



Department of consumer and corporate affairs / Ministère de la consommation et des corporations



STANDARDS BRANCH - DIRECTION DES NORMES

**NOTICE OF APPROVAL
AVIS D'APPROBATION**

E-121-1

OTTAWA August 15, 1974

SANGAMO TYPE "K2M-" SINGLE PHASE WATTHOUR METER
EQUIPPED WITH TYPE "M" PULSE INITIATOR AND TYPE
"SRI" LOAD SURVEY RECORDER

This notice is an addition to Approval Notice E-121 of February 9, 1973 and permits:

- (a) The use of the Sangamo type "K2S" single phase watt-hour meter when equipped with type "M" Pulse Initiator, and type "SRI" Load Survey Recorder as a single unit.
- (b) The use of the Sangamo type "K2-" single phase watt-hour meter equipped with type "M" Pulse Initiator, and interconnected by shielded cable to the separately mounted type "SRI" Load Survey Recorder.

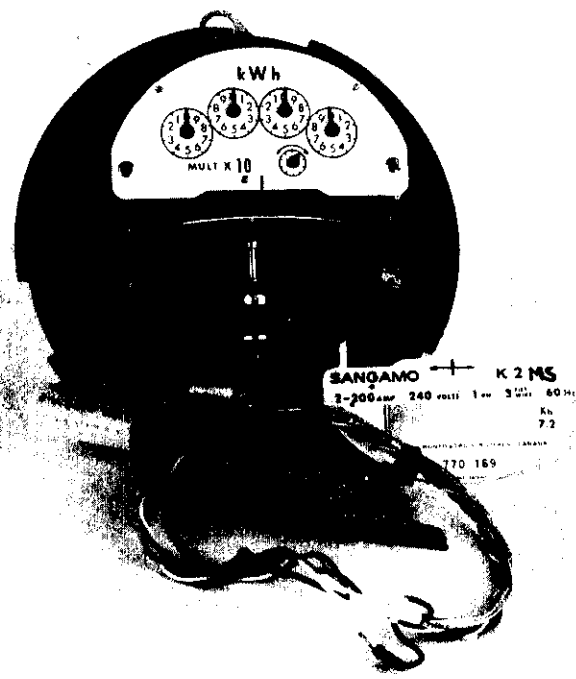
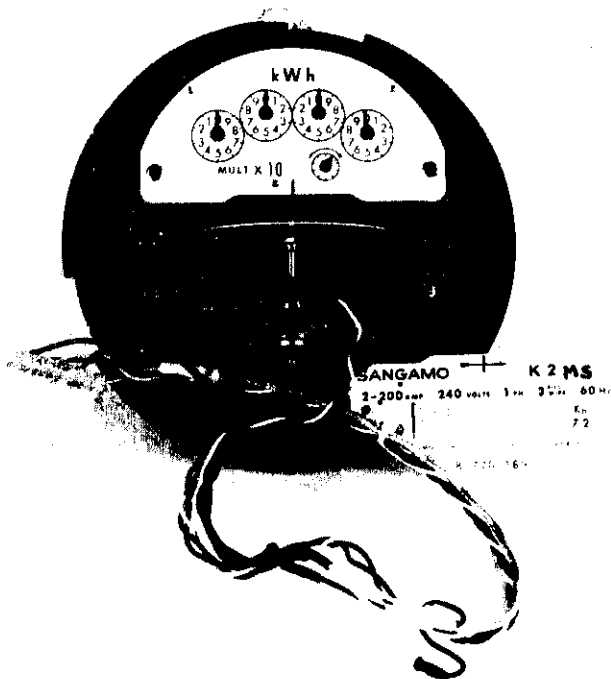
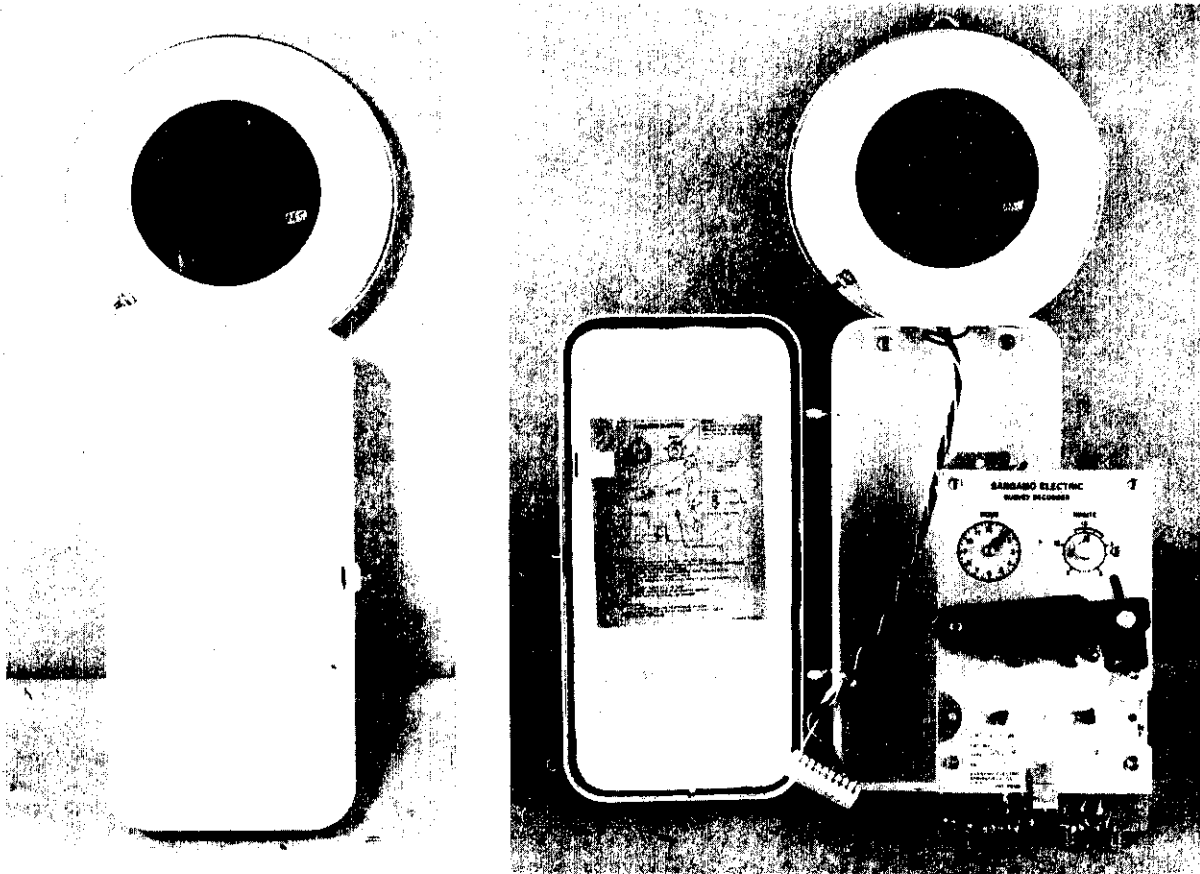
When a meter is equipped with a type "M" pulse initiator, its type designation will change and the letter "M" will be added just prior to the base or enclosure designation e.g., "K2MS", "K2MA" or "K2MF".

This approval does not cover the type "M" Pulse Initiator or type "SRI" Load Survey Recorder for use as billing devices. The magnetic tape data from the recorder is intended to be used for load survey purposes only.

"SRI" LOAD SURVEY RECORDER RATING

Voltage	120 or 240 volts
Frequency	60Hz
Recorder Burden	8 voltampere at rated voltage
Burden on Meter Contact	15 mA at 13 V.D.C.
Maximum Input Pulse Rate	1 pulse per 2 seconds
Time interval	15 minutes

SANGAMO TYPE "K2MS" SINGLE PHASE WATTHOUR METER EQUIPPED WITH TYPE "M" PULSE INITIATOR AND TYPE "SRI" LOAD SURVEY RECORDER



Description

The type "M" solid state photo-electric Pulse Initiator, with no moving parts does not introduce any additional friction to the meter.

It consists of a printed circuit electronic board mounted by two screws below the meter disc and behind the nameplate. An electrical signal is generated within the pulse initiator each time the disc makes a revolution. As the meter disc rotates, a small black zone on the bottom of the disc interrupts the path of reflected light from a light emitting diode to a phototransistor. The absence of light on the phototransistor develops a signal which is applied to a Schmitt trigger circuit for noise immunity and pulse shaping. The Schmitt trigger output is applied to a divider circuit which determines the pulse per disc revolution and is factory preset. The output pulse is amplified by a driver transistor and delivered through a shielded cable to the recorder.

The 12 volt D.C. input to the pulse initiator is supplied by the type "SR1" recorder.

The type "SR1" Load Survey Recorder was designed and is manufactured by the Sangamo Electric Company of Springfield, Illinois, U.S.A. It is a small magnetic tape recorder mounted in a drawn sheetmetal weatherproof enclosure. It uses a small data cassette housing a 0.15 inch wide, 300 feet long magnetic tape, which has a capacity of up to 35 days. The tape has a double track. Pulses at a rate proportional to load are generated by a pulse initiator in the associated watthour meter and recorded on one track. The second track carries a timing pulse generated every 15 minutes by the recorder itself. The record produced on the tape can then be processed to show demand information on a 15 minute basis over an entire monthly period.

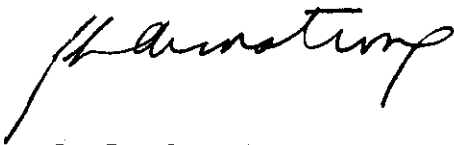
The power to the recorder (8 VA at rated voltage) is taken from the watthour meter at the same points as the potential coil of the meter (across the meter supply voltage) when mounted as a single unit or from any convenient source when mounted separately.

The voltage of recorder type "SR1" is the same as that of the meter which is stamped on its nameplate.

The cassette installation instruction label is attached on the side of the recorder door and the grounding provision and operation information are outlined in the Instruction Manual and should be adhered to.

Approval granted to:

Sangamo Company Limited,
Toronto, Ontario.



J. L. Armstrong
Chief, Standards Laboratory,
Metrology and Laboratory Services.



D. L. Smith,
Chief, Electricity & Gas Division,

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