

TRADE AND COMMERCE  
CANADA

SD-EA.307

## STANDARDS DIVISION

OTTAWA.....August 19, 1957.....

TYPE APPROVALCANADIAN WESTINGHOUSE TYPE "DS" 2-WIRE/3-WIRE WATTHOUR METER

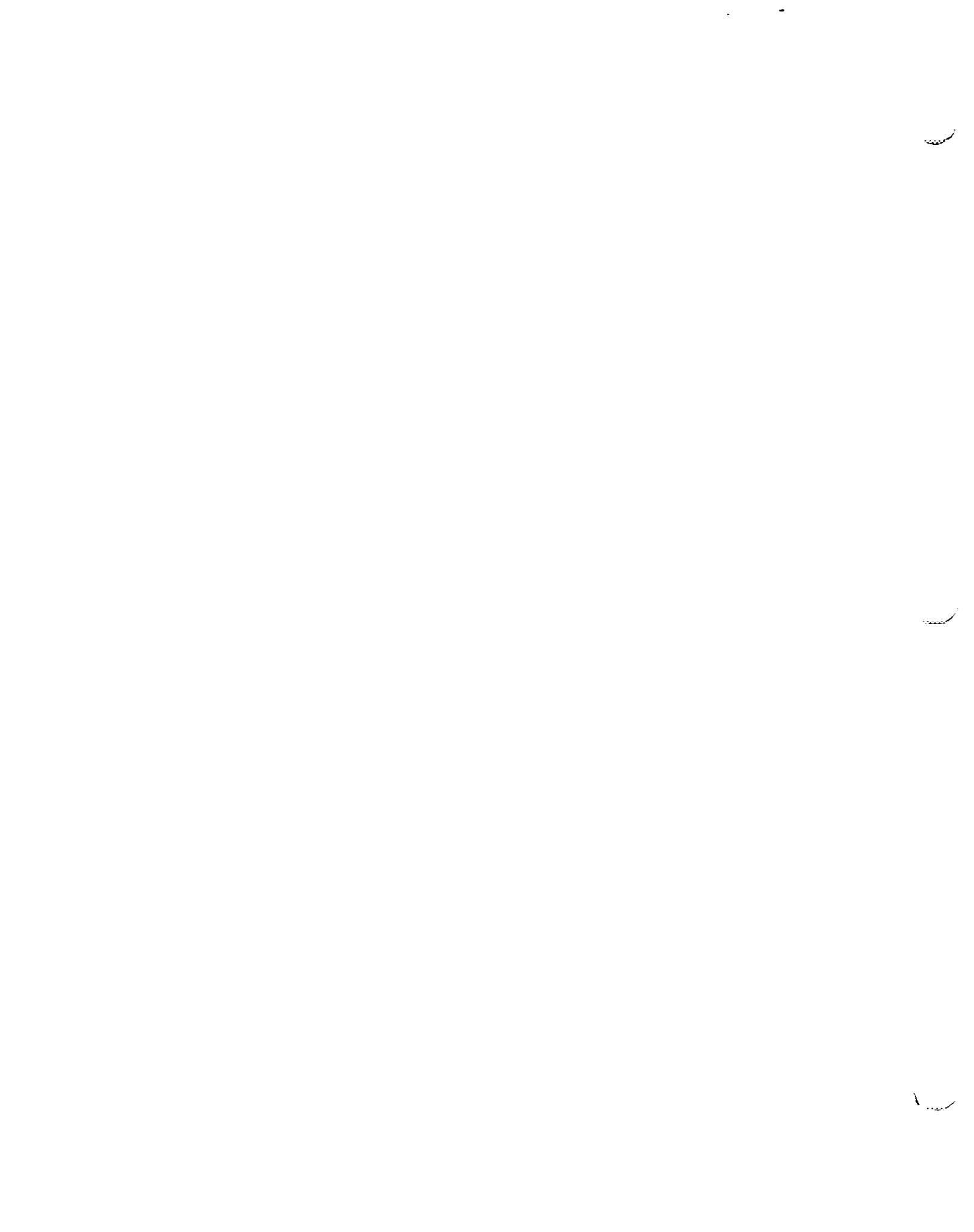
The apparatus specified and illustrated herein has been duly approved by the Standards Division under the provisions of the Electricity Inspection Act, Chapter 94, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Type "DS" 2-wire/3-wire Single-Phase Watthour Meter, manufactured by the Canadian Westinghouse Company Limited, Hamilton, Ontario.

Rating of Apparatus:	<u>As 2-Wire</u>	<u>As 3-Wire</u>
Normal Range .....	1.5-50 or 1.5-100 amperes	.75-100 amperes
Voltage .....	115 or 120 volts	230 or 240 volts
Wire .....	2	3
Frequency .....	60 cycles	60 cycles
Kh .....	3.6	3.6

Description: In order to convert this meter from 2-wire to 3-wire the following steps are required: Loosen the screw on the potential coil switch block connector and move connector to the 230- or 240-volt position as indicated by marking on the nylon strip. Adjacent to the right-hand load terminal (front view) is a screw which is used to hold the jumper to the load terminal. Remove this screw, bend the jumper away from the load terminal and use screw to pull end of series coil down to load terminal. The meter is now connected for 3-wire service and should be re-calibrated and tested as such. The potential coil on this meter is wound as two separate coils, each with an equal number of turns. When connected as a 2-wire meter, these coils are connected in parallel and each produces half the total voltage flux with 115 or 120 volts impressed across each coil. By changing the position of the connector on the potential switch block for 3-wire service, these two coils are connected in series and 230 or 240 volts may be impressed across this combination or half this voltage across each coil. As a result they produce the same voltage flux as when connected for 2-wire service. The two series coils are both formed in such a manner that when moulded in position around the series poles, each coil will have one turn per pole. When connected as a 2-wire meter, the series coil connected to the right-hand line and load terminals (front view) is open-circuited and the current in this line passes through the meter by means of the jumper. The electromagnet will then be influenced by currents flowing in the series coil connected to the left-hand (front view) line and load terminals only. By disconnecting the jumper and connecting the right-hand coil by means of the screw, currents passing through

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the other line will affect the electromagnet. The meter will then be connected for 3-wire service. When changing from 2-wire to 3-wire, a detachable metal strip marked with the 2-wire rating is removed, thus exposing the 3-wire rating.

These meters are in general the same as those approved under Circular SD-EA.238, April 10, 1956 and they incorporate the modifications approved under Circular SD-EA.285, February 26, 1957.

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CANADIAN WESTINGHOUSE TYPE "DS" 2-WIRE/3-WIRE WATTHOUR METER

