

Contactless Hall-IC Angle Sensor

MIDORI CP-3HABS Series



General

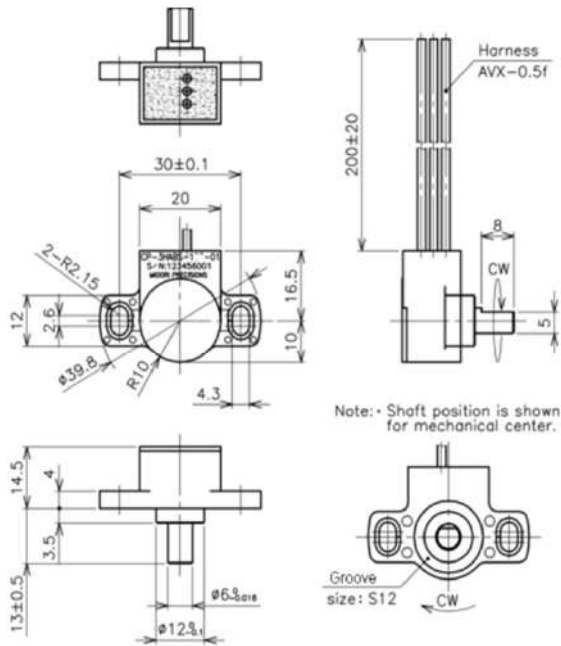
- Single-turn Hall-IC Angle Sensor
- Effective Electrical Travel: 90°
- Independent Linearity: ±4%FS
- With/ Without Return Spring

Material

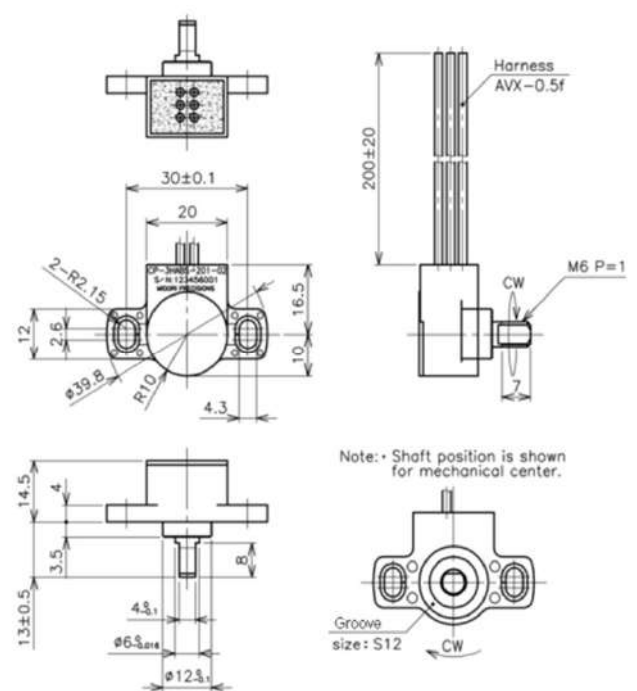
- Housing: PBT
- Shaft: Stainless Steel
- Bearing: Copper Alloy

Dimension (mm)

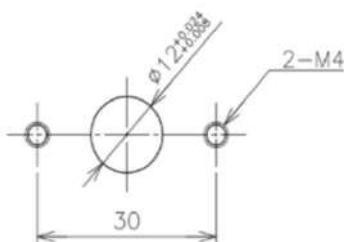
Single Output, D-cut Shaft



Dual Output, Double Side Flat Shaft

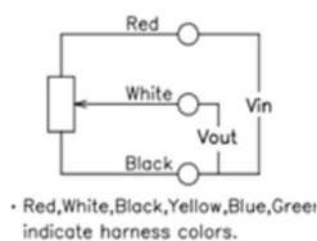


Mounting(mm)

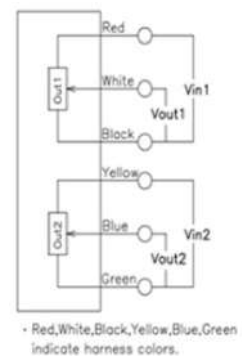


Schematic

Single Output

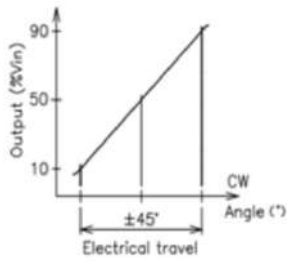


Dual Output

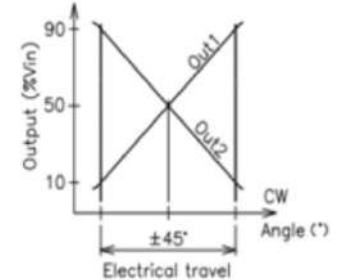
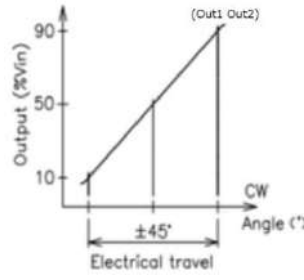


Output Characteristics

Single Output



Dual Output



Parallel Output

Cross Output

Specifications

Single Output	CP-3HABS-100-01	CP-3HABS-101-02	CP-3HABS-110-01	CP-3HABS-111-02
Dual Output	CP-3HABS-200-01	CP-3HABS-201-02	CP-3HABS-210-01	CP-3HABS-211-02
Return Spring	X	○	X	○
Shaft	D-Cut	Double Side Flat	D-Cut	Double Side Flat

Electrical Specifications

Effective Electrical Travel	Standard: 90°
Output Range	10%~90%Vin
Independent Linearity	±4%FS (FS=90°)
Input Voltage	DC5V±0.5V
Load Resistance	10KΩMIN.
Insulation Resistance	100MΩ/ DC50V MIN.
Supply Current	10mA MAX. (Single Output) / 20mA MAX. (Dual Output)
Temp. Characteristics -40~+125°C (Reference Temp: 25°C)	@ 0° Position: ±2° @±45° Position: ±4°
Hysteresis	0.3° MAX.

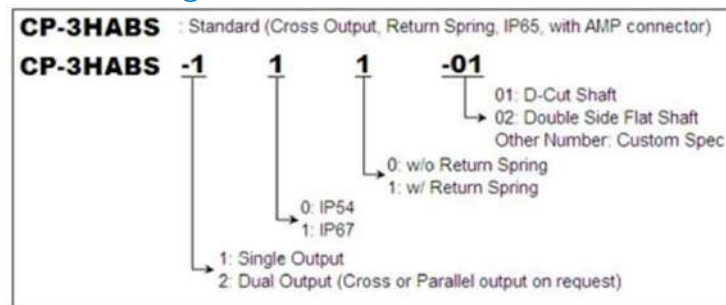
Mechanical Specifications

Total Mechanical Travel	360° Endless	120° ±5°	360° Endless	120° ±5°
Stopper Strength (Back Spring)	---	1N · m MIN.	---	1N · m MIN.
Torque	6mN · m MAX	5~60mN · m	6mN · m MAX	5~60mN · m
Mass	Approx. 30g			

Environmental Specifications

Life Cycles	50 Million Cycle
Category Temp. Range	-40~+125°C
Storage Temp. Range	-40~+125°C
Vibration	200mm2/S, 5~400Hz, 10minutes, 3axis
Shock	1000mm2/S, 6ms, 3axis, 3times
EMS	100V/m 10K~1GHz
ESD (Case to Each Terminal)	±16kV (IEC61000-4-2)
ESD (Between Each Terminal)	±8kV (IEC 61000-4-2)
Torque	IP40 IP65 IP40 IP65

CP-3HABS Model Number Designation



Handling Instruction

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