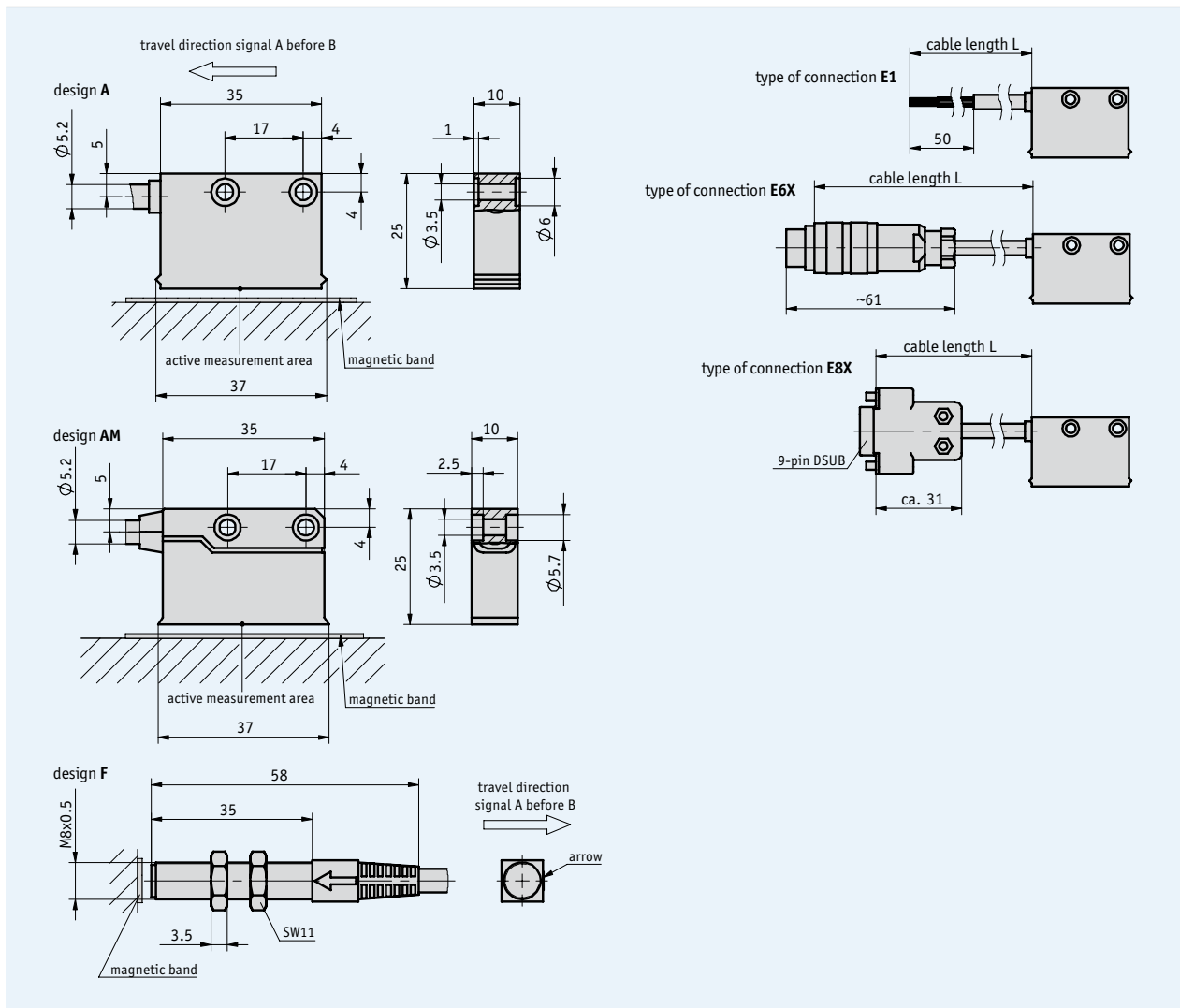


Profile

- Max. resolution 40 μm
- Repeat accuracy $\pm 0.04\text{ mm}$
- Works with magnetic band MB320
- Reading distance up to 2 mm



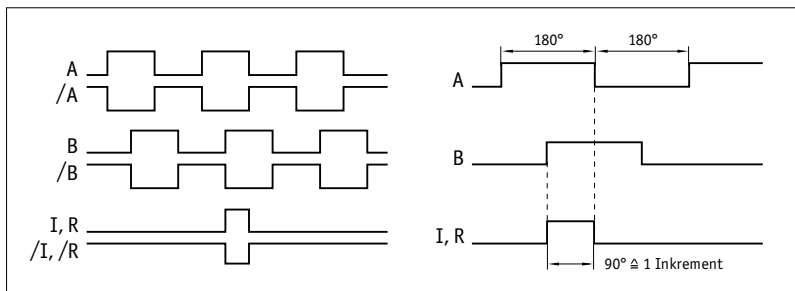
Mechanical data

Feature	Technical data	Additional information
Scale embodiment	MB320	
System accuracy	$\pm(0.1 + 0.01 \times L)$ mm, L in m	
Repeat accuracy	± 1 increment	with $T_U = 20$ °C
Sensor/band reading distance	0.1 ... 2 mm 0.1 ... 1.5 mm	with reference signals O, I with reference signal R
Travel speed	max. 25 m/s	max. referencing speed 3.2 m/s
Housing	rectangular housing, plastic red; round housing, steel	
Sensor cable	PUR	drag chain-compatible
Operating temperature	-10 ... +70 °C	
Storage temperature	-30 ... +80 °C	
Humidity	100 % rh	condensation permitted
Protection category	IP67	
Vibration resistance	10 g/50 Hz	
Max. measuring length	infinite	in steps of 90 m

Electrical data

Feature	Technical data	Additional information
Operating voltage	24 V DC ± 20 % 5 V DC ± 5 %	reverse-polarity protection on UB no reverse-polarity protection on UB
Current consumption	<20 mA off-load <75 mA loaded	at 24 V
Type of connection	flying leads round connector D-SUB 9-pin	
Output circuit	PP LD (RS422) TTL	PP only with 24 V
Output signals	A, /A, B, /B, Option: I, /I, or R, /R	quadrature signal
Pulse width of reference signal	1 increment	
Resolution	0.04, 0.05, 0.08, 0.1, 0.16, 0.2, 0.8 mm	
Jitter	<15 %	with reading distance of 0.5 mm
Interference protection class	3	according to IEC 801
Real-time requirement	real-time signal processing	
Signal level high	>UB - 2.5 V >2.5 V >2.4 V	with PP with LD with TTL
Signal level low	<0.8 V <0.5 V <0.4 V	with PP with LD with TTL

Signal forms



! The logical condition of signals A and B is not defined in reference to the index signal I or the reference signal R. It can deviate from the signal form.

Pin assignment

■ non-inverted

signal	E1	E6X	E8X
A	red	3	3
B	orange	4	4
+UB	brown	2	2
GND	black	1	1
N.C.		5,6,7	5,6,7,8,9

■ inverted

signal	E1	E6X	E8X
A	red	1	1
B	orange	2	2
+UB	brown	4	4
GND	black	5	5
A/	yellow	6	6
B/	green	7	7
N.C.		3	3, 8, 9

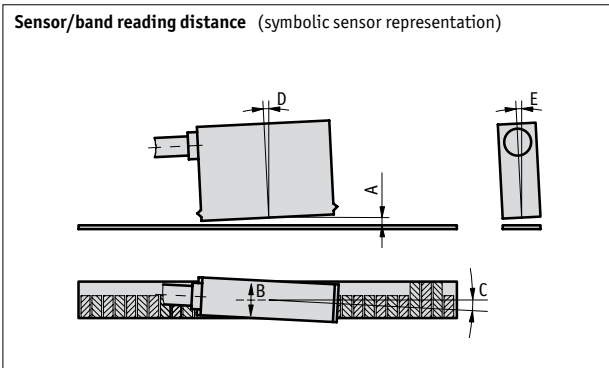
■ inverted with reference signal

signal	E1	E6X	E8X
A	red	1	1
B	orange	2	2
I	blue	3	3
+UB	brown	4	4
GND	black	5	5
A/	yellow	6	6
B/	green	7	7
I/	violet	8	8
N.C.			9

Mounting instruction

On systems with reference points on the magnetic band, please ensure the correct alignment of the sensor and band (see diagram).

Reference signal	O, I	R
A, Sensor/band reading distance	max. 2 mm	max. 1.5 mm
B, Lateral offset	max. ±2 mm	max. ±0.5 mm
C, Misalignment	<±3°	<±3°
D, Longitudinal tilt	<±1°	<±1°
E, Lateral tilt	<±3°	<±3°



Order

■ **Order table**

Feature	Order data	Specifications	Additional information
Operating voltage	4	24 V DC ±20 %	reverse-polarity protection
	5	5 V DC ±5 %	
Design	A	rectangular	only with output signal NI, reference signal O and Resolution 0.1
	AM	metal housing without status LEDs	
	F	round	
Type of connection	E1	flying leads, 2 m cable	
	E6X	round connector without mating connectors	
	E8X	D-SUB 9-pin without mating connectors	
		cable extensions on request	
Cable length L	...	1 ... 20 m, in steps of 1 m	
		others on request	
Output circuit	PP	push-pull	only operating voltage 4
	LD	line driver	only with non-inverted output signal, max. cable length 5 m
	TTL		
Output signal	NI	non-inverted	only with design A or AM and reference signal I or R
	I	inverted	
Reference signal	O	without	only with design A or AM only with design A or AM, not with resolution 0.8 mm
	I	index periodic	
	R	index fixed	
Resolution	...	0.05, 0.1, 0.2, 0.8, 0.04, 0.08, 0.16	

■ **Order code**

MSK320 - - - - - - - -
A B C D E F G H

Scope of delivery: MSK320, User information, Allen fastening screws M3 x 14 mm ISO 4762, lock washers M3 DIN 7980, strain relief for sensor cable



Additional information:

Short Description, Technical Details
Product Overview

Page 46 cont.
Page 4 cont.