

Contactless Hall-IC Angle Sensor

CP-45H Series

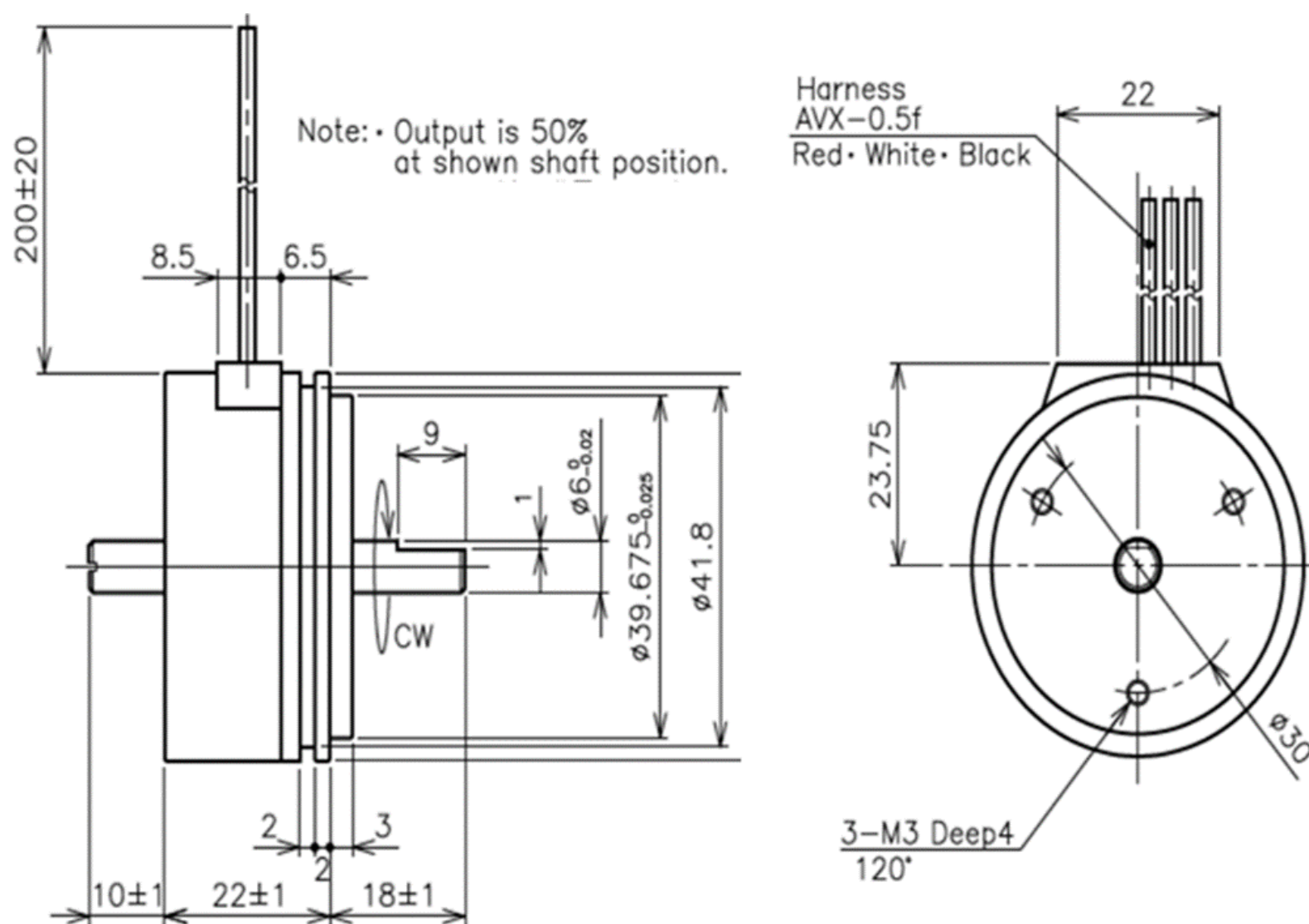


- Contactless Hall-IC Angle Sensor
- Effective Electrical Travel : 360°
- Absolute Linearity : ±0.4%FS
- Input Voltage : DC5±0.5V
- Output Range : 10% ~ 90%Vin

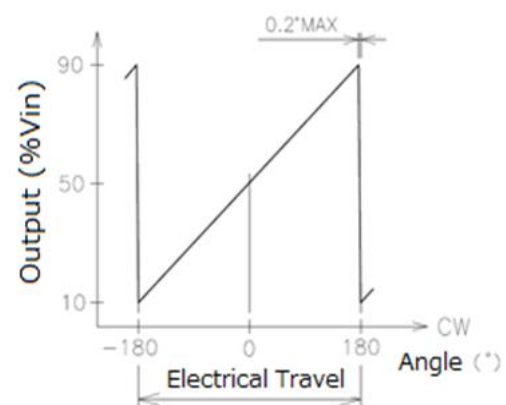
[Material]

- Housing : Aluminum
- Shaft : Stainless Steel

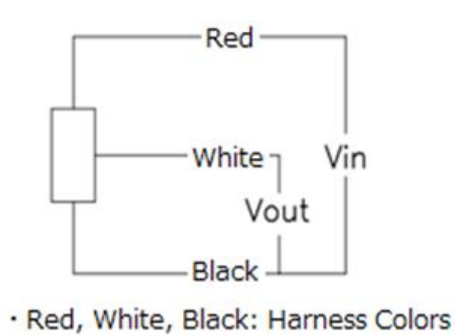
Dimension (mm)



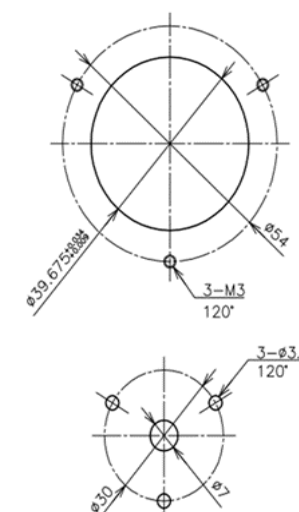
Output Characteristics



Schematic

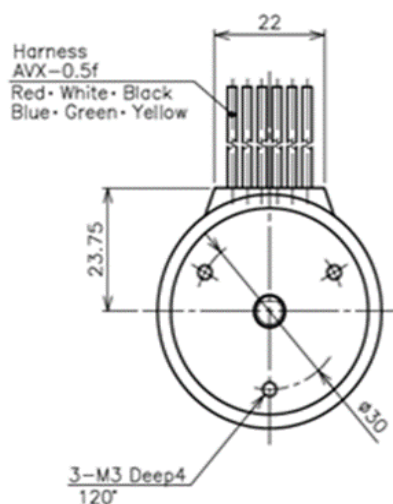


Mounting

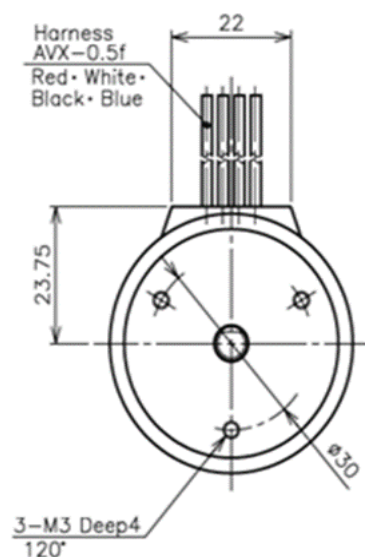


■ **Dimension (mm)**

Dual Output, 6 wires

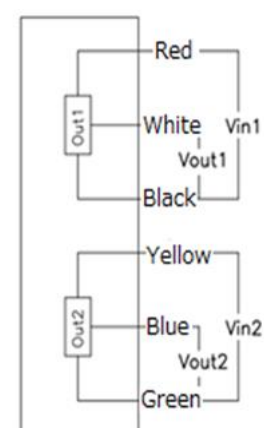


Dual Output, 4 wires



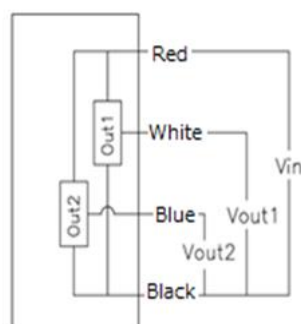
■ **Schematic**

Dual Output, 6 wires



Each color indicate harness colors

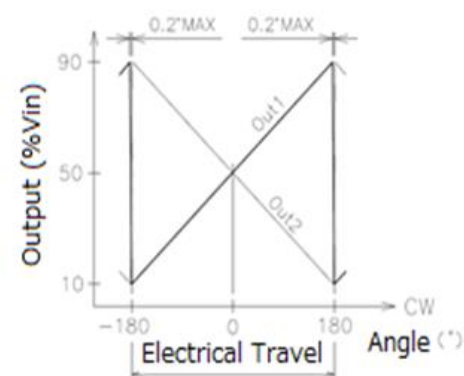
Dual Output, 4 wires



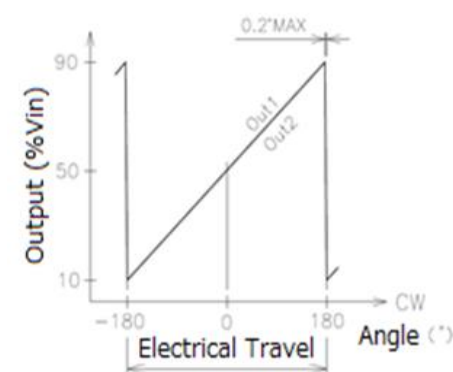
Each color indicate harness colors

■ **Output Characteristics**

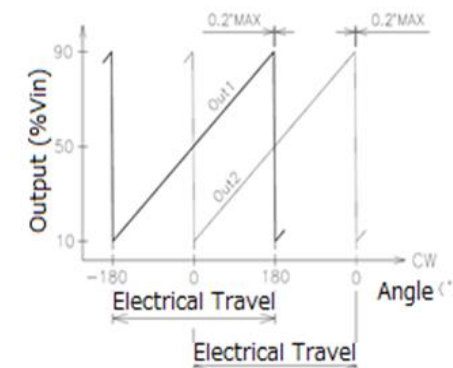
CP-45HC Cross Output



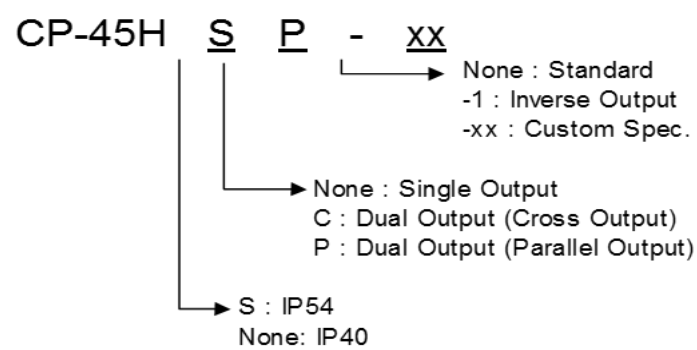
CP-45HP Parallel Output



CP-45HP 180° Phase Output



■ **CP-45H Model Number Designation**



| [Model No.] | CP-45H | CP-45HS | CP-45HC | CP-45SC | CP-45HP | CP-45HSP |
|---|--|-----------------------------|---------|---------|------------|----------|
| Electrical Specifications | | | | | | |
| Effective Electrical Travel | 360° | | | | | |
| Output Range | 10 ~ 90 %Vin | | | | | |
| Absolute Linearity | ± 0.4 %FS | | | | | |
| Input Voltage | DC 5 V ± 0.5V | | | | | |
| Load Resistance | 10KΩ MIN. | | | | | |
| Supply Current | 10 mA MAX. /1ch | | | | | |
| Insulation Resistance | 100 MΩ MIN. DC 50V | | | | | |
| Output Resolution | 12 bit (Shaft Rotational Speed 20rpm MAX.) | | | | | |
| Response Time | 0.9ms MAX. | | | | | |
| Hysteresis | ± 0.2 %FS MAX. | | | | | |
| Temp. Characteristics -40 ~ 100°C (Ref.Temp. 25°C) | ± 1.08° MAX. | | | | | |
| Dual Output Difference | --- | 100 ± 1.5%Vin (Sum 1 and 2) | | | ± 1.5 %Vin | |

| | | | | | | |
|----------------------------------|--------------|-----------|------------|-----------|------------|-----------|
| Mechanical Specifications | | | | | | |
| Total Mechanical Travel | 360° endless | | | | | |
| Torque | 1.8 mN · m | 30 mN · m | 1.8 mN · m | 30 mN · m | 1.8 mN · m | 30 mN · m |
| Thrust Load Tolerance | 2 N | | | | | |
| Radial Load Tolerance | 6 N | | | | | |
| Mass | Approx. 100g | | | | | |

| | | | | | | |
|-------------------------------------|---|-------|-------|-------|-------|-------|
| Environmental Specifications | | | | | | |
| Life Cycles | 10 M Cycles (Room Temp., No load, CW / CCW) | | | | | |
| Category Temp. Range | -40 ~ +100 °C (No condensation) | | | | | |
| Storage Temp. Range | -40 ~ +100 °C (No condensation) | | | | | |
| Vibration | 5 ~ 500 Hz (6min) 200m/S ² (20G) 3 directions 4 hours each | | | | | |
| Shock | 1000 m/S ² (100G) 6 directions 3 times | | | | | |
| EMS | 100V/m 1M ~ 1GHz (ISO 11452) | | | | | |
| ESD (Case to each terminals) | ± 15 kV MAX. (IEC 61000-4-2) | | | | | |
| ESD (Between each terminals) | ± 15 kV MAX. (IEC 61000-4-2) | | | | | |
| IP Level | IP 40 | IP 54 | IP 40 | IP 54 | IP 40 | IP 54 |

■ OPTIONS

- Effective Electrical Travel : 90° ~ 360°
- Inverse Output

■ Handling Instruction

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