Conductive Plastic Angle Sensor

MIDORI **CP-45F** Gear Head Series

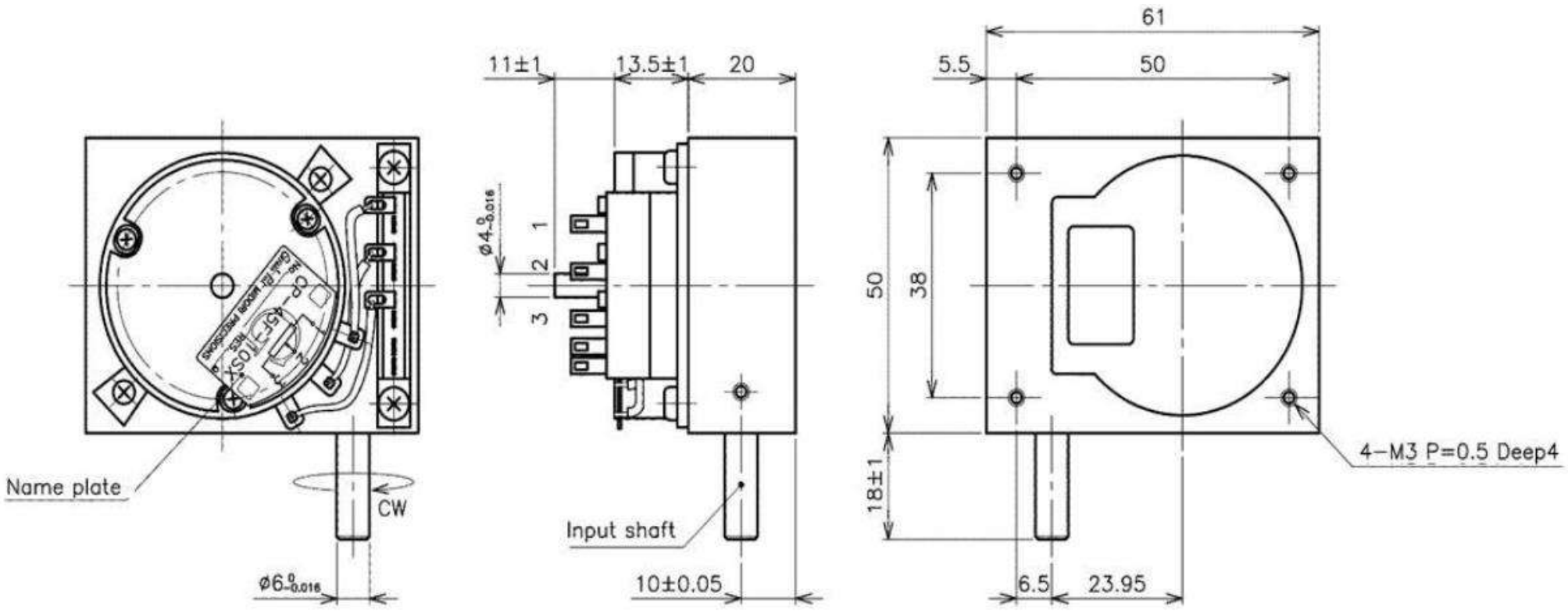
General

- Conductive Plastic Multi-turn Angle Sensor
- Effective Electrical Travel: 34000° (CP-45F-10SX)
  : 8400° (CP-45F-24SX)
  : 12250° (CP-45F-35SX)
  : 35000° (CP-45F-100SX)
- Independent Linearity: ±0.1%
- Output : Voltage Ratio Output

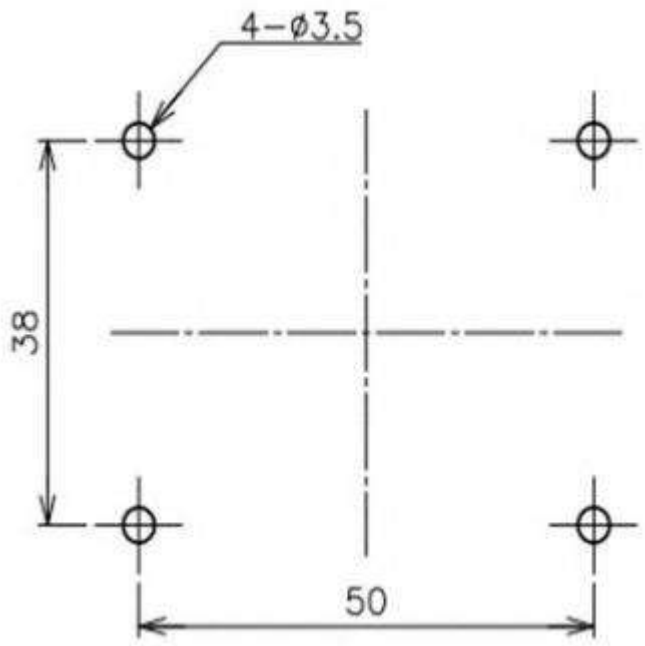
Material

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

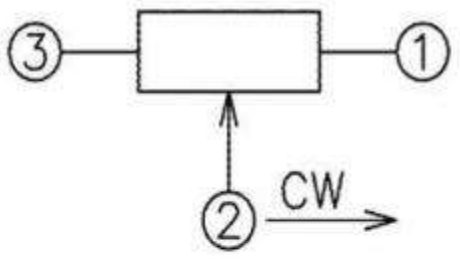
Dimension (mm)



Mounting(mm)

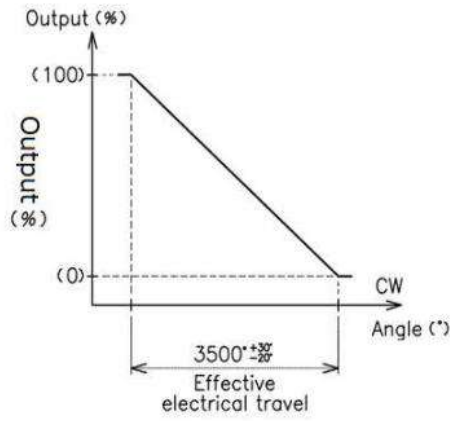


Schematic



- ①②③ :Terminal No.
- This schematics shows the rotation direction as viewed from the input shaft.

Output Characteristics



Specifications

Electrical Specifications

	CP-45F-10SX	CP-45-24SX	CP-45F-35SX	CP-45F-100SX
Effective Electrical Travel	3500° +30° ,-20°	8400° +72° , -48°	12250° +105° , -70°	35000°+300°, -200°
Output Range	1K, 2K, 5K, 10K Ω			
Total Resistance Tolerance	±15%			
Independent Linearity	±0.1%			
Rated Dissipation	3W/ 70℃			
Output Smoothness	0.1% MAX.			
Insulation Resistance	100MΩMIN./DC1000V			
Dielectric Strength	AC1000V/ 1Minute			
TC of Resistance	±400ppm/K			

Mechanical Specifications

Gear Ratio	10:1	24:1	35:1	100:1
Torque	4mN・m MAX.			
Thrust Load Tolerance	5N			
Radial Load Tolerance	16N			
Repeatability	0.03% MAX. (Including Backlash)			
Weight	Approx. 210g			

Environmental Specifications

Category Temp. Range	-40~+120℃
Storage Temp. Range	-40~+85℃

Options

Total Resistance: 0.5K, 20KΩ

Gear Ratio: 14:1 (CP-45F-14SX), 60:1 (CP-45F-60SX)

Handling Instruction

- **To avoid burnout of resistive element, do not supply more than 1mA current to terminal 2.**
- **Miswiring might cause burnout of resistive element.**
- **To reduce sliding noise, add load resistance should be more than 100times and less than 1000times of total resistance.**
- **Slight continuous vibration such as dither might cause short lifetime of the sensor.**