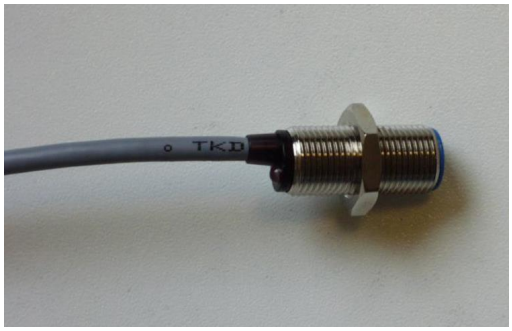
Datasheet

The incremental measuring system MSR12 is a simple measuring system with integrated interpolation chip (interpolation factor 128) which is based on magnetic scanning. The design is round - thread M12. The measuring system can be operated in connection with magnetic scales or magnetic rings with a pole pitch of 2,5 mm.



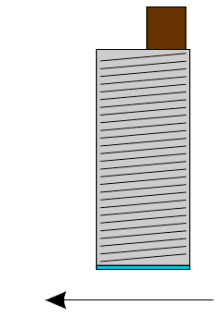
Mechanical Data

Mounting position	optional		
Dimensions Connection Position of Sensor	Ø12 x 32,5 mm (WxD) M12x1 thread eccentrical		
Resolution	10 µm		
Pole Pitch	2,5 mm 5 mm	Accuracy: Accuracy:	± 100 µm on request
Distance between magnetic tape / sensor	max. 1 mm		
Operating Temperature	-20 - +85°C		
Humidity	max. 90%		
IP-Rating	IP65		

Electrical Data

Power Supply	5 VDC ±5% 10-30 VDC ± 5%	
Power Consumption	max. 20 mA plus outputs	
Output Signals	Line Driver	A; B; Z; $\overline{A}$; $\overline{B}$; $\overline{Z}$: 5V max. 20 mA* *Z-signal linked
	Push-Pull	A, B, Z: 10V - 30V max. 20 mA A,B: 5V max. 4mA
Frequency	max. 200 kHZ	

Installation



The sensor is screwed into a M12 thread or mounted in a through bore with two lock nuts. The distance to the magnetic scale or the magnetic ring must not exceed 1 mm. Therefore, the sensor is screwed into the thread until it rests on the magnetic scale. Then turn it back until the cable outlet is perpendicular to the traverse direction.

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Fon:07665/93465-0 • Fax:07665/93465-22 • Email: info@willtec.de • Internet: www.willtec.de

Connection

The sensor is either operated at 5V DC voltage ±5% (Line Driver), or at 10 - 30V DC voltage ±5% (Push-Pull).

Electrical wires have to be installed according to the respective national regulations (e.g. VDE)
Measuring, signal and power lines must be installed separately.

The shield of the cable has to be attached to the ground of the connected device.

Depending on the version, the wire colour can vary.

	Measuring system (Line Driver)	**Measuring system (Push-Pull)**
Wire colour	**Connection**	**Connection**
red	$+U_B$	-
blue	GND	-
pink	A	-
grey	$\overline{A}$	Z
green	B	B
yellow	$\overline{B}$	A
white	Z	$+U_B$
brown	$\overline{Z}$	GND

Ordering example

Type	**MSR12**	-	**128**	-	**TTL**	-	**5**	-	**1,0**

Version
12 =M12x1

Interpolation
128
REF = fixed reference value for Z-gauge

Output
TTL = Line Driver
Y = Push-Pull
PNP = pole-periodic pulse

Power Supply
5 = 5 VDC
24 = 10 - 30 VDC
5/24 = 5-24 VDC*

Cable Length
1,0 = 1 m
2,0 = 2m
5,0 = 5m

*only with REF

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