

## Incremental Encoder



### Special features :

- ▶ Robust design and high-strength metal disk(≤1024CPR) for high vibration and shock resistance
- ▶ Advanced high-reliability optical reading system, good performance in electromagnetic compatibility
- ▶ Overvoltage, overcurrent, surge protection
- ▶ HTL(Push-pull) or TTL(RS422)
- ▶ 10-30V(polarity protection),5V(Single power supply)
- ▶ IP 66
- ▶ 2 years warranty

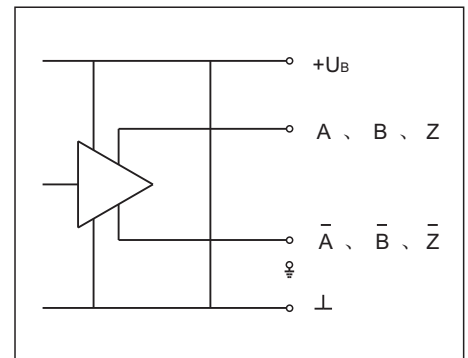
### Product application:

- ▶ Applicable for displacement and velocity measurement of heavy equipments under harsh environment

### Electrical Specification

Cycles per turn (CPR)	100 500 512 900 1000 1024 1200 1250 1500 1800 2000 2048 2500 3000 3600 4096 5000 6000 7200 8000 8192 10000
Out frequency	800KHz
Rise time	Push-pull 400ns; Rs422 100ns
Supply voltage UB	+5V or +10V~+30V
Current consumption at no-load	Push-pull 50mA; Rs422 70mA
Out voltage (UB=24V)	UL≤1.5V; UH≥UB-3.0V
Maximum load current per channel	Push-pull 40mA; Rs422 20mA
Mark space ratio	1:1 ±20%
Square wave displacement	90° ±20%

### Output Circuit



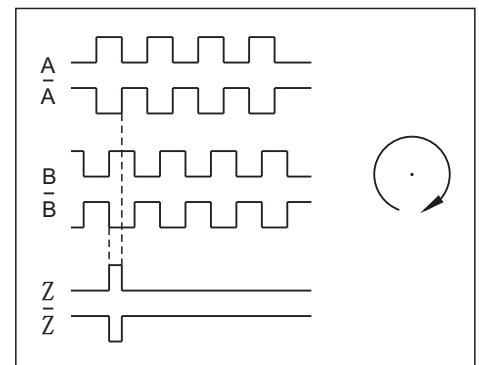
Output styles :

- P** : Push-pull
- R** : RS422 (TTL)
- L** : HTL
- C** : OC

### Mechanical Specification

Shaft diameter	φ 6/φ10 Stainless steel
Moment of inertia	≈50gcm <sup>2</sup>
Speed max (Mechanical)	≤12000r/min
Driving torque	≈0.01N·m
Maximum shaft load	Axial 50N; Radial 100N
Vibration resistance	≤10G/55~2000Hz
Shock resistance	≤100G/6ms
Permissible encoder temperature	-25℃~+85℃ (-40℃ optional)
Protection class	IP66
Weight	≈0.30Kg

### Output Signals



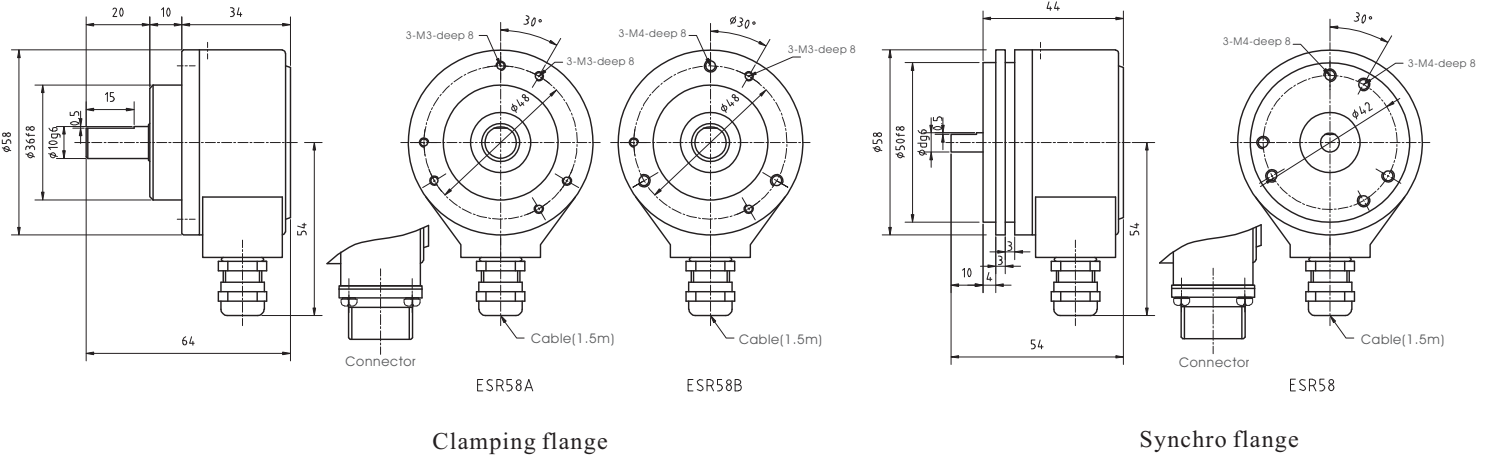
Index width:

- 0**: No Index
- 4**: 1/4 T

### Remark

$$\text{Speed max (Electronic)} = \frac{f_{\max} * 60 * 10^3}{\text{CPR}} \quad (f_{\max} = \text{Out frequency})$$

## ■ Dimensions



## ■ CONNECTION

颜色 Colour	红 RED	黑 BLK	棕 BRN	蓝 BLU	灰 GRA	黄 YEL	绿 GRN	白 WHT	屏蔽线 SHLD
编号 Pin	1	2	3	4	5	6	7	8	9
信号 Signal	+Vdc	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	Body

## ■ Ordering Information

ESR58    - D     -   -   -  R

Incremental  
Solid  
Robustness  
Body dimension:  $\phi$  58 mm  
Empty: Synchro flange  
A: Clamping flange A  
B: Clamping flange B  
Shaft diameter: 06:  $\phi$  6 mm (Synchro flange)  
10:  $\phi$  10 mm (Clamping flange)  
Shaft fixing: Jackscrew or Clamp  
Shell fixing: A: Synchro flange  
B: Clamping flange

Cycles per turn: 100 500 512 900 1000 1024 1200 1250 1500 1800 (CPR)  
2000 2048 2500 3000 3600 4096 5000 6000 7200  
8000 8192 10000  
(Other needs contact with the manufacturer)

Exit position: Radial  
Connection type:  
A: Cable(1.5m)  
F: Connector(9pin)  
M: Connector(M23,12pin)  
Number of output Signals :  
2---A, B  
3---A, B, Z  
4---A, B,  $\bar{A}$ ,  $\bar{B}$   
6---A, B, Z,  $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$   
Signal output styles: P: Push-pull  
R: RS422 (TTL)  
L: HTL  
C: OC  
Index width: 0: No Index, 4: 1/4 T  
Supply/Signal output Voltage (DC) :  
A: 5V/5V , B: 10~30V/10~30V , C: 10~30V/5V

Remarks : Technical modifications reserved.

## ■ Guarantee

2 years warranty within the conditions of Normal use and maintenance.



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