NOTICE
This manual assures that the user has a fundamental knowledge of the principles of electricity, process control, computer technology and communications.

The figures, diagrams and numeric values used in this manual are only for purpose of illustration.

RKC is not responsible for any damage or injury that is caused as a result of using this instrument incorrectly or indirect damage.

RKC is not responsible for any damage and/or injury resulting from the use of instruments made by imitating this instrument.

Periodic maintenance is required for safe and proper operation of this instrument. Some components have a limited service life, or characteristics that change over time.

Every effort has been made to ensure accuracy of all information contained herein. RKC makes no warranty expressed or implied, with respect to the accuracy of the information. The information in this manual is subject to change without prior notice.

Do not connect fuses or switches to the noise filter output wiring as this will reduce the effectiveness of the noise filter.

Always install the noise filter on a grounded panel. Minimize the wiring distance between the noise filter output and the instrument power supply terminals to achieve the most effective noise reduction.

Do not connect fuses or switches to the noise filter output wiring as this will reduce the effectiveness of the noise filter.

Power supply wiring must be twisted and have a voltage drop.

For an instrument with 24 V power supply, supply power from a SELV circuit.

A suitable power supply should be considered in end-use equipment. The power supply must be in compliance with a limited-energy circuit (maximum available current of 8A).

Use the solderless terminal appropriate to the screw size (M3).

1. MOUNTING

1.1 Mounting Cautions

- An external protection device must be installed if failure of this instrument could result in damage to the instrument, equipment or injury to personnel.

- All wiring must be completed before power is turned on to prevent electric shock, fire or damage to instrument and equipment.

- This instrument must be used in accordance with the specifications to prevent fire or damage to instrument and equipment.

- This instrument is not intended for use in locations subject to flammable or explosive gases.

- Do not touch high-voltage connections such as power supply terminals, etc. to avoid electric shock.

- RKC is not responsible if this instrument is repaired, modified or disassembled by other than factory-approved personnel. Malfunction can occur and warranty is void under these conditions.

1.2 Dimensions

Depth in connector mounting

Use example of micro-style connector

1.3 DIN rail Mounting

Mounting procedures

1. Pull down the mounting bracket at the bottom of the instrument (A). Attach the hooks on the top of the instrument to the DIN rail and push the lower section into place on the DIN rail (B).

2. Slide the mounting bracket up to secure the instrument to the DIN rail (C).

Mounting dimensions

1.4 Panel Mounting

Mounting procedures

1. Pull down the mounting bracket (A) until locked and that a mounting hole appears.

2. Prepare one mounting bracket per instrument (B) sold separately (KRX55-5S) and then insert it in the year of the terminal board at top of the instrument until locked but a mounting hole does not disappear.

3. Mount each module directly on the panel with screws which are inserted in the mounting holes of this top and bottom mounting brackets.

Recommended tightening torque: 0.3 Nm (3 kgf cm)

The customer needs to provide the M3 size screws. Select the screw length which matches the mounting panel.

2. WIRING

To prevent electric shock or instrument failure, do not turn on the power until all wiring is completed. Make sure that the wiring is correct before applying power to the instrument.

2.1 Wiring Cautions

- To avoid noise induction, keep communication signal wire away from instrument power line, load lines and power lines of other electric equipment.

- If there is electrical noise in the vicinity of the instrument that could affect operation, use a noise filter.

- Shorten the distance between the twisted power supply wire pitches to achieve the most effective noise reduction.

- Always install the noise filter on a grounded panel. Minimize the wiring distance between the noise filter output and the instrument power supply terminals to achieve the most effective noise reduction.

- Do not connect fuses or switches to the noise filter output wiring as this will reduce the effectiveness of the noise filter.

- Power supply wiring must be twisted and have a voltage drop.

- For an instrument with 24 V power supply, supply power from a SELV circuit.

- A suitable power supply should be considered in end-use equipment. The power supply must be in compliance with a limited-energy circuit (maximum available current of 8A).

- Use the solderless terminal appropriate to the screw size (M3).

2.2 Terminal Configuration
2.3 Pin Layout of Connector

Open-style connector

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal name</th>
<th>Symbol</th>
<th>Cable color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power supply, minus (-)</td>
<td>V-</td>
<td>Black</td>
</tr>
<tr>
<td>2</td>
<td>Communication data, low</td>
<td>CAN_L</td>
<td>Blue</td>
</tr>
<tr>
<td>3</td>
<td>Shield</td>
<td>CAN_H</td>
<td>White</td>
</tr>
<tr>
<td>4</td>
<td>Communication data, high</td>
<td>CAN_H</td>
<td>White</td>
</tr>
<tr>
<td>5</td>
<td>Power supply, plus (+)</td>
<td>V+</td>
<td>Red</td>
</tr>
</tbody>
</table>

Micro-style connector

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal name</th>
<th>Symbol</th>
<th>Cable color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shield</td>
<td>CAN_H</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Power supply, plus (+)</td>
<td>V+</td>
<td>Red</td>
</tr>
<tr>
<td>3</td>
<td>Communication data, high</td>
<td>CAN_H</td>
<td>White</td>
</tr>
<tr>
<td>4</td>
<td>Communication data, low</td>
<td>CAN_H</td>
<td>White</td>
</tr>
</tbody>
</table>

Connection plugs

Recommended model: MSTD2/S-5TF/-5.0BAUM (PHOENIX CONTACT, Inc.)

Multi-drop type (recommended model)

Through the 5-pin style connector, DeviceNet can be used on the multi-drop connection method. The maximum number of DeviceNet nodes is 31.

3. SPECIFICATIONS

3.1 DeviceNet communication

- Protocol: DeviceNet
- Connection method: Multi-drop connection, T-branch connection
- Communication speeds: 125 kbps, 250 kbps, 500 kbps
- Error control: CRC error, Node address (MAC ID) duplication check
- Maximum number of connection nodes: 64 (including master)
- Power supply voltage: 24 V DC
- Power supply voltage range: 21.6 to 26.4 V DC
- Current consumption: 80 mA or less
- Connection socket: Micro-style connector (COM, PORT)

3.2 Controller communication

- Interface: Base on RS-485, ISA standard
- Protocol: Modbus/RTU
- Communication speed: 9600 bps, 19200 bps, 38400 bps
- Data bit configuration: Data 8-bit, Without parity, Stop 1-bit
- Maximum connections: 31 controllers (FB100/400/900)
- General specifications
  - Power supply voltage: 24 V DC
  - Power supply voltage range: 21.6 to 26.4 V DC
  - Current consumption: 80 mA or less
  - Allowable ambient temperature: -10°C to +60°C
  - Allowable ambient humidity: 5 to 95% RH

3.3 DeviceNet Network installation conditions and methods

For cable specifications, connection method, and vendor, refer to the web site of ODVA (Open DeviceNet Vendor Association).

3.4 Standard

Safety standard: UL UL61010-1
CE marking: EN61010-1
EMC: EN61326-1
ROM: EN50011