Magnetic Encoder

OME06

The OME06 absolute magnetic encoder consists of a stator and a rotor. The stator integrates angle calculation and encoder output circuits, with multi-pin output connectors (see interface diagram below) located on its outer edge. Two connectors are used for angle output, supporting SSi, BiSS- C, UART, SPI, and ABZ interface protocols.

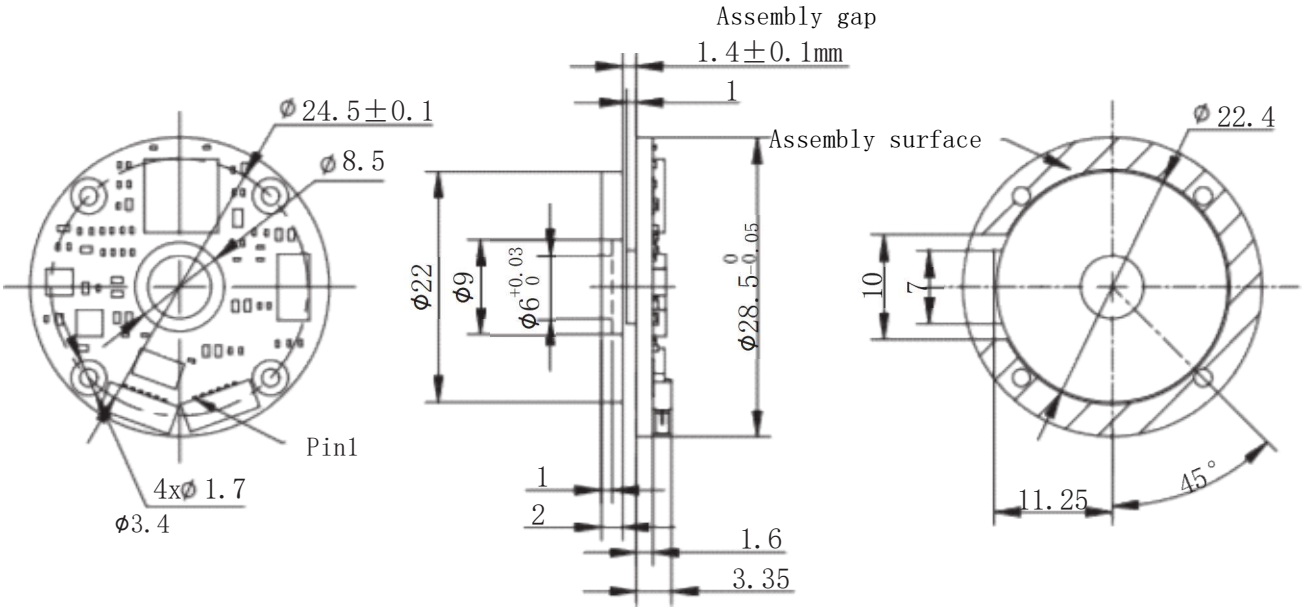




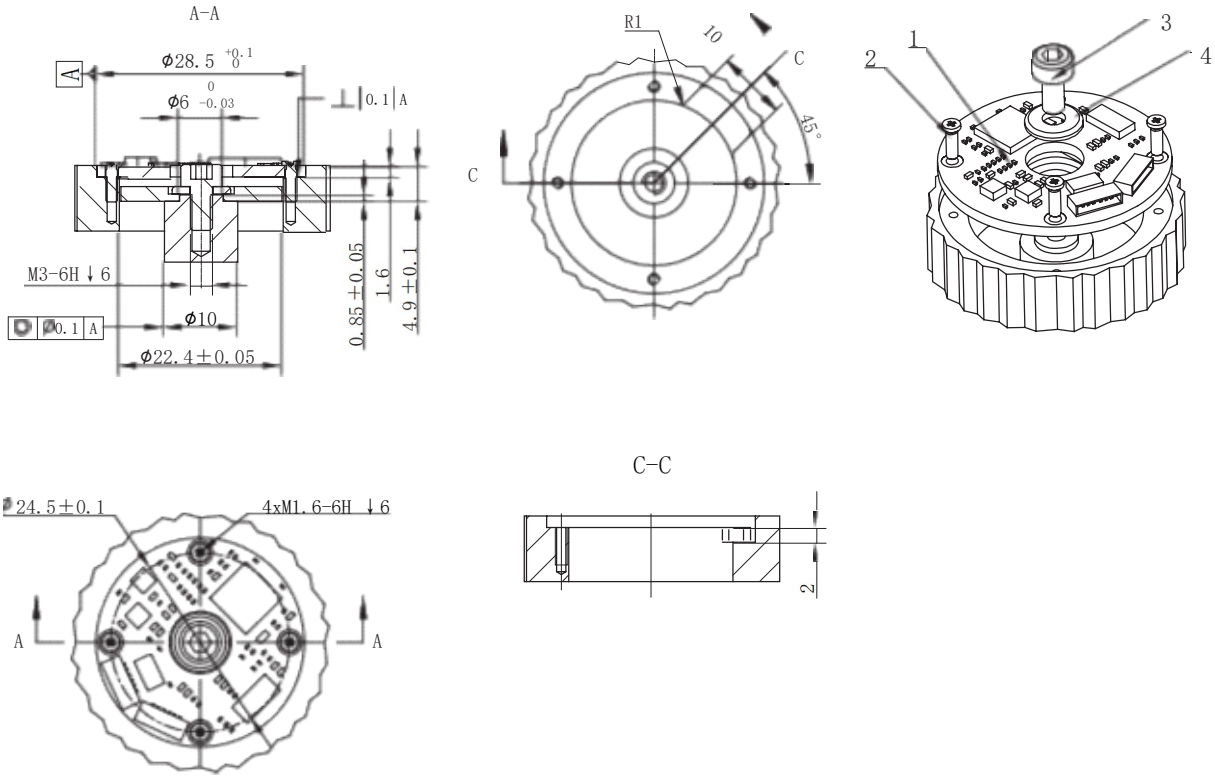
Technical Parameters

Model	OME06
Basic Performance	
Angular Resolution	17~18 bit
Maximum Static Error	±0.03°-0.1°
Repeatability Error	±2 LSB
Maximum Operating Speed	6000 rpm
Measurement Range	Single-turn
Rotation Direction	Default CW Increment (Adj.)
Mechanical Dimensions & Installation	
OD \ ID \ Thickness	28.5\6\7.6 mm
Allowable Eccentricity	±0.3 mm
Stator-Rotor Gap	1.3±0.1 mm
Rotor Inertia	0.29 kg·mm²
Weight (Approx.)	8 g
Rotor & Stator Material	FR-4
Application Environment	
EMC	IEC 61000-6-2、IEC 61000-6-4
Operating Temperature	-30℃ - +85℃
Relative Humidity	0 - 99%
Shock	100 g / 11 ms
Vibration	20 g (10 - 2000 Hz)
Electrical & Interface	
Supply voltage	5 - 30V
Working current	< 100 mA
Output Protocol	SSi, BiSS-C, UART, SPI, ABZ

OME06 External Dimensions



OME06 Installation Dimensions



No.	Name	Qty
1	OME06	1
2	Cross Pan Head M1.6x6	4
3	Hex Socket M3x6	1
4	OME06 Rotor Mount Ring	1

OME06 Electrical Interface

Hardware Interface

SSI / BiSS / RS-422 / RS-485 Interface Connector Definition

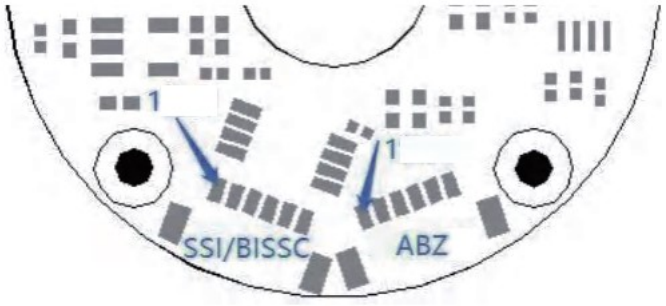
6 针插座	RS-422	SSI	BiSS-C	RS-485
1	VCC			
2	GND			
3	RX+	CLK+	MA+	A+
4	RX-	CLK-	MA-	B-
5	TX-	DATA-	SLO-	VCC
6	TX+	DATA+	SLO+	\

ABZ / SPI Interface Connector Definition

6-Pin Socket	SPI	ABZ (单端)
1	CS	\
2	CLK	A
3	MISO	Z
4	MOSI	B
5	GND（多圈时电池 -）	
6	VCC（多 圈时电池 +）	

SSI / BiSS Signal Output Parameters

Digital Output Parameters	
Signal Delay	< 50 us
Output Code Format	Binary
Max Data Update Rate	25kHz
Interface Level	Differential RS-422
Power Consumption	< 100 mA
Sampling rate and clock frequency depend on the selected communication protocol.	



6-Pin Plug: HC-0.8-6PWT
Mating Connector: HC-0.8-6Y