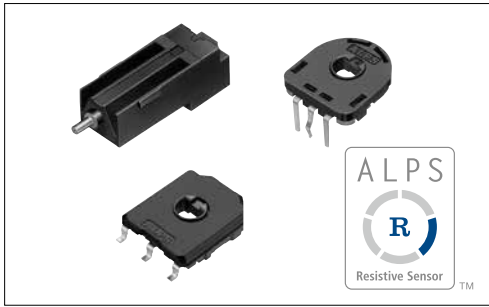




■ Typical Specifications



Items	Specifications		
	RDC40	RDC50	RDC90
Rated voltage	5V DC		
Operating life	100,000 cycles	1,000,000 cycles	10,000,000 cycles
Total resistance	10kΩ		3.3kΩ (RDC9010006) 10kΩ (RDC9010007)
Operating temperature range	-30°C to +80°C	-40°C to +120°C	

■ Product Line



Mounting method	Linearity guarantee range	Linearity	Hollow shaft variation	Operating life (cycles)	Minimum order unit (pcs.)		Model No.	Drawing No.
					Japan	Export		
Connector type	13 rotations	±1%	—	100,000	770	770	RDC401D07A	1
Horizontal type	320°	±2%	φ3.5 dia	1,000,000	1,500	3,000	RDC501051A	2
			φ3.5 dia with radius				RDC501052A	3
Vertical type			φ3.5 dia				RDC502012A	4
Reflow type			φ3.5 dia with radius				RDC503051A	5
							RDC503052A	6
Reflow type (Low-profile)			φ4 dia		3,600	3,600	RDC506018A	7
Reflow type (Long-life)	60°	±3%	φ3.5 dia	10,000,000	1,960	1,960	RDC9010006	8
	244°						RDC9010007	

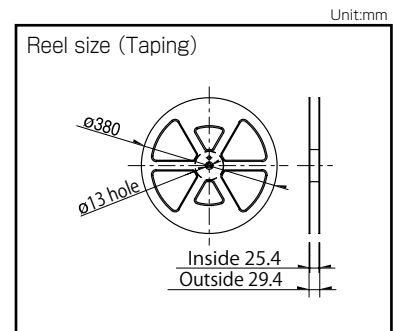
Note

Other varieties are also available. Please inquire.

■ Packing Specifications


Tray / Taping

Series	Packing Specifications	Number of packages (pcs.)		Tape width (mm)	Export package measurements (mm)
		1 case / Japan	1 case / export packing		
RDC40	Tray	770	770	—	526×370×191
RDC501		1,500	3,000		
RDC502		1,600	1,600		
RDC503	Taping	3,900	3,900	24	415×407×135
RDC506		3,600	3,600		
RDC90	Tray	1,960	1,960	—	300×240×270





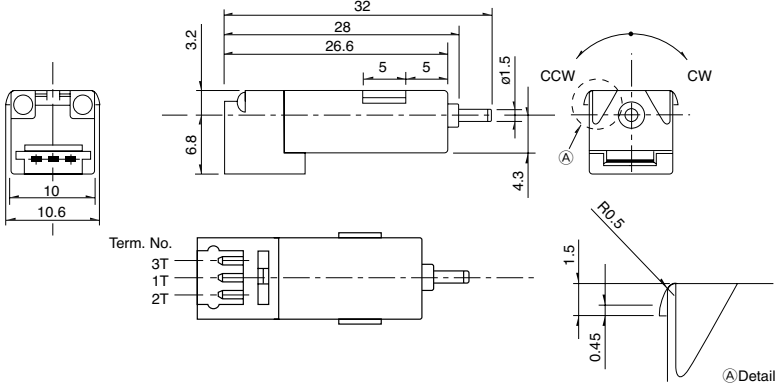

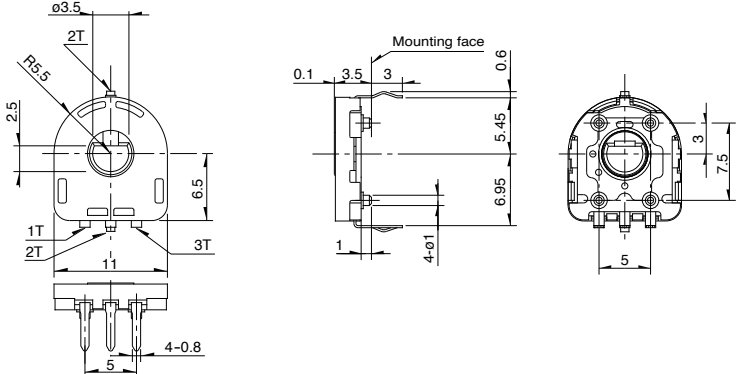

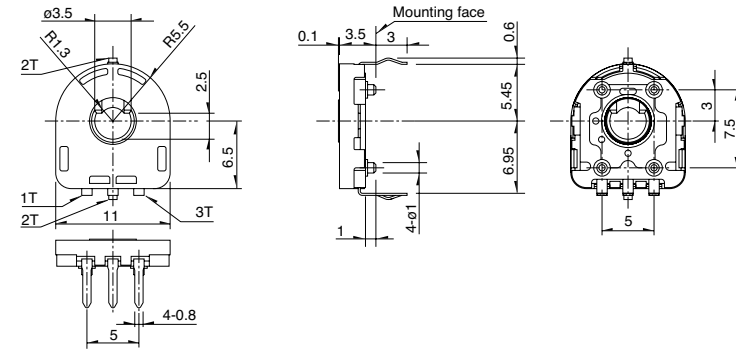

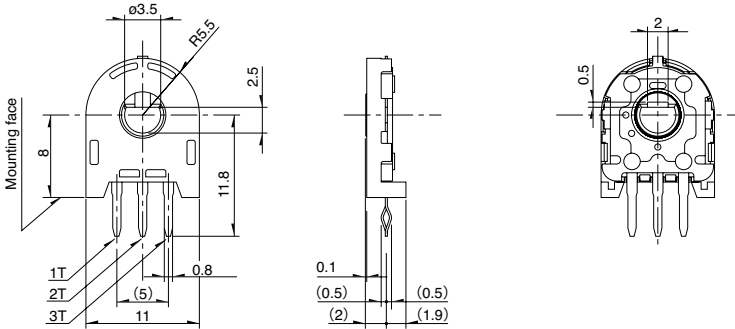
*Products marked with a are not recommended for new designs

Refer to P.466 for product specifications.
Refer to P.467 for soldering conditions.

*Products marked with a  are not recommended for new designs

■ Dimensions

Unit:mm

No.	Photo	Style
1	<p>RDC40 (Multiple turns type)</p>  	 <p>Term. No. 3T 1T 2T</p> <p>CCW CW</p> <p>R0.5</p> <p>0.45</p> <p>1.5</p> <p>Ⓐ Detail</p>
2	<p>RDC501 (Horizontal type)</p> 	 <p>Mounting face</p>
3	<p>RDC501 (Horizontal type, $\phi 3.5$ dia with radius)</p> 	 <p>Mounting face</p>
4	<p>RDC502 (Vertical type)</p> 	 <p>Mounting face</p>


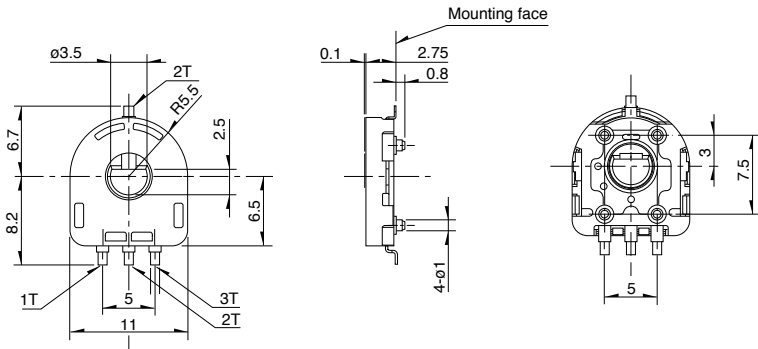

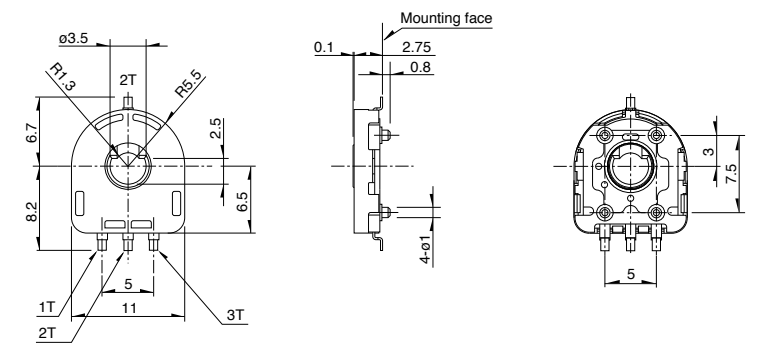

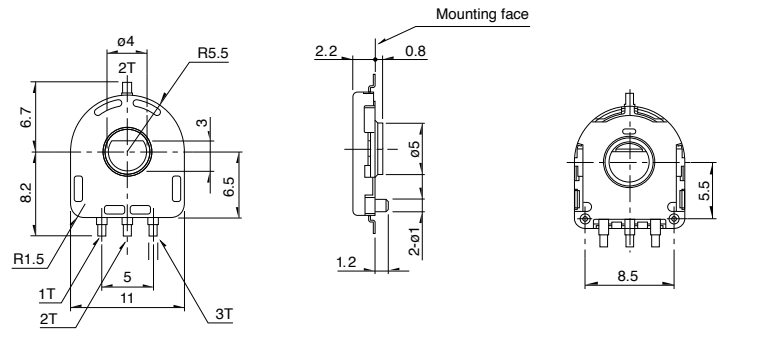

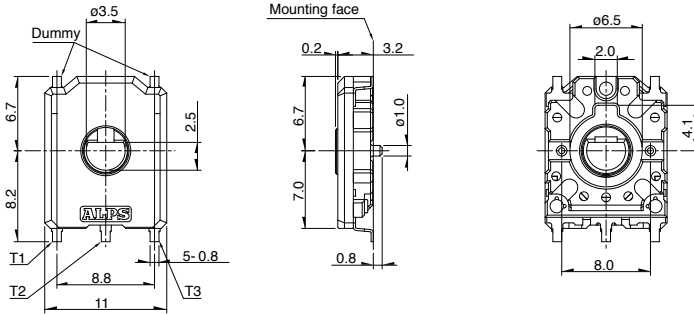
Resistive
Position Sensors

Rotary Type

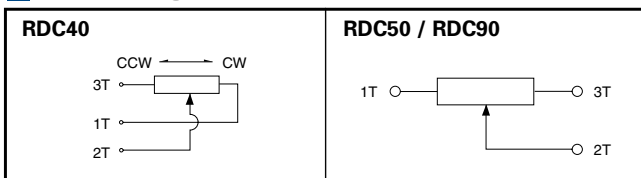
Linear Type

■ Dimensions

Unit:mm

No.	Photo	Style
5		
6		
7		
8		

■ Circuit Diagram



Resistive Position Sensors

List of Varieties

Type	Rotary Type				
Series	RDC40	RDC50	RDC90	RD6R1A	
Photo					
Direction of lever	Horizontal	Vertical Horizontal	Vertical		
Effective electrical angle (°)	5,400 (15 rotations)	333.3	80, 260	320	
Linearity guarantee range (°)	4,680 (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	±2 (320°)
	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, 90 to 95%RH 240h	60°C, 90 to 95%RH 96h		80°C, 90 to 95%RH 96h
Terminal style	Connector	Insertion / Reflow	Reflow	Connector	
Page	456			459	

Resistive Position Sensors Measurement and Test Methods	466
Resistive Position Sensors Soldering Conditions	467
Resistive Position Sensors Cautions	467

Note

- Indicates applicability to all products in the series.

*Products marked with a  are not recommended for new designs

