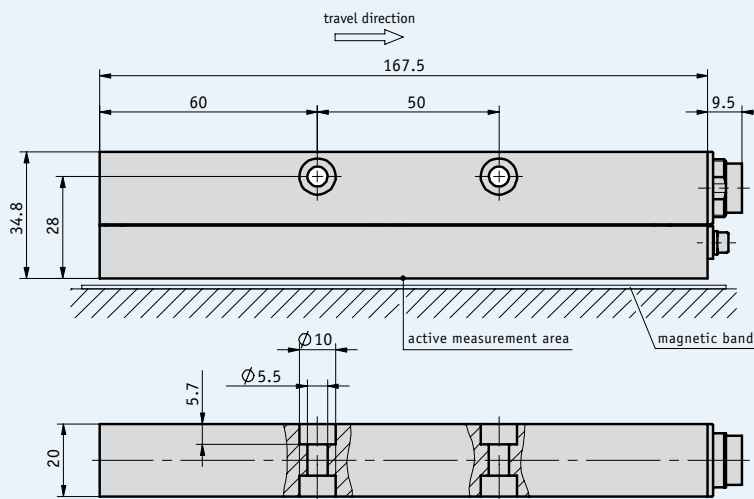


Magnetic Sensor MSA511

Absolute, SSI interface, resolution 10 μm

Profile

- Max. resolution 10 μm
- Repeat accuracy 0.01 mm
- SSI, RS485 output circuits
- Max. sensor/band reading distance 2 mm
- Max. measuring length 20480 mm



Mechanical data

Feature	Technical data	Additional information
Scale embodiment	MBA511	
System accuracy	$\pm(0.1 + 0.03 \times L)$ mm, L in m	
Repeat accuracy	± 0.01 mm	
Sensor/band reading distance	max. 2 mm	
Travel speed	max. 5 m/s	
Housing	aluminum natural chromated	
Operating temperature	-20 ... +60 °C	
Storage temperature	-20 ... +70 °C	
Humidity	100 % rh	condensation permitted
Protection category	IP65	according to DIN VDE 0470 with a suitable mating connector
Vibration resistance	10 g/50 Hz	
Max. measuring length	20480 mm	

Electrical data

Feature	Technical data	Additional information
Operating voltage	24 V DC $\pm 20\%$	reverse-polarity protection on UB
Current consumption	<100 mA	
Power input	<2 V A	
Type of connection	plug connection, 12-pin	
Output circuit	SSI	according to RS422
Output signals	sine, cosine	1 V _{SS} (± 100 mV), offset 2.5 V (± 100 mV), 5 mm period length
Interfaces	RS485, service interface	
Resolution	10 μm	
Interference protection class	3	according to IEC 801
Baud rate	<500 kHz	
Cycle time	<2 ms	

Pin assignment

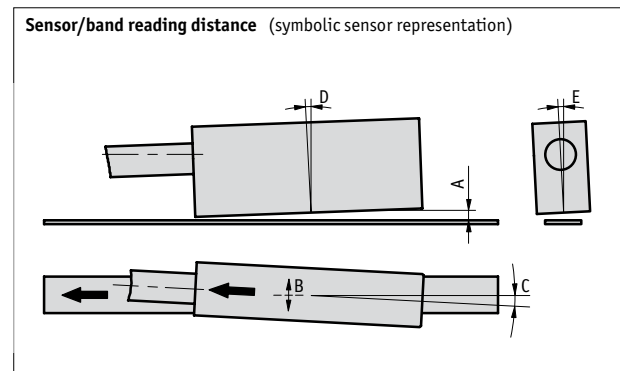
SSI (according to RS422)

Signal	
SSI data-	A
SSI data+	B
SSI clock-	C
SSI clock+	D
+24 V DC	E
Sine	F
RS485 DÜA	G
RS485 DÜB	H
GND	J
N.C.	K
Zeroing input	L
Cosine	M

Mounting instruction

When installing the sensor and magnetic band, always ensure that both system components are correctly aligned. The arrows marked on the band and sensor must point in the same direction during installation

A , Sensor/band reading distance	max. 2 mm
B , Lateral offset	max. ± 1.0 mm
C , Misalignment	< $\pm 1^\circ$
D , Longitudinal tilt	< $\pm 0.5^\circ$
E , Lateral tilt	< $\pm 3^\circ$



Order

- **Order note**

This sensor is sold in Switzerland and Austria under the product name "AMSA511".

- **Order code**

MSA511 - **SSI**

5.2

Scope of delivery: MSA511, User information

 **Accessories:**

Mating connectors Page 175
Cable extension KV12S0 Page 178

Additional information:

Short Description, Technical Details Page 46 cont.
Product Overview Page 4 cont.