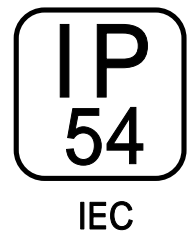


Magnetic Rotary Encoder - Solution for harsh environment.  
Compact, flat design, easy direct mounting on a shaft.

# 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.

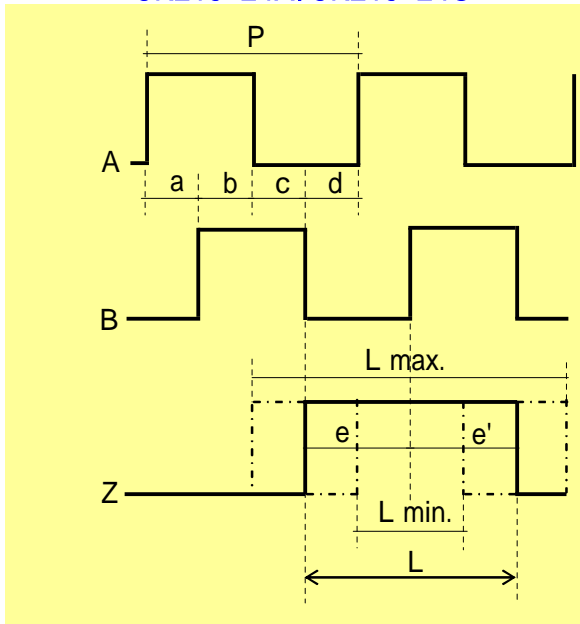


**TAIHO PRODUCT CO.,LTD.**

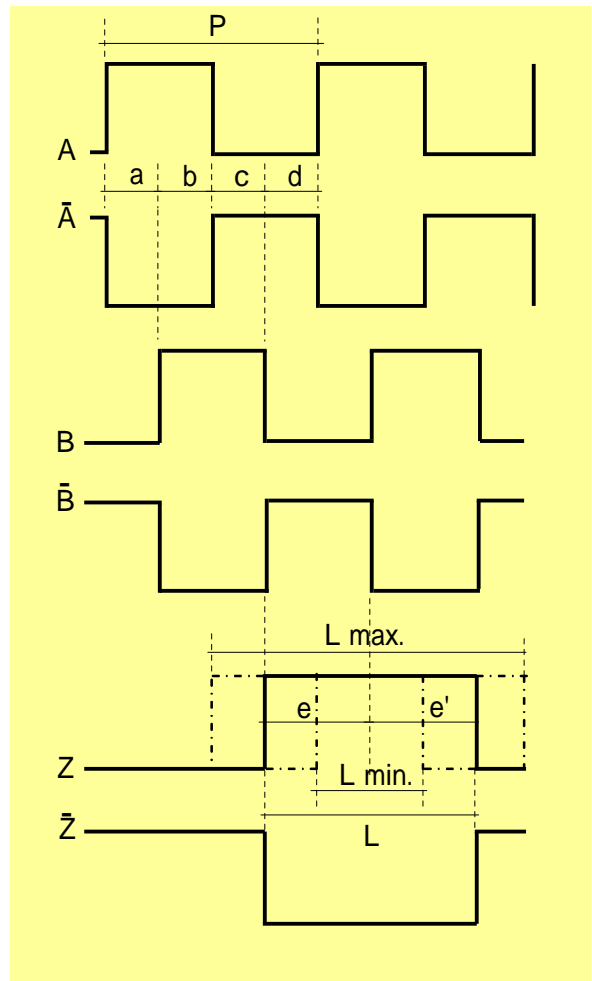
High reliability, that's a must for an encoder.  
 You asked for it.....now you got it .

Output waveforms

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



JR205D/JR215D/JR305D



Output specification

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

Z signal = 1 pulse per revolution

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

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

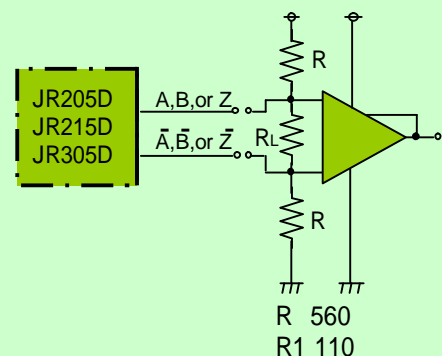
$P/2 \quad L < 3P/2$

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

Absolute pitch error  $P/20$

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.

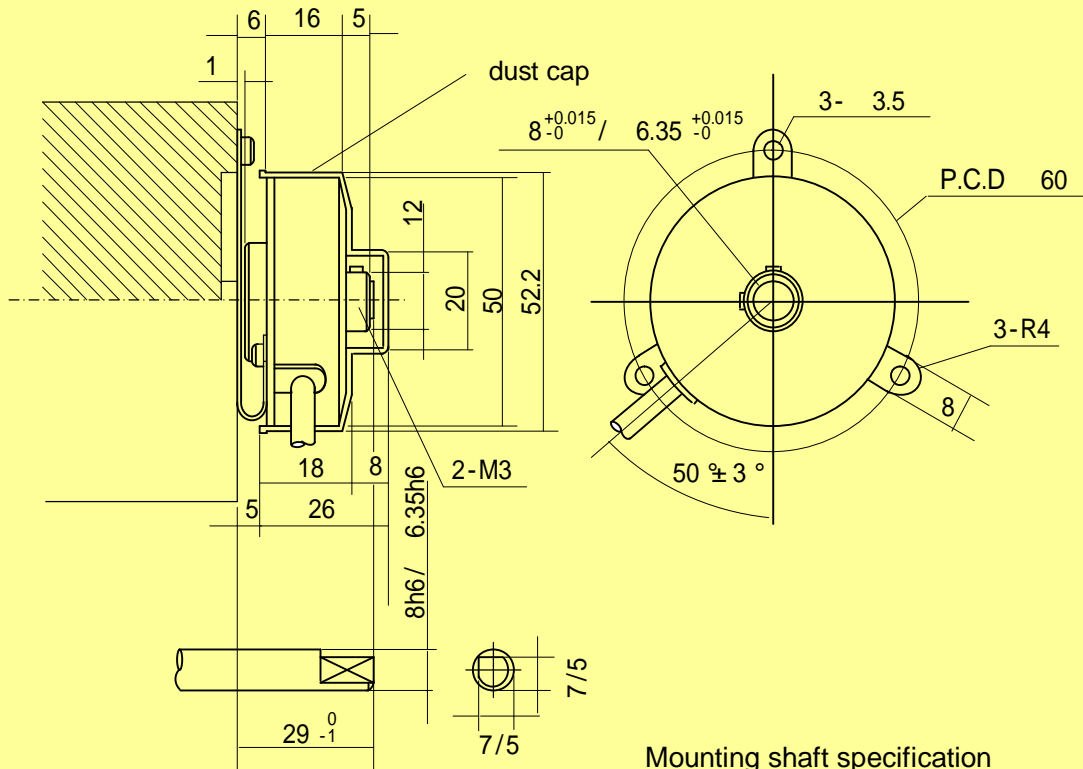


**Line-up to meet wide range applications.  
High temperature resistance, fast response speed.**

## Specification

Model Specification	JR205 JR215	JR205C JR215C	JR205D JR215D	JR305
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 cable	
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 output	
Circuitry withstanding voltage	+30V max.	—		
Sink current	35mA max.	—	20mA 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 Coated Circuitry against Dew.
Storage temperature	JR205, JR305: -30 ~ + 90 JR215 : -30 ~ + 115			
Permissible vibration	2 hours each in X,Y and Z directions under 58 ~ 500Hz/10G's, 0 ~ 58Hz/1.52mm(p-p)			
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, Axial direction : 4.9N			
Moment of inertia	$3.5 \times 10^{-6} \text{Kg/m}^2$			
Slew speed	6000rpm			
Hollow shaft bore	$8.00\text{mm}^{+0.015}_{-0}$ / $6.35\text{mm}^{+0.015}_{-0}$			
Standard cable length	500mm			
Weight	120g (including mounting bracket, dust cap and standard cable)			

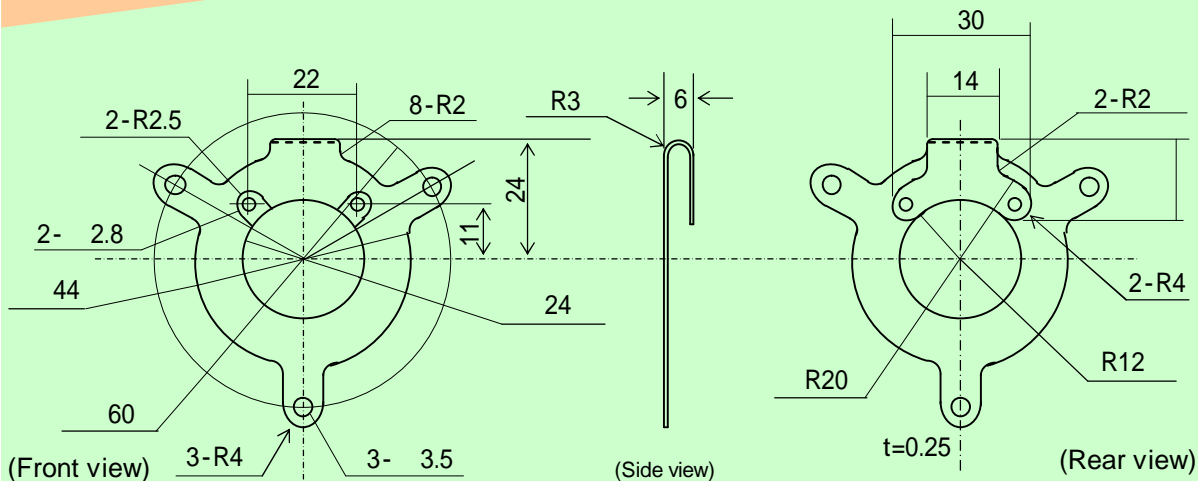
# JR205,215,305 Drawing for Installation (unit: mm)



## 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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Telephone: 0277-78-4400 Facsimile: 0277-78-7920

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

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