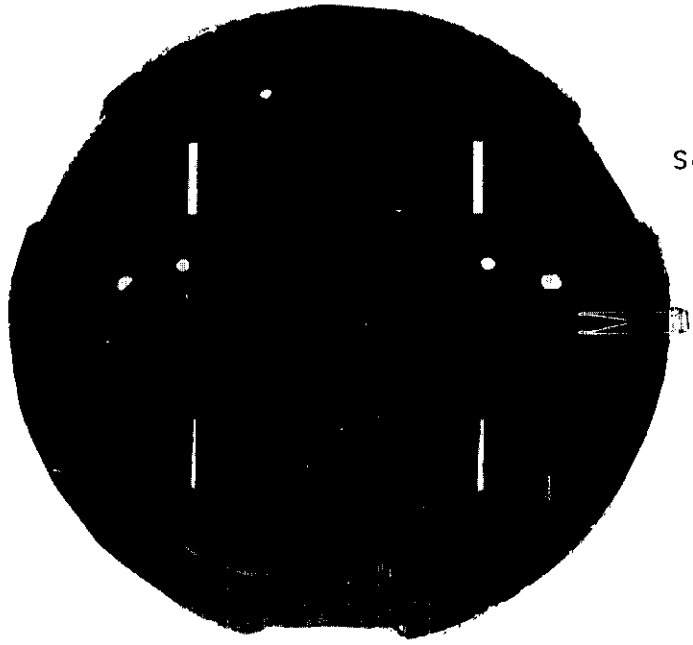
Both the types I-70A and I-70S are provided with two test links that are connected to the voltage coil. On the S base, screws pass through clearance holes in these links, which, when screwed down, connect the links to their respective blades.

Each link on the S base is provided with a small tab as shown in the illustration which is intended to receive connectors on the voltage test leads. If alligator clips are used, they should be covered with insulating sleeves.

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



SINGLE MAGNET



NEW BASE
See circular letter
Dec. 19, 1971.

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

Dial testing of registers, particularly Rr 13 8/9, of the older design (designated by the symbol KWh located above the dials) not covered by circular E-110, it is recommended that the dial test be started with the test dial pointer on the way up as these older registers have a significant amount of backlash and in many cases the weight of the test dial pointer may overcome the very low register friction.

Approval granted to:

Canadian General Electric Co. Ltd.,
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Ref: SL-100-530 (AL)
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