

TRADE AND COMMERCE
CANADA

SD-EA.57-a

STANDARDS DIVISION

OTTAWA, January 31, 1953.

TYPE APPROVALLEEDS & NORTHRUP STRIP CHART 'MICROMAX' RECORDERS

The apparatus specified herein has been duly approved by the Standards Division under the provisions of The Electricity Inspection Act, Chapter 22, 1928, as amended, and may be admitted to verification in Canada.

Apparatus Approved: Models 40102, 40112 and 40352 of the Model S, Series 40000, Strip Chart 'Micromax' Recorders, manufactured by Leeds & Northrup Company, Philadelphia 44, Pa., U.S.A., and submitted by Sangamo Company Limited, Leaside, Canada.

Rating of Apparatus:

- Types - Model 40102:- two-point, curve drawing, continuous line, D.C. potentiometer type, load recorder;
 Model 40112:- two-point, curve drawing, dot-and-dash, D.C. potentiometer type, load recorder;
 Model 40352:- two-point, curve printing, D.C. potentiometer type, load recorder, one or two colours as specified.

Current Standardizing - Automatic

Motor - Synchronous, 115 volts, 60, 50 or 25 cycles.

Description: The Leeds & Northrup Company designates one group of its 'Micromax' Recorders as the Model S, 40000 Series. These are strip chart instruments and the group includes a large number of instruments whose basic design is the same as far as the essential elements are concerned, but which differ in detail or in some auxiliary attachment. Circular SD-EA.57 approved the use in Canada of three instruments from this group, and this approval covers three more.

There are five methods by which the quantities may be recorded on the chart. Three of these methods are called "curve drawing" and two are called "curve printing".

Every "curve drawing" instrument, either single or two-point, has one large reservoir glass pen. Those charts produced by a pen are:-

- (1) single-point, continuous line;
(Models 49221, 49227 and 49231, already approved, are of this type.)
- (2) two-point, dot-and-dash, where a commutator connects the input quantities alternately, the pen being raised from the chart during the switching and balancing operations; the pen makes a dot for one and a dash for the other quantity; timing nominally 45 seconds on each point;

(O V E R)

- (3) two-point, continuous record, in which the pen is not raised from the chart during the switching and balancing operations; the edges of the pattern produced show the curves of the input quantities; the timing is nominally 40 seconds on one point and 80 on the other.

Every "curve printing" instrument has a print wheel in place of a pen. Charts produced by a print wheel are:-

- (4) multiple-point, one colour, in which a numbered print wheel is pressed into contact with the chart for a very short period, for each point; timing nominally 1 minute per point;
- (5) multiple-point, multi-colour, in which the points are printed as in (4) above, but recorded in different colours.

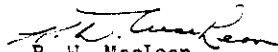
For load recording both KW and KVAR records are sometimes required. This approval will therefore cover the following two-point models:-

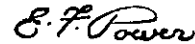
Model 40102 - two-point, curve drawing, continuous line, D.C. potentiometer type, load recorder. Chart as listed in (3) above.

Model 40112 - two-point, curve drawing, dot-and-dash, D.C. potentiometer type, load recorder. Chart as listed under (2) above.

Model 40352 - two-point, curve printing, D.C. potentiometer type, load recorder, with records in one or two colours as specified. Chart as listed under (4) or (5) above.

These instruments are essentially the same as the Model 49221, already approved, except for the method of recording on the chart.


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