

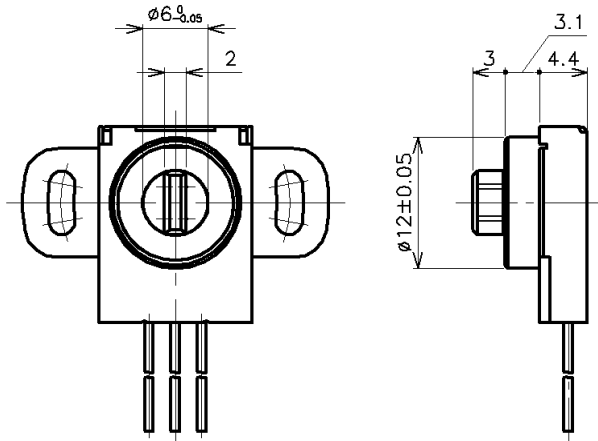
Contactless Hall-IC Angle Sensor
CP-1HX Series



- 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]

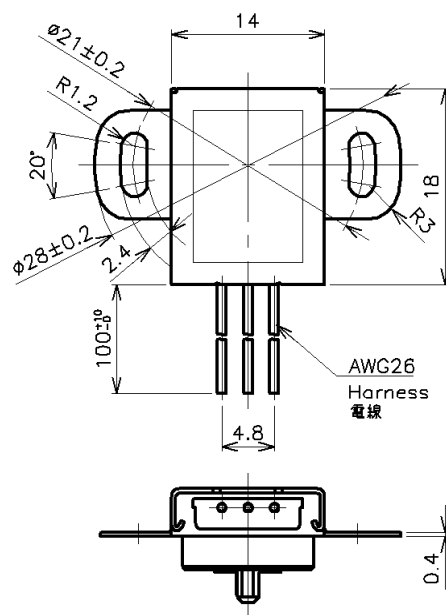
Shaft : Double side flat



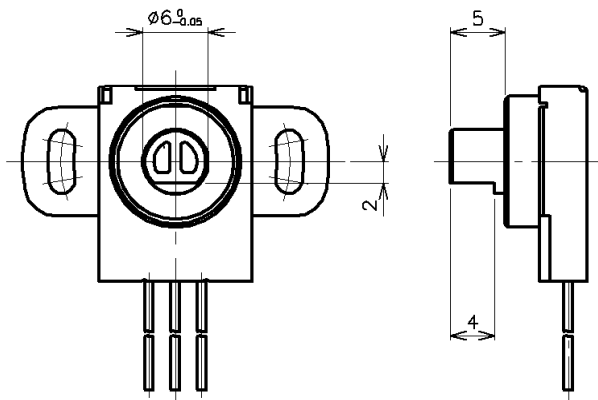
Out,GND,+V
 White,Black,Red
 白, 黒, 赤

- 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)

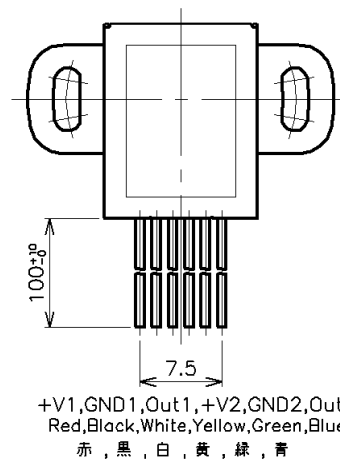


Shaft : D-cut



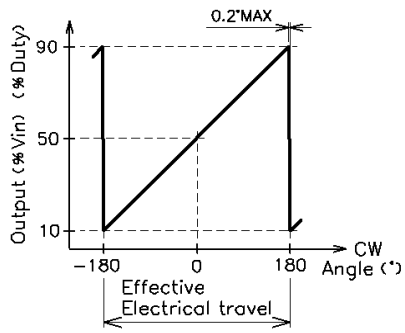
- Shaft position is shown for approx. 50%Vin
- シャフトが本図位置にある時出力は約50%になります。

Dual Output (6 wires)



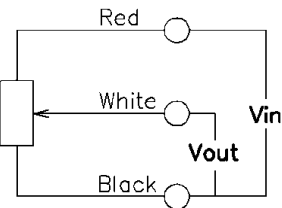
■ Output Characteristics

Single Output



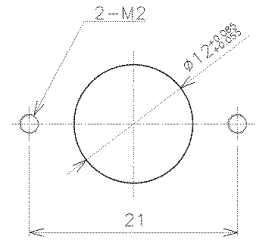
■ Schematic

Single Output

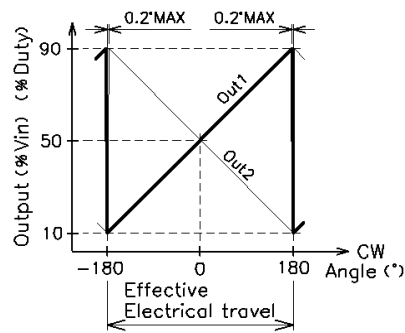


• Red, White, Black indicate harness colors.

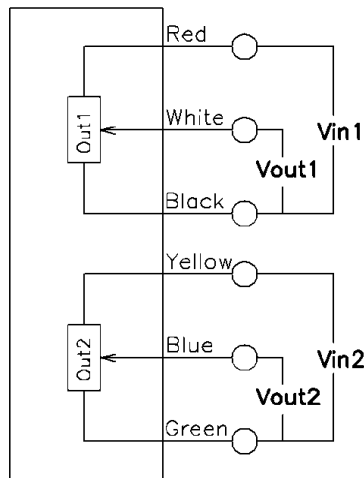
■ Mounting



Dual Output (Cross)

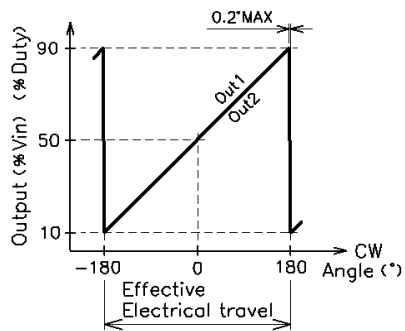


Dual Output

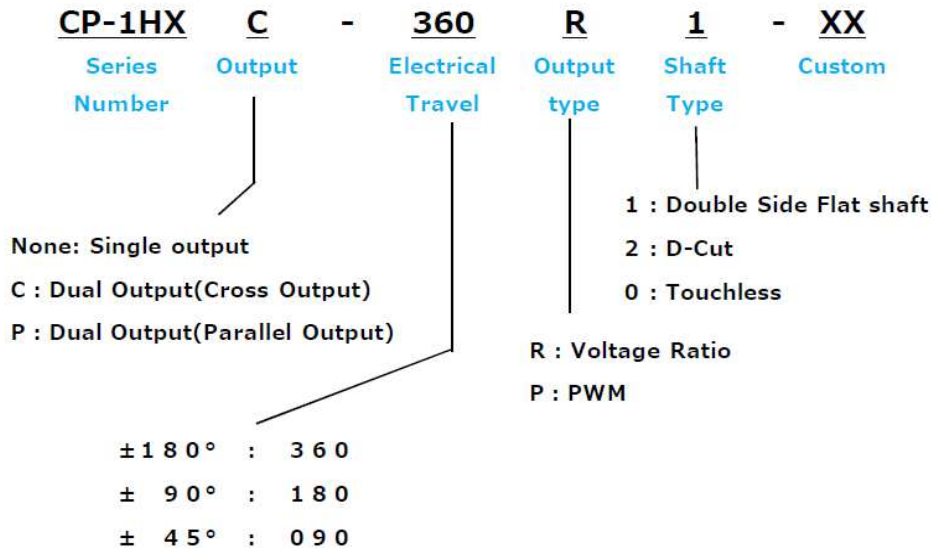


• Red, White, Black, Yellow, Blue, Green indicate harness colors.

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 MIN.				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 ² , 5~500Hz 10min, 3axis 2hours (Room Temp.)				
Shock	500m/s ² , 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.