Thank you for purchasing this RKC product. In order to achieve maximum performance and ensure proper operation of your new instrument, carefully read all the instructions in this manual. Please be sure to follow the instructions for proper operation and maintenance.

1. MOUNTING

WARNING: To prevent electric shock or instrument failure, always turn off the power before mounting or removing the instrument.

1.1 Mounting Cautions

(1) This instrument is intended to be used under the following environmental conditions:
- Allowable ambient temperature: -10 to +50 °C
- Allowable ambient humidity: Relative humidity: MAX W. C 29.3 g/m3 dry air at 101.3 kPa
- Allowable ambient vibration:
- Allowable ambient shock:
- Mounting location: Horizontally
- Allowable ambient pressure: 500 to 106.1 kPa
- Allowable ambient altitude: Up to 2000 m
- Allowable ambient power supply: 50 or 60 Hz
- Allowable ambient temperature change:

(2) Use this instrument in the following devices:
- Power supply: 24 VDC ± 20% or 110 VAC
- Voltage source: 208 VAC
- Power source: 115 VAC 50/60 Hz
- Instrument class: Class A

1.2 Instrument populations

(1) This instrument is intended for use with industrial machinery, test and measurement equipment. It is not designed for use with medical equipment and water supply.
(2) This instrument is prohibited from being used in a domestic environment. This instrument may cause radio interference, in which case the user may be required to take additional measures.
(3) This instrument is protected from electric shock by reinforced insulation. Provide proper insulation between the input signal and the instrument power supply, or source of power and loads.
(4) To prevent instrument damage or failure, please ensure that the control device fails.
(5) Instrument class: Class A, 2004, RKC INSTRUMENT INC.

2. WIRING

To prevent electric shock or instrument failure, do not turn on the power before mounting or removing. This is a Class A instrument. In a domestic environment, this instrument may cause radio interference, which the user may be required to take additional measures.

2.1 Wiring Cautions

- For thermometer input, use the appropriate compensation wire.
- For RTD inputs, use the fine wire with the same resistance in the resistance between the three leads wire.
- The resistance between the lead wire for the instrument and the power supply must not exceed 50 Ω.
- If there is no connection between the input signal and the instrument power supply terminals, or if the input signal is isolated, please contact RKC sales office or the agent.

3. Product Check

For RTD input, use low resistance lead wire with no difference in resistance between adjacent wires.

4. Specifications

- Mounting procedures
- Allowance ambient pressure: 500 to 106.1 kPa
- Allowance ambient temperature change: ±10 °C
- Allowance ambient humidity: Relative humidity: MAX W. C 29.3 g/m3 dry air at 101.3 kPa
- Allowance ambient altitude: Up to 2000 m
- Allowance ambient power supply: 50 or 60 Hz
- Allowance ambient temperature change: ±10 °C
- Allowance ambient humidity: Relative humidity: MAX W. C 29.3 g/m3 dry air at 101.3 kPa
- Allowance ambient altitude: Up to 2000 m
- Allowance ambient power supply: 50 or 60 Hz
- Instrument class: Class A

5. Precautions

- All precautions described in this manual should be taken to avoid damage to the instrument or equipment.
- All wiring must be in accordance with local codes and regulations.
- The installation location and the input/output signals should be taken into consideration.

6. Removing procedures

- Turn off the power OFF.
- Loosen the screw of the mounting bracket (Fig. 4).
- Lift the latch of the mounting bracket (Fig. 5), then pull the mounting bracket (Fig. 6) from the instrument.

7. Cleaning the instrument

- Use long nose pliers to remove mounting brackets from the instrument that is installed in a narrow area or installed tightly in a vertical position.

8. Other mounting brackets should be removed in the same way as described in Sec. 3.4.

9. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 7).

10. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

11. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 8).

12. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

13. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 9).

14. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

15. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 10).

16. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

17. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 11).

18. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

19. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 12).

20. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

21. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 13).

22. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

23. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 14).

24. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

25. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 15).

26. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

27. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 16).

28. The other mounting brackets should be removed in the same way as described in Sec. 3.4.

29. Pull out the instrument from the mounting case while holding the front panel frame (Fig. 17).

30. The other mounting brackets should be removed in the same way as described in Sec. 3.4.
TABLE 2: INPUT/OUTPUT RANGES AND RESISTANCE LIMITS

<table>
<thead>
<tr>
<th>Digital Input (DI)</th>
<th>Voltage (V)</th>
<th>Current (mA)</th>
<th>Power Supply (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>0 to 10 V</td>
<td>0 to 20 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>L</td>
<td>10 to 15 V</td>
<td>5 to 20 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>J</td>
<td>15 to 20 V</td>
<td>0 to 10 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>I</td>
<td>20 to 25 V</td>
<td>0 to 5 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>H</td>
<td>25 to 30 V</td>
<td>0 to 2.5 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>G</td>
<td>30 to 35 V</td>
<td>0 to 1.25 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>F</td>
<td>35 to 40 V</td>
<td>0 to 0.625 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>E</td>
<td>40 to 45 V</td>
<td>0 to 0.3125 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>D</td>
<td>45 to 50 V</td>
<td>0 to 0.15625 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>C</td>
<td>50 to 55 V</td>
<td>0 to 0.078125 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>B</td>
<td>55 to 60 V</td>
<td>0 to 0.0390625 mA</td>
<td>200 to 260 V AC</td>
</tr>
<tr>
<td>A</td>
<td>60 to 65 V</td>
<td>0 to 0.01953125 mA</td>
<td>200 to 260 V AC</td>
</tr>
</tbody>
</table>

**Power supply:**
- 220 to 260 V AC, 50/60 Hz
- Maximum power consumption: 120 W (as measured at 230 V AC)

**Current requirements:**
- 3.5 A (max) at 230 V AC
- Power terminal: 1500 V AC

**TYPICAL POLARITY:**
- Input: + to OUT and VDC through the OUT terminals
- Output: OUT and VDC through the OUT terminals

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