

Description and Instructions For

WATER LEAKAGE DETECTOR

APPLICATION:

Used to detect leakage of water from the tubes of closed air circuit water cooled (CACW) cooler mounted on A.C. Motors.

DESCRIPTION:

Water Leakage Detector (WLD) senses the presence of water leaked in a tray from the tubes of water cooler. The two sensing elements of the probe are electrically connected through water and negligible current in micro-amps starts flowing between them which is amplified by monitoring unit and an electromagnetic relay inside monitoring unit energizes.

MONITORING UNIT:

The said relay gets de-energized when probe is uncovered by water.

It is made of Cast Aluminium having suitable glands and is wall mounting type. The mounting strip is provided with vibration pads. A Power-ON indicator is located on the top of the unit.

PROBE:

It consists of two sensing elements. When it is installed horizontally then there is a level difference of 5 mm between tip of one element and that of the other.

SPECIFICATIONS

RATED VOLTAGE : 240 V. AC. +/- 10%

NOMINAL FREQUENCY : 50/60 Hz.

TEMPERATURE RANGE : Upto 55° C.

TYPE OF CONTACT : 2 changeovers.

<u>CONTACT RATING</u> :	Inductive	Resistive
110/220 V.D.C.	0.25 A	0.5 A
110/240 V.A.C.	0.5 A	5.0 A

DI-ELECTRIC STRENGTH: 1.5 KV for 60 Seconds.

BETWEEN CONTACT

AND BODY.

MATERIAL OF PROBE : Stainless Steel.

MONITORING UNIT : Aluminium Casting.

CASING.

CONNECTION INSTRUCTIONS

Suitable glands are provided at the bottom of the Monitoring Unit. Use correct size conduits to ensure dust proof cable entry.

The external wires are passed through the three cable glands and are connected to the terminal strip as described hereunder:

TERMINAL 1 & 2 : to 240 V.A.C. 50 Hz. supply.

TERMINAL 3 & 4 : to the wires coming from the probe.

TERMINAL 5-6-7: is a changeover contact

5-6 being NC and

6-7 being NO contact.

TERMINAL: 8-9-10 : is a changeover contact.

8-9 being NC and

9-10 being NO contact.

OPERATION

When power is Switched-ON the indicator will glow red. As soon as the water comes in contact with two sensing elements of probe the electromagnetic relay in the Control Unit gets energized opening its contacts 5-6 and 8-9 and closing its contacts 6-7 and 9-10. The relay thus energized restoring its contacts when water contact between two sensing elements is discontinued.

FAULTS AND CHECK POINTS

A. Indicator does not glow

- Check: 1. The tightness of the bulb.
2. AC - ON/OFF condition.

B. The relay in the Monitoring Unit does not energise when probe is dipped in water.

- Check: 1. Whether relay energises when terminals 3 & 4 of the Monitoring Unit are manually short circuited with the ordinary wire link. If yes, then check the wires from probe for discontinuity or break and also the tightness of the probe leads to terminal 3 & 4.
2. Whether the tip or the round stainless steel wall is covered with dust or oil or with any external non conducting compound. If yes, remove it completely with water, thinner or kerosene.

C. The relay once energised does not de-energise when probe is removed from water.

- Check: 1. The presence of water droplets between two sensing terminals. If yes, then clean the area between two sensing terminals with dry cotton.
2. The presence of any type of continuity between the probe terminals. If yes, then isolate the two terminals electrically from each other.

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