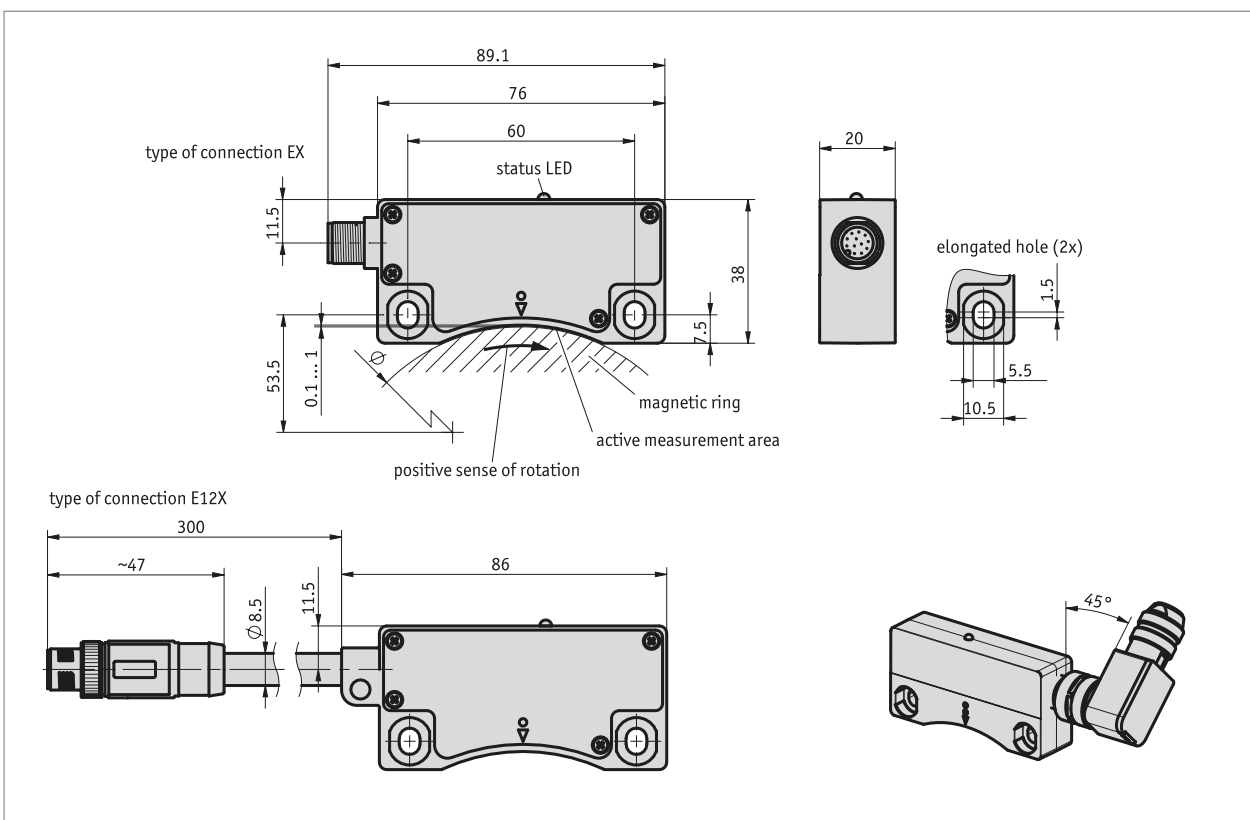
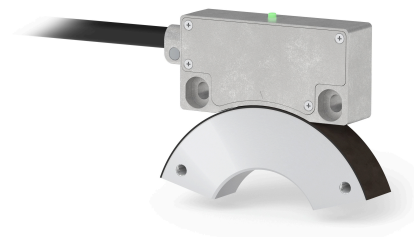


Profile

- Magnetic absolute encoder single-turn
- Compact design
- Resolution 12 ... 16 bits
- Additional analog Sin/Cos 1 V_{SS} signals
- Reading distance ≤1 mm
- Works with MRAS506 magnetic ring
- Industry 4.0 ready



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 protection |
| Power input | <1 W | |
| SSI clock speed input | 50 ... 750 kHz | |
| Output circuit | 1 V _{PP} ±10 % | |
| Offset voltage | 2.5 V DC ±100 mV | |
| Interface | SSI | service mode (RS485) |
| Cycle time | ≤30 μs | |
| Type of connection | M12 plug connector (A-coded) | 12-pole, 1x pin |

System data

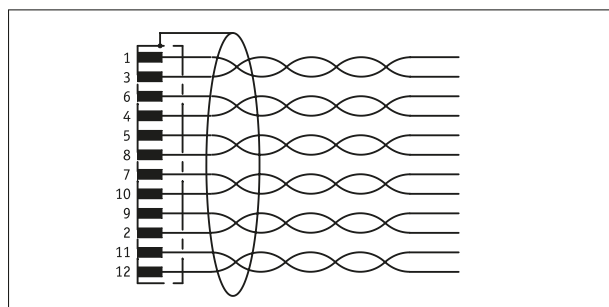
| Feature | Technical data | Additional information |
|-----------------------|---------------------------------|-----------------------------|
| Pole length | 5 mm | pole number 64 |
| Resolution | 12 ... 16 bit | ~0.08° ... 0.005° |
| System accuracy | ±0.1° at T ₀ = 20° C | with run-out error of 50 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 | interference resistance / immission |
| | EN 61000-6-4 | emitted interference / emission |
| Protection category | IP67 | EN 60529 |
| Shock resistance | ≤500 m/s ² , 11 ms | EN 60068-2-27 |
| Vibration resistance | ≤100 m/s ² , 50 Hz ... 2000 Hz | EN 60068-2-6 |

pin assignment

| Signal | PIN |
|--------|-----|
| sin | 1 |
| GND | 2 |
| /sin | 3 |
| /cos | 4 |
| T+ | 5 |
| Cos | 6 |
| D+ | 7 |
| T- | 8 |
| +UB | 9 |
| D- | 10 |
| config | 11 |
| nc | 12 |



Industry 4.0

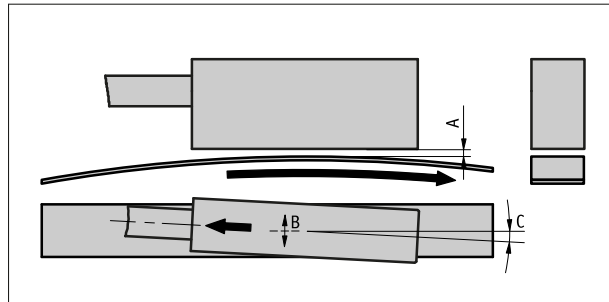
In most cases, data exchange with the magnetic encoders is limited to the exchange of process data. In addition to the process data, intelligent drives provide additional information that can be evaluated for condition monitoring up to predictive maintenance:

| Process data | Smart Value | Smart Function |
|-----------------|-------------|-------------------------|
| Actual position | -- | Plausibility monitoring |

Hint for mounting

Please ensure that both system components are correctly aligned with each other when mounting the sensor and magnetic ring.

| | |
|---------------------------------|----------------|
| A, Sensor/ring reading distance | 0.1 ... 1.0 mm |
| B, Lateral offset | ±1.5 mm |
| C, Alignment error | <±0.5° |



(Sensor representation symbolic)

Order

■ Ordering information

One or more system components are required:

Magnetic ring MRAC506

www.siko-global.com

■ Ordering table

| Feature | Ordering data | Spezifikation | Additional information |
|--------------------|---------------|------------------------|------------------------|
| Type of connection | A EX | Plug outlet | |
| | E12X | plug outlet with cable | |
| Resolution | B 12 | 12 bit | |
| | 13 | 13 bit | |
| | 14 | 14 bit | |
| | 15 | 15 bits | |
| | 16 | 16 bit | |

■ Order key

MSAC506 - - H - - SSI - S

A
B



Scope of delivery:
MSAC506, Quick Start Guide