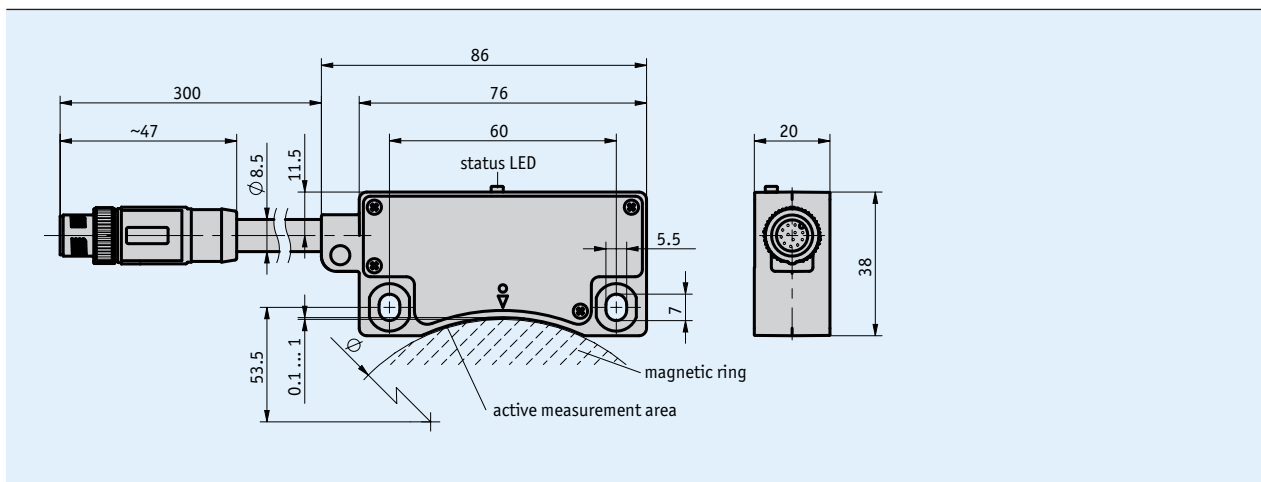


### Profile

- Magnetic absolute encoder single-turn
- Compact design
- Resolution 12 ... 16 bits
- Additional analog Sin/Cos 1 V<sub>SS</sub> signals
- Reading distance ≤1 mm



### Mechanical data

Feature	Technical data	Additional information
Housing	zinc die-cast	
Sensor/ring reading distance	0.1 ... 1 mm	over the whole sensor line

### Electrical data

Feature	Technical data	Additional information
Operating voltage	4.5 ... 30 V DC	reverse polarity protected
Power input	<1 W	
SSI clock speed input	50 ... 750 kHz	
Output circuit	1 V <sub>pp</sub> ±10 %	
Offset voltage	2.5 V DC ±100 mV	
Interface	SSI	service mode (RS485)
Cycle time	≤30 μs	
Type of connection	M12-Steckverbinder (A-kodiert)	12-polig, 1x Stift

### System data

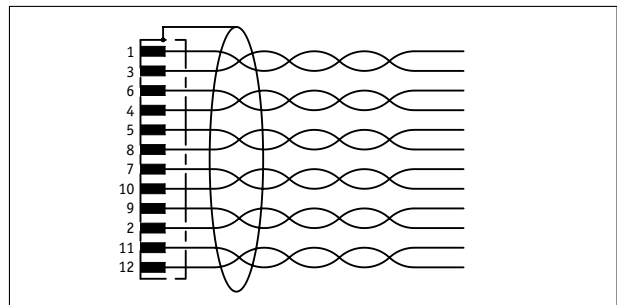
Feature	Technical data	Additional information
Pole length	5 mm	pole number 64
Resolution	12 ... 16 bit	~0.08° ... 0.005°
System accuracy	±0.1°	at TU = 20 °C, with run-out error of 50 μm
Repeat accuracy	0.01°	unidirectional
Circumferential speed	≤32 m/s	absolute value ≤3 m/s

### Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-20 ... 85 °C	
Storage temperature	-20 ... 85 °C	
Relative humidity	100 %	condensation admissible
EMC	EN 61000-6-2 EN 61000-6-4	interference resistance / immission emitted interference / emission
Protection category	IP67	EN 60529
Shock resistance	≤500 m/s <sup>2</sup> , 11 ms	EN 60068-2-27
Vibration resistance	≤100 m/s <sup>2</sup> , 50 ... 2000 Hz	EN 60068-2-6

### Pin assignment

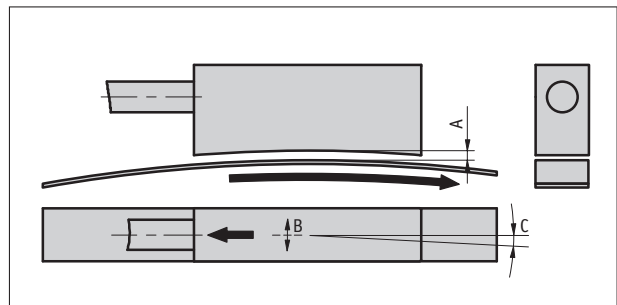
Signal	PIN
Sin	1
0 V	2
/Sin	3
/Cos	4
T+	5
Cos	6
D+	7
T-	8
+Ub	9
D-	10
config	11
nc	12



### Hint for mounting

When mounting sensor and magnetic ring, please be careful to align both system components correctly.

A, Leseabstand Sensor/Ring (aktive Messfläche)	0.1 ... 1.0 mm
B, seitlicher Versatz	±0.2 mm
C, Fluchtungsfehler	<±0.1°



Symbolic sensor representation

### Order

#### Ordering table

Feature	Ordering data	Specification	Additional information
Resolution	12	12 bit	
	13	13 bit	
	14	14 bit	
	15	15 bit	
	16	16 bit	

#### Order key

MSAC506 - E12X - H - A - SSI - S

Scope of delivery: MSAC506, Quick Start Guide