DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

E-61

OTTAWA October 2 19 67

NOTICE OF APPROVAL

FOR

LANDIS & GYR TYPE "2MF8/VA/MF8Ø" DUPLEX TRIVECTOR

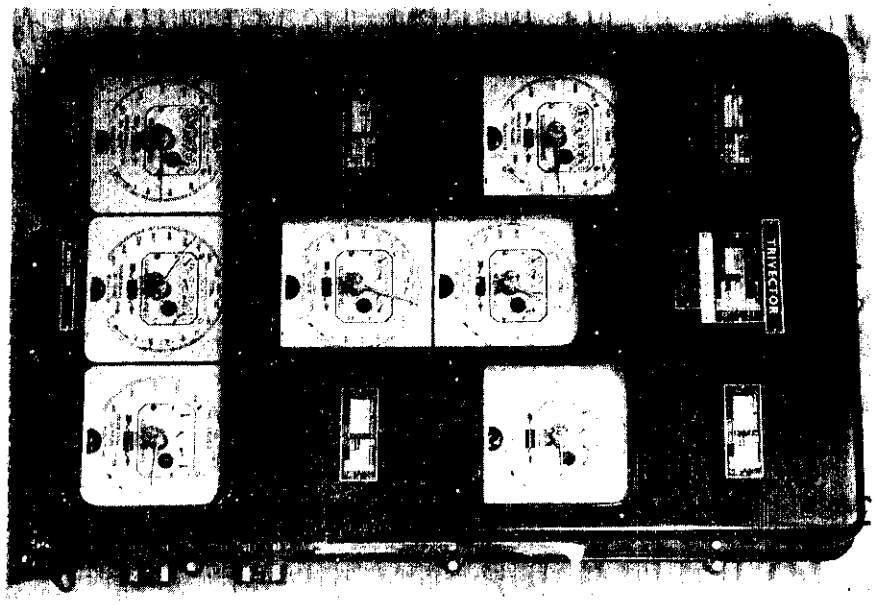
Apparatus

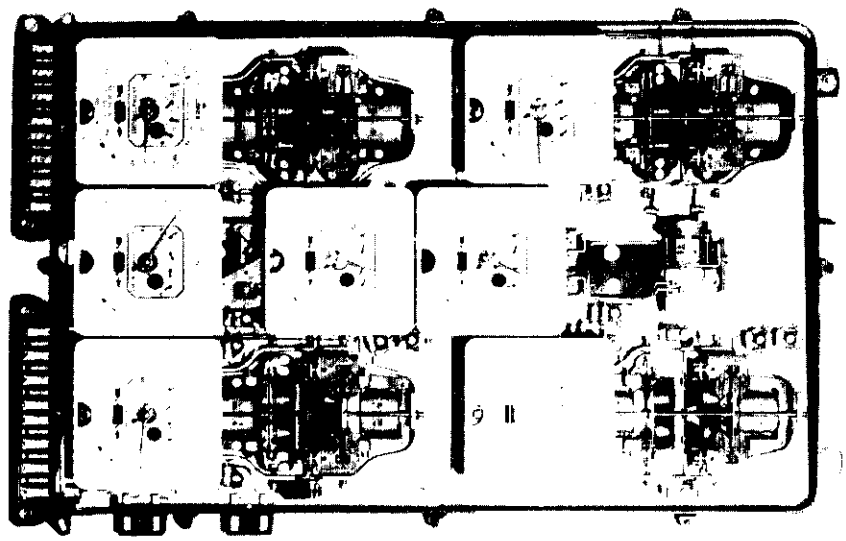
Current Range	0.12-10 amperes
Voltage	115 volts
Phase	3
Wire	4
Elements	3
Test Period	15 minutes
Frequency	60 hz
Feeders	2
Power Factor Range	1.0 to zero lagging

Description

The basic elements in this Duplex Trivector are identical to those used in the single Trivector receiving approval under S-EA.636 which contained a single 3-element active energy meter(MF8) and a single 3-element reactive energy meter(MF8Ø) in the same case along with a Trivectoring mechanism located between them and producing a readout of "va" on the demand scale and "kvah" on the register.

LANDIS & GYR TYPE "2MF8/VA/MF80" DUPLEX TRIVECTOR





This Duplex Trivector contains two such sets of measuring elements, each with its own watt or var demand dials and kwh or kvarh registers.

Each set will be identified as "line 1" or "line 2".

This 3-element Duplex Trivector is identical in operation to the 2-element "2FF8/VA/2FF8Ø" design receiving approval under circular "E-52".

The individual watt demands of lines 1 and 2 are mechanically totalized and read out on another "Watt" demand dial marked "Total", and also the individual var demands of lines 1 and 2 are totalized and read out on another separate "var" demand dial also marked "Total".

The readings of the "Total" watt demand dial and those of the "Total" var demand dial are fed into the Trivectoring mechanism and appear on another demand dial as "Voltamperes".

Similarly the kwh readings of lines 1 and 2 are totalized on a register inset in the "Total" watt demand dial, and the kvarh readings of lines 1 and 2 are totalized on a register inset in the "Total" var demand dial.

The totalized kwh and kvarh are fed into the Trivectoring mechanism and appear on a register inset in the voltampere demand dial as kilovoltamperehours.

The purpose of this Duplex Trivector is to give the individual watt demand, kilowatthours, reactive voltampere demand and reactive kilovoltamperehours of two separate feeders, to totalize separately the above quantities and to give a readout in vectorial voltamperes and kilovoltamperehours.

It is essential for this purpose that the nominal ratio of each of the current transformers and voltage transformers of each of the two feeders be the same.

All the maximum demand driving mechanisms are allowed to return to zero simultaneously by means of synchronous motor driven relays.

This Duplex Trivector is approved for use with any suitable approved Landis & Gyr attachments, which when incorporated, will appear in the type designation, e.g., (2MF8hm) mr4/VAmyer4/(2MF8Øhm) m which means - two MF8 type elements, each with reverse running stop "h", each with maximum demand attachment "m", a totalizing maximum demand attachment "m", transmitting contacts "r4",(watthours per contact on a small nameplate); following the oblique stroke, VA indicates the Trivector function, "m" the maximum demand indicator, "ye" indicates the demand timing unit, "r4" the transmitting contact (voltamperes per contact on a small nameplate); following the second oblique stroke, (2MF8Ø) indicates two reactive energy meters, each with reverse running stop "h", maximum demand attachment "m", and a totalizing maximum demand "m".

A diagram attached to the case indicates the two feeders and the connections from the secondaries of the various transformers to the various terminals.

When verifying, this Duplex Trivector will be considered as having two 3-element watthour meters and two 3-element varhour meters each with its own demand dial.

The two watthour meters may be connected in series for dial testing, in which case the test dial of the total register will indicate the sum. Similarly in the case of the varhour meters.

Care should be taken when verifying the demand dials of the watthour and varhour sections as there may be cases where the full scale value of the "total" demand dial is not double the value of the separate line demand dials.

This Duplex Trivector is available with either English or French nameplates.

Approval granted to: Landis & Gyr Incorporated,
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