

S=E4.50) (amended)

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### DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

оттама Аргії 8, 1964.

### MODIFICATION OF TYPE APPROVAL

# SANGARO TYPE 412 2-ELECTRAT AND 2. ELEMENT Y COMBINATION POLYPHASE DEFAND ELEMEN FETER

The modifications to the apparatus specified 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 Modified: Type 4L2 2 Element and 2½ Element Y Combination Polyphase Demand-Energy Meters, manufactured by the Sangamo Company Limited, Leaside, Toronto 17, Chtario.

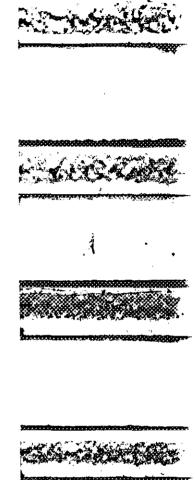
Rating of Apparatus:

## 3 Phase 3 wire (2-Element)

Voltages Ampere Rating	115 120 •12-7•5*	230 •12=5**	240 40 •25~15*	60 480 •25-10**	575 60 •5 <b>-</b> 37•5	00 volts 1.2-75	2.5-150
O Full Scale Kilowatta	1.5	1	3	2	7.5	15	30
Multiplier	1	1	2	2	5	10	20
O Disc Const. (Kh each disc)	1/6	1/6	1/3	1/3	1	1-2/3	3-1/3
.egister Ratio (Rr) overall Maximum amperes	6000	6000	6000	6000	5000	6000	6000
at rated KW and volts	7.5	5	15	10	37.5	75	150

Response period Frequency Register 10 and 16 minutes - all ratings 50 and 60 cycles - all ratings

Clock type, individual on each element, or differential for totalizing readings of both elements (S-FA.493).



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## 3 Phase 4 wire (2 Element Y)

120 volts Voltages 0.12-8.5\* 0.12-6.0\*\* 0.5-40 1.2 - 85Current Ranges, amperes 15 30 Full Scale, Kilowatts 20 10 Multiplier Disc Constant (Kh) each disc 4000 Register Ratio (Rr) overall 40no Maximum Amperes at 83.3 rated KW and volts 5.56 8.33 41.67 10 and 16 minutes - all ratings Response Period 50 and 6) cycles - oll ratings Frequency Slock type, individual on each element, or Register differential for totalizing readings of both elements (S-EA.493).

May be transformer type or self-contained 1500 watt scale.

\*\* Transformer type with 1000 watt scale

O Full Scale kilowatta, multiplier and disc constant are given for 115 or 120 volts.

# Applies to both watthour and demand readings.

Modifications: The modifications to the existing type 4L2 involve:

(1) the use of the enclosed demand frame with dial and scale similar to that used in the 413 and

(a) all ratings are now current range rated, and the  $2\frac{1}{3}$  element Y ratings of 0.75-50 and 1.5-100 amperes (receiving approval under SD-EA.266) have been changed to 0.5-40 and 1.2-85 respectively. The current ranges of the type 4L2 are now consistent with those of the types 4L3 and CD30.

This amendment covers the addition of the 1000 watt scale, which may be supplied in addition to the 1500 watt scale, in the transformer type of meter. Self-contained ratings will have 1500 watt scales. No other change is involved and the power factor selector switch will be found in the same place at the top of the cover.

This circular replaces S-EA.583 (amended) of Harch 6, 1964.

w. J. & Traco

(for) E. F. Power, Chief, Electricity and Gas Division, Standards Branch,

Az linder

R. W. HacLean, Director, Standards Branch.

Ref: A588C.





