



**EHK99H series**  
Sensing method optical  
Shaft insulation shaft insulation reach to2.5KV  
Housing size  $\Phi 99.5\text{mm}$   
Hollow shaft  $\Phi 12$ 、 $\Phi 16\text{mm}$   
Max. resolution 2500PPR  
Supply voltage 5VDC, 9-30VDC  
Protection IP66

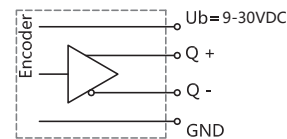
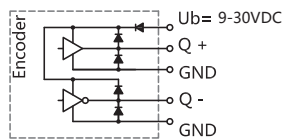
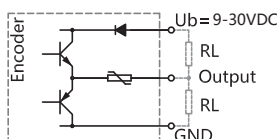


**EHK9901H series**  
Encoder with redundant signals  
Sensing method optical  
Shaft insulation shaft insulation reach to2.5KV  
Housing size  $\Phi 99.5\text{mm}$   
Hollow shaft  $\Phi 12$ 、 $\Phi 16\text{mm}$   
Max. resolution 2500PPR  
Supply voltage 5VDC, 9-30VDC  
Protection IP66

## Mechanical characteristics

Shaft diameter	$\Phi 12$ 、 $\Phi 16\text{mm}$ axis of cone17 (1:10)
Protection	IP66
Speed	6000RPM
Shaft loading	Max. 100 N Axial; max. 300 N Radial
Shock resistance	1000m/s <sup>2</sup> (11ms)
Vibration resistance	100m/s <sup>2</sup> (20-2000Hz)
Bearing life	10 <sup>9</sup> turns
Rotor moment of inertia	$\approx 55 \times 10^{-6} \text{kgm}^2$
Starting torque	<0.05Nm
Materials	Materials Flange :PEEK Solid shaft :Aluminium alloy Housing:Aluminium alloy
Working temperature	-40 C ... +85 C
Storage temperature	-40 C ... +85 C
Weight	Approx. 1.5kg

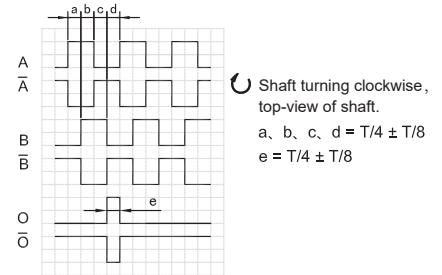
## Electrical characteristics



Output circuit	Push-Pull	Push-Pull Differential	RS422 (TTL Compatible)
Pulse rate	Max. 2500P/R	Max. 2500P/R	Max. 2500P/R
Supply voltage	5VDC, 9-30VDC	5VDC, 9-30VDC	5VDC, 9-30VDC
Power consumption(no load)	Max. 125 mA	Max. 125 mA	Max. 80mA
Permissible load/channel	Max. $\pm 80\text{mA}$	Max. $\pm 80\text{mA}$	Max. $\pm 50\text{mA}$
Pulse frequency	Max. 100 KHz	Max. 100 KHz	Max. 100 KHz
Signal level high	Min. +Ub-4V	Min. +Ub-4V	Min. >3V
Signal level low	Max. 0.8V	Max. <2.5V	Max. <1.15V
Rise time Tr	Max. 1 $\mu\text{s}$	Max. 1 $\mu\text{s}$	Max. 1 $\mu\text{s}$
Fall time Tf	Max. 1 $\mu\text{s}$	Max. 1 $\mu\text{s}$	Max. 1 $\mu\text{s}$
Short circuit proof outputs	Yes	Yes	Yes

## Terminal assignment

Signal		OV	+Ub	A	$\bar{A}$	B	$\bar{B}$	O	$\bar{O}$	$\text{⏏}$
Connection terminal		2	1	4	3	5	6	7	8	
Colour		WH	BN	GN	PK	YE	BU	GY	RD	Shield
12cores M23 Socket CCW (9223-2)		10	12	5	6	8	1	3	4	PH <sup>1)</sup>
12cores M23 Socket CW (9223)		10	12	5	6	8	1	3	4	PH <sup>1)</sup>



Note: <sup>1)</sup> PH= connected to housing

## Ordering information

EHK99 XX H 12 E 1024 A 5-30 R 2 / XXXX

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧    ⑨    ⑩

① Extended No. Null: Standard 01: Encoder with redundant signals	② Shaft type H: hollow shaft HZ: axis of cone	③ Shaft diameter 12: 12mm <b>16: 16mm</b> <b>17: 17 (1: 10)</b>	④ Channels <b>B: A B</b> C: A B O <b>D: A <math>\bar{A}</math> B <math>\bar{B}</math></b> <b>E: A <math>\bar{A}</math> B <math>\bar{B}</math> O <math>\bar{O}</math></b>	⑤ Pulse rate 600, <b>1024, 2048</b> 2500
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⑥ Output circuit F: Push-Pull <b>A: Push-Pull Differential</b> <b>B: RS422 (TTL Compatible)</b>	⑦ Supply voltage <b>5: 5VDC</b> <b>9-30: 9...30VDC</b>	⑧ Exit position R: Radial	⑨ Connection type T1: M20 Radial cable sealing head $\phi$ 11-14 T2: M20 Radial cable sealing head $\phi$ 8-11 Figure: Cable length(m) 9223: M23 plug in clockwise 12 cores 9223-2: M23 plug in anticlockwise 12 cores	⑩ Special code XXXX
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Note: Printed in bold=standard items

Notes: 1, mentioned resolution is in common use, others depend on real situation.

2, pls confirm the model information: model series, axis dimension, output channel, resolution, output form, voltage, outlet, cable length, connect type and special code.

Ordering example : 1、EHK99H16E1024A9-30RT1,, pls specify the special demand at end

Explanation : EHK99H series, shaft diameter 16mm, output A B O, 1024PPR, push-pull, 9-30VDC, M20 Radial cable sealing head  $\phi$ 11-14.

2、EHK9901H16E2048A9-30RT1, pls specify the special demand at end.

Explanation : EHK9901H series, Encoder with redundant signals, output A  $\bar{A}$  B  $\bar{B}$  O  $\bar{O}$ , 2048PPR, push-pull differential, 9-30VDC, M20 Radial cable sealing head  $\phi$ 11-14.

3、EHK99HZ17E2048A9-30R9223, pls specify the special demand at end.

Explanation : EHK99HZ series, axis of cone 17mm, output A  $\bar{A}$  B  $\bar{B}$  O  $\bar{O}$ , 2048PPR, Push-Pull Differential, 9-30VDC, M23 Clockwise 12 pin plug connection.

**Accessories (sold separately)** Note: Further stator coupling can be found in the accessories selection table.

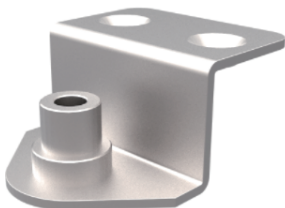
Tether arm, long

Model (normal) : 8561A 6/L=X



Mounting bracket

Model (normal) : 8166



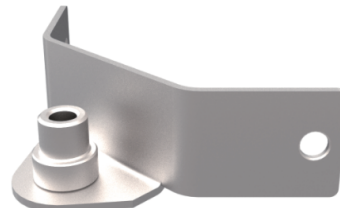
Mounting bracket

Model (normal) : 8166A



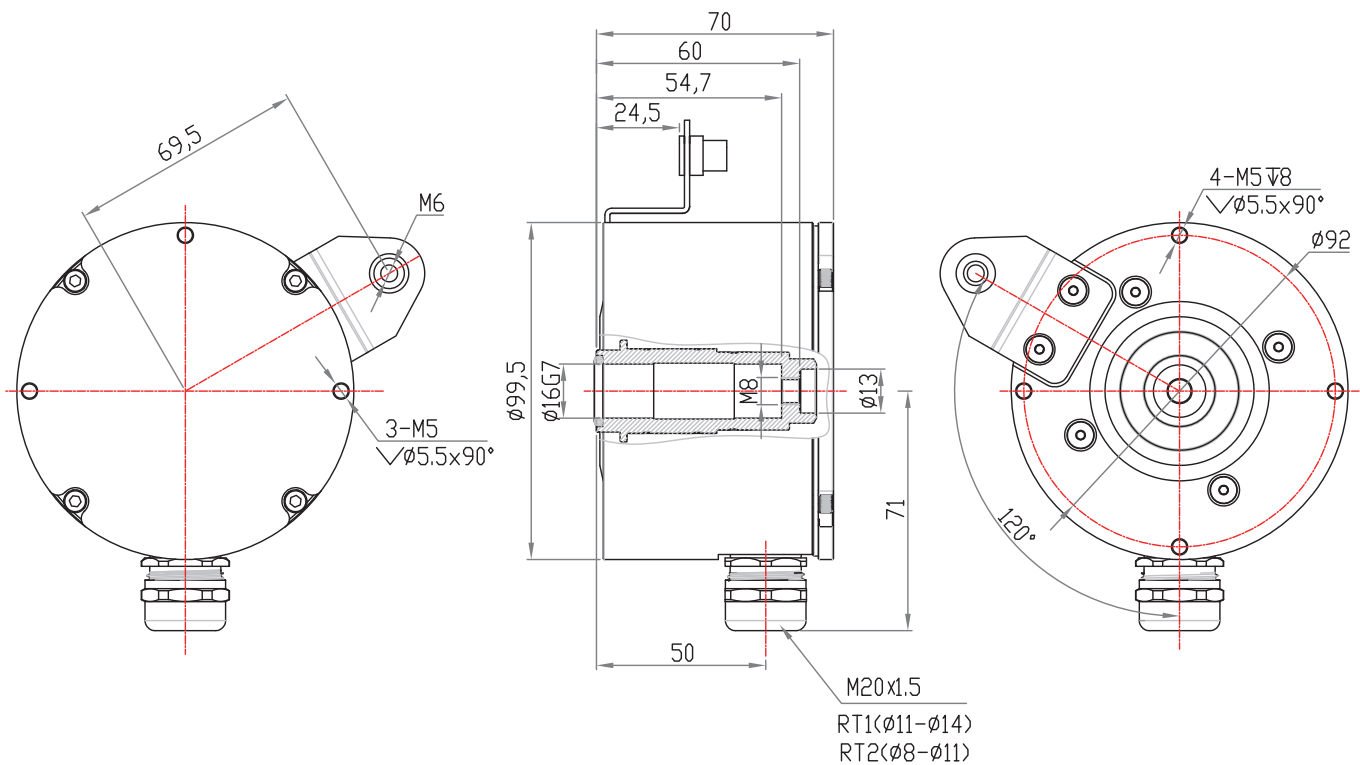
Mounting bracket

Model (normal) : 8166B



**Dimensions**

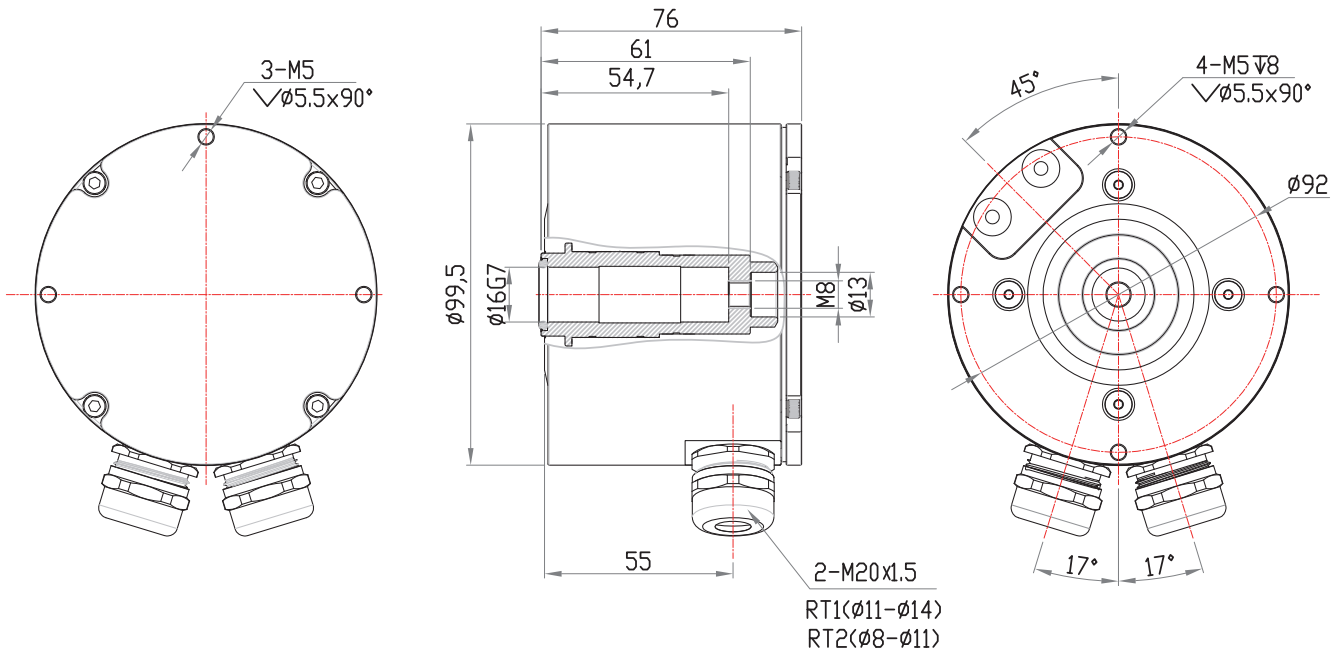
EHK99H16+8166A





Dimensions

EHK9901H16



EHK9901HZ17

