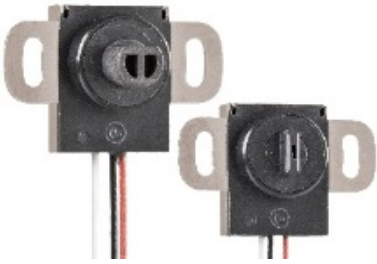


Contactless Hall-IC Angle Sensor

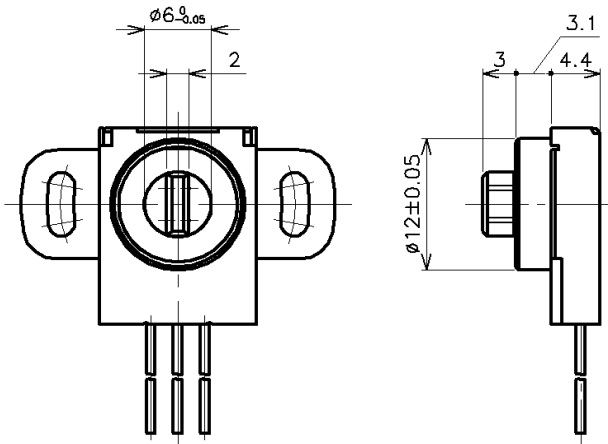
# CP-1HX Series



- Compact and Thin Type
- Contactless Hall-IC Angle Sensor
- Effective Electrical Travel:  $\pm 180^\circ$
- Absolute Linearity:  $\pm 2\%FS$
- Voltage Ratio or PWM Output
- Single Output (3 wires), Dual Output (6 wires)
- Shaft: Double side flat, D-Cut
- Water drip proof (Circuit part)
- 【Option】
- Effective Electrical Travel:  $90\sim 360^\circ$
- Inverse output is available by programming
- Touchless type (No shaft)

■ Dimension [mm]

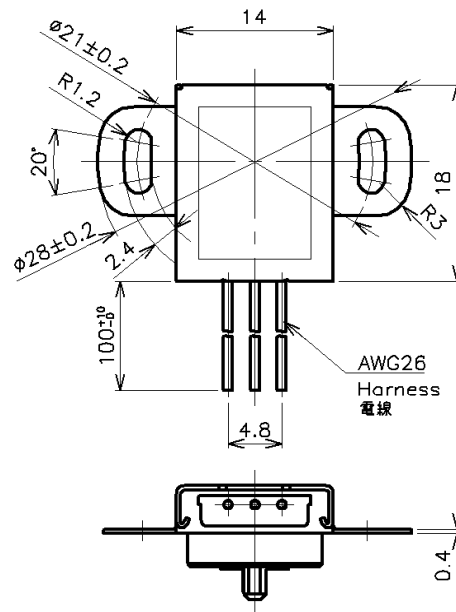
Shaft : Double side flat



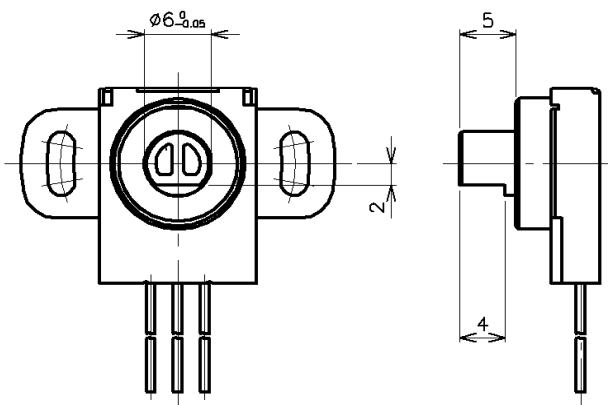
Out,GND,+V  
White,Black,Red  
白,黒,赤

- Shaft position is shown for approx. 50%Vin
- シャフトが本図位置にある時出力は約50%になります。

Single Output (3 wires)

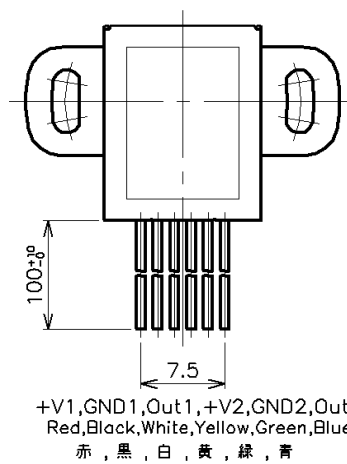


Shaft : D-cut



- Shaft position is shown for approx. 50%Vin
- シャフトが本図位置にある時出力は約50%になります。

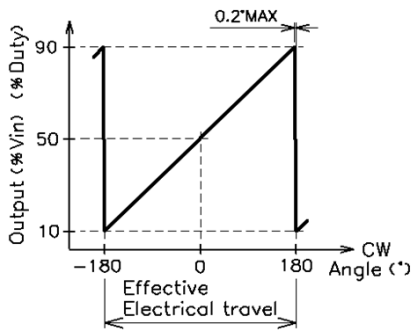
Dual Output (6 wires)



+V1,GND1,Out1,+V2,GND2,Out2  
Red,Black,White,Yellow,Green,Blue  
赤,黒,白,黄,緑,青

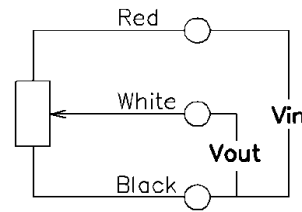
■ Output Characteristics

Single Output



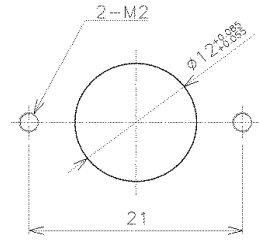
■ Schematic

Single Output

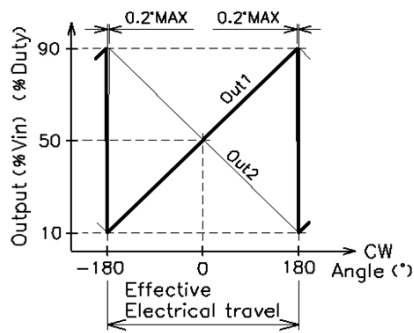


- Red, White, Black indicate harness colors.

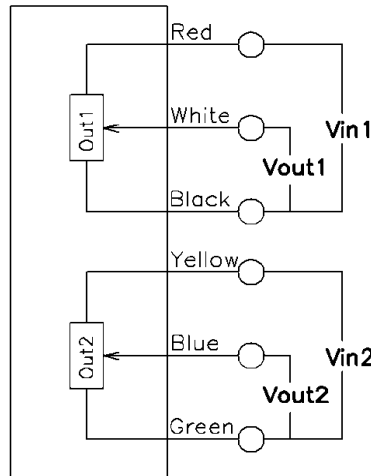
■ Mounting



Dual Output (Cross)

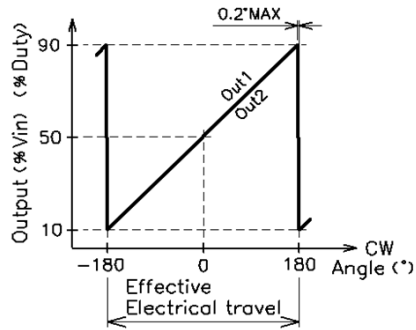


Dual Output

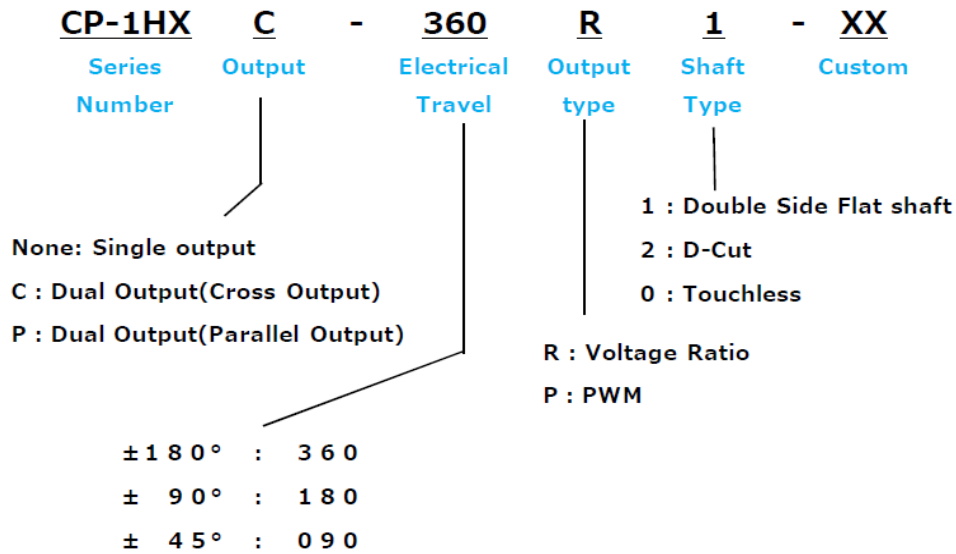


- Red, White, Black, Yellow, Blue, Green indicate harness colors.

Dual Output (Parallel)



## 【CP-1HX Series Model Number Designation】



【Model Number】	CP-1HX-xxxRx	CP-1HXC-xxxRx	CP-1HX-xxxPx	CP-1HXC-xxxPx
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### 【Electrical Specifications】

Effective Electrical Travel	±180			°	
Output Range	Ratio Output 10~90%Vin	PWM 10~90%Duty			
Absolute Linearity	±2			%FS	
Input voltage	DC5±0.5			V	
Load Resistance	10 MAX.			kΩ	
Current Consumption	10 MAX.	20 MAX.	10 MAX.	20 MAX.	mA
Insulation Resistance	100 MIN./DC50V			MΩ	
Resolution	12(0~100%Vin)			bit	
Hysteresis	1.0			%FS	
Temp. Characteristics -40~+85°C (25°C std.)	±1			°	
Dual Output Difference	—	100±1%Vin	—	100:±1%Duty	

### 【Mechanical Specifications】

Total Mechanical Travel	360 Endless			°
Torque	3 MAX.			mN·m
Thrust Load Tolerance	4			N
Radial Load Tolerance	3			N
Mass	Approx. 5			g

### 【Environmental Specifications】

Lfie Cycles	7M (Room Temp., No Load)			Cycle
Category Temp. Range	-40~+85			°C
Storage Temperature Range	-40~+85			°C
Vibration	200m/s <sup>2</sup> , 5~500Hz 10min, 3axis 2hours (Room Temp.)			
Shock	500m/s <sup>2</sup> , 11ms, 3axis 3 times (Room Temp.)			
EMS	100V/m, 1MHz~1GHz (ISO 11452-2, -3)			
ESD (Case to Each Terminal)	Contact Discharge	±15 (IEC 61000-4-2)		kV
ESD (Between Each Terminal)	Contact Discharge	±15 (IEC 61000-4-2)		kV
IP Rating	IP67(Circuit part only)			

### ■ Handling Instruction

- This product may be influenced from external magnetic field.
- Use this sensor in the place where is protected from ESD.