DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

CANADA

F-25

OTTAWA February 1, 1966

NOTICE OF APPROVAL

FOR

SANGAMO TYPE "HYL" KVA THERMAL CONVERTERS

Apparatus

Elements	2 Element	2½ Element Y	3 Element
Rated Current	5 amperes	5 amperes	5 amperes
Rated Voltage	120 volts	120 volts	120 volts
Frequency	60 cycles	60 cycles	60 cycles
Circuit	3 phase 3 wire	3 phase 4 wire Y	3 phase 4 wire Y
Basic Input	1.0 kva ac	1.5 kva ac	1.5 kva ac
Basic* Output	100 mv dc	100 mv dc	100 mv dc
Response Period 90%	10 and 15 min	10 and 15 min	10 and 15 min
Single Phase Test Constant	1.3#	1.0	1.0
Current Rating Factor (R.F.)	1.5	1.5	1.5

* The basic output of these converters is 100 mv for the given rated ac input, but by moving a soldered connection to another tap on the output voltage divider circuit, a lower value of dc mv can be obtained for the same ac input. This value will be marked on the nameplate.

o The nameplate is marked at 5 amperes and these instruments are to be treated as 5 ampere ratings for verification purposes, but they are approved for use in situations where the current may reach 7½ amperes, and in accordance with this approval, a rating factor of 1.5 will be marked on the nameplate.

\# In order to obtain a reading of 100 mv corresponding to 1 kva ac input when testing on single phase it is necessary to apply 500 x 1.3 or 650 va to each element in series.

Description

This is an extension to circular S-EA.648 to include 2 element, 2½ element Y and 3 element designs with 10- and 15 minute response periods and covers the complete HYL line as of this date. The type HYL supersedes the type "HVA15M" covered under circular S-EA.618.

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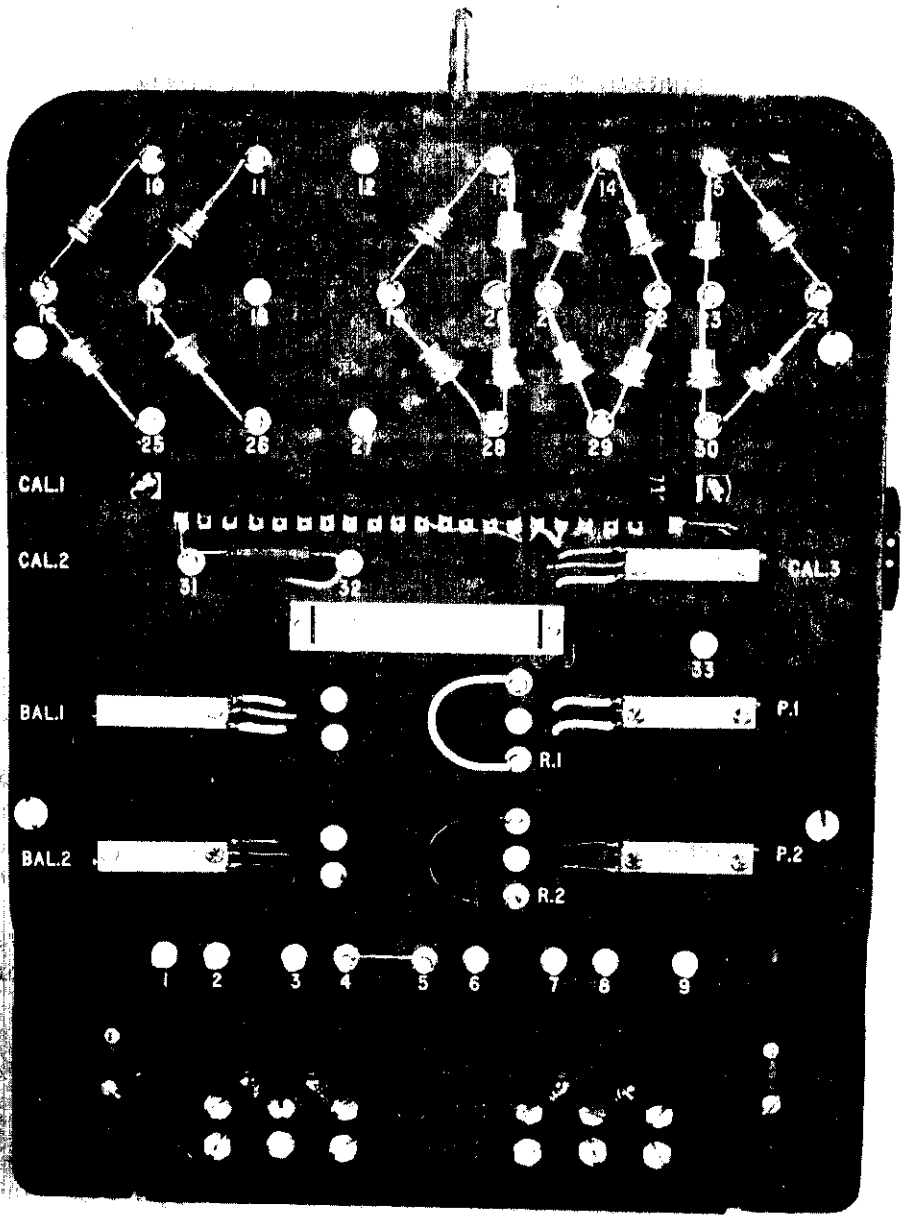
SANGAMO TYPE "HYL" KVA THERMAL CONVERTERS



Description (Cont'd)

The 2-element converter uses two potential and two current transformers, these latter being so connected as to derive the third current from the two that are supplied, the 2½-element Y design uses two potential and three current transformers and the 3-element design uses three potential and three current transformers.

All tests must be made with potential applied to all potential transformers, and as the 2½- and 3-element design have 3 current transformers, the same current applied to each in turn will produce the same output, both must be treated as 3-element meters for verification purposes.

The type HYL is a rectifier type of instrument and while it is independent of power factor, its readings are proportional to the average values of the current and voltage waves. Therefore, when verifying these meters, particularly if a waltmeter or rotating standard whose readings are proportional to the rms values is used, the test equipment should be known to produce current and voltage waves of low harmonic content.

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