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

STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL E-61-1

OTTAWA March 24, 1969

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

Apparatus

Current Range	0.12 - 10 amperes
Voltage	115 volts
Phase	3
Elements	3
Test Period	15 minutes
Frequency	60 hz
No. of Circuits Totalized	2
Power Factor Range	1.0 to zero lagging
Multiplier Ratio *	
Meter Burdens	
Type MF 8 (each meter)	Voltage Coil 1.2w 4.9 va
	Current Coil 0.9w 1.4 va
Type MF8Ø (each meter)	Voltage Coil 2.1w 2.3 va
	Current Coil 1.3w 1.5 va

* "Multiplier Ratio" is the ratio between the instrument transformer multiplier of line 1 and the instrument transformer multiplier of line 2. See section marked "*" in the description.

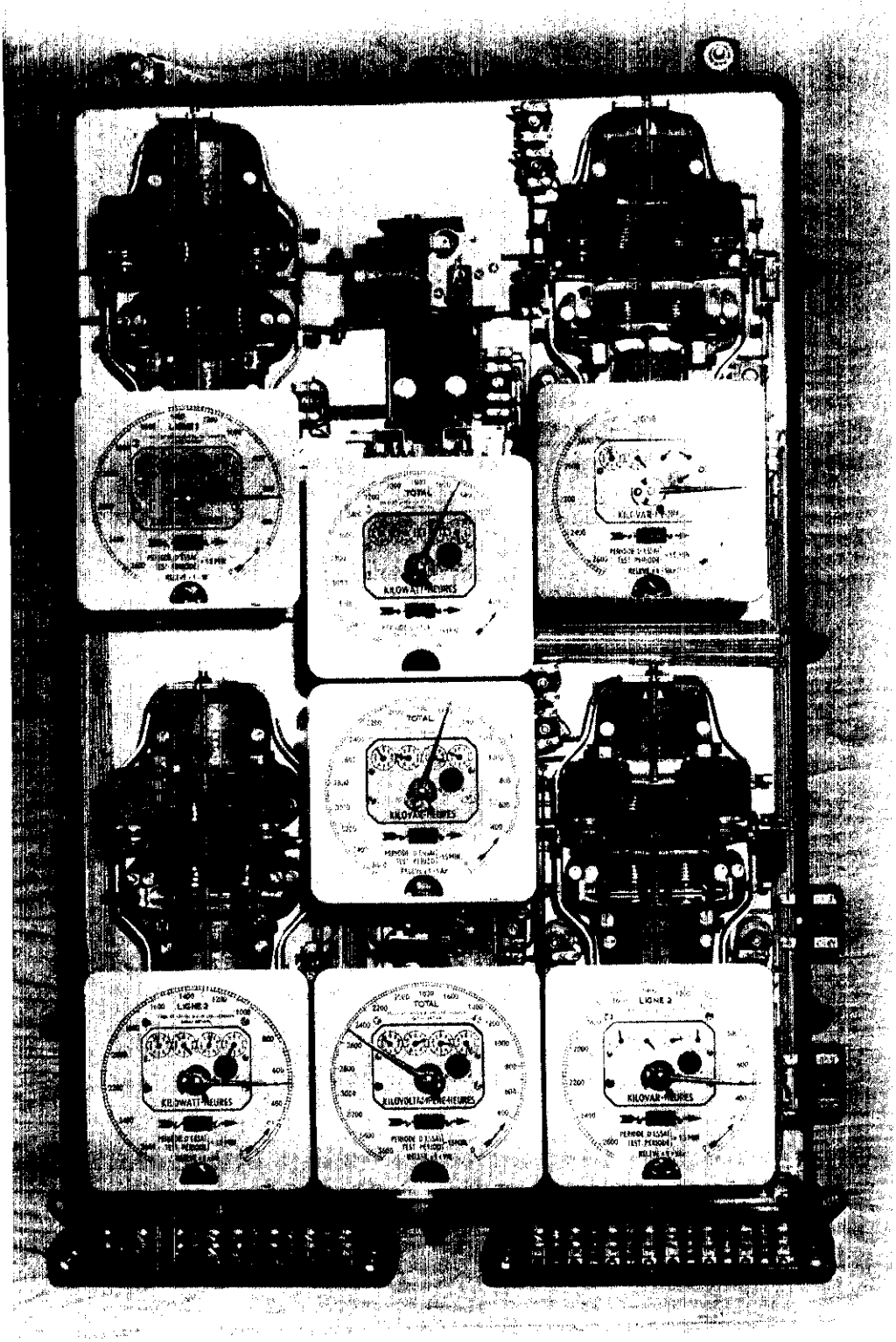
Description

The basic elements in the 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 reactive energy meter (MF8Ø) in the same case along with a Trivector mechanism located between them and producing a readout of "va" on the demand scale and "kvah" on the register.

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

....2/

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



NOTE: This point is to be checked when verifying, and may be done by energizing the upper meter only. The ratio between the "Total" test dial revolutions and the upper meter test dial revolutions should be the "multiplier ratio".

The same effect will be noticed in the demand indications, so that if a load is applied to cause the upper meter to indicate 1000, the "Total" demand dial will indicate 500. If the same load were to be applied to both upper and lower meters simultaneously, the indication on the "Total" demand dial would be 1500.

NOTE: The three paragraphs immediately preceding are not applicable to primary reading (transformer rated) Duplex Trivectors.

The Duplex Trivector is to be considered as having two 3-element watthour meters and two 3-element varhour meters.

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

In all cases, the line having the lower overall multiplier is to be connected to the top meters if the words "multiplier ratio" appears.

Duplex Trivectors marked with the words "multiplier ratio" are approved for use only where the overall transformer multipliers of each line match the multiplier ratio.

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 (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; (volt-amperehours 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 totalizing maximum demand (m).

The (ye) demand timing units permits all maximum demand mechanisms to return to zero simultaneously.

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

All Duplex Trivectors marketed after the date of this circular will carry a

...6/

label similar to the following:

> This instrument for use only where primary multiplier of line #2 (top meters) is equal to times the primary multiplier of line #1 (bottom meters).

The illustrations on this circular are the same as those used on circular E-61 and show a Duplex Trivector having a multiplier ratio of 1.

This illustration does not show the required label.

Approval granted to

Landis & Gyr Inc.,
2063 Chartier,
Dorval, Quebec.

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

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

Ref: SL-100-681(AO)