

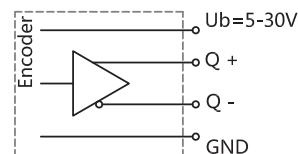
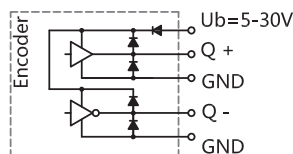
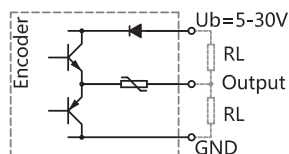


EHK105HS+MS Series
Constitution Incremental encoder + Mechanical speed switch
Sensing method Optical + Mechanical centrifugal
Housing size $\Phi 105\text{mm}$
Shaft diameter Hollow shaft $\Phi 16\text{mm}$ 、 $\Phi 20\text{mm}$ 、The cone shaft 17 (1:10)
Max. resolution 2500PPR
Speed range 720~3600rpm
Working voltage 5-30V
Protection IP66

Mechanical characteristics

Shaft diameter (mm)	Hollow shaft $\Phi 16$ 、 $\Phi 20\text{mm}$ 、The cone shaft 17 (1: 10)
Protection	IP66
Speed	3000RPM
Shaft loading	100N Axial, 300NRadial
Shock resistance	100g, 6ms
Vibration resistance	10g, 10...2000Hz
Bearing life	10^9 turns
Rotor moment of inertia	$< 150 \times 10^{-6} \text{kgm}^2$
Starting torque	$< 0.1\text{Nm}$
Materials Flange	Aluminum alloy
Solid 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	$\approx 2.2\text{Kg}$

Electrical characteristics



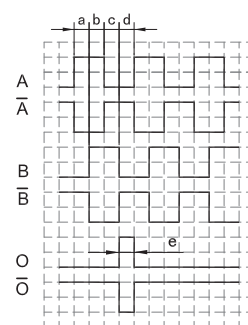
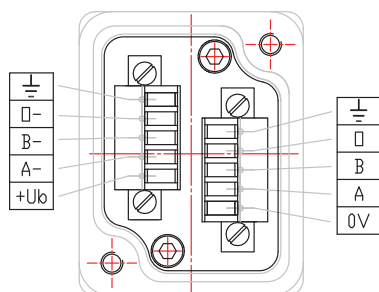
Output circuit	Push-Pull	Push-Pull Differential	RS422 (TTL Compatible)
Pulse rate	Max. 3000P/R	Max. 3000P/R	Max. 3000P/R
Supply voltage	5-30V	5-30V	5-30V
Current Draw at No Load	Max. 125 mA	Max. 125 mA	Max. 80 mA
Max. load current	Max. ± 80 mA	Max. ± 80 mA	Max. ± 50 mA
Pulse frequency	Max. 100KHz	100KHz	100KHz
Signal level high	Min. $U_b - 2.5\text{V}$	Min. $U_b - 2.5\text{V}$	Min. 2.5V
Signal level low	Max. 0.8V	Max. 0.8V	Max. 0.4V
Rise time T_r	Max. 1 μs	Max. 1 μs	Max. 1 μs
Fall time T_f	Max. 1 μs	Max. 1 μs	Max. 1 μs
Short circuit proof outputs	Yes	Yes	Yes

Mechanical speed switch

Protection	IP66
Switching speed range	720~3600rpm
Maximum speed	1.25ns
Movement speed	≤ 20%
Output switching capacity	≤6A/230VAC
	≤1A/125VDC
Switching Deviation	≈3%
Switching hysteresis	≈40%
Switching precision	± 4% ($\Delta n=2\text{rpm/s}$)
	≤ 20% ($\Delta n=1500\text{rpm/s}$)
Working temperature	-40~+85°C
Cable	Terminal box cable radial

Terminal assignment- Encoder

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



⌚ Shaft turning clockwise, top-view of shaft.
a, b, c, d = $T/4 \pm T/8$
e = $T/4 \pm T/8$

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

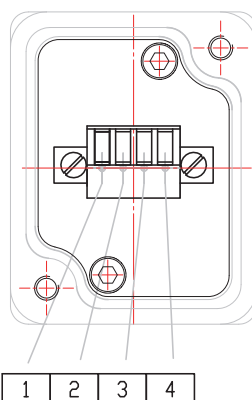
Terminal assignment- Speed switch

PINS:	1	2	3	4
Cable colour:	RD	RD	BK	BK

Make contact



Break contact



Ordering information

EHK105 HS 16 E 1024 A 5-30 R 2 + MSXXXX / XXXX

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Shaft type

HS: Hollow+screw

HZ: hollow cone shaft

② Shaft diameter

16: 16mm

20: 20mm

17: 17(1:10)

③ Channels

B: A B

D: A $\bar{A}$ B $\bar{B}$

E: A $\bar{A}$ B $\bar{B}$ O $\bar{O}$

④ Pulse rate

600, 1024

2048, 2500

⑤ Output circuit

F: Push-Pull

A: Push-Pull Differential

B: RS422 (TTL Compatible)

⑥ Supply voltage

5-30: DC5...30V

9-26: DC9...26V

⑦ Exit position

R: Radial

⑧ Connection type

Figure: Cable length(m)

⑨ Setting Switching speed

720, 780, 850, 900,
980, 1075, 1200, 1250,
1350, 1750, 1950, 2300
3000, 3600

⑩ Special code

XXXX

Note: Printed in bold=standard items

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

Ordering example: 1, EHK105HS16D1024A5-30R2+MS1750

Explanation: EHK105HS Series, Shaft diameter 16mm, Output channels A $\bar{A}$, B $\bar{B}$, 1024PPR, Push-Pull, DC5-30V, Radial Output 2m, Mechanical speed switch, Setting Switching speed 1250rpm.

Accessories (sold separately)

Note: Further coupling can be found in the coupling selection table.

Mounting bracket

Model (normal) : 8182



Tether arm,long

Model (normal) : 8561 6/L=X



Mounting bracket

Model (normal) : 8182A



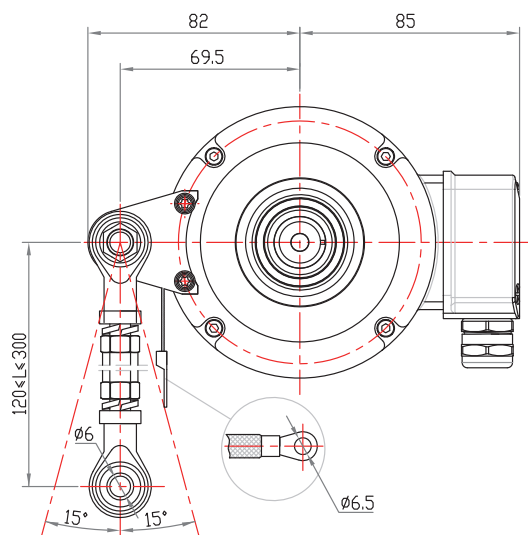
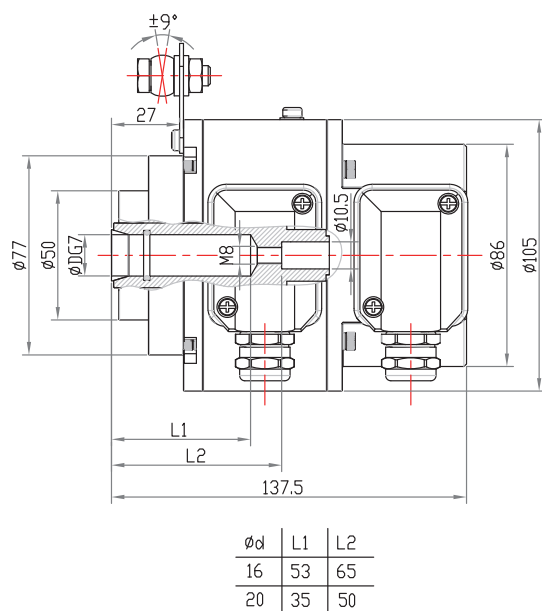
Tether arm,long

Model (normal) : 8564 8/L=X



Dimensions

EHK105HS+MS+8182+8561



EHK105HZ+MS+8182+8561

