

Rotary Measuring Technology

Incremental encoders **Magnetic measurement system** **RI50 / LI50**



Thanks to its installation depth of just 16 mm, the magnetic measurement system RI50/LI50, comprising a magnetic ring and sensor head, is ideally suited to plant and machinery where space is very tight.



High rotational speed



High IP value



Shock/vibration resistant



Reverse polarity protection

Hard-wearing and robust

- High shock and vibration resistance
- Protection rating IP67
- Non-contact measurement system

Fast start-up

- Function display via LED
- Large mounting tolerance between magnetic band and sensor head
- Slotted hole fixing ensures simple alignment

Selection guide

Pulse rates/ppr ¹⁾	Order code Magnetic ring RI 50	Order code Magnetic sensor LI50	max. rotational speed (electronic ²⁾)	
			without using index signal	using index signal
1000	8.RI50.031.XXXX.112	8.LI50.11X1.1050	9000	3000
2000	8.RI50.031.XXXX.112	8.LI50.11X1.1100	4000	3000
1024	8.RI50.048.XXXX.112	8.LI50.11X1.1032	9000	2000
2048	8.RI50.048.XXXX.112	8.LI50.11X1.1064	4000	2000
3600	8.RI50.055.XXXX.112	8.LI50.11X1.1100	2500	1700

*other pulse rates on request

Order code

Magnetic sensor Limes LI50

8.LI50.11XX.1XXX



1 Interface and supply voltage

1 = RS422 / 4,8...26VDC
2 = Push-Pull / 4,8...30VDC

2 Type of connection

1 = cable PUR, 2 m length

3 Reference signal

1 = separate index signal (linked with A and B)

4 Interpolation factor¹⁾

032
050
064
100

Order code

Magnetic ring RI50

8.RI50.XXX.XXXX.112



1 Outer diameter

031 = 31 mm
048 = 48,3 mm
055 = 54,7 mm

2 Bore diameter

0600 = 6 mm 2000 = 20 mm
0800 = 8 mm 2500 = 25 mm
1000 = 10 mm 2540 = 25,4 mm (1")³⁾
1200 = 12 mm 3000 = 30 mm³⁾
1500 = 15 mm 3500 = 35 mm⁴⁾
1587 = 15,875 mm (5/8")

3) only possible for outer diameters 048 and 055

4) only possible for outer diameter 055

1) The pulse rate (ppr) results from the combination of the magnetic sensor with the various outer diameters

2) With an input frequency of the evaluation unit of 250 kHz

Stock types

Magnetic ring RI50 8.RI50.048.0600.112

Magnetic sensor LI50 8.LI50.1121.1032

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Incremental encoders	Magnetic measurement system	RI50 / LI50
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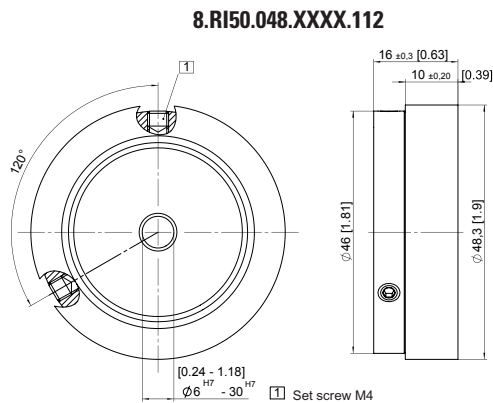
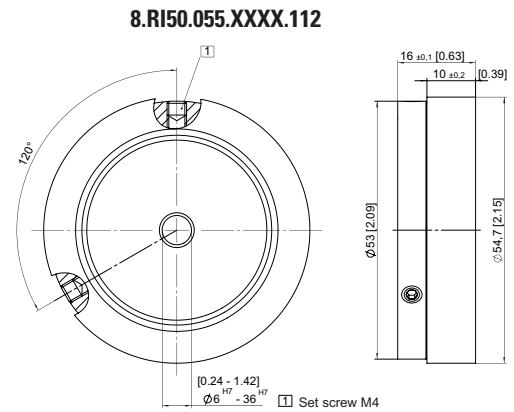
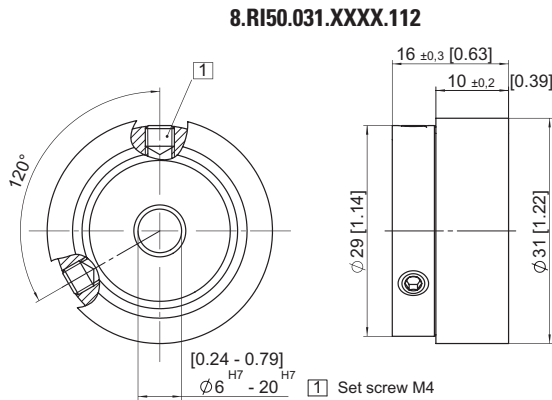
Mechanical characteristics:	
Speed:	max. 12000 min ⁻¹
Protection class to EN60529:	IP67
Working temperature:	- 20...+ 80 °C
Shock resistance:	500 g / 1 ms
Vibration resistance:	30 g / 10...2000 Hz
Housing (Sensor):	Zinc die-cast
Pole gap:	5 mm from pole to pole

Electrical characteristics:		
Output circuit:	RS 422	Push-Pull
Supply voltage:	4,8...26 VDC	4,8...30 VDC
Current consumption (without load):	typ 25 mA, max. 60 mA	
Permissible load/channel:	max. 20 mA	
Min. pulse edge interval:	1 µs	
Reference signal:	fixed	
System accuracy:	typ 0,3° with shaft tolerance g6	

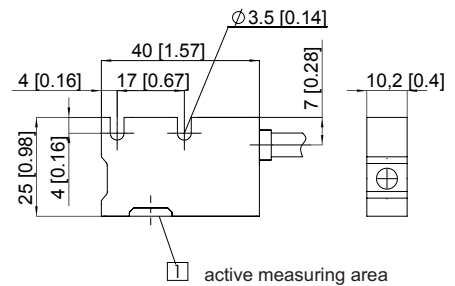
Pin assignment

Signal:	0V GND	+UB	A	\bar{A}	B	\bar{B}	0	$\bar{0}$
Cable, wire colour:	WH	BN	GN	YE	GY	PK	BU	RD

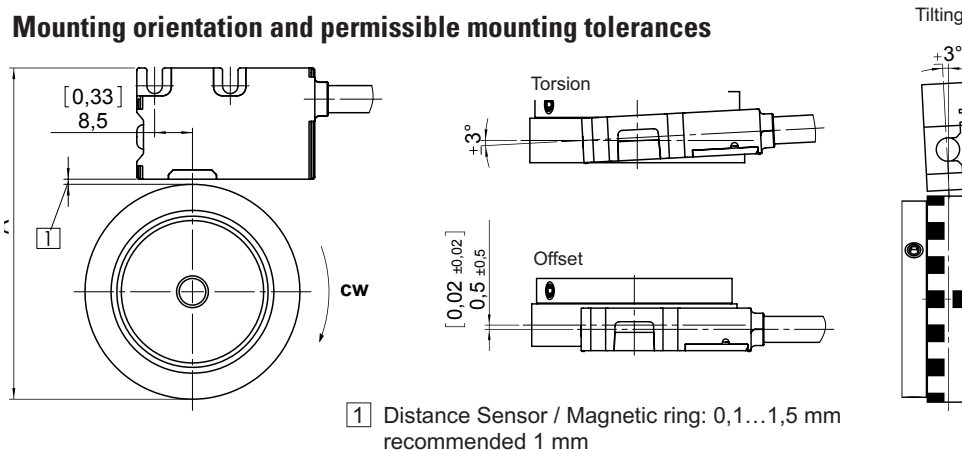
Dimensions



Measuring head Limes LI50



Mounting orientation and permissible mounting tolerances



Magnetic ring	A
8.RI50.031.XXXX.112	57 ¹⁾
8.RI50.048.XXXX.112	74,3 ¹⁾
8.RI50.055.XXXX.112	80,7 ¹⁾

Warning:
When mounting the sensor head,
please ensure its correct
orientation to the magnetic ring!