

Contactless TMR-Element Angle Sensor

MIDORI CP-16U Series



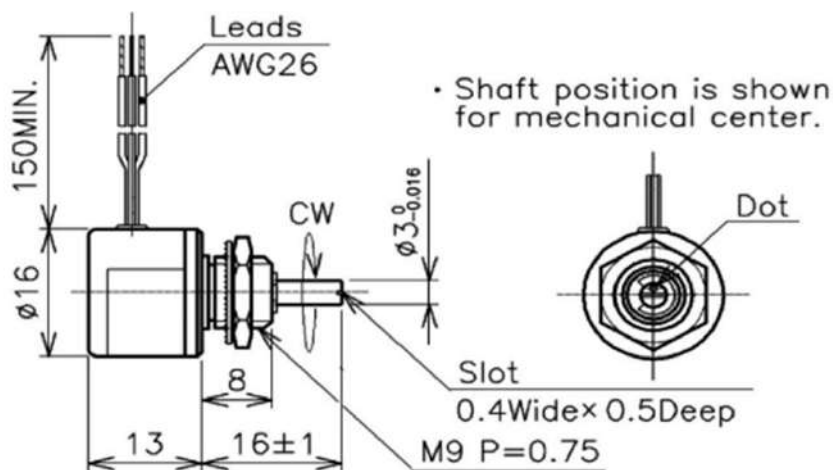
General

- Single-turn TMR-Element Angle Sensor
- Lower Current Consumption: 0.6mA MAX.
- Effective Electrical Angle: 90° (Option: 120°)
- Independent Linearity: $\pm 1.5\%$ FS
- Low Torque

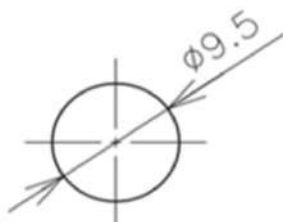
Material

- Housing: Aluminum
- Shaft: Stainless Steel
- Ball Bearing: Stainless Steel

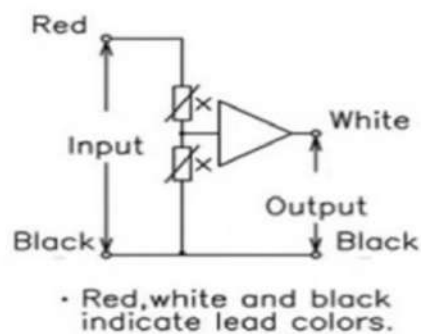
Dimension (mm)



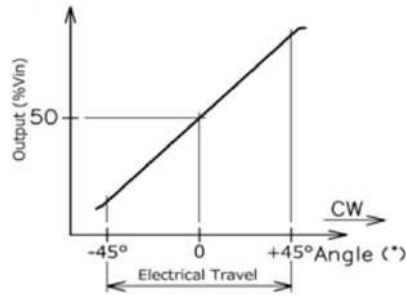
Mounting(mm)



Schematic



Output Characteristics



Specifications

CP-16U	
Electrical Specifications	
Effective Electrical Travel	±45°
Output Sensitivity	0.35~0.65%Vin/°
Independent Linearity	±1.5%FS
Input Voltage	DC3V~5.5V
Current Consumption	0.6mA MAX.
Load Resistance	100KΩ MIN.
Insulation Resistance	100MΩMIN./DC500V
Temp. Characteristics -30~+100°C (Reference Temp. 25°C)	@0° Position: ±0.9° @ ±45° Position: ±7°
Dielectric Strength	AC500V/1Minute
Mechanical Specifications	
Total Mechanical Travel	360° Endless
Torque	0.1mN · m MAX.
Thrust Load Tolerance	1N
Radial Load Tolerance	5N
Mass	Approx. 10g
Environmental Specifications	
Life Cycles	10Million Cycles MIN.
Category Temperature Range	-30~+100°C
Storage Temperature Range	-40~+100°C
Vibration	200m/S ² , 5~500Hz(20min), 3axis 2hours each
Shock	1000m/S ² , 11ms 3axis 3times
EMS	25V/m 1MHz~1GHz (IEC11452-2, -3)
ESD (Case to Each Terminal)	±4KV (IEC61000-4-2)
ESD (Each Terminal)	±8KV (IEC61000-4-2)

Options

Temperature Compensating Range: -20~+80°C

Effective Electrical Travel: 120° (Independent Linearity: ±2.5%FS)

Accessories

N9 Nut, Internal Toothed Lock Washer 1piece each

Handling Instruction

- Do not use this sensor as a variable resistor.
- This product may be influence from external magnetic field.
- Use this sensor in the place where is protected from ESD.