CANADA

DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

S-EA.648

OTTAWA, February 26, 1965.

TYPE APPROVAL

SANGAMO TYPE "HYL" 2-½ ELEMENT "Y" THERMAL CONVERTER

The apparatus specified and illustrated herein has been duly approved by the Standards Branch under the provisions of the Electricity Inspection Act, Chapter 94, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Type "HYL" 2-½ Element "Y" Thermal Converter, manufactured by Sangamo Company Limited, Leaside, Toronto 17, Ontario.

Rating of Apparatus:

Rated Current.....5*Amperes
Rated Voltage.....115 or 120 volts
Frequency.....60 cycles
Phase.....3
Wire.....4
Elements.....2-½ element Y
° Basic Output.....100 mv D.C. for 1.5KVA A.C. input
Response Period.....15 minutes
Single Phase Test Constant.....1

* R.F. (rating factor 1.5)

* The nameplate is marked at 5 amperes and the instrument is to be treated as a 5 ampere meter for verification purposes, but it is approved for use in situations where the current may reach 7-½ amperes, and in accordance with this approval, a rating factor of 1.5 will be marked on the nameplate.

° The basic output of this converter is 100 millivolts for an A.C. input of 1.5 kVA, and by moving a soldered connection to another tap on the voltage divider, a lower value of DC millivolts may be obtained for the same AC input. *This value will be marked on the nameplate.*

Description: The type "HYL" 2-½-element Y KVA thermal converter is similar in construction to the 2-element HVA design receiving approval under circular S-EA.618 and the HW design under circular S-EA.481 in that it also has a sealed thermal element.

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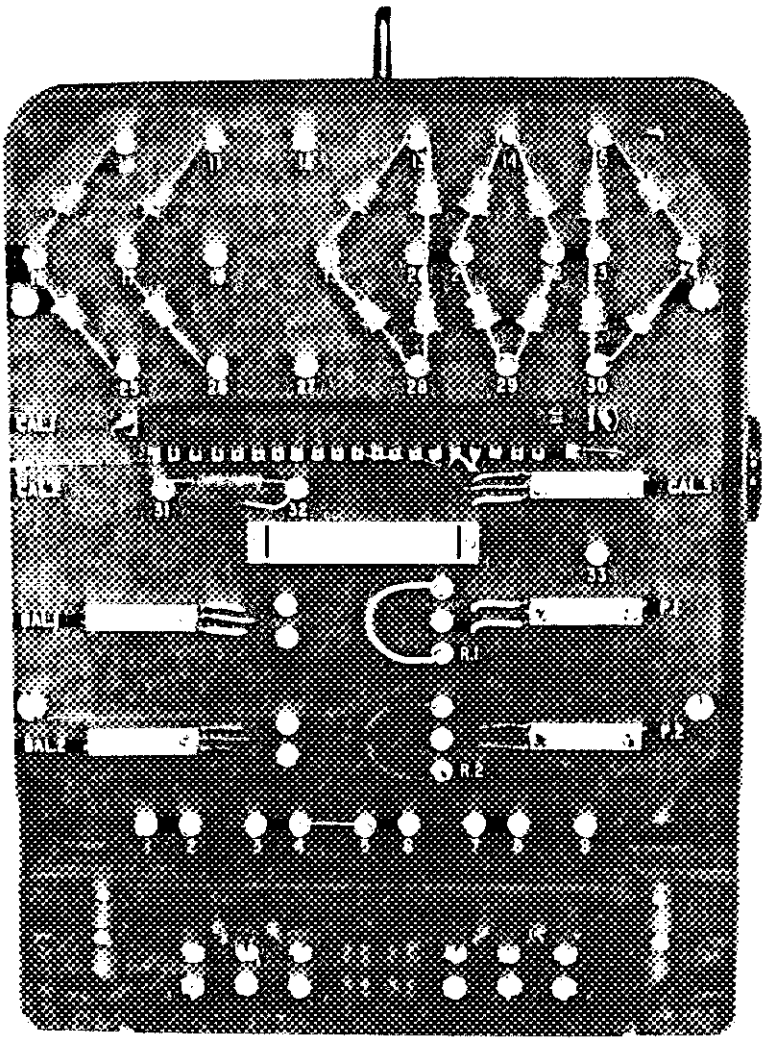
SANGAMO TYPE "HYL" 2-½ ELEMENT "Y" THERMAL CONVERTER



Description (Con'd)

Like the type HVA 2-element design, the current to the heaters is rectified DC taken through a network of rectifiers supplied from the secondaries of two transformers in the voltage circuit, and three transformers in the current circuit.

All tests must be made with potential applied to both voltage transformers, and as each of the current transformers is identical, the same current applied to each in turn will produce the same output, so that this instrument must be treated as a 3-element meter for verification purposes.

As the type "HYL" is a rectifier type of instrument, it is independent of power factor but is subject to errors due to waveform distortion, and should only be verified on a test board known to produce a waveform having low harmonic content, particularly if a wattmeter or rotating standard is used as a reference.

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Ref: SL-100-13A