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In order to improve safety and the immunity to withstanding noise, mount this instrument as far away as possible from high voltage equipment, power lines, and rotating machinery.

High voltage equipment: Do not mount within the same panel. Power lines: Separate at least 200 mm. Rotating machinery: Separate as far as possible.

(5) If this instrument is permanently connected to equipment, it is important to include a switch or circuit-breaker into the installation. This should be in close proximity to the equipment and in the control of each of the operator. It should be marked as the disconnecting device for the equipment.

2.2 Dimensions

<table>
<thead>
<tr>
<th>Terminal type (4-channel type)</th>
<th>Connector type (4-channel type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagram](Image 130x372 to 255x416)</td>
<td>![Diagram](Image 344x436 to 478x485)</td>
</tr>
</tbody>
</table>

2.3 DIN Rail Mounting

2.3.1 Mounting procedures

1. Pull down the mounting bracket at the bottom of the module (A). Attach the hooks on the top of the DIN rail and push it down until it clicks on the DIN rail(B).

2. Slide the mounting bracket up to secure the module to the DIN rail.

3. Joint connector cover (KSRZ-517A) .................................................................... 2

4. Joint connector cover (Optional) ........................................................................ 1

2.5 Joining Each Module

Up to 16 Z-TIO-A/B modules (for host communication) can be joined together. Join these modules according to the following procedures.

2.5.1 Connecting the module to the DIN rail

1. Mount the modules on the DIN rail.

2. Slide the modules until the modules are closely joined together and the joint connectors are securely connected.

3. Push in the mounting brackets to lock the modules together and fix to the DIN rail.

2.5.2 Connecting the modules to each other

For panel mounting, mount the module mainframes after the bases are joined and mounted.

(See view of module mainframe)
3. WIRING

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

3.1 Wiring Cautions

- To avoid noise induction, keep input/output signal wires away from instrument power line, load line, and motor cables.
- Signal connected to Voltage input and Current input shall be low-voltage defined as "SEU" by the IEEE 141-1993 standard.
- If there is electrical noise in the vicinity of the instrument that could affect operation, use a noise filter.
  - Shorter the distance between the twisted power supply wires to achieve the most effective noise reduction.
  - Do not connect noise filter output wiring as this will reduce influence of external resistance: Approx. 0.125 \( \Omega \) (Dependent on PT100 type).
- To prevent electric shock or instrument failure, do not turn on the power on if any of the following is applicable:
  - Allow approximately 10 seconds for contact output when the instrument is turned on.
  - Use a delay relay for input/output time is used for external main circuit.
  - Power supply wiring must be twisted and have a side voltage drop.
  - For an instrument with 2-channel/4-channel type, input/output power supply from a "SEU" circuit defined as IEC 60581-1.

- A suitable power supply should be considered in use. The power supply must be in compliance with a limited-energy circuit (minimum available current of 8 A).
- Supply the power to only one of the terminal modules. When power is supplied to any of the terminal modules, all of the terminal modules will receive power.
- Select the power capacity within the allowable power consumption of all terminal modules and the current output when the power is turned on.
- Power consumption (at maximum load): 140 mA max. (at 24 V DC) (4-channel type)
- Voltage 24 V DC (2-channel type)
- Current 10 A or less

- For the connector type module, use the following connector plug (sold separately).
- Terminal Connector type: TP2-21 (Front-contact type), TP2-32 (side-contact type)
- Recommended tightening torque: 0.43 to 0.5 N·m (4.3 to 5.0 kgf·cm)
- Useable cable specifications:
  - Wire type: Solid wire (cross-section: 0.01 mm² to 12 mm² (cross-section: 3.30 mm²) or Twisted wire (cross-section: 0.01 mm² to 12 mm² (cross-section: 3.30 mm²))

3.2 Terminal Configuration

3.2.1 Base (Common to both terminal and connector type)

- Power supply terminals
  - Communication terminals

3.2.2 Terminal type module

3.3.1 Power supply terminals

3.3 CT Input Connector (Optional)

For better connection to the 2-channel/4-channel types, use the following CT input with accuracy and current transformer (CT) (sold separately)

- CT type: CTLY-4410 (Class 0.5, 100 A, 0.3 A, 0.02 mV)/4410 (Class 0.5, 100 A, 0.02 mV)/1510 (Class 0.5, 100 A, 0.01 mV)

4. SPECIFICATIONS

4.1 Number of input:

- Input type: Tri
- Input method: AC output (Zero-cross method)

4.2 Power consumption: 131.6 W

4.3 Power supply consumption:

- Power supply (at maximum load): 140 mA max. (at 24 V DC) (4-channel type)
- Voltage 24 V DC (2-channel type)
- Current 10 A or less

5. MODEL CODE

5.1 Code format for this unit:

- The factory set value of the breaker alarm (KAB) type is based on the output type.
- For heater alarm (KAB) type, refer to the SRZ Instruction Manual (W011051-EC)