Relay Operation

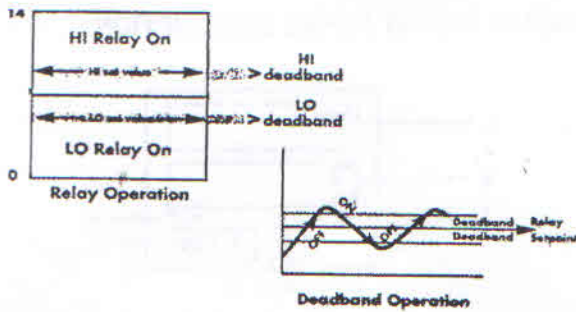Deadband Operation

4.3 Programming the Setpoints and the Deadband

1) Press and hold the SET button until the display shows I_HI (High Setpoint). The display will then automatically cycle through 3 more displays: dB.1 (High Deadband), 2_LO (Low Setpoint), and dB.2 (Low Deadband).

2) Press the SET button when the desired parameter is on the display. For example, to adjust the Low Setpoint, press the SET button when the display is showing I_LO.

3) When the desired parameter has been selected, the top display will show the value to be adjusted. The bottom display will now show the parameter (I_LO, I_HI, etc.).

4) Use the UP and DOWN arrow buttons to adjust the SETPOINT or the DEADBAND. Selection ranges are shown in the table below.

5) Press the SET button when finished to store the new settings.

SECTION 5. MEASUREMENT

1) After installation and setting, remove the protective bottom from electrode and rinse the electrode with clean water and wipe it dry.

2) Dip the electrode into sample solution to be measured. Stir gently and wait until a stable reading can be obtained.

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1/16 DIN   ORP Controller
Model: 4802

SECTION 1. INTRODUCTION

Thank you for selection **4802 ORP controller**. This 1/16 DIN controller offers dual display, high accuracy, alarm and control relays.

1.1 Specifications

Range/Deadband	±1999 mV/adjustable from 0 to 250 mV
Limit Relays (2)	SPDT contacts rated for 5A at 115V
Resolution/Accuracy	1 mV/± 2% FS
Relay status indicators	Front panel LED lamp
Memory Back-up	All data is saved while the meter is off
Power supply	90 to 260VAC 50/60Hz
Panel Cutout	1/16th DIN 1.81 x 1.81" (46 x 46mm)
Meter Dimensions	4.7 x 1.77 x 1.77" (105 x 45 x 45mm)

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SECTION 2. INSTALLATION

### 2.1 Mounting the Controller

1) Make a 1.77 x 1.77" (45 x 45 mm) panel cutout (1/8" to 3/8" thickness).
2) Slide the controller into the cutout until the bezel is flush with the panel.
3) Slide the mounting bracket over the rear of the controller and press snugly against the rear of the panel.

2.2 Rear Panel Connections

1) Connect AC power to the terminal as indicated in the diagram.
2) Connect an RTD probe to the terminal as indicated in the diagram. If the RTD probe is not connected to the controller, the display will show 25 degree C normally.
3) Connect the ORP electrode to the BNC connector. If the ORP electrode is not connected to the controller, the display will be all dashes.
4) Connect the alarm/control devices to the HI or LO relay terminals. The SPDT relays are dry contact type and the terminal designations are:

   C: Common, **NO**: Normally Open, **NC**: Normally Closed
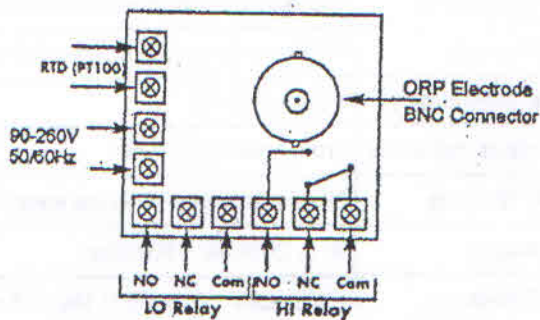
SECTION 3. FRONT PANEL DESCRIPTION
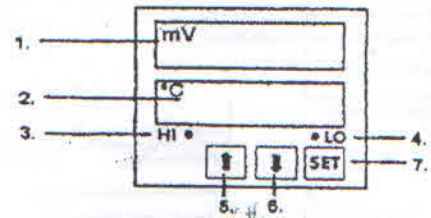
1. ORP measurement and programming display
2. Temperature measurement and programming display
3. LED lamp light is on when "HI" relay is energized
4. LED lamp light is on when "LO" relay is energized
5. UP arrow programming button
6. DOWN arrow programming button
7. SET programming button

SECTION 4. SETPOINTS

4.1 HI and LO Relay

Relays switch state when their user-programmable setpoint is exceeded. They switch again when the limit is no longer exceeded. If the measurement exceeds the high setpoint, the high relay will switch state. If the measurement is lower than the low setpoint, the low relay will switch state. The programming steps are detailed later in this section.

4.2 HI and LO Deadband

The Deadband feature is used to minimize relay chatter (rapid on/off relay switching) near setpoint. This is accomplished by creating a region where no relay action can occur (see diagram below). The High Deadband parameter (db.1) creates a band at the high setpoint and the Low Deadband parameter (db.2) creates a band at the low setpoint.