



DEPARTMENT OF TRADE AND COMMERCE  
STANDARDS BRANCH

OTTAWA, August 6, 1963.

MODIFICATION OF TYPE APPROVAL

LEEDS & NORTHRUP "SPEEDOMAX" TYPE G MODEL S SINGLE AND DOUBLE  
PEN AND ONE - AND TWO-POINT CURVE PRINTING RECORDER

The apparatus specified and illustrated herein have 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 G Model S Strip Chart "Speedomax" single and double pen, and one - and Two-Point Curve Printing Recorders manufactured by Leeds & Northrup, Canada, Ltd., 61 Industry Street, Toronto 15, Ontario.

Rating of Apparatus

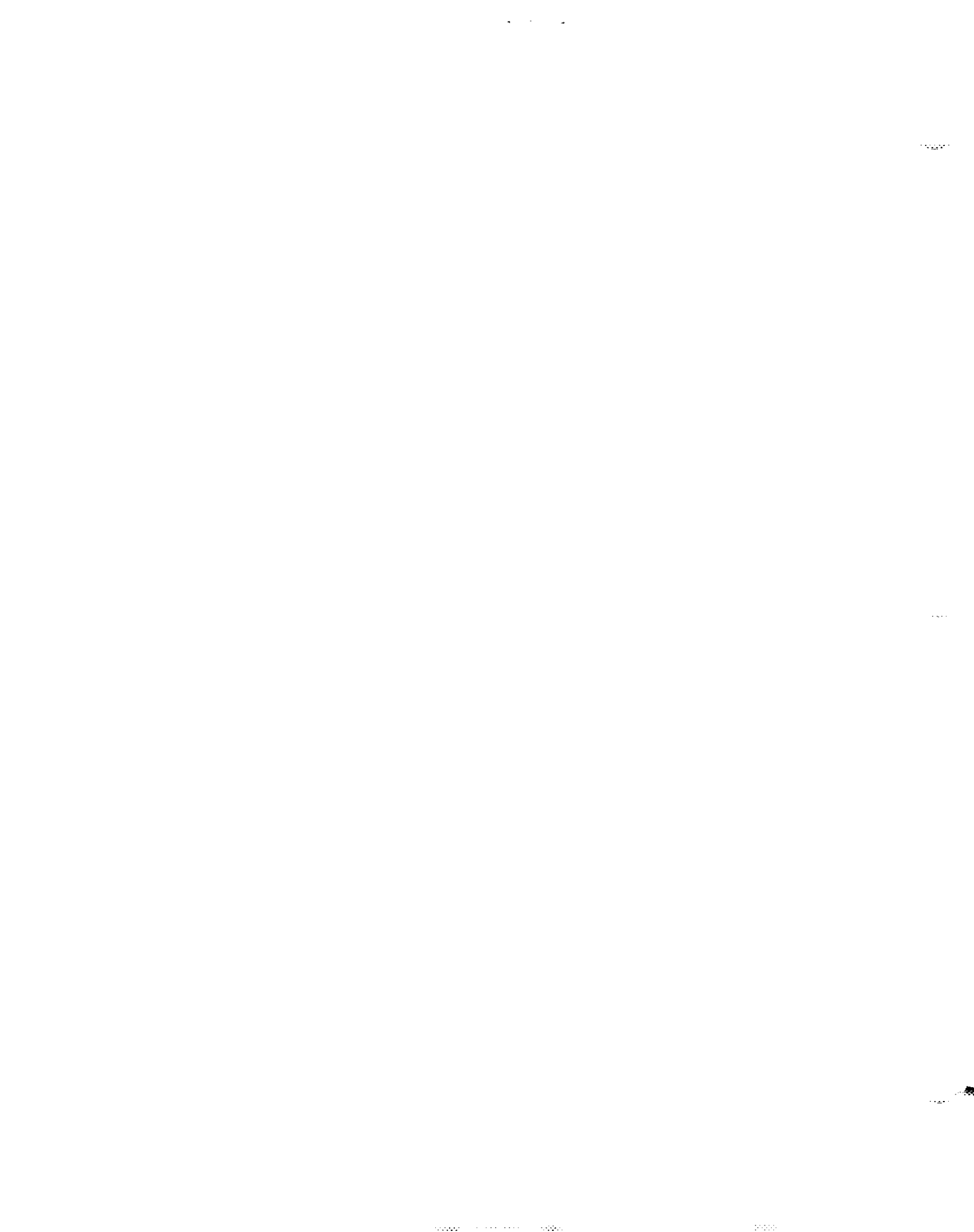
Catalogue numbers of models approved

69221	Single Pen D.C. Potentiometer Recorder
69221-G2	Single Pen D.C. Potentiometer Recorder with D.C. re-transmitting slidewire
69221-G21	Single Pen D.C. Potentiometer Recorder with A.C. re-transmitting slidewire
69225	Single Pen D.C. Potentiometer Recorder with impulse transmitter
69229	Two Pen D.C. Potentiometer Recorder
69252	Two Point Null Balance Recorder
* Millivolt Input Record	0-10 to 0-1000 millivolts Single or double pen continuous line and one or two coloured dots or symbols
Standardization Chart	Continuous automatic (zener diode) 9-7/8 and 10 <sup>1/8</sup> inches calibrated width
° Pen Speed	1 second to 30 seconds
f Printing Interval	4 seconds to 60 seconds
Chart Speeds	3/4 inch per hour minimum
Power Supply	120 volts 60 cycles
Maximum External Resistance	2000 ohms

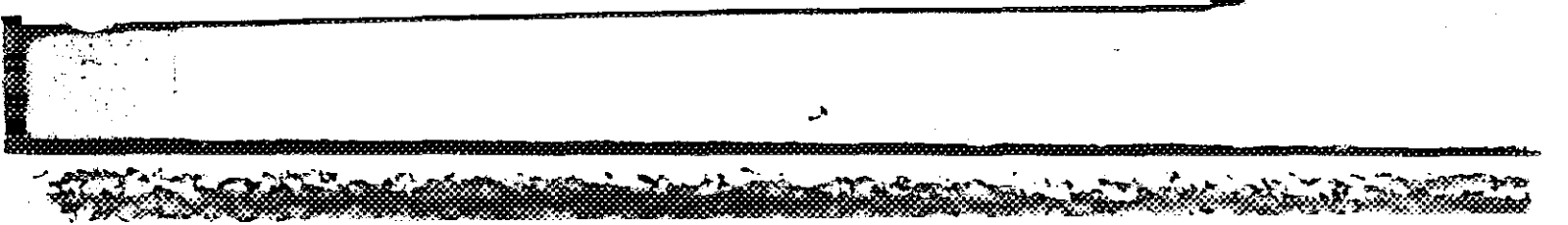
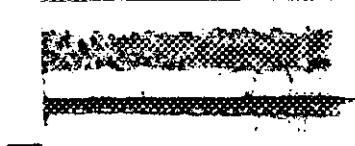
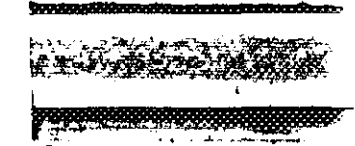
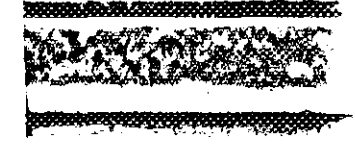
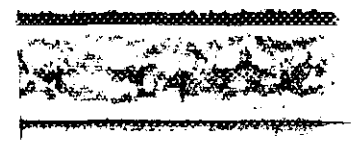
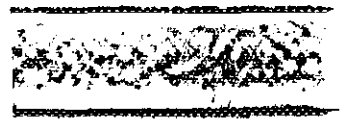
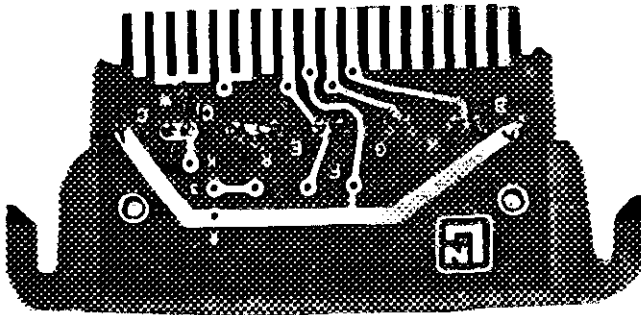
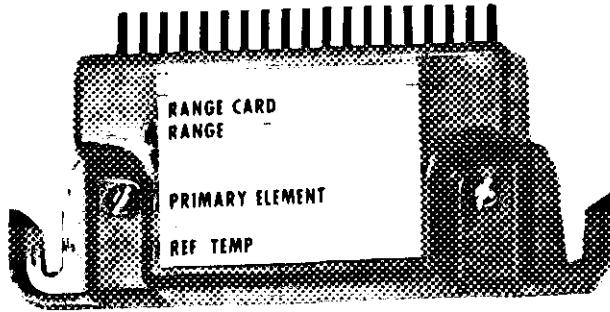
\* The kilowatts, megawatts or other power function which the millivolts represent will be shown on the nameplate and scale and also on the range card.

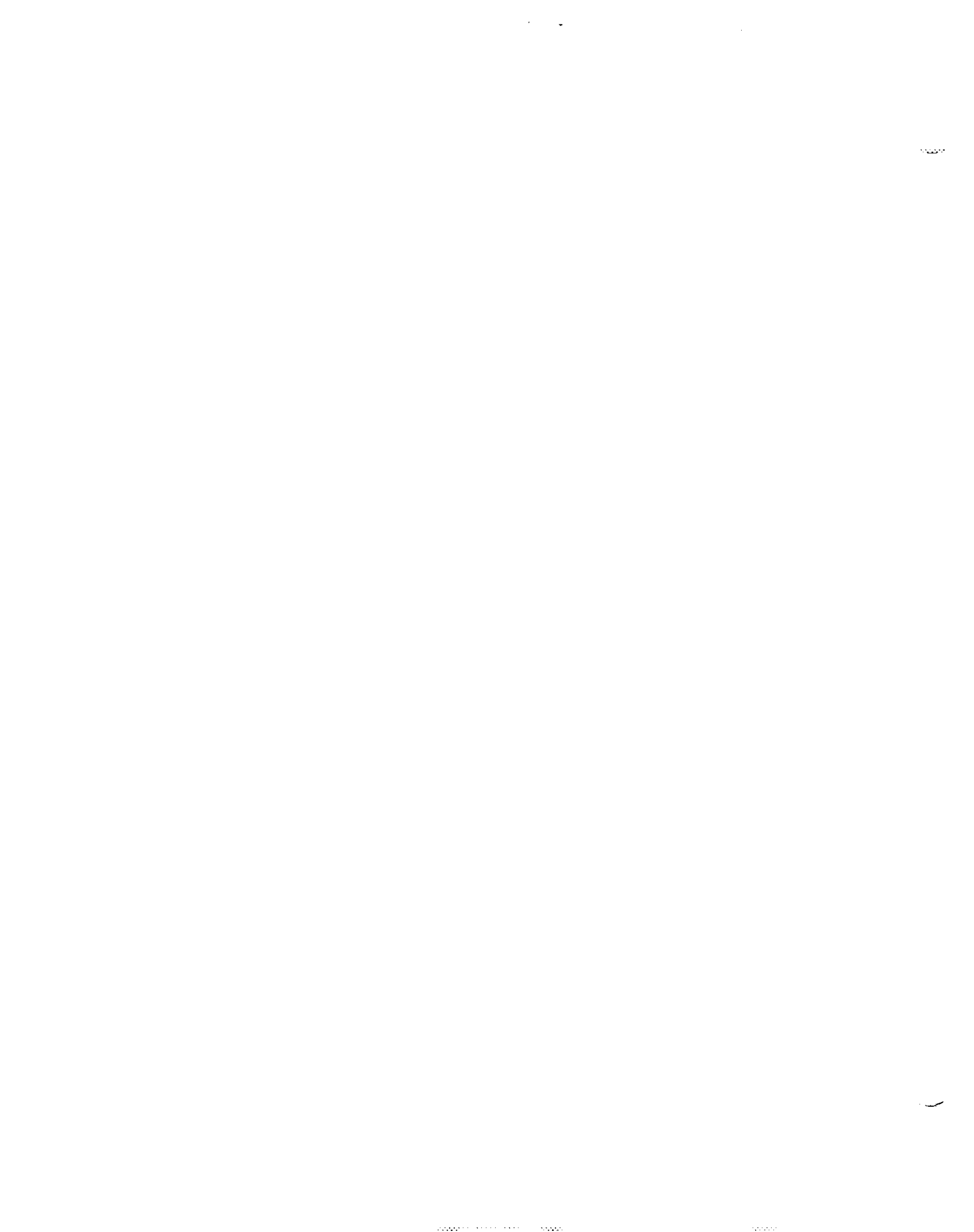
x L.H. zero and raised zero up to half scale is approved

° Pen speed is the time taken for the pen or printing mechanism to travel the full length of the scale with a step load change equal to full scale



LEEDS & NORTHRUP "SPEEDOMAX" TYPE G MODEL S SINGLE AND DOUBLE  
PEN AND ONE - AND TWO-POINT CURVE PRINTING RECORDER





When a 10 inch calibrated width chart is used, the pen or printing mechanism must be adjusted for a live zero, pen or print is then prevented by mechanical stop from reaching full scale.

Printing interval is the time between successive prints.

Description: These recorders are essentially the same as those receiving approval under S-EA,445 of March 31, 1960. The measuring circuits have been re-designed and re-located on a printed circuit board of the plug-in type which is protected by a rivetted-on cover.

As the zener diode regulated power supply is now standard, the "B5" previously used to denote this item is now omitted from the catalogue number.

The range card can be provided upon customer's request with a fail-safe resistor whose function is to drive the pen or print to the top of the scale in the event of a break in the primary circuit.

The printing interval and chart speed must be such that over-printing is avoided. Special ink may be required for use at low temperatures.

The recorder is approved for use unscaled.

*E. F. Power*

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Ref: A-2400

