

|                 |                     |                 |
|-----------------|---------------------|-----------------|
| <b>R Series</b> | Applicable cylinder | GLC HCA MFC SHC |
|-----------------|---------------------|-----------------|



R\*/R\*Y



R\*B



R\*A

## Specifications

| Descriptions          | Proximity 2-wire  |              |   | Proximity 3-wire   |  |                             |
|-----------------------|---|--------------|---|--|--|-----------------------------|
|                       | R1/R1K  | R2/R2K       | R2Y/R2YK (2-color display)                          | R3/R3K   | R3Y/R3YK (2-color display)                                     |                             |
| Applications          | For programmable controller, relay, compact solenoid valve                |              | Dedicated for programmable controller               |  | For programmable controller, relay, IC circuit, solenoid valve |                             |
| Output method         | -   |              |   | NPN output   |  |                             |
| Power supply voltage  | -   |              | -   |  | 4.5 to 28 VDC  |                             |
| Load voltage          | 85 to 265 VAC   | 10 to 30 VDC |   | 30 VDC or less   | 30 VDC or less   |                             |
| Load current          | 5 to 100 mA   | 5 to 30 mA   |   | 200 mA or less   | 100 mA or less   |                             |
| Current consumption   | -   |              | -   |  | With 24 VDC (when ON)  |                             |
|                       |   |              |   |  | 10 mA or less  | 16 mA or less               |
| Internal voltage drop | 10% or less of load voltage   |              | 4 V or less   |  | 0.5 V or less with 150 mA                                      | 0.5 V or less               |
| Indicator lamp        | Red LED (Lit when ON)   |              | Red/green LED (Lit when ON)                         |  | Red LED (Lit when ON)  | Red/green LED (Lit when ON) |
| Leakage current       | 1 mA or less with 100 VAC, 2 mA or less with 200 VAC                      | 1 mA or less |   | 10 µA or less  |  |                             |
| Lead wire length      | 1 m (oil resistant vinyl cabtyre cable 2-conductor 0.3 mm <sup>2</sup> )  |              |   | 1 m (oil resistant vinyl cabtyre cable 3-conductor 0.2 mm <sup>2</sup> ) |  |                             |
| Shock resistance      | 980 m/s <sup>2</sup>  |              |   |  |  |                             |
| Insulation resistance | 20 MΩ and over with 500 VDC megger  |              |   |  |  |                             |
| Withstand voltage     | No failure after 1 minute of 1,500 VAC application.                       |              | No failure after 1 minute of 1,000 VAC application. |  |  |                             |
| Ambient temperature   | -10 (14°F) to +60°C (140°F)   |              |   |  |  |                             |
| Degree of protection  | Grommet type: IEC standards IP67, JIS C0920 (water-tight), oil resistance |              |   |  |  |                             |
| Option                | Terminal box R*A (IP64), terminal box R*B (not waterproof)                |              |   |  |  |                             |
| Weight                | 1 m:42 g  | 3 m:100 g    | 5 m:158 g   | 1 m:56 g   | 3 m:114 g  | 5 m:172 g                   |

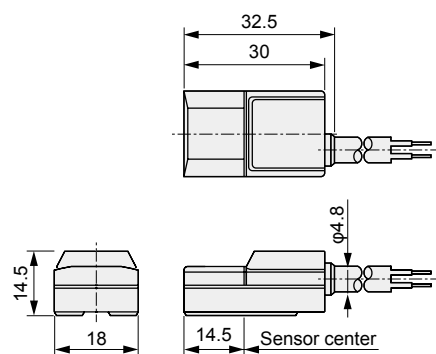
| Descriptions                  | Reed 2-wire   |            |            |   |              |   |               |               |   |           |
|-------------------------------|---|------------|------------|---|--------------|---|---------------|---------------|---|-----------|
|                               | R0  |            |            | R4                                      |              | R5  |               |               | R6  |           |
| Applications                  | For relay, programmable controller  |            |            | For high capacity relay, solenoid valve |              | For programmable controller, relay IC circuit (without indicator lamp), serial connection |               |               | Dedicated for programmable controller (with DC self-hold) |           |
| Power supply voltage          | -   |            |            | -                                       |              | -   |               |               | -   |           |
| Load voltage                  | 12/24 VDC   | 110 VAC    | 220 VAC    | 110 VAC                                 | 220 VAC      | 5/12/24 VDC   | 110 VAC       | 220 VAC       | 24 VDC ±10%   |           |
| Load current                  | 5 to 50 mA  | 7 to 20 mA | 7 to 10 mA | 20 to 200 mA                            | 10 to 200 mA | 50 mA or less   | 20 mA or less | 10 mA or less | 5 to 50 mA  |           |
| Current consumption           | -   |            |            | -                                       |              | -   |               |               | -   |           |
| Internal voltage drop         | 3.0 V or less   |            |            | 2 V or less                             |              | 0.5 V or less (*1)  |               |               | 5 V or less   |           |
| Indicator lamp                | Red LED (Lit when ON)   |            |            | Neon light OFF (Lit when OFF)           |              | None  |               |               | Red LED (Lit when ON)                                     |           |
| Leakage current               | 0 mA  |            |            | 1 mA or less                            |              | 0 mA  |               |               | 0.1 mA or less  |           |
| Lead wire length              | 1 m (oil resistant vinyl cabtyre cable 2-conductor 0.3 mm <sup>2</sup> )  |            |            |   |              |   |               |               |   |           |
| Shock resistance              | 294 m/s <sup>2</sup>  |            |            |   |              |   |               |               |   |           |
| Insulation resistance         | 20 MΩ and over with 500 VDC megger  |            |            |   |              |   |               |               |   |           |
| Withstand voltage             | No failure after 1 minute of 1,500 VAC application.                       |            |            |   |              |   |               |               |   |           |
| Ambient temperature           | -10 (14°F) to +60°C (140°F)   |            |            |   |              |   |               |               |   |           |
| Degree of protection          | Grommet type: IEC standards IP67, JIS C0920 (water-tight), oil resistance |            |            |   |              |   |               |               |   |           |
| Contact protection circuit *2 | Yes   |            |            |   |              |   | None          |               |   |           |
| Option                        | Terminal box R*A (IP64), terminal box R*B (not waterproof)                |            |            |   |              |   |               |               |   |           |
| Weight                        | 1 m:42 g  |            |            |   |              |   |               |               | 3 m:100 g   | 5 m:158 g |

\*1: Internal resistance 10 Ω or less.

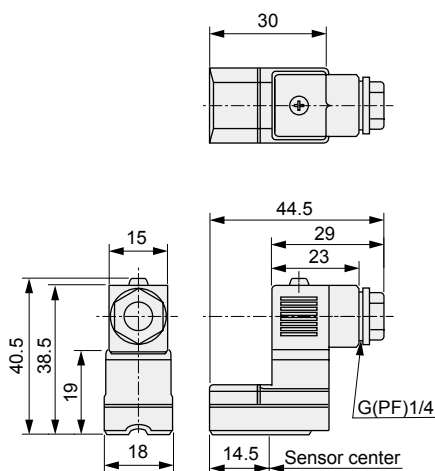
\*2: Refer to Intro Page 80 for contact protective measures.

## Dimensions

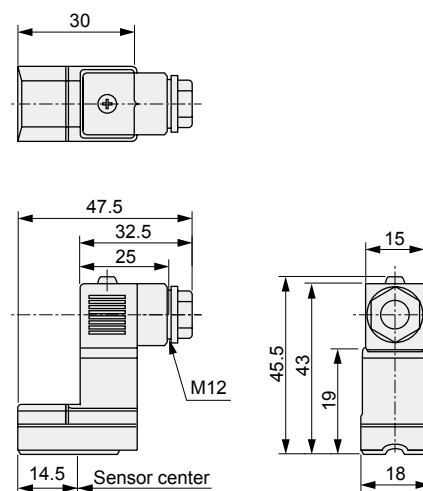
● R Series (grommet)



● R Series (terminal box R\*B)



● R Series (terminal box R\*A type)



## Switch internal circuit diagram

| ● R1 | ● R2/R2Y | ● R3/R3Y |      |
|------|----------|----------|------|
|      |          |          |      |
| ● R0 | ● R4     | ● R5     | ● R6 |
|      |          |          |      |

Cylinder switch