Remote System
User’s Guide

Remote Sensor system / Analog signal
Thermocouple / 2 signal transmission

Transmitter: RS252-030-K300 (type-K)
Output Sensor: RS02E-030E-PU

Attention for Installation
(Read the instruction before installation)
Before using the Remote Sensor, read this manual carefully.

1. Ensure the power is switched off during installation or maintenance operations.
2. Use a regulated power supply, e.g. switchmode type. Simpler power supplies, such as a fullwave rectification type, will cause the permissible ripple rating to be exceeded and may cause malfunction.
3. Ensure correct connections by reference to the wiring diagram.
4. To avoid malfunction caused by induction noise, cable should be kept apart from motor or other power cable.

Dimension
Transmitter: RS252-030-K300
Output sensor: RS02E-030E-PU

Construction of the system
(Detector) (Transmitter) (Output Sensor)

- Power supply
- Power supply
- Power

[] (Function of each component)
Detector: Two thermocouples type K are used as a detector and it detects temperature.
Transmitter: (1) Detects the voltage of thermocouples which changes depending on temperature.
(2) The internal CPU converts the temperature data of (1) into digital signals and transmits the signals to the Output Sensor.
Output Sensor: Change the temperature data to analog signal (4.20mA) and output to external unit and supplies power for operation of Transmitter at the same time.

Wiring diagram

Cable length
Transmitter (RS252-030-K300): max. 3m
Output sensor (RS02E-030E-PU): max. 10m

Caution
- Measure to surge
Please note that the cable length of an output sensor may not longer than 10m. The IEC marking verifies that our products comply with the requirements of EMC directive. The surge test to an output sensor is not carried out.
When using RTT or RTE with cable length longer than 10m a measure to protect the sensor from surge current should be taken.
- Measure to static electricity
When using RS252 in environment with the electrostatic discharge, take the ground to prevent influence by the static electricity on RS252.

Current output
Output sensor RS02E outputs the electric current as described below.

<table>
<thead>
<tr>
<th>Status</th>
<th>Output current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Transmitter</td>
<td>0 mA</td>
</tr>
<tr>
<td>Receiving the temperature data from Transmitter</td>
<td>4 ~ 20 mA (at 0.05% C/4mA at the highest measurement range: 20 mA)</td>
</tr>
<tr>
<td>Thermocouple is not connected, though the transmitter is in the transmitting range</td>
<td>21 mA</td>
</tr>
</tbody>
</table>

Influence of surrounding metal
In order to avoid influence of surrounding metal, or to avoid mutual interference between parallel mounted sensors, provide the minimum free zone as described below.

Mutual interference
Tightening torque for attached nut is 20Nm(200kgf-cm).

Typical Transmitting Diagram
Example: Supply voltage at 24 VDC

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