Terminal Box for Remote sensor
RPK-4C01-N
RPK-4C01-P

User’s guide

Read this guide before installation and operation. Handle the Terminal Box properly.

[ Dimension ]

[ Specification ]

<table>
<thead>
<tr>
<th>Type</th>
<th>DC 3-wire/NPN</th>
<th>RPK-4C01-N</th>
</tr>
</thead>
<tbody>
<tr>
<td>code</td>
<td>DC 3-wire/PNP</td>
<td>RPK-4C01-P</td>
</tr>
<tr>
<td>Material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminum sandmold casting</td>
<td></td>
</tr>
<tr>
<td>Lid</td>
<td>Aluminum cutting</td>
<td></td>
</tr>
<tr>
<td>Packing</td>
<td>Viton</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>Terminal block</td>
<td>Transmitter</td>
<td>7 poles crewless terminal block</td>
</tr>
<tr>
<td></td>
<td>Detector</td>
<td>4 poles connector ( M12 x 4 )</td>
</tr>
<tr>
<td>Cable gland</td>
<td>Transmitter</td>
<td>PG9 x 1</td>
</tr>
<tr>
<td>DC 3-wire/2-wire Selector</td>
<td>4 pole switch</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>M5 allen screw x 3</td>
<td></td>
</tr>
<tr>
<td>Blank plug</td>
<td>VA-OT5 (2 pieces are supplied with Terminal Box)</td>
<td></td>
</tr>
</tbody>
</table>

[ Transmitter and Terminal box (selector for applicable detectors)]

Set a built-in selector switch according to the table.
The selector should be switched to ON when using DC 2-wire detectors with the Transmitter for DC 3-wire sensor.

<table>
<thead>
<tr>
<th>Transmitter</th>
<th>Terminal box</th>
<th>Selector</th>
<th>Applicable Detector sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPT4-1803D-PU, RPT4-3005D-PU</td>
<td>RPK-4C01-N</td>
<td>OFF</td>
<td>Non-polarized DC 2-wire</td>
</tr>
<tr>
<td></td>
<td>RPK-4C01-P</td>
<td></td>
<td>Polarized DC 2-wire</td>
</tr>
<tr>
<td>RPTA-1803-PU, RPTA-3005-PU</td>
<td>RPK-4C01-N</td>
<td>OFF</td>
<td>NPN DC 3-wire</td>
</tr>
<tr>
<td></td>
<td>RPK-4C01-P</td>
<td>ON</td>
<td>Non-polarized DC 2-wire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>PNP DC 3-wire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
<td>Polarized DC 2-wire</td>
</tr>
</tbody>
</table>

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Connection of the Transmitter to the Terminal Box

Connect the Transmitter to the Terminal Box in accordance with the following procedure.

Measure of strip cables (Fig. 1)
1. Strip outer sheathes of cable.
2. Strip insulations of cores.

Fastening position of cable (Fig. 2)
Make sure that outer sheath of cable is positioned inside of the Terminal Box properly in tightening cable.

Mounting of Cable <Fig. 3>
Put a cap and sealing ring on cable, then insert the cable to the body.
Put a cap on the Cable Gland and tighten it with a spanner. (Spanner caliber : 17mm)
Applicable cable diameter : 5.0...8.0mm
Tightening torque : 6Nm
The cap can be shut up tightly to the body.

Replace the sealing rings of Cable Glands when you change Transmitter in maintenance to avoid decline of its watertight quality.
Sealing ring Code : 991995008
Type number : KBC-F2/E150P8

Connecting to Terminal block
Press the button with slotted screw driver (width of edge : 2.6mm) and connect the core.
Insert core to reach terminal sufficiently.
(If a core was inserted insufficiently, core may come out or cause short with adjoining cable. If a core was inserted excessively, the core cannot be connected sufficiently because of terminal catching insulations.)

Install
Fix the Terminal Box with three M5 Allen screws (length : longer than 20mm).
Put on the lid on the Terminal Box horizontally and screw in the lid carefully or damaged thread of the lid, then insert and fasten it tightly.

Unused connectors should be protected by blank plugs which supplied with box.
Transmitter: RPTA-1803-PU_._ / RPTA-3005-PU_._

**DC 3-wire Detector**

- BU (-)
- GN (S4)
- YE (S3)
- RD (S2)
- BN (S1)
- BK (POL)
- WH (+)

**DC 2-wire Detector**

- BU (-)
- GN (S4)
- YE (S3)
- RD (S2)
- BN (S1)
- BK (POL)
- WH (+)

<table>
<thead>
<tr>
<th>Type code</th>
<th>Applicable Detector</th>
<th>Selector</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPK-4C01-N</td>
<td>DC 3-wire NPN type</td>
<td>OFF</td>
</tr>
<tr>
<td>RPK-4C01-P</td>
<td>DC 3-wire PNP type</td>
<td>OFF</td>
</tr>
<tr>
<td>RPK-4C01-N</td>
<td>Non-polarized DC 2-wire</td>
<td>ON</td>
</tr>
<tr>
<td>RPK-4C01-P</td>
<td>Polarized DC 2-wire</td>
<td>ON</td>
</tr>
</tbody>
</table>

Transmitter: RPT4-1803D-PU_._ / RPT4-3005D-PU_._

**DC 2-wire Detector / Non-polarized Sensor**

- BU (-)
- GN (S4)
- YE (S3)
- RD (S2)
- BN (S1)
- BK (POL)
- WH (+)

**DC 2-wire Detector / Polarized Sensor, RXD series**

- BU (-)
- GN (S4)
- YE (S3)
- RD (S2)
- BN (S1)
- BK (POL)
- WH (+)

<table>
<thead>
<tr>
<th>Type code</th>
<th>Applicable Detector</th>
<th>Selector</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPK-4C01-N</td>
<td>DC 2-wire &amp; Mechanical Sensor</td>
<td>OFF</td>
</tr>
<tr>
<td>RPK-4C01-P</td>
<td>Mechanical Sensor</td>
<td>OFF</td>
</tr>
<tr>
<td>RPK-4C01-N</td>
<td>Mechanical Sensor</td>
<td>OFF</td>
</tr>
<tr>
<td>RPK-4C01-P</td>
<td>DC 2-wire &amp; Mechanical Sensor</td>
<td>OFF</td>
</tr>
</tbody>
</table>
Wiring to Connector

In accordance with the wiring diagram bellow, connect the wire of detectors to connectors.

Case of DC 3-wire Detector Sensor

- NPN type sensor and RPK-4C01-N

Connect to pol. 1, 3, 4

![Diagram of NPN type sensor and RPK-4C01-N]

- PNP type sensor and RPK-4C01-P

Connect to pol. 1, 3, 4

![Diagram of PNP type sensor and RPK-4C01-P]

Case of DC 2-wire Detector Sensor or Mechanical Sensor

- Non-polarized DC2-wire sensor and RPK-4C01-N

Connect to pol. 3, 4

![Diagram of non-polarized DC2-wire sensor and RPK-4C01-N]

- Polarized DC2-wire sensor and RPK-4C01-P

Connect to pol. 1, 4

![Diagram of polarized DC2-wire sensor and RPK-4C01-P]

Connection of Angle Connectors

In using angle connectors, use a connector which a projection is positioned indicated in the right figure. If you use different type connectors, connectors interfere each other and other connectors cannot connect into the contacts.

![Diagram of angle connector]

*Use this type connector.

B & PLUS k.k.  (Former NIHON BALLUFF co., Ltd.)
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Specifications are subject to change without notice.