DEPARTMENT OF

TRADE AND COMMERCE
CANADA

SD-EA .342

STANDARDS DIVISION

OTTAWA March 4, 1958.

TYPE APPROVAL

PACKARD TYPES "B2A" and "B2S" SINGLE-PHASE WATTHOUR METERS

The apparatus specified and illustrated herein has been duly approved by the Standards Division under the provisions of the Electricity Inspection Act, Chapter 94, R. S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Types "B2A" and "B2S" Single-phase Watthour Meters, manufactured by the Packard Electric Company Limited, St. Catharines, Ontario.

Rating of Apparatus:	2-wire	3-wire*
Current Range	.12-10 amperes .5 -50 "	.75-100 amperes
Voltage	115, 230, 460, 575 or 120, 240, 480, 600	230 or 240
Frequency	- - - - - 60 cycles - - - - -	
K_h	Basic const. for .12-10 range = .3 Basic const. for .5-50 range = .9	3.6

* May be supplied for either four or six terminal operation.

Description: The Types "B2A" and "B2S" meters supersede the Types "B1A" and "B1S". The manufacturer claims the following features: long range performance, improved calibration stability and improved resistance to corrosion. The driving elements are molded, the magnets are cast into the frame and there is a factory pre-set power factor adjustment. The Type "B2A" uses the same case and cover as the "B1A", but the "B2S" used a phenolic back plate with smaller glass cover.

The top bearing is a flexible stainless steel pin running in a graphite bushing. The bottom bearing is normally a double jewel and ball, though some meters may be supplied with pivot and jewel identical to those supplied with the Type "B1A". The ball on the new meter may be either a new cobenium ball or the steel ball as formerly used. Both bearings are non-adjustable and require no lubrication.

The aluminum rotor is the same diameter and thickness as previously used. The outside of the disc is cut with 720 teeth and the top of the disc is printed with 100 and 180 graduations for test purposes.

The grid is die-cast from aluminum alloy and is treated with Alodine to resist corrosion. Four small C-shaped magnets of Alnico IV cast into the frame constitute the damping system.

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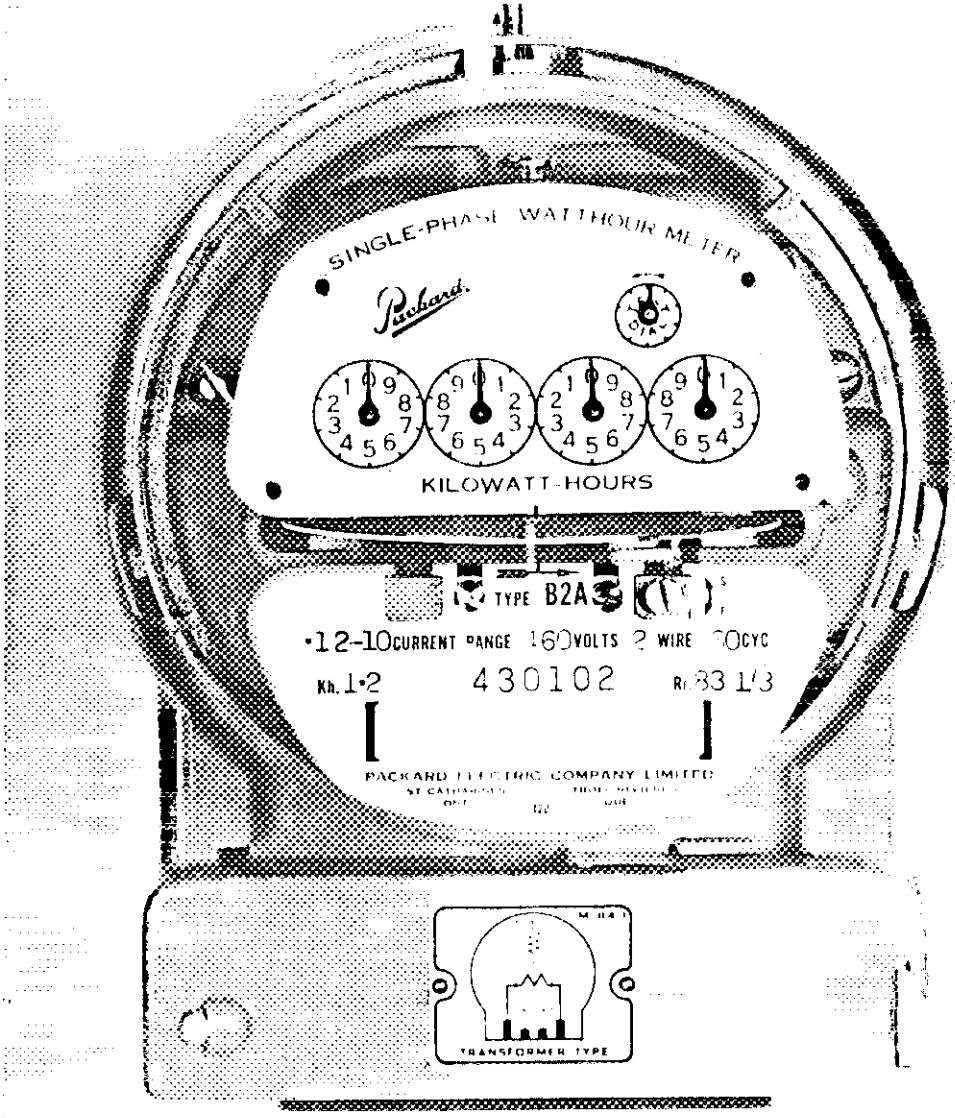
PACKARD TYPE "B2A" SINGLE-PHASE WATTHOUR METER



Description (Cont'd.)

The full load adjustor works on the right hand magnet and is controlled from the front of the meter by means of a screw projecting through the name-plate. The adjustor works partly as a wedge and partly as a magnetic shunt.

The voltage coil is wound on a nylon spool and molded in polyethylene plastic. The .75/100 amp. coil is molded in high temperature vinyl. All other coils are insulated with butyl rubber coil insulators as used previously on the Type "B1A" meter.

The lag plate, carrying the Class 2 temperature compensator, consists of a single plate of copper which is permanently adjusted at the factory.

Light load adjustment is made by means of a micrometer screw operated from the front of the meter. The screw is located in the frame just to the right of the right hand magnet.

Test links are of the "positive action" spring type. Two are supplied as standard on the 3-wire meter, and one on the 2-wire.

The seal pan is disposable and self-retaining, and can be readily replaced without the use of tools.

Two grounding studs are rivitted to the back of the base of the Type "B2A" meter. It is to be noted that the relief gap works only for the molded current coil.

A sealing screw is provided to prevent removal of the terminal block after the wax seal has been applied.

The register to be used with these meters is designated Style E and is similar to the Style D previously approved. The dials have been re-arranged to be in a straight line instead of an arc. A resetting device has been added to the four-dial clock register. The mounting pillar can be pivoted to de-mesh the train. This permits rapid resetting of all pointers. The arrangement has an inherent safety feature since the gear train must be back in mesh before the register can be put on the meter.

The five-dial clock register is of similar general construction to the four-dial unit except that no resetting device is provided.

The style E cyclometer register is the same as the style D previously approved except for the front plate.

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