

## ESA361M SERIE



### For CNC machines, crane system and test equipment

- ➔ Outer diameter of only 36mm
- ➔ 360° resolved into 4096 different positions
- ➔ 0-10 V or 4-20mA output
- ➔ Short circuit proof
- ➔ Wide temperature range

### Product description

The ESA361M series singleturn with analog interface and magnetic sensor technology are particularly flexible in use due to their diverse interfaces and measuring ranges. A green and red LED facilitate both installation and fault diagnosis as a reference point and as a fault indicator. Protected up to IP69k, shockproof and resistant to extreme temperature fluctuations, the ESA361M are suitable even for demanding outdoor applications.

### Application

The encoder is used in all areas of industry. Especially in the processing industry such as metal construction. It is used in lathes and milling machines, CNC machines, motors and in many other machines. Rotary encoders with incremental measurement or absolute measurement are predestined to detect the angular change of objects and determine their position.

### Technical Data

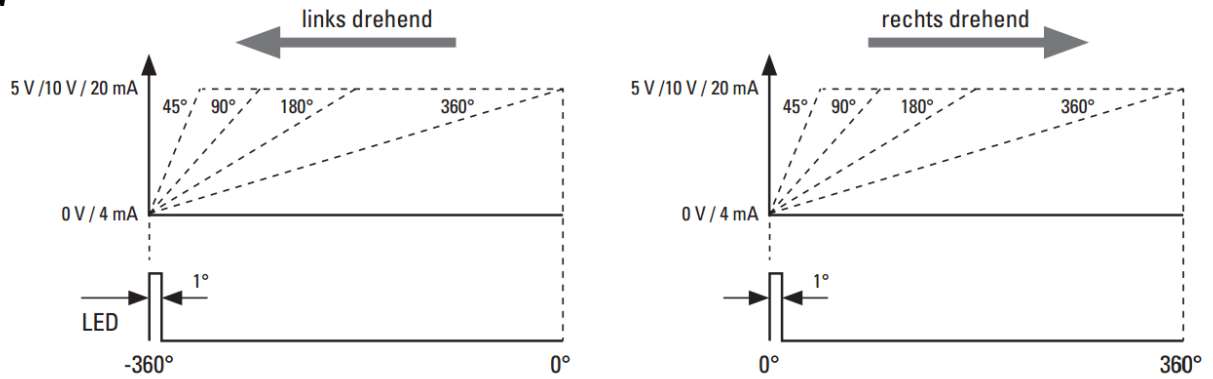
Supply voltage 4-20 mA	10 ... 30 V DC
Supply voltage 0-5 VDC	10 ... 30 V DC
Supply voltage 0-10 VDC	15 ... 30 V DC
Current consumption (without load)	max. 38 mA
Reverse polarity protection of the supply voltage	Yes
Measuring range	45°, 90°, 180° or 360°
Resolution	12 Bit
Absolute accuracy (25°C)	±1°
Repeatability (25°C)	± 0,2°
Maximum speed	6000 min <sup>-1</sup>
Starting torque (at 20°C)	< 0,06 Nm
Shaft load capacity	radial 40 N axial 20 N
Shock resistance according to EN 60068-2-27	5000 m/s <sup>2</sup> , 6 ms
Vibration resistance according to EN 60068-2-6	300 m/s <sup>2</sup> , 10 ... 2000 Hz
Permanent shock after EN 60068-2-27	1000 m/s <sup>2</sup> , 2 ms
Vibration (broadband noise) after EN 60068-2-64	5 ... 2500 Hz, 100 m/s <sup>2</sup> – rms
Protection class	IP69

**ESA361M SERIE**

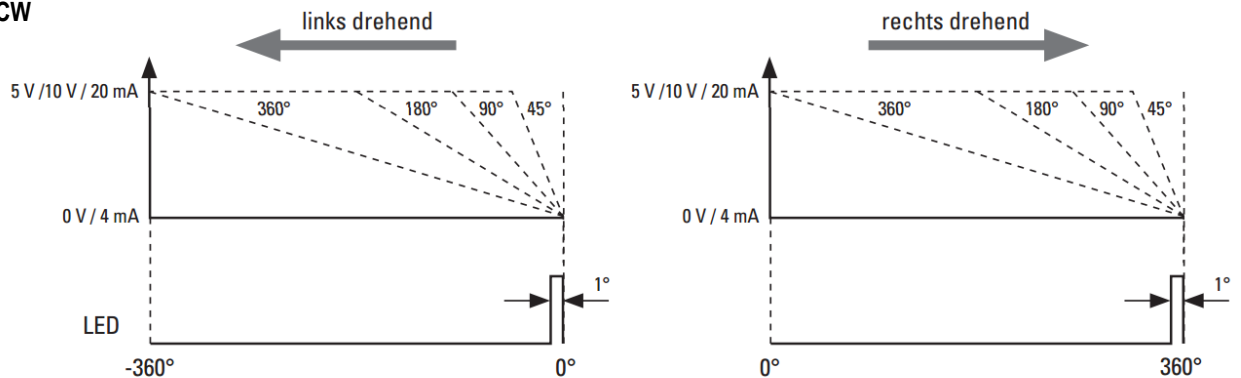


**Example (course of the output signal)**

**Variant CW**



**Variant CCW**



**Connection assignment**

Interface	Connection type	Cables (unused cores must be individually insulated before commissioning)				
Current output	0,1	Signal	0V	+V	+I	-I
		Cable colour	WH	BR	GN	YE
Current output	2,3	Signal	0V	+V	+I	-I
		Pin	3	2	4	5

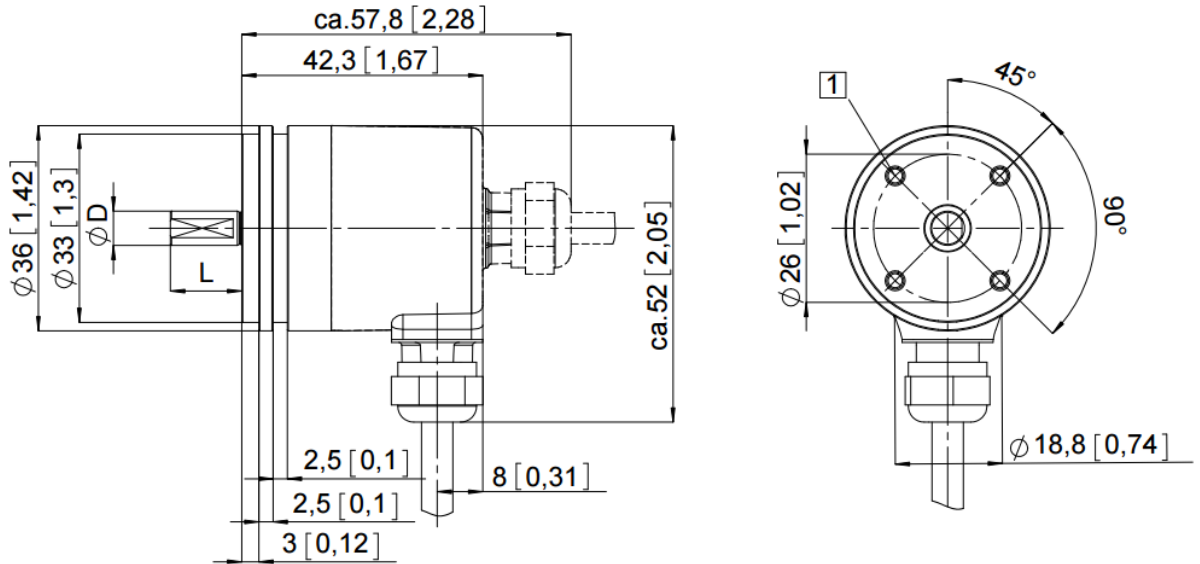
Interface	Connection type	Cables (unused cores must be individually insulated before commissioning)				
Voltage output	0,1	Signal	0V	+V	+I	-I
		Cable colour	WH	BR	GN	YE
Voltage output	2,3	Signal	0V	+V	+I	-I
		Pin	3	2	4	5

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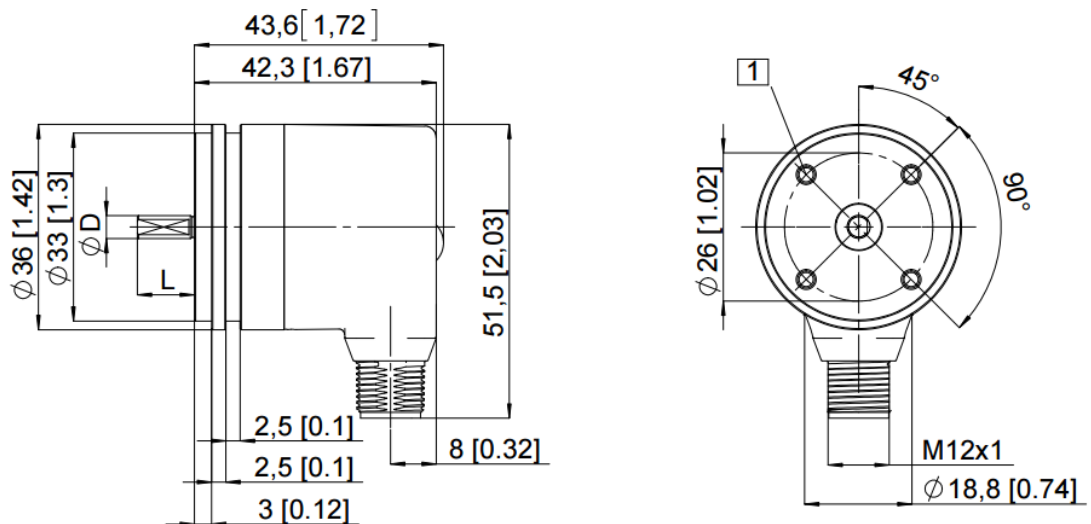
Reference drawing in mm

Synchro flange, Ø36  
Cable output



1 - 4 x M3, 6mm tief

Synchro flange, Ø36  
M12 Plug



1 - 4 x M3, 6mm deep

**ESA361M SERIE**



**Order Code**

**ESA 361 M**

**957 x. x x. x x x**

957 ESA361M

**FLANGE**

0 Synchroflange Ø36mm

**SHAFT**

- 0 Ø 6 x 12,5mm
- 1 Ø 6,35 x 12,5mm
- 2 Ø 8 x 12,5mm

**CONNECTION CIRCUIT**

- 0 Current output
- 1 Voltage output

**CONNECTION TYPE**

- 0 Cable axial, 1m
- 1 Cable radial, 1m
- 2 M12-Plug axial, 5-pole
- 3 M12-Plug radial, 5-pole

**MEASURING RANGE**

- 0 1 x 360° / CW
- 1 1 x 180° / CW
- 2 1 x 90° / CW
- 3 1 x 45° / CW
- 4 1 x 360° / CCW
- 5 1 x 180° / CCW
- 6 1 x 90° / CCW
- 7 1 x 45° / CCW

**OUTPUT**

- 0 0...5V / 10...30V DC
- 1 0...10V / 15...30V DC
- 2 4...20mA / 10...30V DC



**Do you have any questions?**

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