

# RD6R1A Rotary Type

Long-life sensor supporting absolute linearity



## Typical Specifications

| Items                       | Specifications |
|-----------------------------|----------------|
| Rated Voltage               | 5V DC          |
| Operating life              | 500,000 cycles |
| Total resistance            | 3.8kΩ          |
| Operating temperature range | -40°C to +85°C |

## Product Line

| Mounting method | Linearity guarantee range | Linearity | Hollow shaft variation | Minimum order unit (pcs.) |        | Model No.         |
|-----------------|---------------------------|-----------|------------------------|---------------------------|--------|-------------------|
|                 |                           |           |                        | Japan                     | Export |                   |
| Connector type  | 310°                      | ±2%       | φ3.53                  | 1,800                     | 1,800  | <b>RD6R1A0008</b> |

### Note

Please ask about linearity with variable ranges other than 320° .

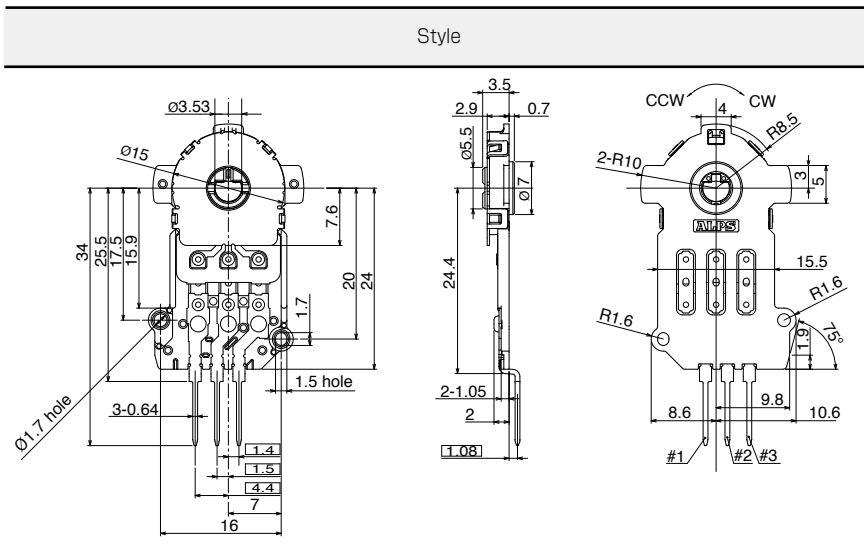
## Packing Specifications

Tray

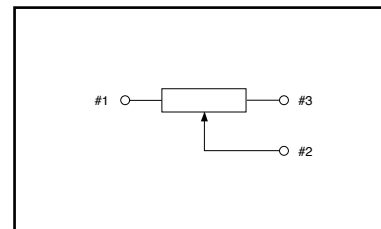
| Number of packages (pcs.) |                        | Export package measurements (mm) |
|---------------------------|------------------------|----------------------------------|
| 1 case /Japan             | 1 case /export packing |                                  |
| 1,800                     | 1,800                  | 540×360×250                      |

## Dimensions

Unit:mm



## Circuit Diagram



Resistive Position Sensors

Rotary Type

Linear Type

Refer to P.466 for product specifications.

# Resistive Position Sensors

## List of Varieties

| Type                           | Rotary Type   |   |   |   |
|--------------------------------|---|---|---|---|
| Series                         | RDC40   | RDC50   | RDC90   | RD6R1A  |
| Photo                          |  |  |  |  |
| Direction of lever             | Horizontal  | Vertical<br>Horizontal  | Vertical  |   |
| Effective electrical angle (°) | 5,400<br>(15 rotations)   | 333.3   | 80,260  | 320   |
| Linearity guarantee range (°)  | 4,680<br>(13 rotations)   | 320   | 60,244  | 310   |
| Travel                         | —   | —   | —   | —   |
| Operating temperature range    | −30°C to +80°C  | −40°C to +120°C   |   | −40°C to +85°C  |
| Operating life                 | 100,000 cycles  | 1,000,000 cycles  | 10,000,000 cycles   | 500,000 cycles  |
| Available for automotive use   | —   | ●   | ●   | ●   |
| Life cycle (availability)      |  |  |  |  |
| Mechanical performance         | Operating force   | —   | —   | —   |
|                                | Rotational torque   | 1.96mN·m max.   | 2mN·m max.  |   |
| Electrical performance         | Total resistance tolerance  | ±30%  |   | ±20%  |
|                                | Linearity (%)   | ±1  | ±2  | ±3  |
|                                | Rated voltage (V DC)  | 5   |   |   |
| Environmental performance      | Cold  | −30°C 240h  | −40°C 168h  |   |
|                                | Dry heat  | 80°C 240h   | 120°C 168h  | 85°C 168h   |
|                                | Damp heat   | 60°C,<br>90 to 95%RH 240h   | 60°C, 90 to 95%RH 96h   |   |
| Terminal style                 | Connector   | Insertion / Reflow  | Reflow  | Connector   |
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|   |     |
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### Note

- Indicates applicability to all products in the series.

