



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



STANDARDS BRANCH - DIRECTION DES NORMES

NOTICE OF APPROVAL

E - 100

OTTAWA May 17, 1971

CANADIAN WESTINGHOUSE TYPE "W-8" INTERVAL TRIPPING RELAY

Type of Relay	Sigma number 42 R06Z 4000 ACG-SIL
Type of Capacitor	Sprague 100 microfarad 250 dc volts working
	Catalogue number 39D107F25OHL4
Contact Opening Limits	5.4 seconds to 9 seconds
For Use With	Canadian Westinghouse Types WR-2C and WR-4C Demand Recorders
To operate Demand Reset on	Landis & Gyr meters equipped with "m" Maximum Demand Indicators
Demand Interval	circular S-EA.453 e.g. Trivectors
Temperature Range	#15 minutes 0 to 50°C

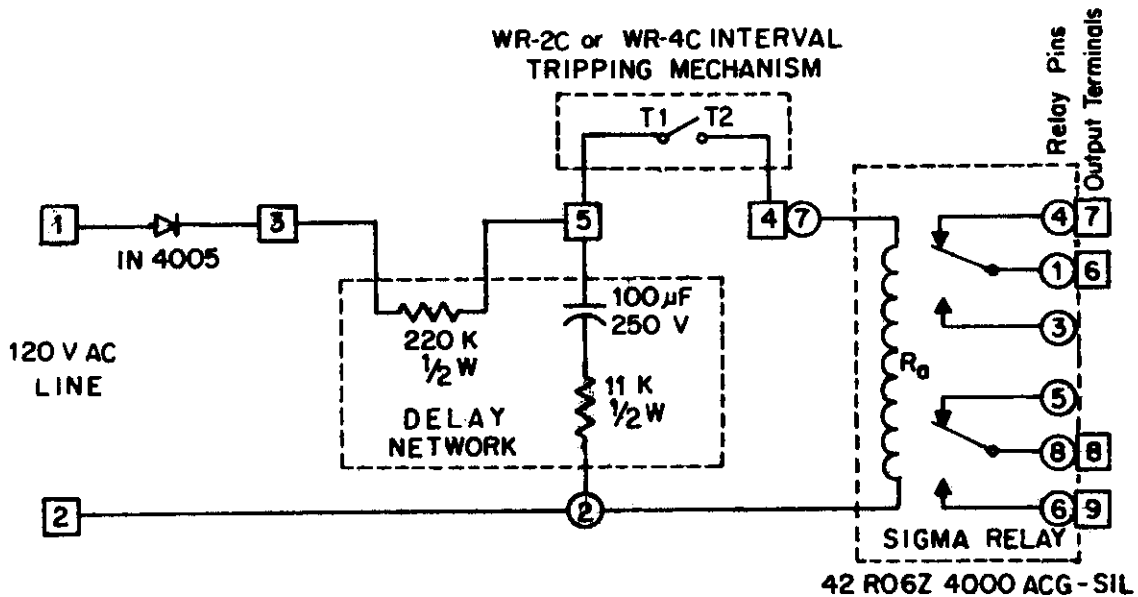
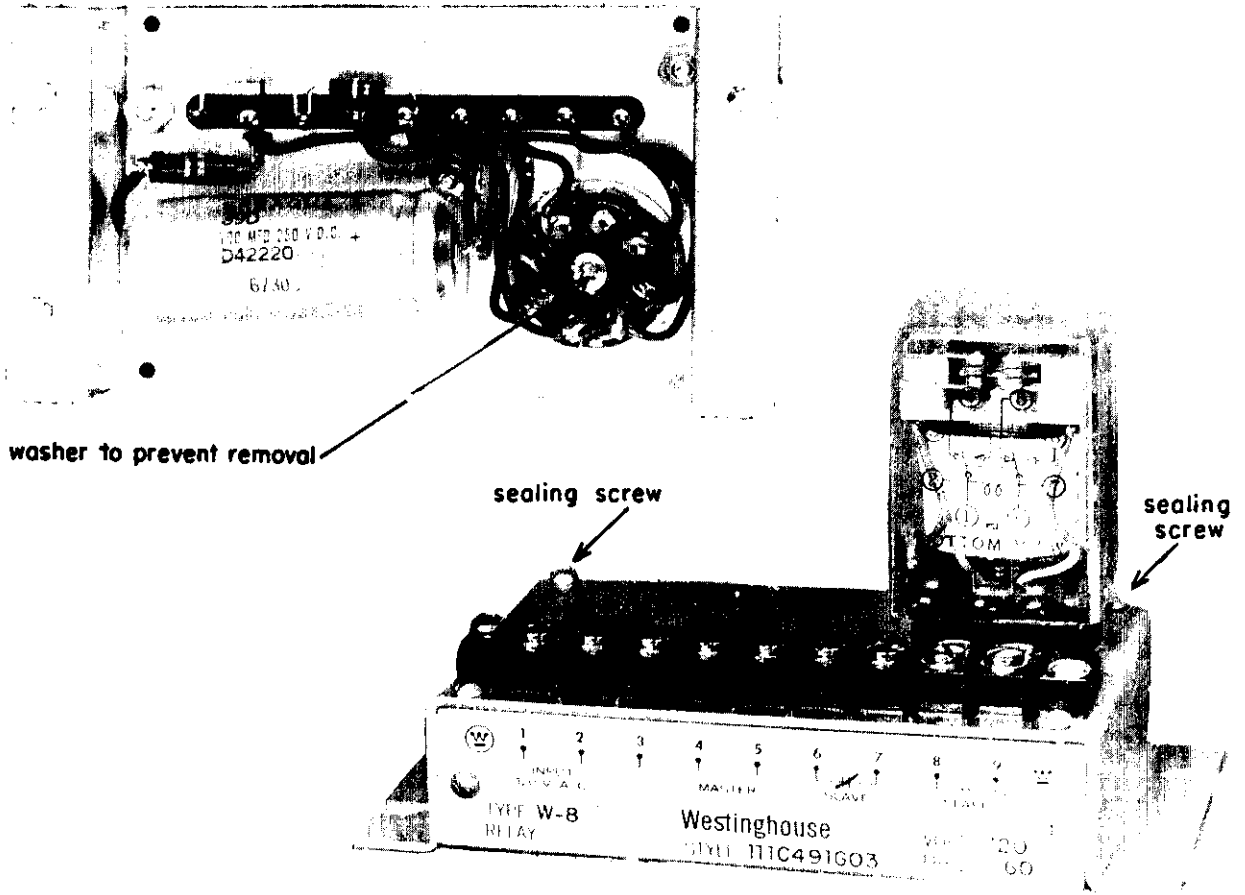
Landis & Gyr type "m" maximum demand indicators have received approval for other time intervals, but this approval covers the use of this relay with those marked 15 minutes only.

Description

Landis & Gyr maximum demand indicators, identified as "m" in the type designation, are operational as long as a pair of contacts in series with the power supply and a holding electromagnet remain closed, and when these contacts open the pointer pusher returns to zero under the influence of a spring.

These contacts are operated by a synchronous motor identified as "ye" in the type designation. The resetting period is included in the demand period, and the gearing in the maximum demand indicator has been designed to take care of the time that the synchronous motor holds the contacts open, which can vary from 5.4 seconds to 9 seconds.

CANADIAN WESTINGHOUSE TYPE "W-8" INTERVAL TRIPPING RELAY



Canadian Westinghouse types WR-2C and WR-4C Demand Recorders have received approval when factory equipped to serve as a "Master" recorder. This entails the addition of a dry reed switch and appropriate wiring to case terminals "T1" and "T2".

This switch is operated by the same permanent magnet cam follower that provides the time pulse.

This switch is normally open and closes at the start and remains closed for approximately 10% of the time interval so that it cannot be used directly to reset "m" maximum demand indicators.

The purpose of the type W-8 relay is to utilize the master capability of the WR-2C and WR-4C and provide a contact opening compatible with the requirements of the "m" maximum demand indicator.

It does this by means of a resistor/capacitor network. During the time that the contacts on the WR-2C or WR-4C are open, the 100 microfarad capacitor is being charged from the line by means of a diode and a high resistance. When the contacts on the WR-2C or WR-4C close, this capacitor discharges through the Sigma relay coil and a 11K resistor simultaneously opening the contacts.

When the voltage across the relay has fallen to a point where the coil can no longer hold the armature, the contacts close.

The given Sprague capacitor has a manufacturing tolerance of -10% to +50% of its marked capacity, and this range together with normal $\pm 10\%$ tolerances of the resistors produces, with normal line voltage variations, a contact opening satisfying the requirements of Landis & Gyr "m" maximum demand indicators.

- NOTE 1. Maximum demand indicators "m" and, "mye" with synchronous timing motor, are approved for use on a number of Landis & Gyr meters including Trivectors.
- NOTE 2. When a type W-8 relay has been unused for some time it may take several hours after the application of voltage for the capacitor to regain its capacity.
- NOTE 3. All W-8 interval tripping relays require verification of the time the contacts remain open after the application of the timing pulse. This may be done quite simply by applying voltage to terminals 1 and 2 marked input, and shorting terminals 4 and 5 with a wire. By watching the relay armature or listening, the point closure time can be ascertained. The time must be between 5.4 and 9 seconds.

The only precaution necessary is to ensure that the voltage shall have been applied for at least 15 minutes prior to the test, subject to Note 2.

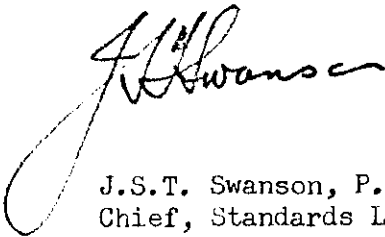
NOTE 4. Interval timing of Trivectors or other approved Landis & Gyr meters equipped with "m" maximum demand indicators when the normal timing function of the "ye" synchronous motor has been taken over by the WR-2C or WR-4C recorder and W-8 relay, will be taken care of when verifying the WR-2C or WR-4C recorder.

The illustration shows a type W-8 relay manufactured by Westinghouse in the U.S.A., but this approval also covers identical units made in Canada.

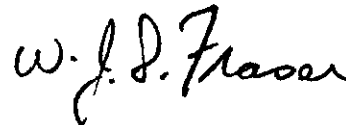
The illustration also shows the means provided to prevent unauthorized relay removal and the positions of the screws for a utility sealing wire.

Approval granted to:

Canadian Westinghouse Company Ltd.,
Hamilton, Ontario.



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