

Contactless Hall-IC Angle Sensor

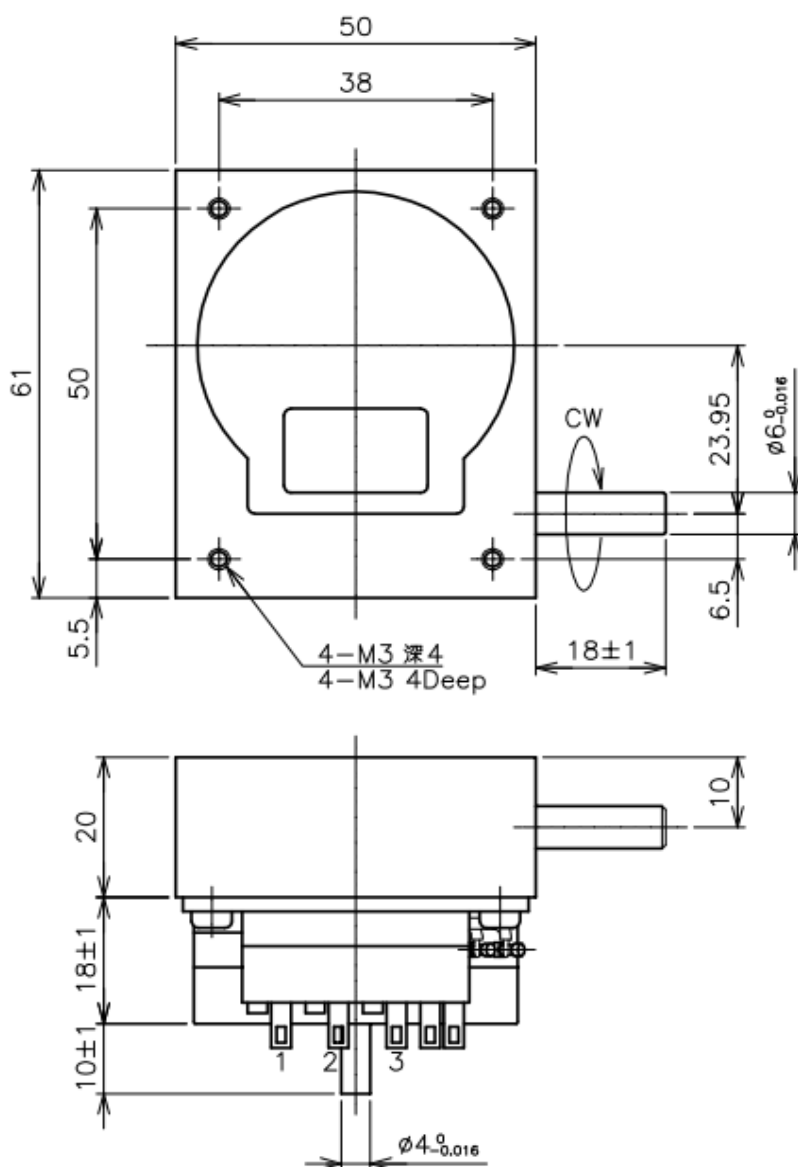
**CP-45H-S Series**

- Contactless Hall-IC Multi-Turn Angle Sensor
- Effective Electrical Trave : 3500° (CP-45H-10S)  
: 35000° (CP-45H-100S)
- Absolute Linearity :  $\pm 0.4\%$ FS (Independent Linearity  $\pm 0.2\%$ FS)

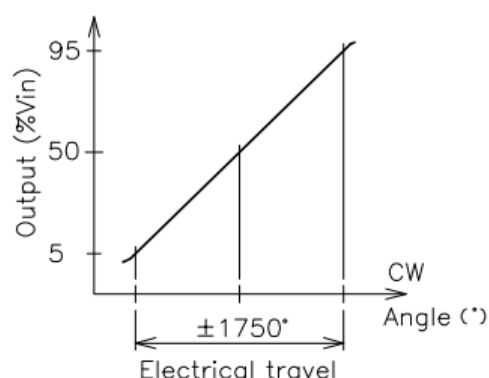
## 【Material】

- Housing : Aluminum
- Shaft : Stainless Steel
- Ball Bearing : Stainless Steel
- Gear Box : Aluminum die-casting

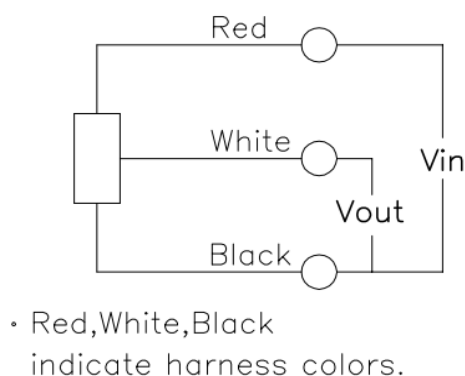
## ■ Dimension [mm]



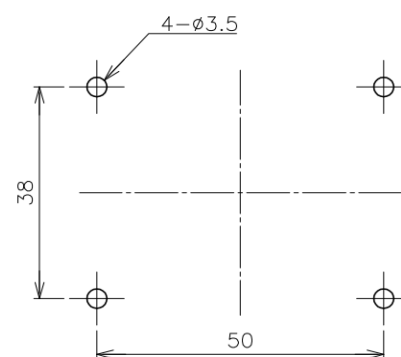
### Output Characteristics



### Schematic



### Mounting



| 【Model No.】 | CP-45H-10S (10-turn) | CP-45H-100S (100-turn) |
|-------------|----------------------|------------------------|
|-------------|----------------------|------------------------|

### 【Electrical Specifications】

|  |  |       |      |
|--|--|-------|------|
| Effective Electrical Travel                                    | 3500   | 35000 | °    |
| Output Range   | 5~95   |       | %Vin |
| Absolute Linearity   | ±0.4 (Independent Linearity : ±0.2%FS)<br>(FS=3500° or 35000°) |       | %FS  |
| Input Voltage  | DC5±0.5  |       | V    |
| Load Resistance  | MIN. 1   |       | Ω    |
| Supply Current   | MAX. 30  |       | mA   |
| Output Resolution  | MAX. 1 (MAX. 4000rpm)  |       | °    |
| Temp. Characteristics<br>-40°C ~ +100°C (Reference Temp. 25°C) | ±0.3%FS (FS=3500° or 35000°)                                   |       |      |

### 【Mechanical Specifications】

|                         |  |  |      |
|-------------------------|--|--|------|
| Total Mechanical Travel | 3600 Endless                             |  | °    |
| Gear Ratio              | 10:1 (10-turn)                           | 100:1 (100-turn)                           |      |
| Torque                  | MAX. 4                                   |  | mN·m |
| Repeatability           | ±7 (±0.2%FS=3500°)<br>Including Backlash | ±70 (±0.2%FS=35000°)<br>Including Backlash | °    |
| Thrust Load Tolerance   | MAX. 5                                   |  | N    |
| Radial Load Tolerance   | MAX. 16                                  |  | N    |
| Mass                    | Approx. 260                              |  | g    |

### 【Environmental Specifications】

|                             |                     |    |
|-----------------------------|---------------------|----|
| Category Temperature Range  | -40 ~ +100          | °C |
| Storage Temperature Range   | -40 ~ +100          | °C |
| EMS (IEC61000-4-2)          | 10V/m, 80M - 1GHz   |    |
| ESD (Case To Each Terminal) | ±8kV (IEC61000-4-2) |    |
| ESD (Between Each Terminal) | ±8kV (IEC61000-4-2) |    |
| IP Level                    | IP40                |    |

### Handling Instruction

- In applying input power, voltage Vin must rise to 4.5V within 0.2 second, otherwise, output shall be disabled (Vout=0V).
- Do not use Hall-IC sensor as a variable resistor.
- This product may be influenced from external magnetic field.
- Use this sensor in the place where is protected from ESD.