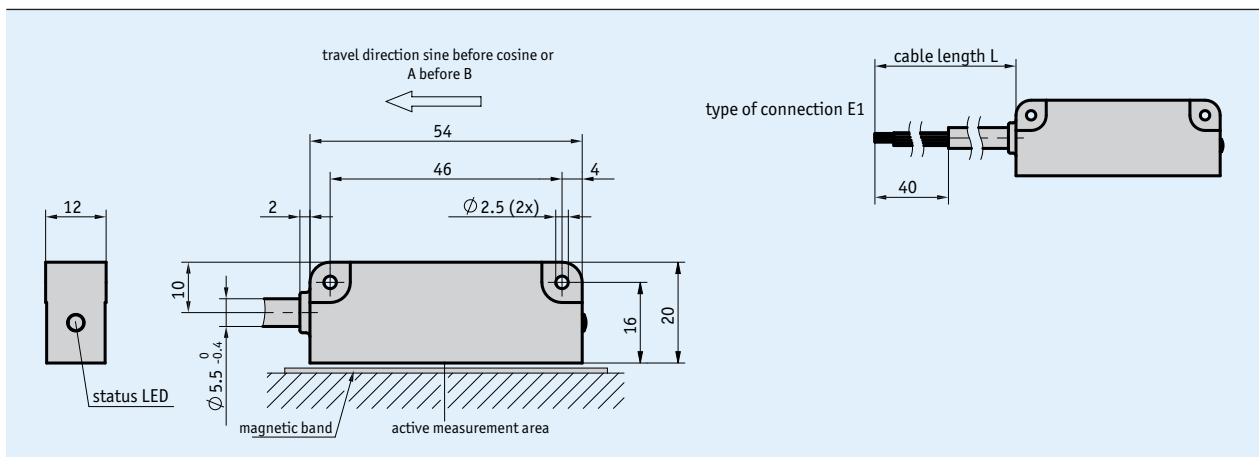
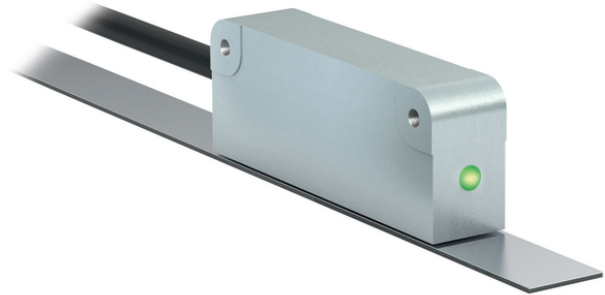


### Profile

- High absolute resolution 1  $\mu\text{m}$
- Repeat accuracy max.  $\pm 1 \mu\text{m}$
- Reading distance  $\leq 0.8 \text{ mm}$
- Measuring range 0 ... 16 m
- Function and status display LED
- BiSS C, SSI, RS485, IO Link
- Optionally analog Sin/Cos 1 Vss or digital line driver



### Mechanical data

Feature	Technical data	Additional information
Housing	zinc die-cast	
Sensor/band reading distance	$\leq 0.8 \text{ mm}$	
Cable length	1 ... 20 m	
Cable sheath	PUR, suitable for drag-chain use	4, 6, 8-core $\varnothing 5.5_{-0.4} \text{ mm}$ (twisted in pairs)
Cable bending radius	10 mm 50 mm	static dynamic

### Electrical data

Feature	Technical data	Additional information
Operating voltage	4.5 ... 30 V DC	reverse polarity protected
Current consumption	<200 mA	
Status display	RGB-LED	plausibility error, distance warning, device status
Output circuit	without, LD, 1Vss	
Interface	SSI, RS485, BiSS C, IO Link	
Real-time requirement	speed-proportional signal output	Sin/Cos output
Type of connection	open cable end	

## System data

Feature	Technical data	Additional information
Pole length	2 mm	incremental
Resolution	1 $\mu\text{m}$	absolute
	1, 5, 10 $\mu\text{m}$	LD, incremental
	2 mm	period length, 1Vpp
Linearity deviation	$\pm 10 \mu\text{m}$	
Repeat accuracy	$\pm 1 \mu\text{m}$	
Travel speed	$\leq 5 \text{ m/s}$	absolute
	$\leq 25 \text{ m/s Sin/Cos output}$	incremental

## Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C	
Storage temperature	-40 ... 85 °C	
Relative humidity	100 %	condensation admissible
EMC	EN 61326-1	industry immunity requirement, class B emission limit
Protection category	IP67	EN 60529
Shock resistance	$\leq 500 \text{ m/s}^2$ , 11 ms	EN 60068-2-27, half-sine, 3 axes (+/-), each 3 pulses
Vibration resistance	$\leq 100 \text{ m/s}^2$ , 10 ... 2000 Hz	EN 60068-2-6, 3 axes, each 10 cycles

## Pin assignment

### ■ Interface without LD, 1Vss

SSI	BiSS C	RS485	IO-Link	Cable color
GND	GND	GND	C/Q	black
+UB	+UB	+UB	+UB	brown
nc	nc	nc	nc	red
nc	nc	nc	nc	yellow
nc	nc	nc	nc	orange
nc	nc	nc	nc	green
T+	MA	RS485	L- (GND)	blue
T-	NMA	RS485-B	L- (GND) extra	violet
D+	SLO	nc	L+ (+UB) extra	gray
D-	NSLO	nc	I/Q (optional)	white

### ■ Interface with LD, 1Vss

SSI	BiSS C	RS485	IO-Link	Cable color
GND	GND	GND	C/Q	black
+UB	+UB	+UB	+UB	brown
A, Sin+	A, Sin+	A, Sin+	A, Sin+	red
/A, Sin-	/A, Sin-	/A, Sin-	/A, Sin-	yellow
B, Cos+	B, Cos+	B, Cos+	B, Cos+	orange
/B, Cos-	/B, Cos-	/B, Cos-	/B, Cos-	green
T+	MA	RS485	L- (GND)	blue
T-	NMA	RS485-B	L- (GND) extra	violet
D+	SLO	nc	L+ (+UB) extra	gray
D-	NSLO	nc	I/Q (optional)	white

## Order

### Ordering information

One or more system components are required:

Magnetic band MBA213

[www.siko-global.com](http://www.siko-global.com)

### Ordering table

Feature	Ordering data	Specification	Additional information
Cable length L	...	01.0 ... 20.0 m, in intervals of 1 m others on request	
	A		
Interface	BiSS/C	BiSS C	
	IOL	IO-Link	
	RS485	Standard/SIKONETZ3	
	SSI	RS422	
Output circuit	1Vss	Sin/Cos	
	LD	Line Driver (RS422)	
	0	Without	
Incremental resolution	1	in $\mu\text{m}$	only with LD
	...	5, 10 in $\mu\text{m}$	
Pulse interval	1	in $\mu\text{s}$	only with LD
	...	2, 5 in $\mu\text{s}$	

### Order key



*Scope of delivery: MSA213C, Quick Start Guide, distance gage*