



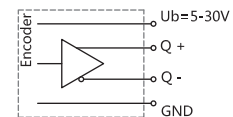
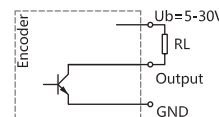
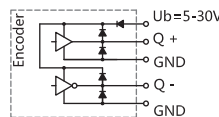
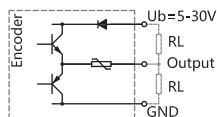
ESG90H Series	
Sensing method	Optical
Housing size	Φ90 mm
Hollow shaft diameter	Φ20、Φ25、Φ30 mm
Max. resolution	5000 PPR
Supply voltage	5VDC, 5-30VDC, 9-26VDC
Protection	IP54/IP65

Mechanical characteristics

Shaft diameter	Φ20、Φ25、Φ30mm
Protection	IP54/IP65
Speed	max. 3500 min ⁻¹
Shaft loading	max. 40 N Axial; max. 80 N Radial
Shock resistance	100g, 6ms
Vibration resistance	10g, 10...2000HZ
Bearing life	10 ⁹ turns
Rotor moment of inertia	approx. 150×10 ⁻⁶ kgm ² 1)
Starting torque	<0.05Nm
Materials	Hollow shaft : Stainless steel Flange : Aluminum alloy Housing: Aluminum alloy
Working temperature	-20℃...+70℃
Storage temperature	-40℃...+85℃
Weight	approx. 850g

Note: 1) The rotor moment of inertia depends on the diameter of the shaft.

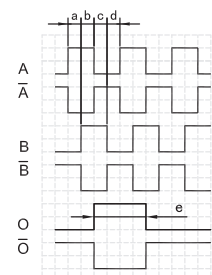
Electrical characteristics



Output circuit	Push-Pull	Push-Pull Differential	Open Collector	RS422 (TTL Compatible)
Pulse rate	max. 5000 P/R	max. 5000 P/R	max. 5000 P/R	max. 5000 P/R
Supply voltage	5-30V	5-30V	5-30V	5-30V
Power consumption(no load)	max. 125 mA	max. 125 mA	max. 80 mA	max. 80 mA
Permissible load/channel	max. ±80 mA	max. ±80 mA	max. -50 mA	max. ±50 mA
Pulse frequency	max. 300 KHz	max. 300 KHz	max. 300 KHz	max. 300 KHz
Signal level high	min. Ub-2.5V	min. Ub-2.5V	/	min. 2.5V
Signal level low	max. 0.8V	max. 0.8V	/	max. 0.4V
Rise time Tr	max. 1μs	max. 1μs	/	max. 1μs
Fall time Tf	max. 1μs	max. 1μs	/	max. 1μs
Short circuit proof outputs	yes	yes	yes	yes

Terminal assignment

Signal		OV	+Ub	A	\bar{A}	B	\bar{B}	O	\bar{O}	\perp
Cable Colour		WH	BN	GN	PK	YE	BU	GY	RD	Shield



Shaft turning clockwise,
top-view of mounting surface
a、b、c、d = T/4 ± T/8
e = T ± T/2

Note: Positional relationship of O channel and A&B channels is not specified.

Ordering information

ESG90	XX	H	30	E	1024	F	5-30	R	2	/	XXXX
	①	②	③	④	⑤	⑥	⑦	⑧	⑨		⑩

① Extended No. XX	② Shaft type H: Hollow shaft	③ Shaft diameter 20: 20mm 25: 25mm 30: 30mm	④ Channels B: A B C: A B O D: A \bar{A} B \bar{B} E: A \bar{A} B \bar{B} O \bar{O} F: A B \bar{O}	⑤ Pulse rate 360,512,600, 1000,1024, 2000,2048, 2500,3600, 4096,5000	⑥ Output circuit F: Push-Pull A: Push-Pull Differential C: Open Collector B: RS422 (TTL Compatible)
⑦ Supply voltage 5: 5VDC 5-30: 5...30VDC 9-26: 9...26VDC	⑧ Exit position R: Radial	⑨ Connection type Figure: Cable length(m)	⑩ Special code XXXX		

Note: Printed in bold=standard items

Notes: 1, Pulse rates available at a short notice (360,512,600,1000,1024,2000,2048,2500,3600, 4096,5000) , other pulse rates on request.

2, Please chose the ordering information: Extended No., Shaft diameter, Channels, Pulse rate, Output circuit, Supply voltage, Exit position, Cable length and Special code.

Ordering example: 1, ESG90H30C1024F5-30R2

Explanation: ESG90H Series, Shaft diameter 30mm, Output channels A B O, 1024PPR, Push-Pull, 5-30V, Radial Output 2m.

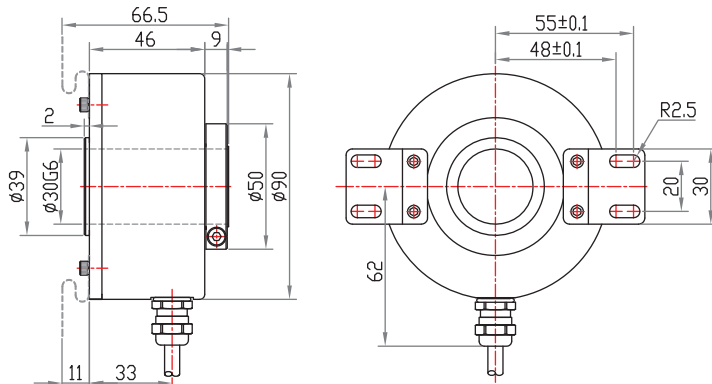
Accessories (sold separately) Note: Further fixing components can be found in the accessories selection table.

Tether square
Model (common) : 8116



Dimensions

ESG90H-



Dimensions

ESG9001H

