

Hollow shaft incremental encoder



EHK99H series

Sensing method optical

Shaft insulation shaft insulation reach to 2.5KV

Housing size Ø99.5mm

Hollow shaft Ø12, Ø16mm, axis of cone Ø17mm (1:10)

Max. resolution 2048PPR

Supply voltage 5VDC, 9-30VDC

Protection IP66

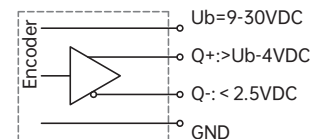
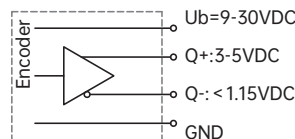
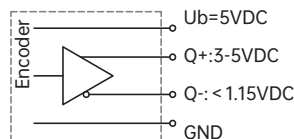
Connection: Plug, M23, 12-pin, cw; Plug, M23, 12-pin, ccw

Direct Cable Out; Terminal block

Mechanical characteristics

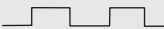
Shaft diameter	Ø12, Ø16mm, axis of cone Ø17mm (1:10)
Protection	IP66
Speed	6000RPM
Shaft loading	Max. 500N Axial; Max. 1200N Radial
Shock resistance	IEC 60068-2-27, ≤400g, 3.5ms
Vibration resistance	IEC 60068-2-6, ≤20g, 55-2000Hz
Bearing life	10 ⁹ turns
Rotor moment of inertia	≈55×10 ⁻⁶ kgm ²
Starting torque	≤6N.cm
Shaft material	Stainless Steel
Body material	Aluminum Alloy
Housing material	Aluminum Alloy
Working temperature	-40°C...+85°C
Storage temperature	-40°C...+85°C
Weight	≈1.5kg

Electrical characteristics



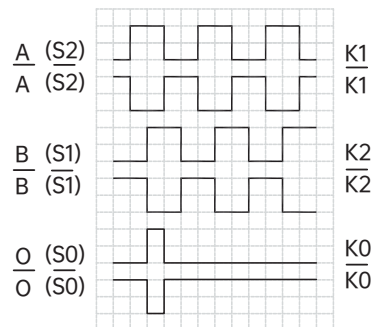
Output circuit	TTL	RS422	HCHTL
Pulse rate	Max. 2048P/R	Max. 2048P/R	Max. 2048P/R
Supply voltage	5VDC	9-30VDC	9-30VDC
Signal level high	3-5V	3-5V	>+Ub-4V
Signal level low	<1.15V	<1.15V	<2.5V
Current Draw at No Load	Max. 80mA	Max. 80mA	Max. 125mA
Max. load current	±50mA	±300mA	±300mA
Max. Output Frequency	400KHz	400KHz	400KHz
Max. cable length	50m	350m	350m
Rise/Fall time Tr	Max. 1µs	Max. 1µs	Max. 1µs
Interface protection	Surge / Reverse polarity / Short-circuit / ESD		

Terminal assignment

Signal		+Ub	0V	A	$\bar{A}$	B	$\bar{B}$	O	$\bar{O}$	Shell
Colour		BN	WH	GN	PK	YE	BU	GY	RD	Shield
Connection terminal		1	2	7	8	5	6	3	4	
Model: 9223 Plug, M23, 12-pin CW		12	10	5	6	8	1	3	4	PH ¹⁾
Model: 9223-2 Plug, M23, 12-pin CCW		12	10	5	6	8	1	3	4	PH ¹⁾

Note:¹⁾ PH= connected to housing

Output signal



From the direction of the shaft end,
the motor rotates clockwise to output the waveform diagram. A leads B.

Note: The phase relationship between the O road signal and the A and B road signals is not specified.

Ordering information

EHK99										XX	H	16	E	2048	W	9-30	R	T1	G /	XXXX		
										①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩			
①Extended No. Null: Standard										②Shaft type H: hollow shaft HZ: axis of cone					③Shaft diameter 12: Ø12mm 16: Ø16mm 17: Ø17 (1: 10)			④Channels B: A B C: A B O D: A $\bar{A}$ B $\bar{B}$ E: A $\bar{A}$ B $\bar{B}$ O $\bar{O}$			⑤Pulse rate 1024, 2048	
⑥Output circuit B: RS422 (TTL Compatible) W: HCHTL										⑦Supply voltage 5: 5VDC 9-30: 9...30VDC					⑧Exit position R: Radial			⑨Connection type T1: M20 Radial cable sealing head Φ11-14 T2: M20 Radial cable sealing head Φ8-11 T3: M25 Radial cable sealing head Φ13-18 Figure: Cable length(m) 9223: Plug, M23, 12-pin, CW 9223-2: Plug, M23, 12-pin, CCW				
⑩Special code XXXX																						
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, EHK99H16E2048W9-30RT1G, pls specify the special demand at end

Explanation : EHK99H series, hollow shaft Ø16mm, output A $\bar{A}$ B $\bar{B}$ O $\bar{O}$, 2048PPR, push-pull differential, 9-30VDC, M20 Radial cable sealing head Ø11-14.

2, EHK99HZ17E2048W9-30R9223G, pls specify the special demand at end.

Explanation : EHK99H series, axis of cone Ø17mm, output A $\bar{A}$ B $\bar{B}$ O $\bar{O}$, 2048PPR, push-pull differential, 9-30VDC, plug, M23, 12-pin, CW

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



Insulated torque arm
Model: 8561A 6/L=X



Torque arm
Model: 8561 6/L=X



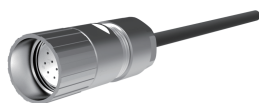
Mounting bracket
Model: 8166



Mounting bracket
Model: 8166A



Mounting bracket
Model: 8166B

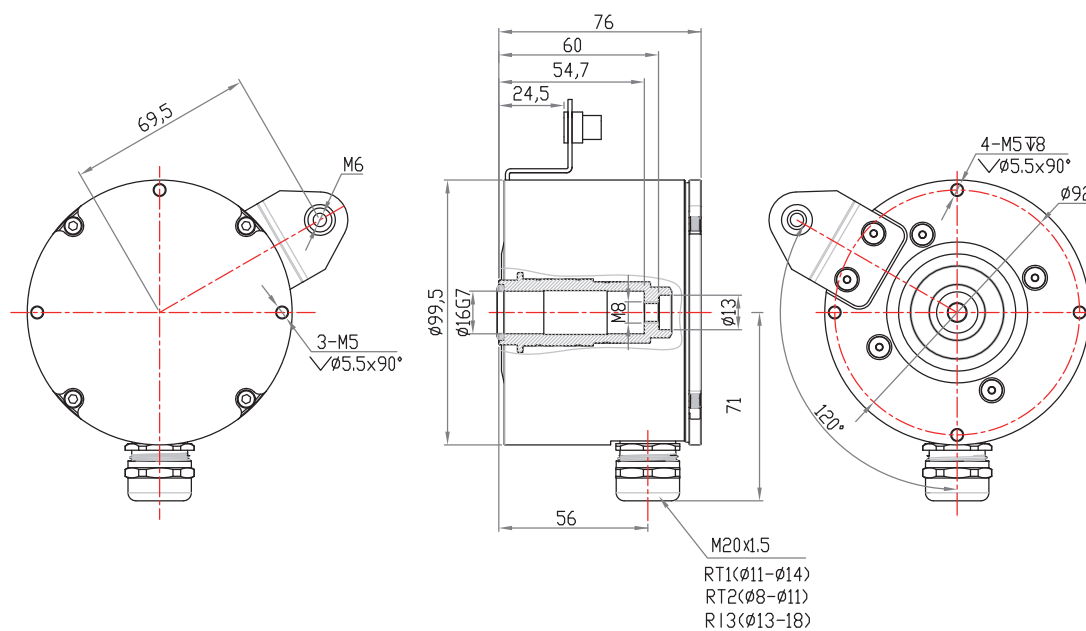


Connectors and cables
Model: 9223B/X-22.006
Plug A: Plug, M23, 12-pin, CCW, straight
Plug B: Bare wire end, x meter cable, PVC, shielded wire 1×2×0.5mm²+3×2×0.25mm², Ø9.7±0.2mm

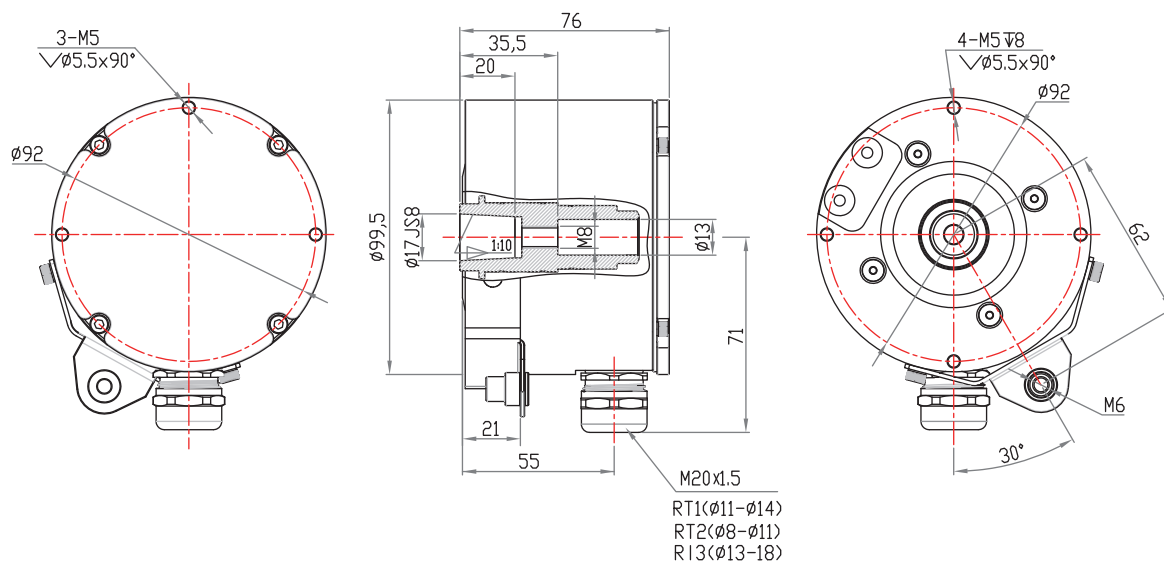
Model : 9223-2B/X-22.006
Plug A : Plug, M23, 12-pin, CW, straight

Dimensions

EHK99H16+8166A

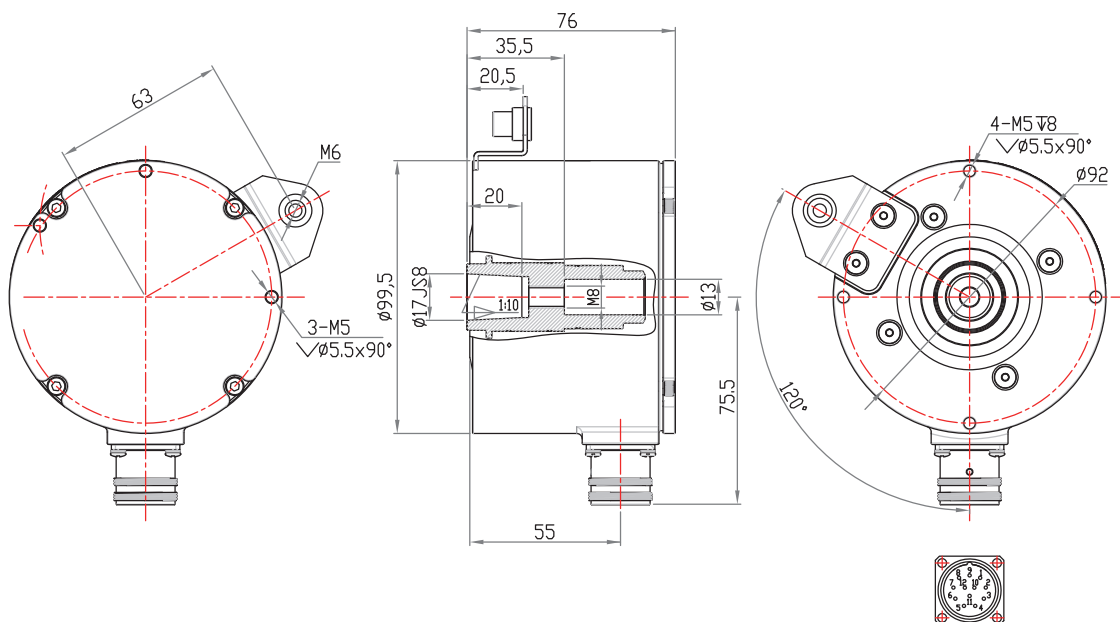


EHK99HZ17+8166B



Dimensions

EHK99HZ17+9223+8166



EHK99H (Client-side)

