

# Single Ear Rotary Position Sensor

## TYPICAL APPLICATIONS:

Small engine throttle plate position sensing and other similar applications where available space for an external feedback sensor is limited.

### Features/Benefits:

- **Compact package with integral Yazaki® connector**  
Choice of mounting ear locations  
Clockwise or counterclockwise rotation
- **Highly resistant to fluid intrusion**  
Internal rotor seal  
Optional external interface seal
- **Tang drive, spring return rotor accepts 6mm shaft**



## TYPICAL SPECIFICATIONS:

### ELECTRICAL

Total Resistance:	5.0 k Ω, ± 40%
Linearity:	± 2.0% (point slope linearity)
Rotation Maximum:	122° mechanical 105° typical electrical
Hysteresis:	≤ 1.0% applied voltage
Slope:	0.8% / degree
Normal Index Voltage:	6% of applied at mid-adjustment
Adjustable Index Range:	0 - 20% of applied
Torque Requirement:	5.11 N-cm
Electrical Limit Maximum:	16 VDC
Typical Voltage:	5 - 10 VDC
Maximum Power Rating:	0.8 watts

### DURABILITY

Mechanical Cycling:	2x10 <sup>6</sup> full strokes @ 1 Hz; 0.5 x 10 <sup>6</sup> half strokes @ 0.5 Hz
Standard Vibration:	24 hrs., 3 planes; random 33 to 2000 Hz; 1.36 - 25g; 0° to 80°C
Thermal Shock:	100 Cycles, -40° to 120°C; transition time less than 1 minute soak at each temperature

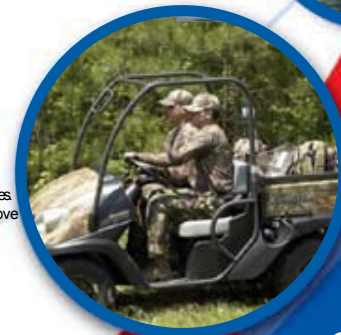
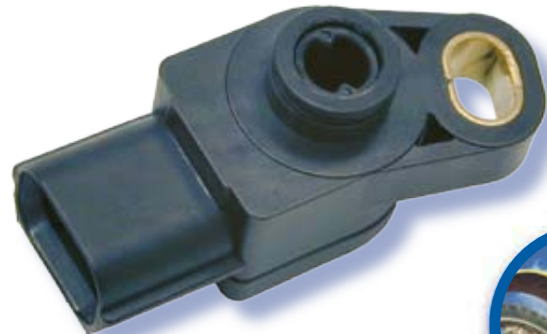
### Temperature Range

Operating Temperature Range:	-40° to 120°C
Storage Temperature Range:	-40° to 120°C

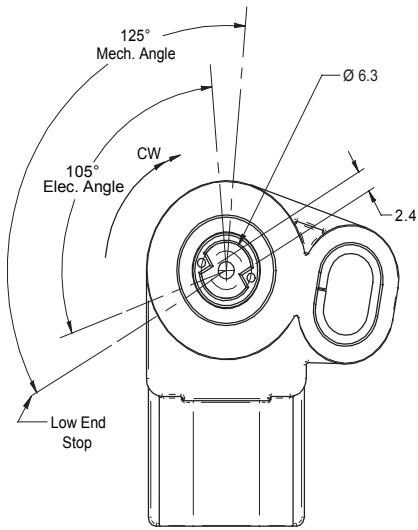
### ENVIRONMENTAL

Water Resistance:	JIS D0203
Solvent Exposure:	Brush on gasoline, engine oil brake fluid, transmission fluid and antifreeze
Dust Exposure:	JIS D0207-F2

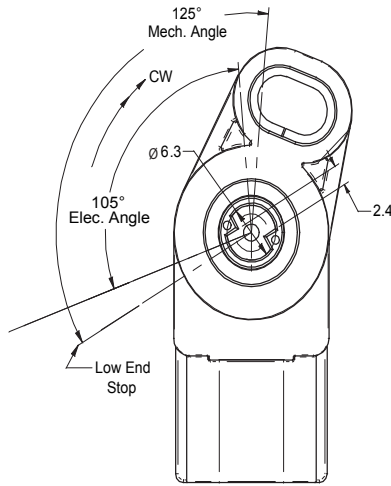
NOTE: These standard specifications have been met by existing production-tooled units evaluated with precise test equipment and procedures. Test results, including failure criteria, is available upon request. This data sheet does not constitute a warranty that the product will meet the above specifications while used in specific applications or attached to specific test equipment.



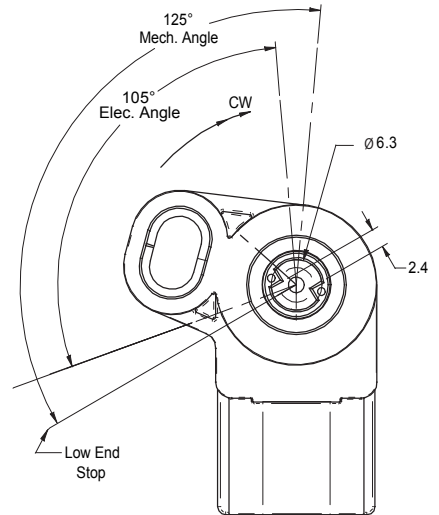
### ACW



### BCW

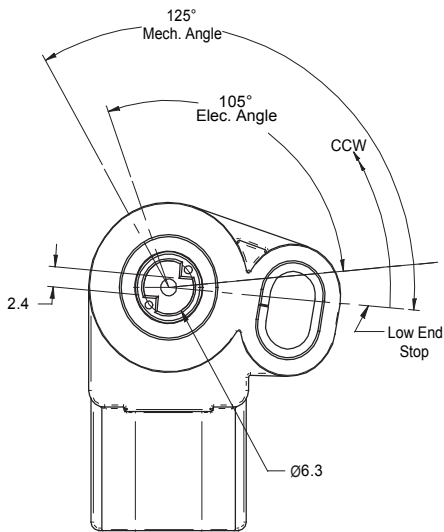


### CCW

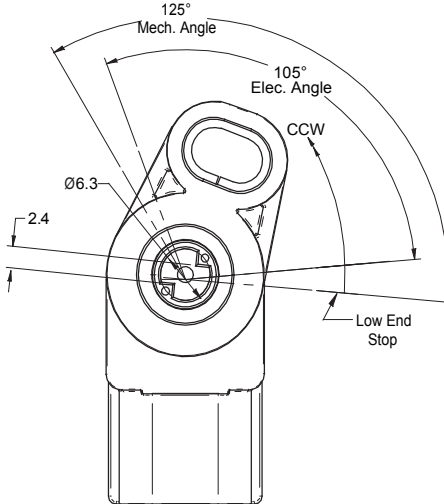


DIMENSION : mm

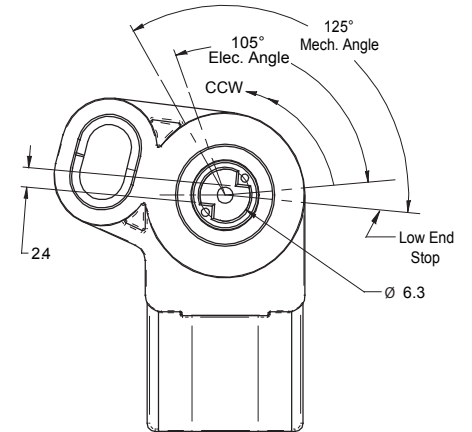
### ACCW



### BCCW



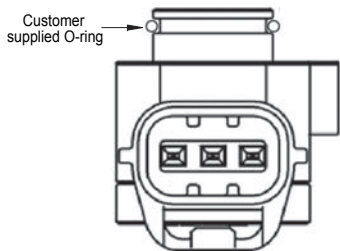
### CCCW



DIMENSION : mm

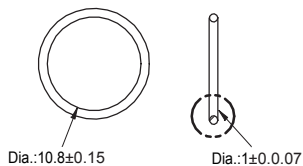
## RECOMMENDATION OF CUSTOMER SUPPLIED HARDWARE AND O-RING

### Connector



Recommendation of connector:  
Yazaki Dwg. SSD 3P Connector Male  
P/N: 7283-8730-30 : A

### O-Ring



### Bolt



**5mm bolt**  
Nominal length 16mm - Pitch 0.8mm  
Wave Washer 0.5mm approx. thick.  
Flat Washer Ø8.9mm min. X 1.0mm thick.  
Fastening Torque - 4.5Nm MAX.

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## Ordering Information

**500**

**A**

MOUNTING STYLE
A – A TYPE
B – B TYPE
C – C TYPE

**CCW**

SPRING
CW – Clockwise
CCW – Counter Clockwise

**D**

RESISTANCE TOL.
D : $\pm 40\%$

**O**

Optional O-ring
O : O-ring installed
Blank : No O-ring

**G**

Optional Grease
G : Grease Inside Connector Pocket
Blank : No Grease