kwbegdv LM8-RRD

kwbegdv LM8-RRD Digital Weighing Controller Indicator User Manual

Model: LM8-RRD

1. Introduction

The kwbegdv LM8-RRD is a high-precision digital weighing controller and indicator designed for industrial applications requiring accurate measurement and control of weight or pressure. This device integrates load cell signal input with relay outputs, making it suitable for various automation tasks such as batch control, accumulation, and mean value calculations. Its dual LED display provides clear readings of process values (PV) and set values (SV).

2. Product Features

- **High Precision:** Ensures accurate measurements with steady performance.
- **Dual LED Display:** Features two LED nixie tube digits for clear display of Process Value (PV) and Set Value (SV).
- **Versatile Input:** Supports 1 to 4 load cell signals, compatible with various pressure and weight sensors.
- **Relay Outputs:** Equipped with 2 RELAY outputs for alarm and control functions.
- **Control Functions:** Includes functions for clearing zero and Process Value (PV) modification.
- **Application:** Ideal for weight control, auto accumulation/mean for up/down batch control, and similar industrial processes.

3. Package Contents

Upon unpacking, please verify that all items are present and undamaged:

- 1 x kwbegdv LM8-RRD Digital Weighing Controller

4. Setup and Installation

Careful installation is crucial for the optimal performance and longevity of the LM8-RRD controller. Ensure power is disconnected before performing any wiring.

4.1 Mounting

The controller is designed for panel mounting. Cut an appropriate opening in your control panel and secure the device using the provided mounting clips or screws.

4.2 Wiring Connections

Refer to the wiring diagram below for proper connection of power, load cells, and relay outputs. Ensure all connections are secure to prevent intermittent operation or damage.

Figure 1: Front and top view of the LM8-RRD Digital Weighing Controller, showing display, buttons, and wiring terminal labels.

Load Cell Connections:

- **EXC+5V:** Excitation Voltage Output (+) for Load Cell
- **SG-:** Signal Ground for Load Cell

- **SG+:** Signal Input (+) from Load Cell
- **EXC-5V:** Excitation Voltage Output (-) for Load Cell

Power Supply Connections:

- **AC 220V / 110V:** Connect to appropriate AC power source.
- **N:** Neutral
- **L:** Live

Relay Output Connections:

- **AL1:** Alarm 1 Relay Output
- **AL2:** Alarm 2 Relay Output
- **COM:** Common terminal for AL1 and AL2 relays.

Control Input Connections:

- **RST:** Reset Input
- **SET:** Set Input

Warning: Ensure correct voltage (220V AC or 110V AC) is applied as per the unit's specification. Incorrect voltage can cause severe damage.

5. Operating Instructions

5.1 Display Overview

- **PV (Process Value):** The upper red LED display shows the current measured value from the load cell.
- **SV (Set Value):** The lower green LED display shows the configured setpoint or target value.
- **AL1 / AL2 / OUT Indicators:** LEDs on the right side illuminate to indicate the status of Alarm 1, Alarm 2, and general output.

5.2 Button Functions

- **SET:** Used to enter parameter setting mode or confirm selections.
- **<<RST:** Typically used for shifting digits during value entry or for a reset function.
- **Up Arrow (↑):** Increases numerical values or navigates through menu options.
- **Down Arrow (↓):** Decreases numerical values or navigates through menu options.

5.3 Basic Operation

1. **Power On:** Connect the device to the specified AC power supply. The display will light up.
2. **Zeroing:** If necessary, use the "clearing zero" function to establish a baseline reading without load. Consult the full programming guide for specific steps.
3. **Setting Parameters:** Press the **SET** button to enter the parameter setting mode. Use the Up/Down arrows to adjust values and **<<RST** to shift digits. Press **SET** again to confirm and move to the next parameter or exit.
4. **PV Modification:** The device supports modification of the Process Value. Refer to the detailed programming instructions for this advanced feature.
5. **Monitoring:** Once configured, the PV display will show the real-time weight or pressure. The AL1/AL2/OUT indicators will activate based on the set alarm conditions.

6. Specifications

Parameter	Value
Model	LM8-RRD (4 Digits)
Display	LED Display
Power Supply	220V/110V AC
Accuracy	0.2%F.S±2dgt
Power Consumption	5VA
Sampling Rate	16 times/second
Input	mV (Load Cell), 1-4 pcs Load Cell
Output	2 RELAY
Relay Contact	Open Contract 250V AC 3A or 30V DC 3A COS=1
Auxiliary Power	DC 5V
Item Size	95 x 85 x 46 mm (3.74 x 3.35 x 1.81 in)
Item Weight	350 Grams (12.35 ounces)
Material	Metal

7. Maintenance

To ensure reliable operation and extend the lifespan of your LM8-RRD controller, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the exterior of the device with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Environmental Conditions:** Operate the device within its specified temperature and humidity ranges. Protect it from excessive dust, moisture, and corrosive environments.
- **Connection Checks:** Periodically inspect all wiring connections for tightness and signs of wear or corrosion.

8. Troubleshooting

If you encounter issues with your LM8-RRD controller, consider the following common troubleshooting steps:

- **No Power:**
  - Check the power supply connection and ensure it matches the specified voltage (220V AC or 110V AC).

- Verify the power source is active.

- **Incorrect Readings:**
  - Ensure load cell wiring is correct and secure.
  - Perform a zeroing procedure.
  - Check if the load cell itself is functioning correctly.
  - Verify calibration settings.
- **Relay Outputs Not Activating:**
  - Check the setpoint (SV) and alarm parameters.
  - Verify the wiring to the external devices controlled by the relays.

For persistent issues, please contact customer support.

9. Warranty and Support

The kwbegdv LM8-RRD Digital Weighing Controller is covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms, duration, and to obtain technical support or service, please refer to the documentation provided with your purchase or contact the seller directly.
When contacting support, please have your product model (LM8-RRD) and purchase information readily available.