

# Model TSA50

## None-Contact Angle Position Sensor

- Hall effective
- Absolute Position
- Linearity  $<\pm 0.2\%$
- Long life
- Single turn
- Servo\Penal Mount
- None-Standard Features and Specifications Available



### MECHANICAL

Total Mechanical Travel	0 - 360( $\pm 5$ )° (with\without stop)
Starting Torque	0.5Ncm
Max Rotating Speed	120rpm
Max Permitted Axial Shaft Load	10N
Max Permitted Radial Shaft Load	10N
Weight	24g

### ELECTRICAL

Measuring Range	360° (Find more options in ORDER INFO)
Independent Linearity	$< \pm 0.2\%$
Resolution	12 bit
Refresh Rate	290 ( $\pm 15$ ) $\mu$ s
Max. Hysteresis	0.1°
Max. Repeatability	0.1°
Supply Voltage	5 ( $\pm 10\%$ ) VDD (Find more options in ORDER INFO)
Supply Current	$< 12$ mA
Output Load Analog	10k $\Omega$
Load Output Capacity	10 to 330nF

### ENVIRONMENTAL

Protection Class	IP54/IP65
Life	$> 10 \times 10^5$
Operation Temperature Range	-40°C ~ +150°C (Find more options in ORDER INFO)
Shock	50g, 11m
Storage Temperature	-40°C ~ +85°C

### CE-CONFORMITY

RF noise field strength EN 55011, class B  
ESD EN 61000-4-2  
Radiated immunity EN 61000-4-3  
Burst EN 61000-4-4  
Conducted disturbances induced by RF fields EN 61000-4-6

### ACCESSORY

Length of wires / ribbon cable	Standard	AWG24 15cm
Length of wires / ribbon cable	Optional	AWG24 20cm
Length of wires / ribbon cable	Optional	Other Length

## ORDERING INFORMATION

		Mechanical Travel	
	360° without stop	Standard	1
	Other Angle Request with stop	Optional	X
		Effective Electronic Travel	
	360°	Standard	1
	Other Angel	Optional	X

### Shaft Type

D	Standard	D Type
I	Standard	I Type
R	Standard	Round Type
X	Optional	Other Type Request

### Shaft Length

1	Standard	31mm
X	Optional	Other Length Request

### Operation Temperature

E	Standard	-40°C ~ +85°C
K	Standard	-40°C ~ +125°C
L	Optional	-40°C ~ +150°C

TSA50

1 1 1 3 6 0 3 6 0 D 1 E

### Output Signal

1	Standard	10% - 90%
2	Standard	0% - 100%
3	Optional	4 - 20 mA
X	Optional	X% - Y%

### Input Voltage

1	Standard	5V DC
2	Optional	10V DC
3	Optional	12V DC
4	Optional	24V DC
X	Optional	Other Input Request

### Output Characteristic

1	Standard	Positive gradient CW
2	Standard	Positive gradient CCW
3	Optional	Redundant, positive gradient CW
4	Optional	Redundant, positive gradient CCW
X	Optional	Other Request

## OUTLINE DRAWING

