

Contactless Hall-IC Angle Sensor

# CP-3HABS Series

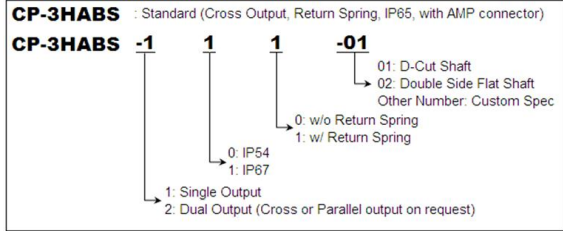


- Contactless Hall-IC Angle Sensor
- Effective Electrical Travel :  $\pm 45^\circ$  (Option:  $\pm 30^\circ$ )
- Absolute Linearity :  $\pm 4\%FS$  (=Independent Linearity:  $\pm 3\%FS$ )
- With / Without Return Spring (Spring Return Direction: CCW)

**[Material]**

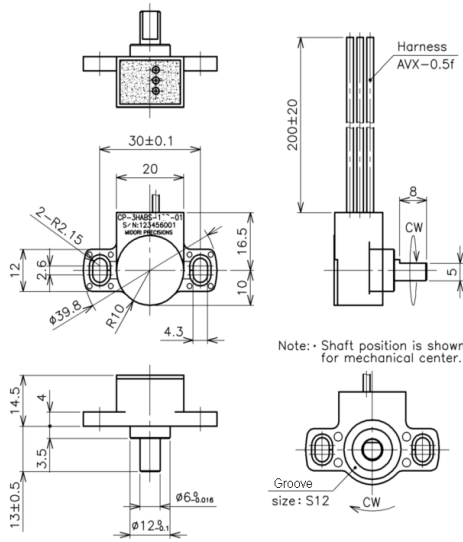
- Housing : PBT
- Shaft : Stainless Steel
- Bearing : Copper Alloy

**CP-3HABS Model Number Designation**

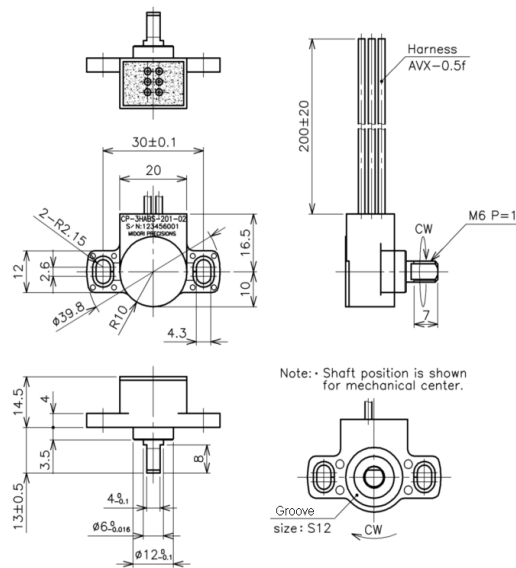


**Dimension (mm)**

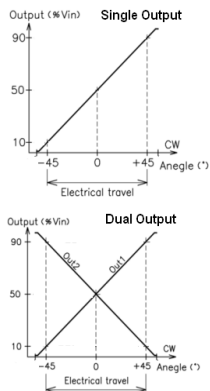
**CP-3HABS : Single Output , D-Cut Shaft**



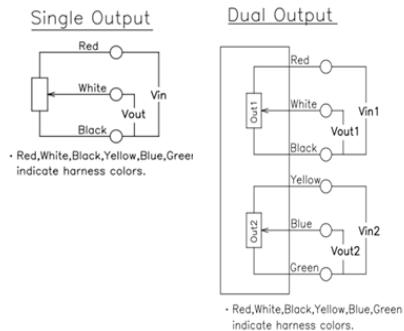
**CP-3HABS : Dual Output , Double Side Flat Shaft**



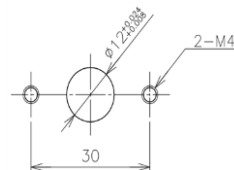
**Output Characteristics**



**Schematic**



**Mounting**



Model No.					
Single Output	CP-3HABS-100-01	CP-3HABS-101-02	CP-3HBAS-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	×	○	×	○	
Shaft	D-Cut	Double Side Flat	D-Cut	Double Side Flat	

Electrical Specifications					
Effective Electrical Travel	±45°				
Output Range	10%~90%Vin				
Absolute Linearity	±4%FS (=Ind.Lin ±3%FS)				
Input Voltage	DC5V±0.5V				
Load Resistance	10KΩ MIN.				
Supply Current	10mA MAX.	10mA MAX.	10mA MAX.	10mA MAX.	
	20mA MAX.	20mA MAX.	20mA MAX.	20mA MAX.	
Insulation Resistance	100MΩ/ DC50V MIN.				
Output Resolution	12bit				
Hysteresis	0.3° MAX.				
Temp. Characteristics: -40~+125°C	@0°Position: ±2°, @±45°Position: ±4° (Reference Temp. 25°C)				

Mechanical Specifications					
Total Mechanical Travel	360° Endless	120°±5°	360° Endless	120°±5°	
Stopper Strength	-	1N · m MAX.	-	1N · m MAX.	
Torque	6mN · m MAX.	5~60mN · m	6mN · m MAX.	5~60mN · m	
Thrust Load Tolerance	3N				
Radial Load Tolerance	6N				
Mass	Approx. 30g				

Environmental Specifications					
Life Cycles	50 Million Cycle				
Category Temperature Range	-40~+125°C				
Storage Temperature Range	-40~+125°C				
Vibration	200mm <sup>2</sup> /S, 5~400Hz, 10minutes, 3axis				
Shock	1000mm <sup>2</sup> /S, 6ms, 3axis, 3times				
EMS	100V/m 200MHz~1GHz				
ESD (Case to Each Terminal)	±16kV (IEC 61000-4-2)				
ESD (Between Each Terminal)	±8kV (IEC 61000-4-2)				
IP Level	IP40	IP65	IP40	IP65	

#### ■ Handling Instruction

- 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.