



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



STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL

T - 31

OTTAWA January 5, 1970.

CANADIAN GENERAL ELECTRIC TYPES "IC-25", "IC-34.5", "IC-46", "IC-69", "IC-92", "IC-115", "IC-138", "IC-161", "IC-196" and "IC-230" CURRENT TRANSFORMERS

Group 1

Transformers with Single Bar Primary and Tapped or Untapped Secondary Windings

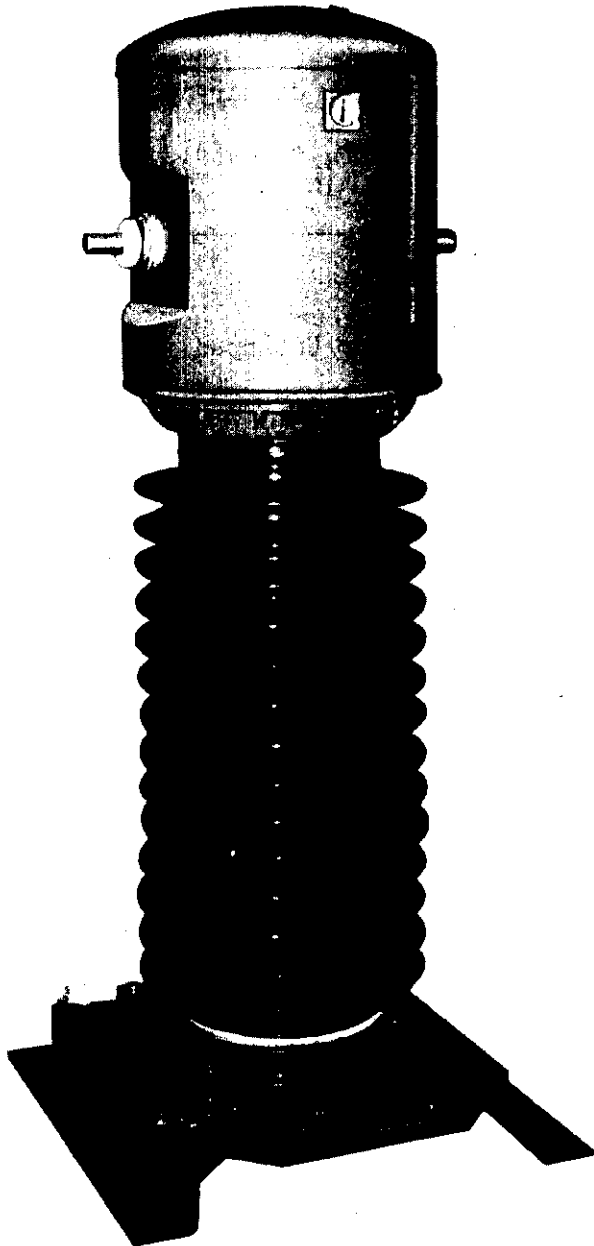
- Primary Currents 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2400 and 3000 amperes
Secondary Current 5 amperes, each secondary
Accuracy Rating at 60hz 500 and 600 amperes 0.3B0.1, B0.2, B0.5, B0.9, B1.0; 0.6B1.8
All others 0.3B0.1, B0.2, B0.5, B0.9, B1.0, B1.8, B2.0
Voltage Rating 25 kv to 230 kv as appearing in the type designation
R.F. (rating factor) 1.33
Frequency 60 hz
Number of Secondaries 1, 2, 3 or 4
Ratios Available 1, 2, 3, 4 or 5
Wire 2, single phase
Style Post type, outdoor, oil filled

Group 2

Transformers with Series/Parallel Primary Winding Connections and Tapped or Untapped Secondary Windings

- Primary Currents 50 x 100 x 200 x 300 x 400; 50 x 100, 100 x 200, 200 x 400 amperes
Secondary Current 5 amperes, each secondary
Accuracy Rating at 60 hz 50 amperes 0.6B0.1, B0.2, B0.5
100 amperes 0.3B0.1, B0.2, B0.5, B0.9, 0.6B1.0, B1.8, B2.0
All others 0.3B0.1, B0.2, B0.5, B0.9, B1.0, B1.8; 0.6B2.0

Canadian General Electric Types "IC-25", "IC-34.5", "IC-46", "IC-69", "IC-92",
"IC-115", "IC-138", "IC-161", "IC-196" and "IC-230" Current Transformers



OIL FILLED INSTRUMENT CURRENT TRANSFORMERS

TYPE IC

voltage Rating 25 kv to 230 kv as appearing in the type designation
R.F. (rating factor) 1.0
Number of Secondaries ⁽⁸⁾ 1, 2, 3 or 4
Ratios available
200-5⁽⁶⁾ and 400-5⁽⁵⁾ Terminals W1-W5, X1-X5, Y1-Y5, Z1-Z5
300-5⁽⁵⁾ Terminals W1-W4, X1-X4, Y1-Y4, Z1-Z4
100-5⁽⁶⁾ Terminals W1-W3, X1-X3, Y1-Y3, Z1-Z3
50-5⁽⁶⁾ Terminals W1-W2, X1-X2, Y1-Y2, Z1-Z2
W1, X1, Y1 and Z1 terminals are polarity
Wire 2, single phase
Style Post type, outdoor, oil filled

- (1) Nameplates of transformers incorporating the 500-5 or 600-5 ampere ratios will be marked 0.3B0.9 as applying to these ratios and either 0.3B0.9 or 0.3B2.0 for the other ratios.
- (2) Transformers may be built with up to 4 separate independent secondary windings which will be identified at the terminal block as "W1- ", "X1- ", "Y1- " and "Z1- ".
Terminals "W1", "X1", "Y1" and "Z1" are connected to the start of their respective windings and have the same polarity as "H1" but are not necessarily common to all the ratios listed on the nameplate. The lowest and highest suffix numbers indicate the full winding and intermediate numbers the taps in their relative order.

For example, a transformer may be constructed with a tapped secondary such as to produce ratios of 1600-5 using X1-X2, 2400-5 using X1-X3 and 3000-5 using X1-X4.

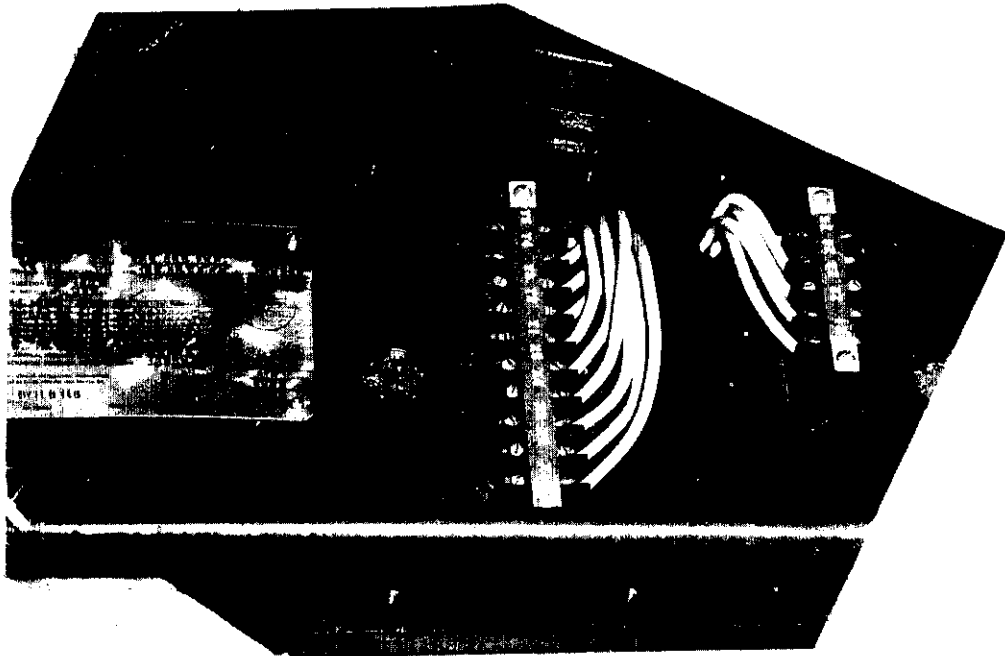
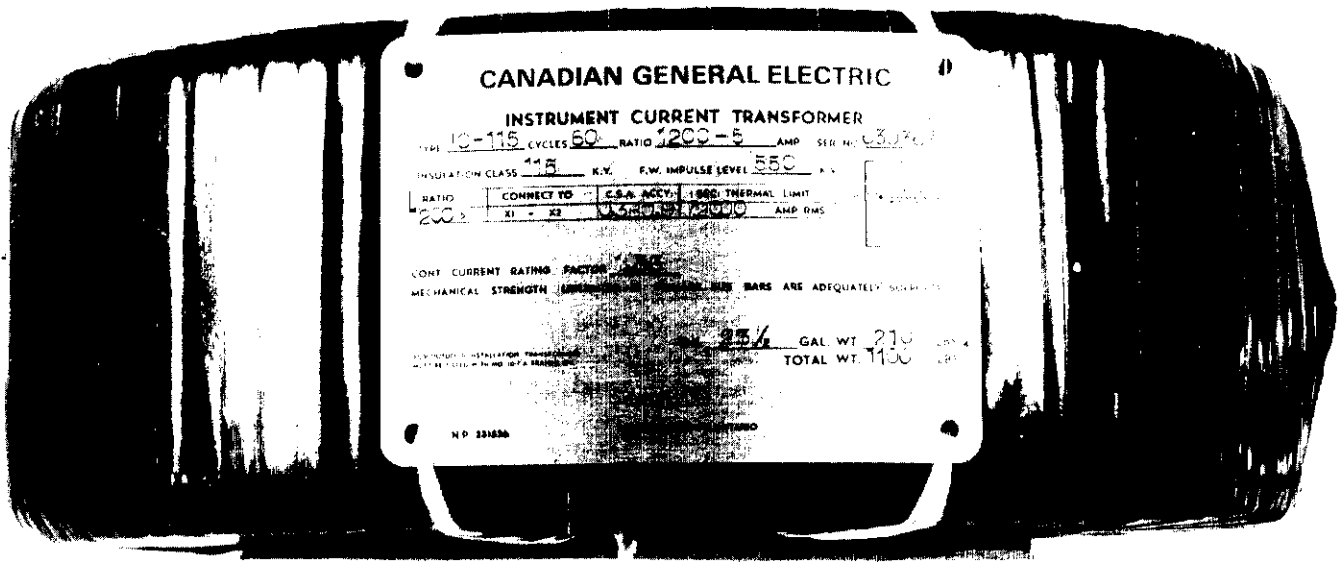
In addition, ratios of 800-5 and 600-5 would be available from terminals X2-X3 and X3-X4 respectively. This example applies equally to the "W", "Y" and "Z" windings.

Only the ratios listed may be used for revenue metering.

In all cases, the terminal with the lower suffix will have the same polarity as "H1".

- (3) 0.6B0.2 marked on the nameplate.
- (4) 0.6B0.9 marked on the nameplate.
- (5) links arranged for parallel primary connections.
- (6) links arranged for series primary connections.
- (7) transformers with untapped secondary windings will be double ratio, in which case the secondary terminals will be W1-W2, X1-X2, Y1-Y2 and Z1-Z2.
- (8) Transformers with double primary windings for series/parallel connections are available with 1, 2, 3 or 4 separate independent tapped or untapped secondary windings.

Canadian General Electric Types "IC-25", "IC-34.5", "IC-46", "IC-69", "IC-92", "IC-115", "IC-128", "IC-161", "IC-196", and "IC-230" Current Transformers



Description

The type "IC--" current transformers are post type, oil filled for outdoor use. All units are sealed at the factory to prevent breathing and consequent absorption of moisture, and are designed for vertical mounting.

The primary connections are brought out to threaded copper studs which are insulated at one or both sides from the expansion chamber with porcelain bushings. One stud is either solidly connected to the expansion chamber, or the unit is equipped with a removable connecting link which may be connected to either of the line terminals and the expansion chamber.

Transformers with double primary windings have two extra studs at the side of the expansion chamber where, by means of links, the two sections of the primary winding may be connected in series or in parallel.

Transformers may be built with one or more secondary windings intended for relaying applications and consequently these windings will be identified with a relaying accuracy rating.

It should be noted that only those windings with a metering accuracy rating are approved for revenue applications.

As the secondary windings of all the transformers covered by this approval are completely independent, any unused secondary should be short-circuited, preferably over the whole winding.

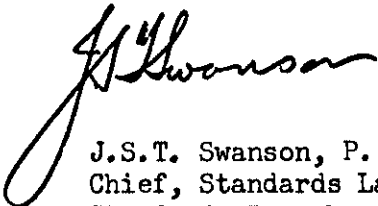
The secondary terminal blocks are attached to the base of the transformer where they are protected by a metal cover.

A connection diagram adjacent to the terminal box at the base of the transformer indicates the placement of the links and the secondary terminals to be used to obtain the desired ratio.

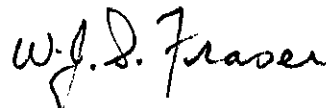
The illustration on page 2 shows a completed transformer from Group 1, and the illustrations on page 4 show a core and coil assembly for use in a transformer of Group 1 and a terminal block as used on a transformer of Group 2.

Approval granted to:

Canadian General Electric Company Ltd.,
Toronto 4,
Ontario.



J.S.T. Swanson, P. Eng.,
Chief, Standards Laboratory,
Standards Branch.



W.J.S. Fraser,
Chief, Electricity and Gas Division,
Standards Branch.

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