CANADA

DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

S.EA.524
(amended)

OTTAWA, September 27, 1963.

TYPE APPROVAL

SANGAMO TYPE "3C2" STRIP CHART RECORDING WATTMETER

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 "3C2" Strip Chart Recording Wattmeter, manufactured by Sangamo Company Limited, Leaside, Toronto 17, Ontario.

Rating of Apparatus:

Rated Amperes	5
Rated Voltage	115, 120, 230, 240, 460, 480, 575 and 600.
Frequency	60 and 50¥ cycles
Elements	2
* Response Period	10 and 16 minutes
° Chart Drive	60 cycle synchronous motor
Chart Speeds	½, 1, 2 or 3 inches per hour
# Inking System	New Tubular Pen and old style quill type

¥ Instruments designed and marked for use on 50 cycles, use a 60 cycle synchronous chart drive motor with a different gear ratio to produce the correct chart speeds at the lower frequency.

* The response period is the time required for the pen to reach 90% of its final indication. The test period is twice the response period and the indication should be 99% of the final value at the end of this time.

\# This approval covers the use of the new style tubular pen (Circular S-EA.523, September 21, 1961), and also the older style quill type.

Description: The type "3C2" is identical to the type "3C" in outward appearance, the modifications being directed towards higher torque, and greater accuracy. The type 3C was approved originally under Circular 170 of July 20, 1926 and Circulars NRC-18 of May 29, 1931, NRC-29 of May 17, 1932 and NRC-130 of September 26, 1939. Higher torque is obtained by the use of a heavier bimetal. It is intended to minimize the effects of paper friction and pen weight and thereby contribute to greater accuracy. Accuracy is further improved by the use of a second, independently-adjustable calibration spring. This spring is intended as a factory adjustment, to be pre-set to suit the individual meter.

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Routine changes in calibration will be obtained by the usual calibration spring. Performance with varying ambient temperature is improved by the use of a non-linear bimetal. The amount of compensation required by the mechanical compensator is thereby considerably reduced. This mechanical compensator is of the same type as currently used in thermal meters.

This circular cancels and amends circular 3-EA.524 of September 21, 1961.

E. F. Power,
Chief, Electricity & Gas Division,
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for R. W. Maclean,
Director,
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Ref: A490 and A490A