



File MP2778

Vol 3

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FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

COMPONENT - CONTROLS, LIMIT
(MBPR2, MBPR8)

Manufacturer: CLARK-RELIANCE CORP
(583324-002) 16633 FOLTZ PKY
STRONGSVILLE OH 44149

Applicant: SAME AS MANUFACTURER
(583324-002)

Recognized Company: SAME AS MANUFACTURER
(583324-002)

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The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

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Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program



DESCRIPTION

PRODUCT COVERED:

*USR, CNR Component (Not for General Use) - Model ECID-f/b 22 to 99, f/b R, f/b blank or S, f/b blank or 0 to 20, f/b blank or 0-20 feed water control.

*USR indicates evaluation to UL 353 - Limit controls.

*CNR indicates evaluation to C22.2, No. 24-93 - Temperature-Indicating and -Regulating Equipment.

Component (Not for General Use) - Model ECID-f/b 22 to 99, f/b R, f/b blank or S, f/b blank or 0 to 20, f/b blank or 0-20 feed water control.

GENERAL:

These controls are intended to be used on a boiler to provide feed water to the boiler in the event of a low water condition, but are not limited to this application. They are for use with electrodes to sense the water level. They can be configured into a "pump up" or "pump down" mode.

The control consists of a printed wiring board mounted in a plastic housing and it is provided with a male plug for mounting into a socket (supplied by others).

MODEL NUMBER NOMENCLATURE:

ECID - 22 - RS - 20 - 20
I II III IV V

- I - ECID - Basic Model Number
- II - Sensitivity/Mode/Supply Voltage
Sensitivity - 4.7K to 1M ohm
Mode - Inverse (pump down) or direct (pump up)
Supply Voltage - 24, 120, or 240 V ac, 60 Hz
- III - S - Sealed Switch
Blank - Not Sealed
- IV - 0-20 - 0 to 20 s. Increasing level delay in seconds
Blank - No delay
- V - 0-20 - 0 to 20 s. Decreasing level delay in seconds
Blank - No delay

RATINGS:

Ambient: -40 to 65°C.

Electrical:

Input - Terminals 1 and 2 - 24, 120 or 240 V ac, 60 Hz.

Output - Terminals 6, 7 and 8 and Terminals 9, 10 and 11 - 5 A
resistive, 1/3 hp, 120-240 V ac, 60 Hz.

Probe Circuit - 30 V ac max.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - The controls are intended for use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

1. The controls shall be mounted in an overall electrical enclosure.
2. The suitability of the probe used in conjunction with the control shall be determined in the end-use application. The probe circuit is a low voltage safety circuit. The circuit shall be wired as a NEC Class 1 circuit.
3. The suitability of the socket to which the control is mounted shall be determined in the end-use application.

MANUFACTURER'S TESTS:

Each control shall be subjected to the following tests:

1. Undervoltage - Each control is adjusted such that it operates properly at a supply voltage at 85 percent of rated voltage.
2. Dielectric Withstand - Each control is subjected to a dielectric withstand test with the following potentials:

A potential of 1,000 plus twice rated input voltage for 120 and 240 V ac controls for a period of 1 min between line voltage circuits and low voltage circuits.

A potential of 1480 is applied for a period of 1 min between output circuits and low voltage circuits.

The test times can be reduced to 1 s if the potential is increased by 20 percent.

Alternate - The controls are placed in a test fixture and the control is checked for proper operation. Rated voltage is applied to all load terminals and input terminals.

MARKING:

Each control is provided with an adhesive backed polyester label which includes the company name, model number, electrical ratings and wiring diagram.

*Products manufactured at Clark-Reliance will be marked with a CR on the printed circuit board.