Remote Sensor System
Switch signal / Weld-immune
4 signal transmission type

M18 Transmitter: RPT4-1803D-PU
Output Sensor: RPE4-1803N / P-PU
M30 Transmitter: RPT4-3005D-PU
Output Sensor: RPE4-3005N / P-PU

Remote System User’s Guide

Attention for Installation
(Read this section thoroughly before installation.)

Before using the Remote Sensor, read these carefully.
During installation and operation, pay close attention to the safety aspect.

- Ensure the power is switched off during installation or maintenance operations.
- Use a regulated power supply, such as a full-wave rectification type. Simpler power supplies, such as a half-wave rectification type, will cause the permissible ripple rating to exceed and may cause malfunction.
- Ensure correct connections by reference to the wiring diagram.
- To avoid malfunction caused by induction noise, cable should be kept apart from motor or other power cable. Please note that the signal may become unstable (false signal or chattering) when the transmission distance and the center offset are outside the specification range.
- The inzone signal is a preliminary signal for confirming that the output signal is established within the specification range. Please note that it does not guarantee signals output outside the specification range.

Construction of the system

[Detector] [Transmitter] [Output Sensor]

\[\text{Detect signal} \quad \text{Signal transmission} \quad \text{Switch signal / Weld-immune} \]

Function of each component
- Detector: Connects DC2W or mechanical limit switches (max.4) and transmits the detected signals to Transmitter.
- Transmitter: Provides power for Detector, also passes detected signals from Detector to Output Sensor.
- Output Sensor: Puts out detected signal to external controller, also sends signals from Detector to Output Sensor.

Specification

- Type number: RPT4-1803D / RPE4-1803N/P
- Rated transmitting distance: 18.5 m / 50 mm
- Center offset: ±0.2 mm
- Drive current: ±50 mA (per switch)
- Supply voltage: 24V DC ±15% (incl. ripple)
- Current consumption: ≤ 400mA

(Supply voltage at 24V DC)

- Drive current is dependent on the transmission distance between Transmitter and Output Sensor the degree of off-set between them refer to Transmitting area diagram.

Wiring diagram

- COMMON(Transmitter) [Detector] [Transmitter] [Output sensor]

\([\text{White (+) and Black (POL) of Transmitter should be connected together.}]\)

\([\text{Blue (-) and Black (POL) of Transmitter should be connected together.}]\)

(Note) Blue (-) and Black (POL) of Transmitter should be connected together.

Please note that the cable length of an output sensor may not longer than 10m. The CE 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 an output sensor with cable length longer than 10m, a measure of EMC directive. The surge test to an output sensor is not carried out.

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In the following instructions, change over switches for the sensors are 50mm.

- Never pull the cable strong in installing.

Influence of surrounding metal
To avoid influence of surrounding metal, keep minimum spacing as described below;

- Non-flush mounting

Mutual interference
In order to prevent mutual interference between parallel-mounted sensors, keep minimum spacing as described below;

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

The minimum bending radius for the sensors are 50mm.

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