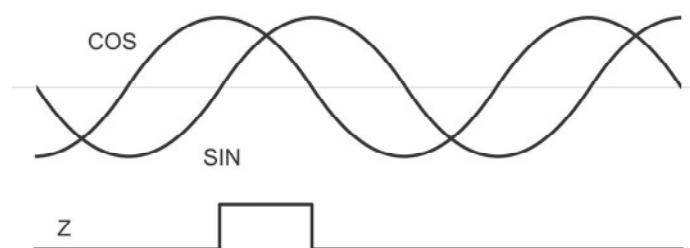


Mini Encoder Sin/Cos



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Description

The MES 25 is a optical encoder. He is available as a shaft or hollow shaft encoder for different sizes of motor shafts.

The encoder provides two differential sinus an cosinus output signals for counting and direction information and one index channel (one pulse per revolution).

The resolution of the encoder is determined by the number of counts per revolution (CPR). Power supply and signals are provided by a 4x2x0,14mm² shielded cable with tinned ends.

Performance



Features

- Small size: 28.0 mm diameter x 31.8 mm length
- Quick and easy assembly
- Three channel differential line driver output
- Output type: 1Vss (diff.)
- Power supply: 5 VDC
- max. 20 mA output drive capability
- Resolution: 250 or 256 CPR
- Maximum shaft diameter: 6.0 mm
- Operating temperature: -20°C to +85°C
- Frequency: 500 kHz
- Compliant EU-directive 2011/65/EU (RoHS)
- Protection class IP65

Recommended operating conditions

Electrical Notes

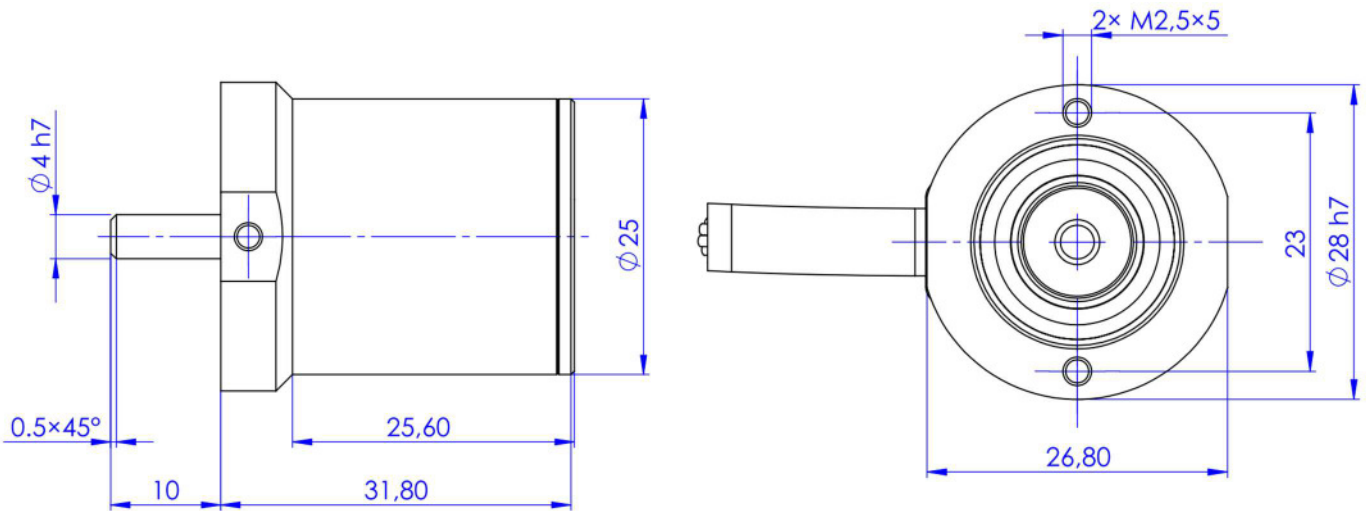
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply voltage	V_{CC}	4,5	5.0	5,5	V_{DC}	
Supply current	I_{CC}	35	50	65	mA	No Load
Load capacitance	C_L			100	pF	
Count frequency	f			500	kHz	
Operating temperature	T_A	-20	25	85	°C	
Humidity exposure				90	% RH	not condensing
Sin+, Sin-, Cos+, Cos-						
Amplitude output voltage	V_{SS}	0,4	0,5	0,6	V_{DC}	
Output current	I_o			20	mA	short-circuit protection
Offset output voltage	V_{OS}		2,5		V_{DC}	depended of VCC
H-, I- Channel						
Amplitude output voltage	V_{SS}	0,4	0,5	0,6	V_{DC}	
Output current	I_o			20	mA	
Offset output voltage	V_{OS}		2,5		V_{DC}	depended of VCC

Mechanical Notes

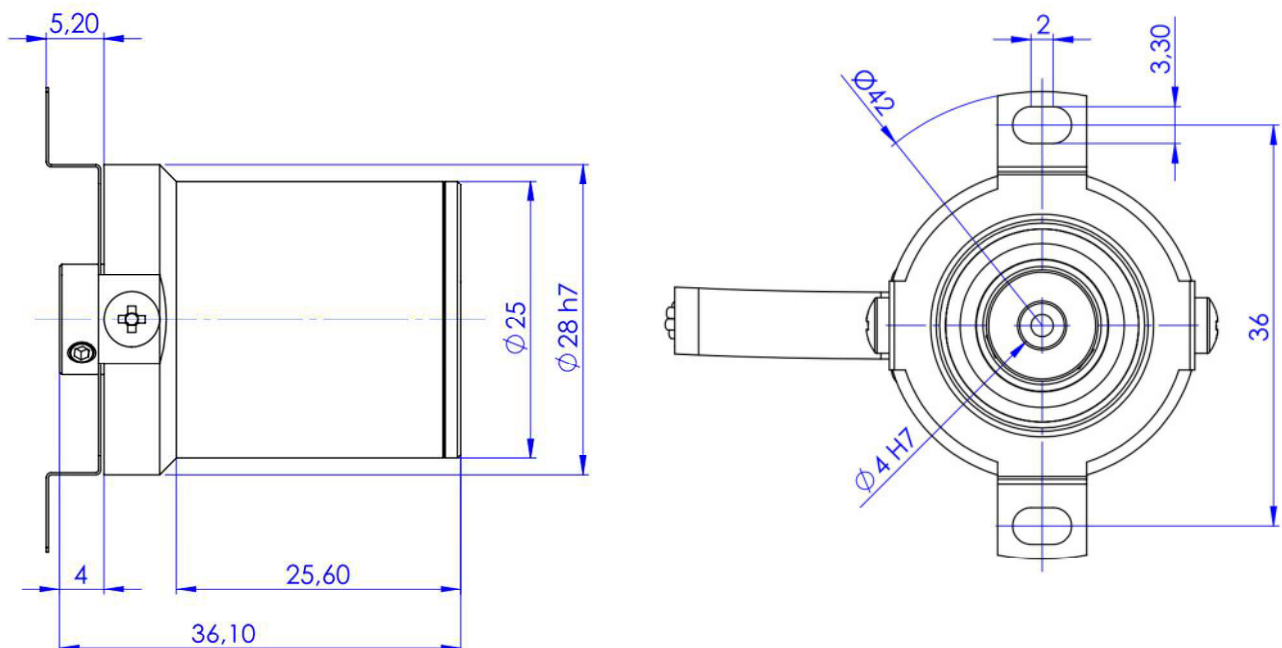
Parameter	Value	Tolerance	Unit
Max. allowable axial shaft play of motor	0.1	-	mm
Max. allowable radial shaft play of motor	0.02	-	mm
Mounting screw size (DIN 84)	M3	-	-
Pitch circle diameter	36.0	±0.1	mm
Shielded cable, twisted pair, tinned ends	4 x 2 x 0,14 mm	-	mm
Total weight	60	-	g
Moment of inertia of the hub with the code wheel	13.0	±1.0	gcm ²
Protection grade according to DIN 40500	IP65	-	-
max. speed (mechanical)	10,000	-	rpm

ESD Warning: Normal handling precautions should be taken to avoid static discharge damage to the sensor.

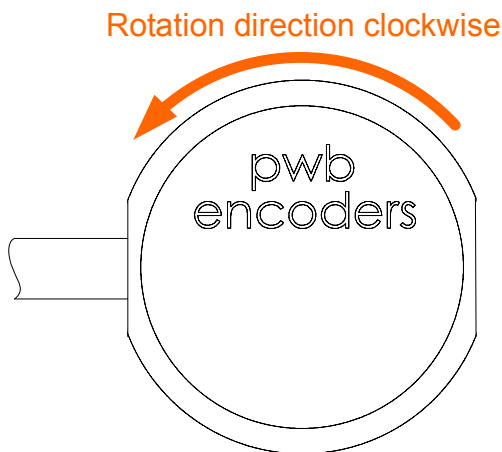
Mechanic performance: K (shaft)



Mechanic performance: C (hollow shaft)



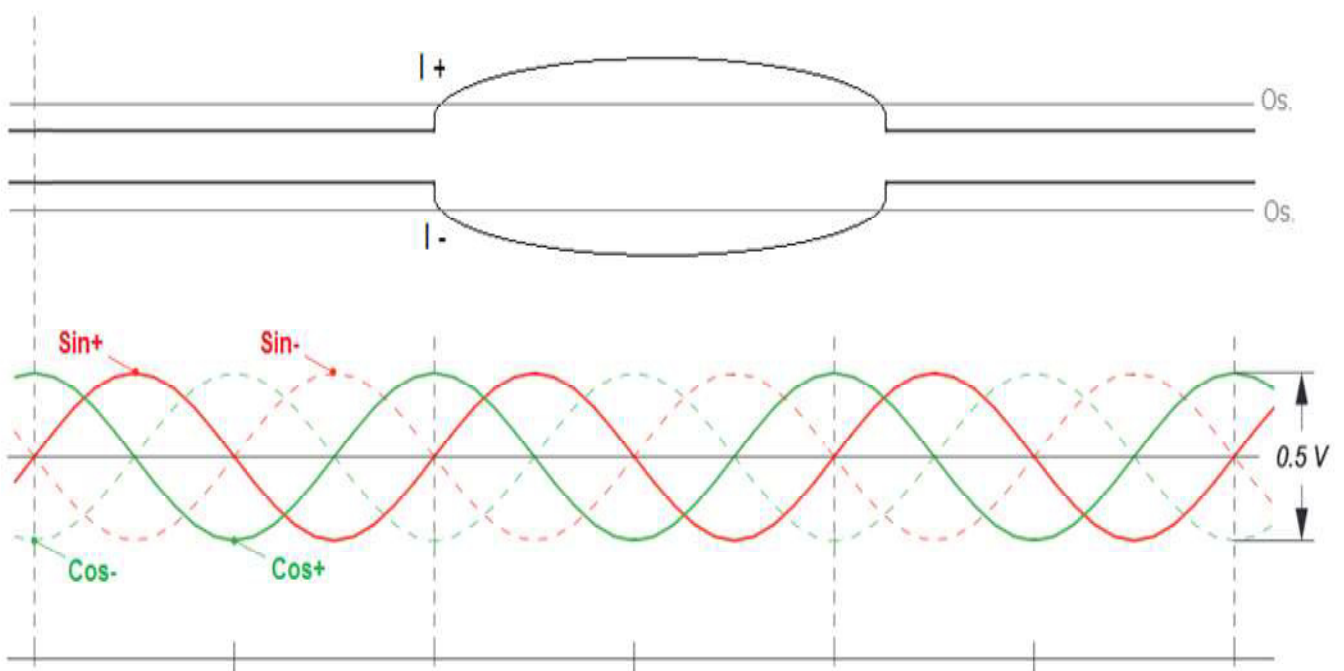
Electrical interface



Pin-out description

Signal Description	Wire colors (cable)
Power supply	red
Ground	blue
Channel A+	white
Channel A-	brown
Channel B+	green
Channel B -	yellow
Index I +	gray
Index I -	pink

Signal form



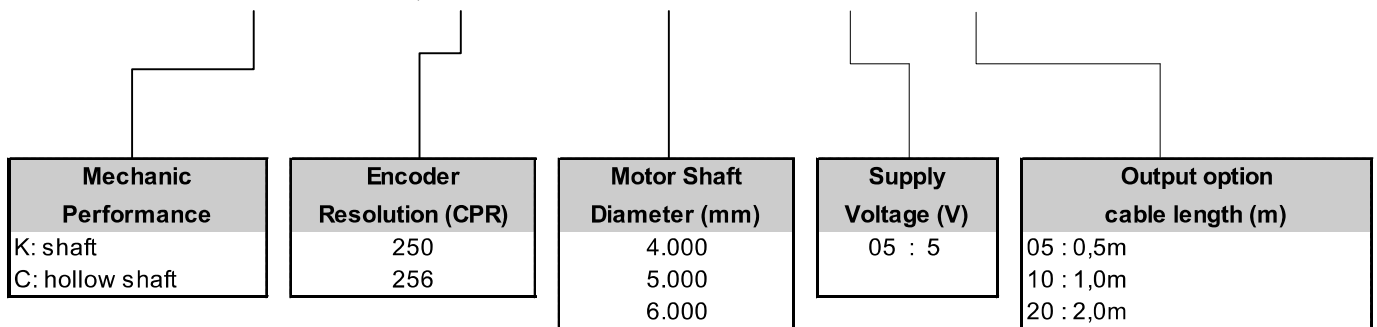
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Ordering information

Ordering code:

MES 25 X - XX,XXX - X.XXX - XX - XX



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