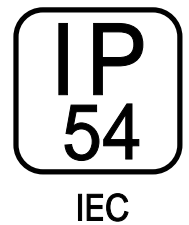


Magnetic rotary encoder - Solution for Harsh Environment.  
Compact, flat design, easy direct mounting on a shaft.

## Magnetic Rotary Encoder

**JR205**  
**JR215** SERIES  
**JR305**



### Features

- Easy direct mounting on motor shaft without coupling.
- No adjustment like difficult shaft alignment is required at mounting.
- Magnetic encoder exceeds optical encoder in resistance against harsh environment.
- High frequency response up to 200kHz for high speed revolution.
- Extended line-up to meet wide range applications.
- Conforming to EC Directive to be accepted in European market also.

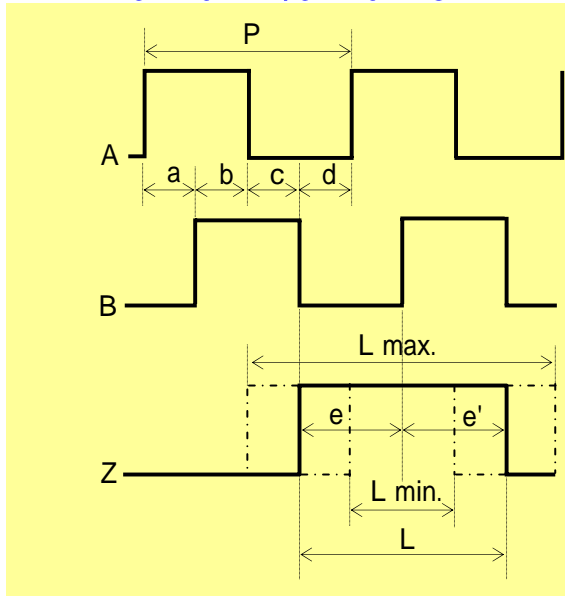


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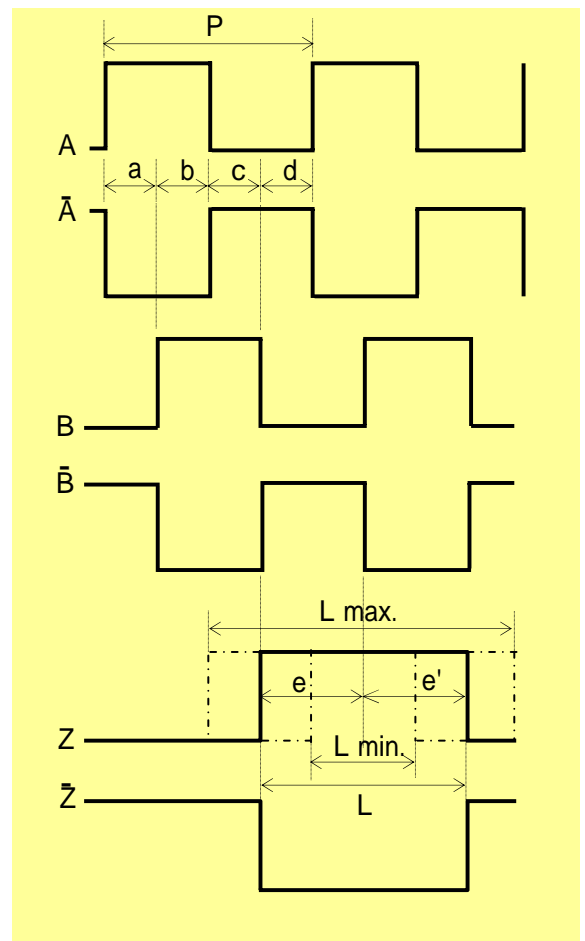
High reliability, that's a must for an encoder.  
 You asked for it.....now you got it .

## Output waveforms

JR205A/JR215A/JR215C/JR215C  
 JR205-24A/JR205-24C  
 JR215-24A/JR215-24C



JR205D/JR215D/JR305D



### Output specification

$P = 1$  pulse (elec.  $360^\circ$ ) =  $1/\text{pulse number per revolution}$

Z signal = 1 pulse per revolution

$a, b, c, d = P/4 \pm P/8$

$0.4 \leq (a+b)/(a+b+c+d) \leq 0.6$

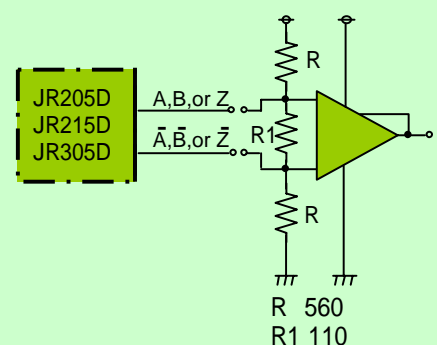
$P/2 \leq L < 3P/2$

$P/4 \leq e, e' \leq 3P/4$

Absolute pitch error  $\leq P/20$

Clockwise direction viewed from mounting bracket side is supposed to be the ordinary revolution.

In the case of D type, current consumption and "signal rise and fall times" are measured with the receiving circuitry shown at the right.

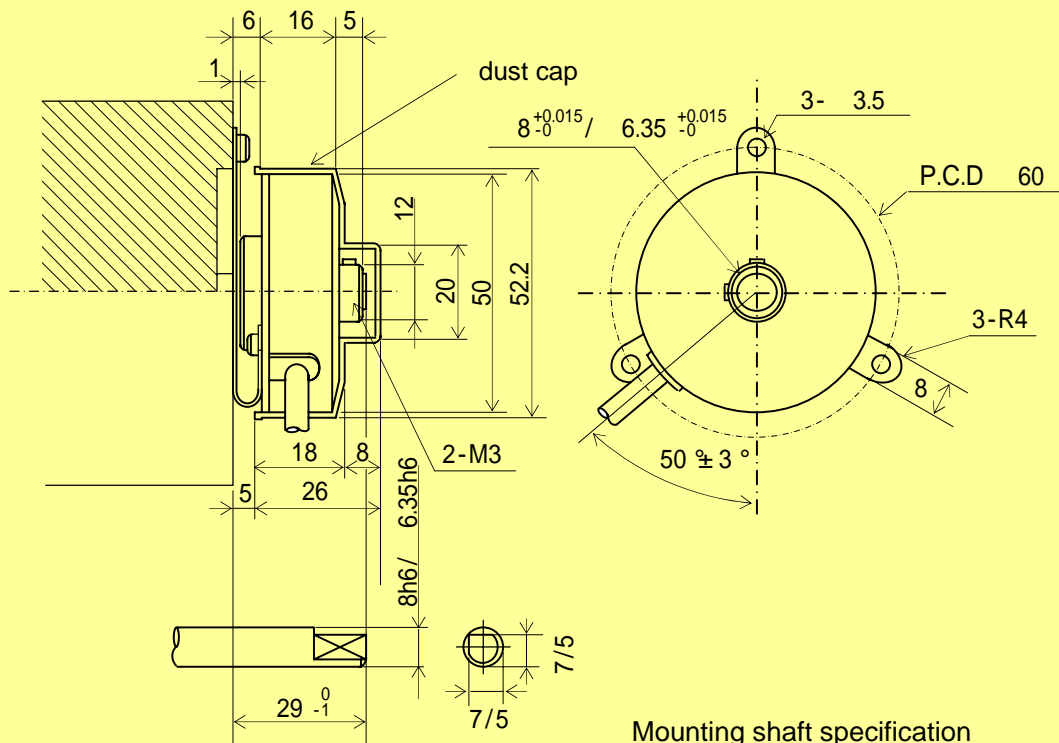


Line-up to meet wide range applications.  
High temperature resistance, fast response speed.

## Specification

Model Specification	JR205 JR215	JR205C JR215C	JR205D JR215D	JR305D
Resolution pulse per revolution	JR205: 300, 360, 500, 1000, 1024, 2000, 2048 JR215: 300, 360, 500, 1000, 1024			500, 1000, 1024
Input voltage	JR205A/C, JR215A/C: DC4.75V-13.2V JR205-24A/C, JR215-24A/C: DC21.6-26.4V at the end of standard cable		DC4.75V-5.25V at the end of standard	
Current consumption	DC13.2V, 60mA max. DC26.4V, 60mA max. excluding sink current		DC5.25V, 160mA max. refer to the left page bottom	
Output signals	A, B, Z phases		A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$ phases	
Output types	Open collector (positive logic)	Voltage output (positive logic) (output pull-up resistance: 2.2k $\Omega$ )	Line driver outputs	
Circuitry withstanding voltage	+30V max.			
Sink current	35mA max.			
Frequency response	0 ~ 200kHz.			
Signal rise and fall	1 $\mu$ sec. Max.		1 $\mu$ sec. max.	refer to the left page
Operating temperature	JR205: -20 ~ +90 JR215: -20 ~ +115 No dew condensation		- 30 ~ + 90 No dew condensation permitted.	- 30 ~ + 90 Dew condensation permitted.
Storage temperature	JR205, JR305: -30 ~ + 90 JR215 : -30 ~ + 115			
Permissible vibration				
Permissible shock	3 times in X, Y and Z directions under 100G/11msec.			
Starting torque	30g·cm max.			
Permissible shaft load	Radial direction : 9.8N max. , Axial direction : 4.9N			
Moment of inertia	3.5x10 <sup>-6</sup> Kg/m <sup>2</sup>			
Slew speed	6000rpm			
Hollow shaft bore	8.00mm <sup>+0.015</sup> <sub>-0</sub> / 6.35mm <sup>+0.015</sup> <sub>-0</sub>			
Standard cable length	500mm			
Weight	120g (including mounting bracket, dust cap and standard cable)			

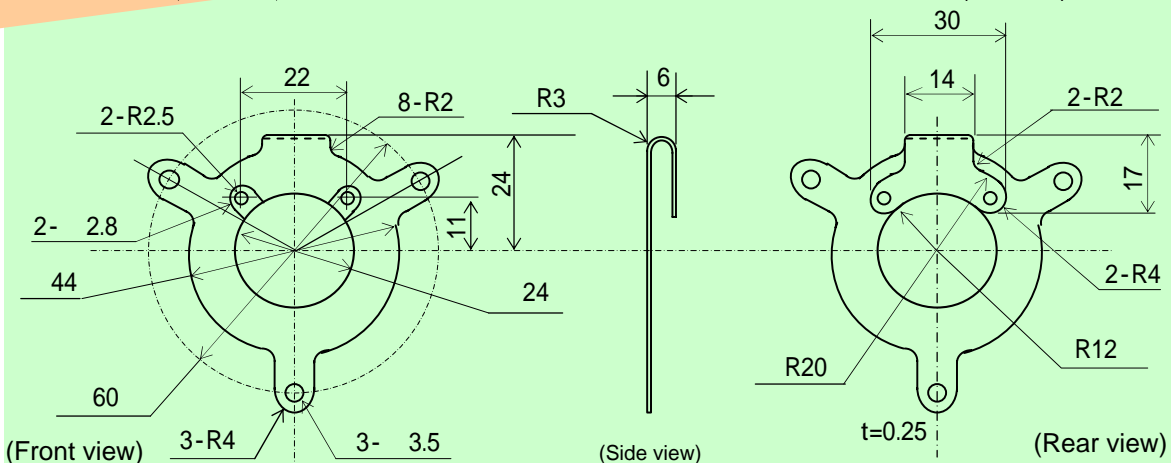
# JR205,215,305 Drawing for Installation (unit: mm)



## Mounting shaft specification

- (1) Shaft diameter: 8mm h6 / 6.35mm h6
- (2) Shaft length: 29mm <sup>0</sup>/<sub>-1</sub>
- (3) Shaft deflections: 0.05mm max.
- (4) Shaft end play: Recommended: ±0.1mm  
Permissible: ±1.0mm
- (5) Perpendicularity between shaft and mounting surface: 0.1mm max

# JR205,215,305 Standard bracket dimensions (unit: mm)



Marketed by  
**ASTEC Co., LTD.**

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Manufactured by  
**TAIHO PRODUCT CO., LTD.**

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