

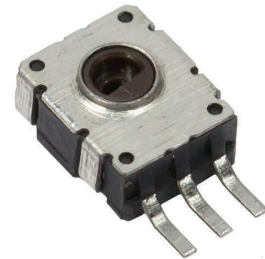
Rotary Position Sensor

PHS04 Series



Features:

- Angle/Position sensor with more than a 300,000 life cycle
- Small footprint size at 4mm width x 5mm length
- Smooth operation



Description:

The PHS04 series is a rotary position sensor that features a small footprint, smooth operation, and a 300,000 life cycle. Some applications are game controllers and robot joint angle controls.

Applications:

- Robot joint angle control
- Game controller

Electrical Specifications

Electrical Characteristics ($T_A = 25^\circ \text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Ω	Total Resistance	1K		100K	Ohms	
V	Rated Voltage	5.0		50	Volts	
W	Rated Power		0.01		Watts	
	Linearity Tolerance			$\pm 5\%$		
	Resistance Tolerance		20%			
	Sliding Noise			300	mV	
	Withstand Voltage		1		Min	At AC 250V
	Insulated Resistance	100			m Ω	DC250V, 1 minute

General Note

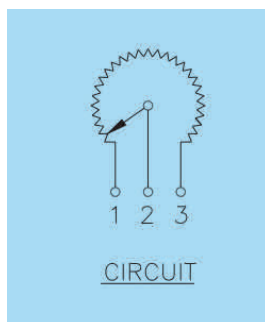
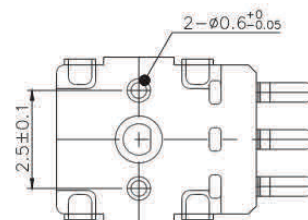
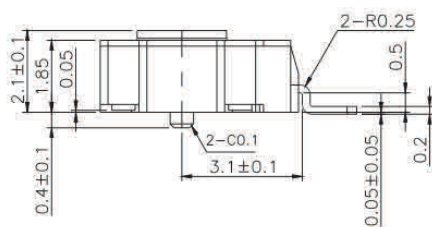
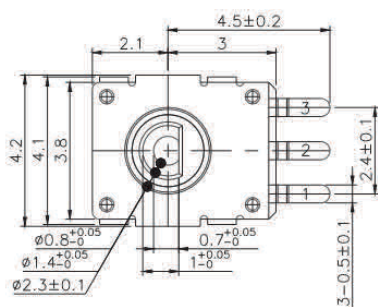
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Rotary Position Sensor

PHS04 Series



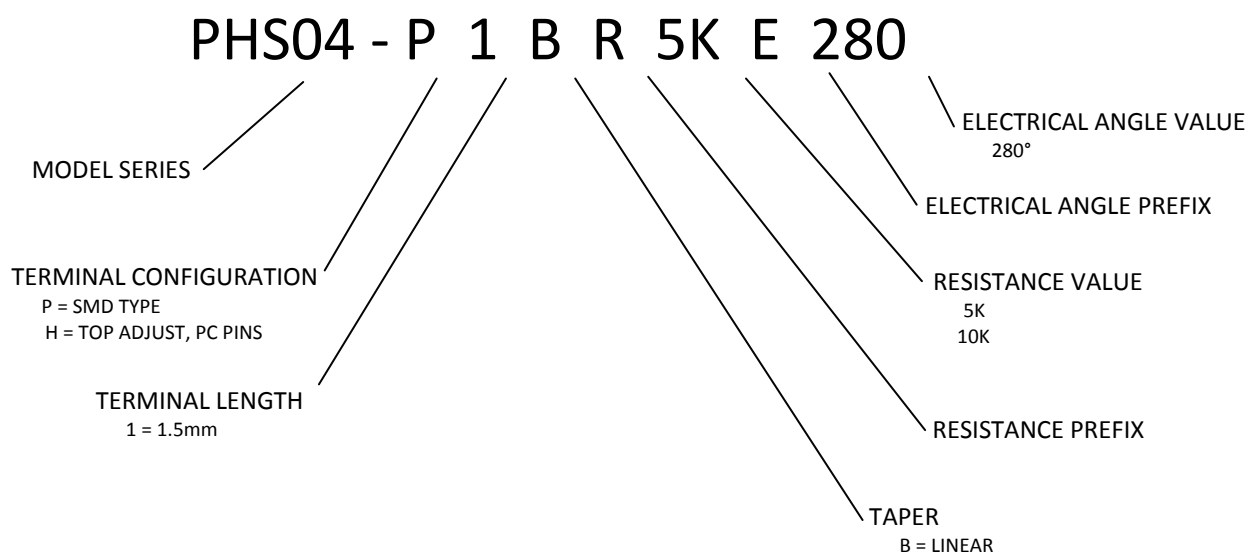
Mechanical Characteristics	
Rotational torque	20mN-m
Total rotational angle	360°
Push strength	30 N, 3 sec
Pull strength	5 N, 3 sec
Operating temperature	-20°C to 70°C
Storage temperature	-30°C to 70°C
Operating life	300,000 (Standard) 500,000 (Long life)
Dry Heat	70±2°C, 240±2hr, -30%≤ΔTR≤+5%
Cold	-30±2°C, 300±5hr, without load, ΔTR≤±20%
Damp Heat	70±2°C, 85%RH, 300±5hr, -5%≤ΔTR≤+35%
Temperature Cycle	-10~+70°C, 5 cycles, ΔTR≤±10%
Temperature Characteristics	70±3°Cn 5hr, -20%≤ΔTR≤+5%
Soldering Conditions	Wave soldering: 250±5°C Peak, 3 sec max Manual soldering: 300°C Peak, 3 sec. max



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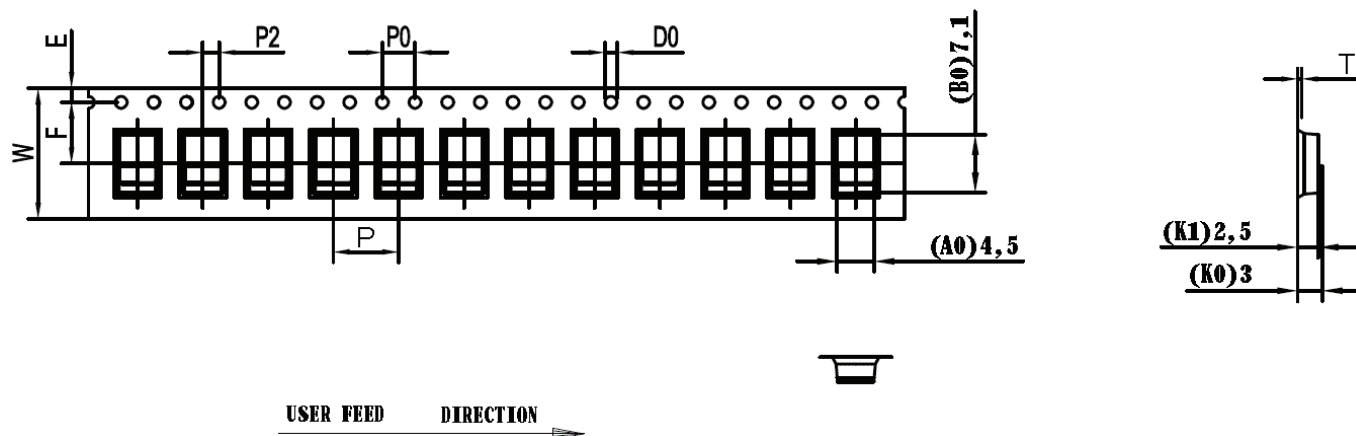
Ordering Information



General Note

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Packaging Specification



Notes:

- (1) The accumulated error of any 10 ratchet holes is below $\pm 0.20\text{mm}$;
- (2) Measurement of thickness of material must be conducted by the edge of the carrier belt
- (3) The non-parallelism of the distance of 100mm in the longitudinal of the carrier tape shall not exceed 1mm; anything exceeding 250mm does not calculate accumulated error.
- (4) Unspecified tolerance range within $\pm 0.1\text{mm}$;
- (5) A0, B0 measurement must be conducted at 0.3mm above the inner bottom of cavity, KO is internal depth.
- (6) Chamfer R of any unmarked cavity is 0.2-0.3
- (7) Unmarked demolding slope is 5°

ITEM	W	A0	B0	K0	K1	P	F	E	D	P0	P2	T	13"	
DIM	16.0	4.50	7.10	3.0	3.00	8.00	7.50	1.75	1.50	4.00	2.00	0.35	Length/ reel	Units/ reel
TOLE	+0.30 -0.30	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.15 -0.15	+0.05 -0.05	23.04M	2800pcs

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Mouser Electronics

Authorized Distributor

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