

Rotary Position Sensor

PHS11R Series



Features:

- Dust proof construction protects the interior from dust, which maintains stable characteristics
- Excellent resistance materials and high reliability wiper achieves 1,000,000 cycles
- Ultra-thin size (2.2mm height)



Description:

The PHS11R series is a rotary position sensor that features dust proof construction, an ultra thin size, and a life cycle of 1 million cycles.

Applications:

- Rotary angle sensor
- Electric motor-driven bicycle
- Motor drive unit
- HVAC sensor

Electrical Characteristics	
$T_A = 25^{\circ}\text{C}$ unless otherwise noted	
Resistance Range	1K Ω to 100K Ω
Standard Resistance Tolerance	$\pm 20\%$
Rated Power	0.1W
Linearity (electrical angle $< 180^{\circ}$)	$\pm 5\%$
Linearity ($180^{\circ} \leq$ electrical angle $< 300^{\circ}$)	$\pm 3\%$
Linearity (electrical angle $\geq 300^{\circ}$)	$\pm 2\%$
Rotational noise	$< 80\text{ mVp-p}$
Effective Electrical Angle	60° to 341° (see ordering information)
Effective Electrical Angle Tolerance	$\pm 2^{\circ}$
TCR	$\pm 500\text{ ppm}/^{\circ}\text{C}$

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

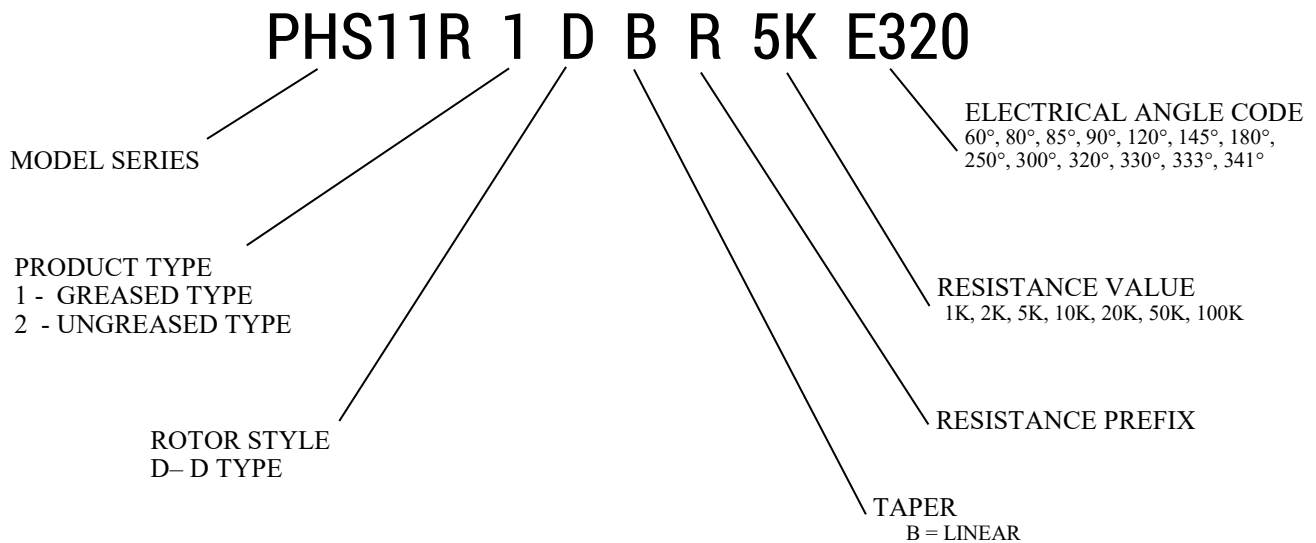
Rotary Position Sensor

PHS11R Series



Mechanical Characteristics	
Rotational Angle	360°
Rotational torque	0-30gf-cm
Shaft push/pull strength	> 1.0kgf for 10 sec min
Storage Temperature	-40°C to +120°C
Operating Temperature	-40°C to +120°C
Life Cycles	1,000,000 cycles min $\Delta RT \pm 10\%$ (Ungreased Type) $\Delta RT \pm 20\%$ (Greased Type)
Dry Heat	120 \pm 3°C, 250 \pm 8H $\Delta RT \pm 20\%$, Linearity: $\pm 2\%$
Cold	-40 \pm 3°C, 168 \pm 4H $\Delta RT \pm 20\%$, Linearity: $\pm 2\%$
Humidity	60 \pm 2°C, 90 to 95RH, 250 \pm 8H $\Delta RT \pm 20\%$, Linearity: $\pm 2\%$
Temperature Cycling	-40°C to +120°C, 5 cycles $\Delta RT \pm 20\%$, Linearity: $\pm 2\%$

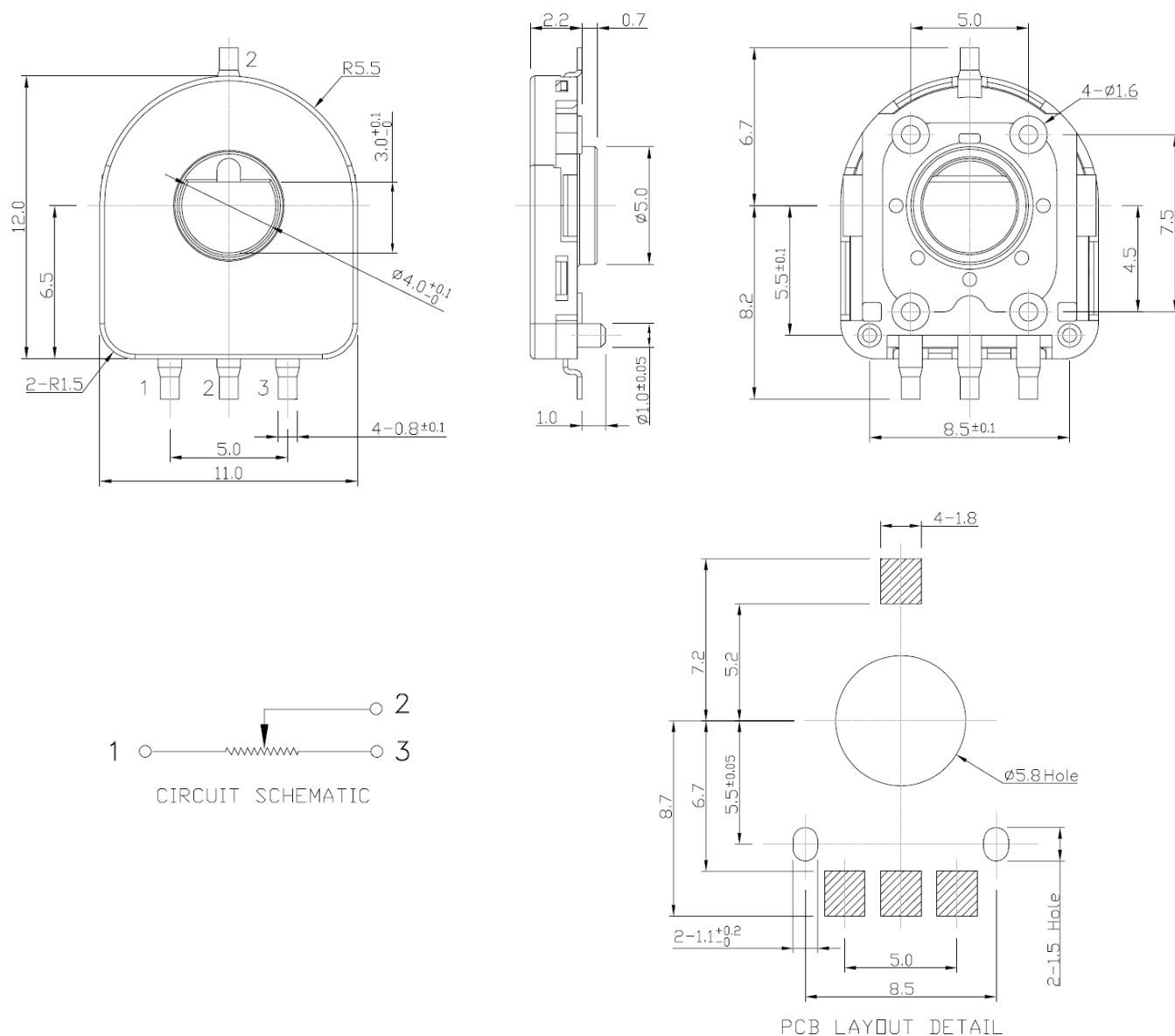
ORDERING INFORMATION



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

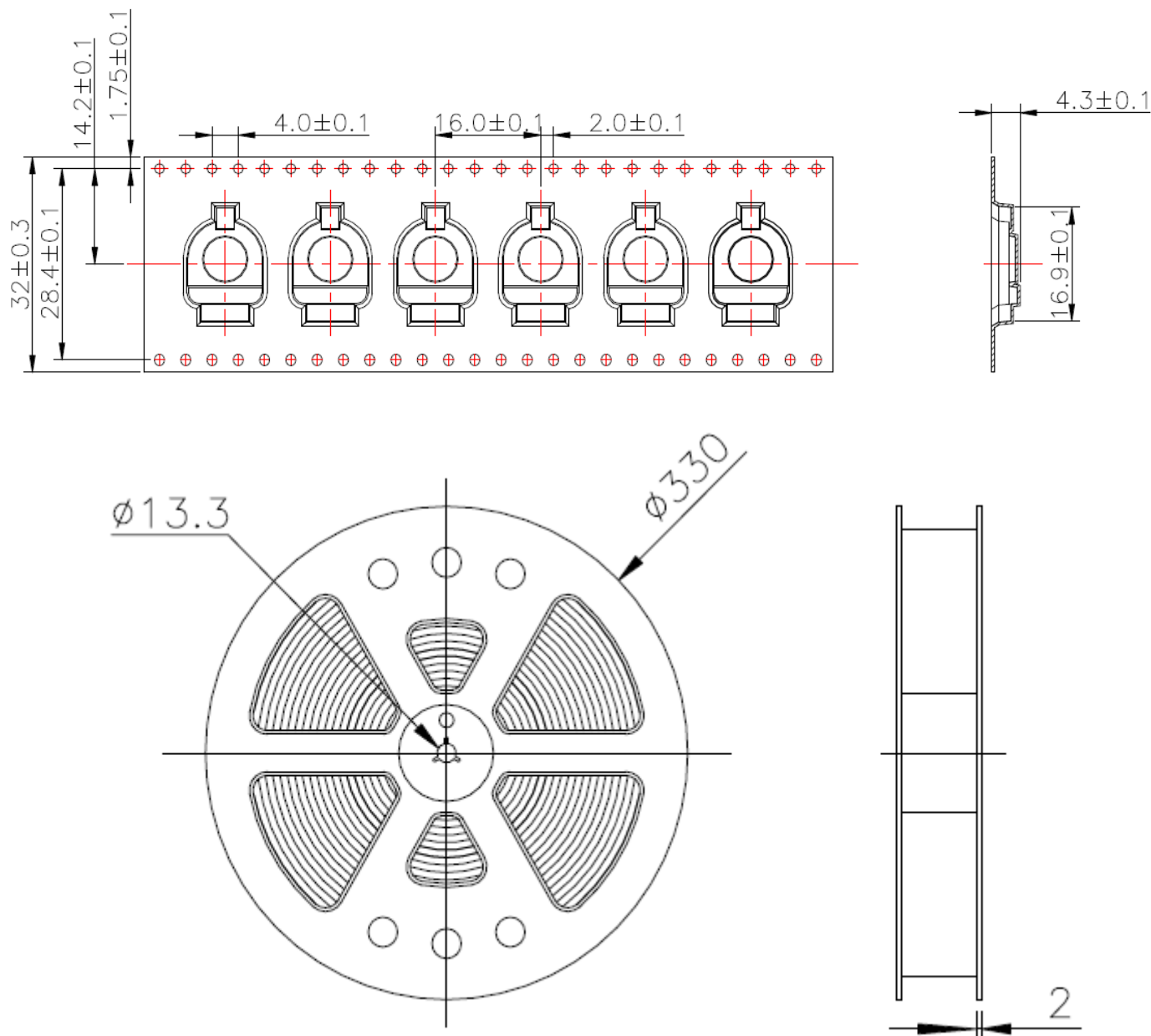
OUTLINE DRAWING



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Packaging Detail: Tape & Reel, 1K per reel



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TT Electronics:](#)

[PHS11R2DBR10KE333](#) [PHS11R2DBR10KE341](#) [PHS11R2DBR5KE333](#)