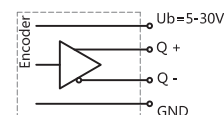
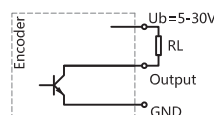
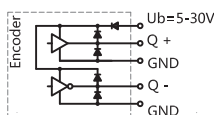
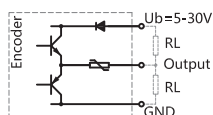


ESK90H Series
Sensing method Optical
Housing size $\Phi 90$ mm
Hollow shaft diameter $\Phi 25$ mm
Max. resolution 2500 PPR
Supply voltage 5-30VDC
Protection IP65

Mechanical characteristics

Shaft diameter	$\Phi 20$ 、 $\Phi 25$ 、 $\Phi 30$ mm
Protection	IP65
Speed	3000RPM
Shaft loading	max.40N Axial, max.80N Radial
Shock resistance	100g, 6ms
Vibration resistance	10g, 10-2000HZ
Bearing life	10^9 turn
Rotor moment of inertia	$\approx 150 \times 10^{-6} \text{ kgm}^2$
Starting torque	$< 0.1 \text{ Nm}$
Materials	Aluminum alloy Hollow shaft: Stainless steel Housing: Aluminum alloy
Working temperature	$-40^\circ\text{C} \dots +85^\circ\text{C}$
Storage temperature	$-40^\circ\text{C} \dots +85^\circ\text{C}$
Weight	$\approx 580 \text{ g}$

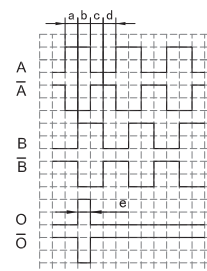
Electrical characteristics



Output circuit	Push-Pull	Push-Pull Differential	Open Collector	RS422 (TTL Compatible)
Pulse rate	max. 2500 P/R	max. 2500 P/R	max. 2500 P/R	max. 2500 P/R
Supply voltage	5-30V	5-30V	5-30V	5-30V
Power consumption(no load)	max. 125 mA	max. 125 mA	max. 80mA	max. 80mA
Permissible load/channel	$\pm 80 \text{ mA}$	$\pm 80 \text{ mA}$	$\pm 50 \text{ mA}$	$\pm 50 \text{ mA}$
Pulse frequency	100KHz	100KHz	100KHz	100KHz
Signal level high	min. Ub-1.5V	min. Ub-1.5V	/	min. 2.5V
Signal level low	max. 0.8V	max. 0.8V	/	max. 0.4V
Rise time Tr	max. 1 μ s	max. 1 μ s	/	max. 1 μ s
Fall time Tf	max. 1 μ s	max. 1 μ s	/	max. 1 μ s
Short circuit proof outputs	Yes	Yes	Yes	Yes

Terminal assignment

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



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

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

Ordering information

ESK90	XX	H	25	E	600	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
25: 25mm

④ Channels
B: A B
D: A A B B
E: A A B B O O

⑤ Pulse rate
500, 512
600, 1000
1024, 2500

⑥ Output circuit
F: Push-Pull
A: Push-Pull Differential
C: Open Collector
B: RS422 (TTL Compatible)

⑦ Supply voltage
5-30: DC5...30V

⑧ Exit position
R: Radial

⑨ Connection type
Figure: Cable length(m)

⑩ Special code
XXXX

Note: Printed in bold=standard items

Notes: 1, Notes: 1, Pulse rates available at a short notice (500, 512, 600, 1000, 1024, 2500), other pulse rates on request.

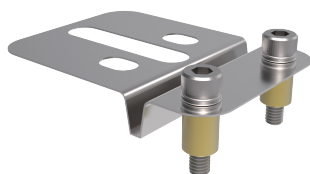
2, Please choose the ordering information: Extended No., Shaft diameter, Channels, Pulse rate, Output circuit, Supply voltage, Exit position, Cable length and Special code.

Explanation: ESK90H Series, Shaft diameter 25mm, Output channels AA, BB, OO, T024PPR, Push-Pull Differential, 5-30VDC, Radial Output 2m.

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

Mounting bracket

Model (common) : : 8161



Dimensions

ESK90H

