

# Rotary Position Sensor

PHS11 Series

**OBSOLETE**  
use PHS11R



## Features:

- Dust proof construction protects the interior from dust, which maintains stable characteristics
- Excellent resistance materials and high reliability wiper achieves 1,500,000 cycles
- Ultra-thin size (2.2mm height)

## Description:

The PHS11 series is a rotary position sensor that features dust proof construction, an ultra thin size, and a life cycle of 1,500,000 cycles. Some applications are HVAC sensors and motor drive units.

## Applications:

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

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$\Omega$	Resistance	1K		100K	Ohms	
	Total resistance tolerance		$\pm 20\%$			
	Power rating			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			$< 80$	mV	
	Effective Electrical Angle		333	$\pm 3$	Degrees	
	TCR		$\pm 500$		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.

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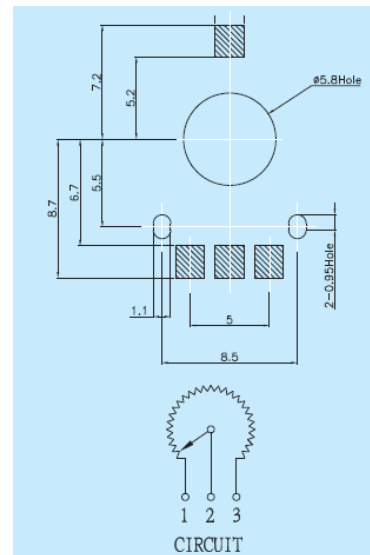
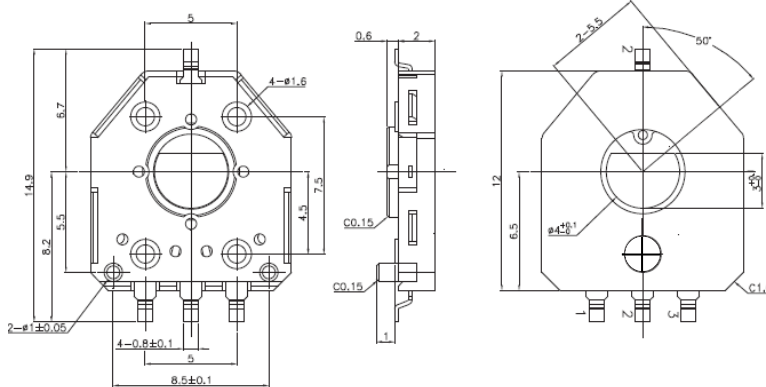
PHS11 Series

**OBSOLETE**



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	1,500,000 cycles min
Dry Heat	120 ± 3°C, 250 ± 8H ΔTR ± 20%, Linearity: ±2%
Cold	-40 ± 3°C, 168 ± 4H ΔTR ± 20%, Linearity: ±2%
Humidity	60 ± 2°C, 90 to 95RH, 250 ± 8H ΔTR ± 20%, Linearity: ±2%
Temperature Cycles	-40°C to +120°C, 5 cycles ΔTR ± 20%, Linearity: ±2%

## Packaging



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