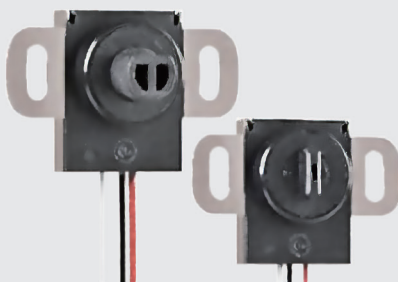


MINIATURE DRIP-PROOF DUAL OUTPUT

HALL IC CONTACTLESS ROTARY ANGLE TYPE

CP-1HX series

RoHS compliant



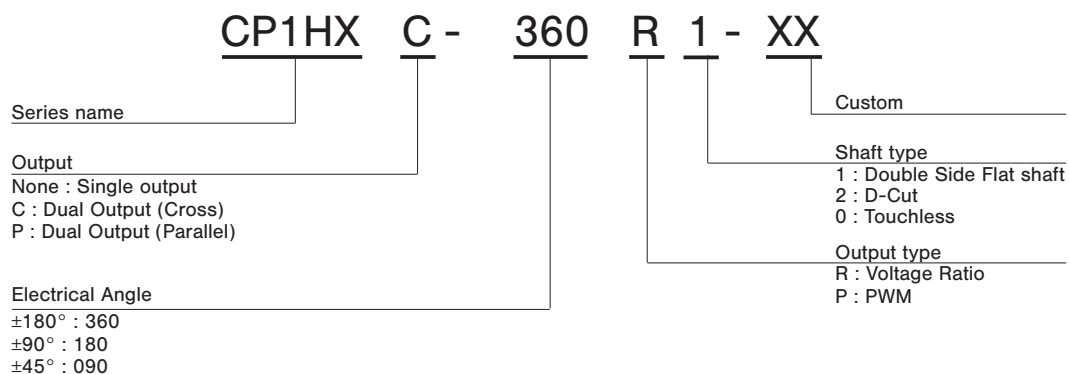
FEATURES

- 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 : $90^\circ \sim 360^\circ$
- Inverse output is available by programming
- Touchless type (No shaft)

PART NUMBER DESIGNATION



STANDARD SPECIFICATIONS

Electrical characteristics

Item	Part No.	CP-1HX-xxxRx	CP-1HXC-xxxRx	CP-1HX-xxxPx	CP-1HXC-xxxPx
Effective Electrical Travel		±180°			
Output Range		Ratio Output 10 ~ 90 %Vin		PWM 10 ~ 90 %Duty	
Absolute Linearity		±2 %FS			
Input Voltage		5±0.5 VDC			
Load Resistance		10 kΩ min.			
Current Consumption		10 mA max.	20 mA max.	10 mA max.	20 mA max.
Insulation Resistance		100 MΩ min. / 50 VDC			
Resolution		12 bit (0 ~ 100 %Vin)			
Hysteresis		1.0 %FS			
Temp. Characteristics -40 ~ 85°C (Reference)		±1°			
Dual Output Difference		-	100 ± 1 %Vin	-	100 ± 1 %Duty

CP-1HX

POTENTIOMETERS

STANDARD SPECIFICATIONS

Mechanical characteristics

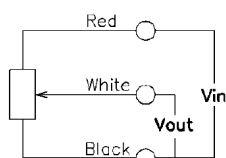
Total Mechanical Travel	360° Endless
Torque	3 mN·m max.
Thrust Load Tolerance	4 N
Radial Load Tolerance	3 N
Net weight	Approx. 5 g

Environmental characteristics

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

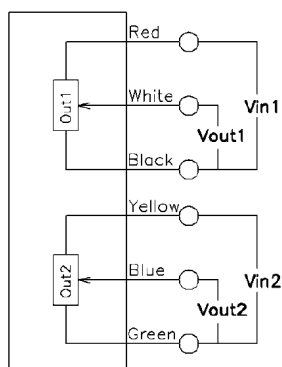
SCHEMATIC

Single Output



Red, White, Black indicate lead colors.

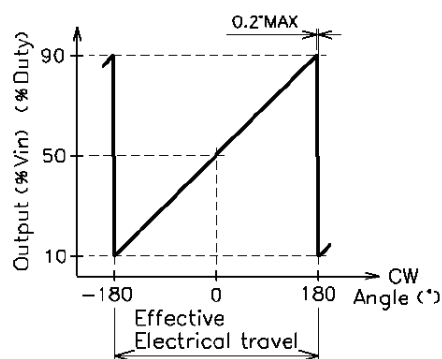
Dual Output



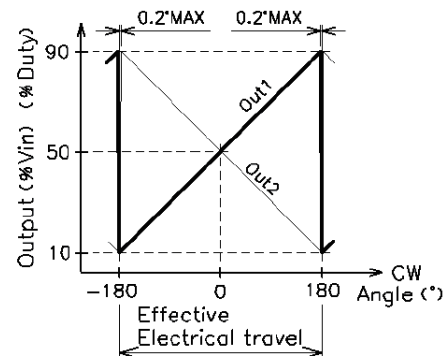
Red, White, Black, Yellow, Blue, Green indicate lead colors.

OUTPUT CHARACTERISTICS

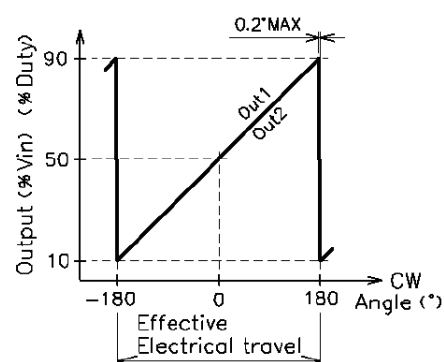
Single Output



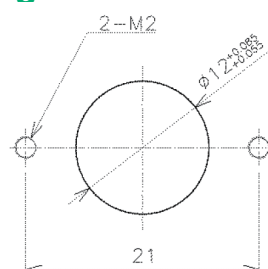
Dual Output (Cross)



Dual Output (Parallel)



Mounting



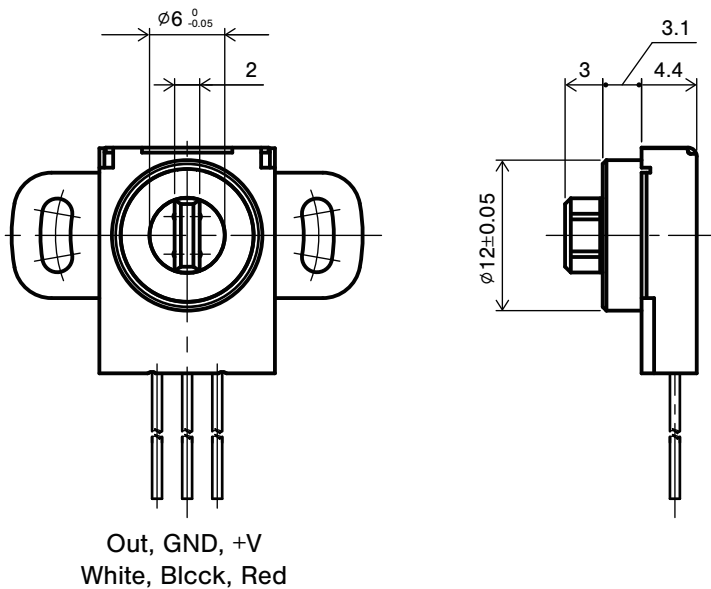
CP-1HX

POTENTIOMETERS

OUTLINE DIMENSIONS

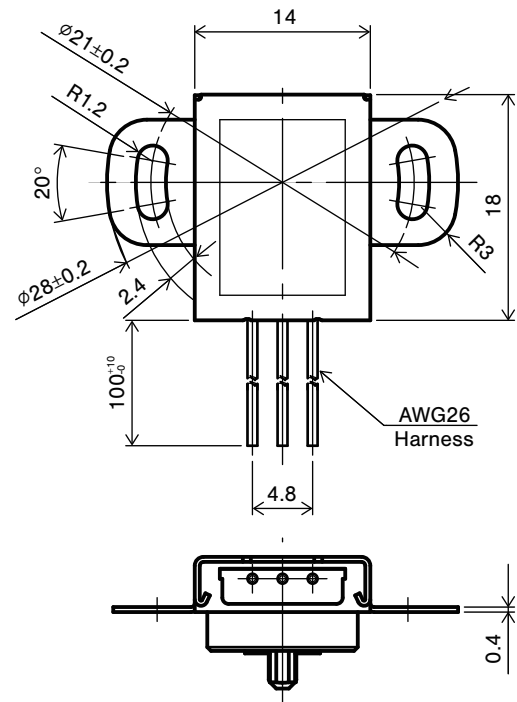
(Unit:mm)

● Shaft : Double side flat

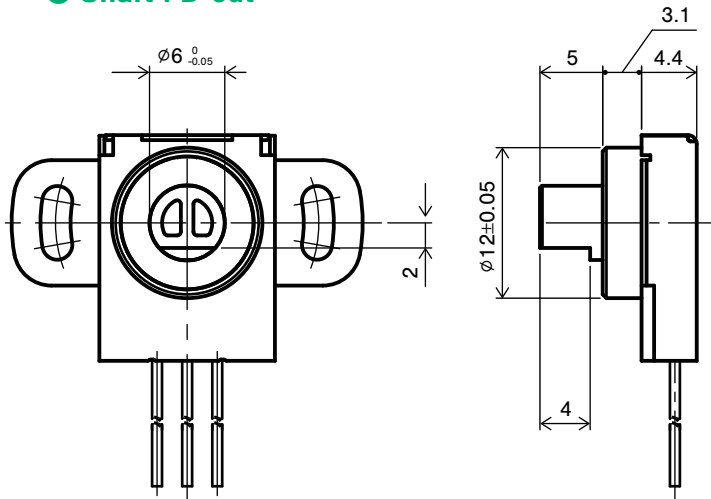


- Shaft position is shown for approx. 50 %Vin.

● Single Output (3 wires)

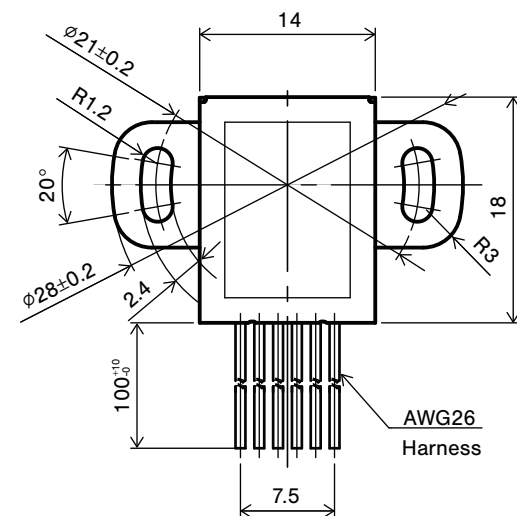


● Shaft : D-cut



- Shaft position is shown for approx. 50 %Vin.

● Dual Output (6 wires)



+V1, GND1, Out1, +V2, GND2, Out2
Red, Black, White, Yellow, Green, Blue

HANDLING INSTRUCTION

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