

Transmitter

MRK 110-S / MRK 110-SIL / MRK 110-Ex-SIL

Application and function

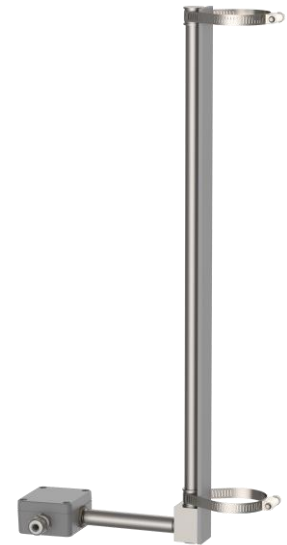
The transmitter measures the fill level of IGEMA magnetic flap indicators. The magnetic system of the float activates the reed chain in the sensor tube. The generated measuring voltage is proportional to the fill level and offers precise resolution. This functional principle enables versatile applications. The constant detection of levels is independent of the properties of the medium, such as foaming, conductivity, pressure, temperature or condensation.

Technical basic equipment

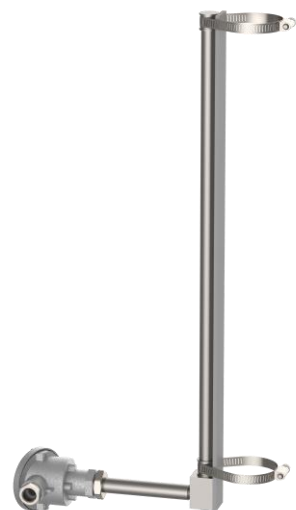
- Protection type IP66 according to EN60529
- Connection housing made of aluminium
- Resolution 10mm
- Fastening via threaded clamps

Optional versions

- LED strip indicator LB16 for remote indication of the fill level



Transmitter MRK110-S



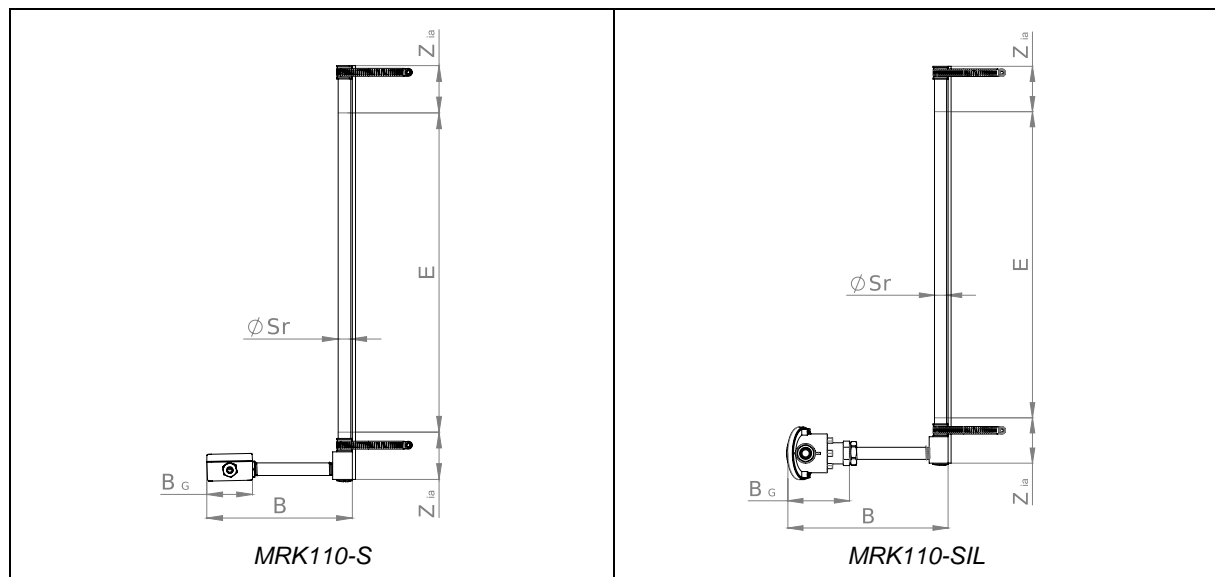
Transmitter MRK110-SIL

Technical data

		MRK 110-S	MRK 110-SIL / Ex SIL	
Ambient temperature T	min.	[°C]	-40	
		[°F]	-40	
	max.	[°C]	75	85
		[°F]	167	185
Temperature of medium ¹⁾	[°C]	< 400		
	[°F]	< 752		
Cable gland		M16 x 1,5	M20 x 1,5	
Power supply voltage		10 bis 36V DC	7,5 bis 30 V DC	
Power supply current		4 bis 20mA		
Electrical connection		2 x 0,5mm ² shielded	2 x 1,5mm ² Shielded stranded wire	
max. load at 24V		680Ω	720Ω	
Power loss			< 850mW	
Sensor current			< 0,15 mA	
Insulation voltage			2,5 kV AC	
Response time			70ms	
Signal dynamics (input/output)			24 / 18 Bit	
Ex labelling		-	ⒺII 3G Ex ic IIC T4 Gc	
Setting range	0%	2,0 up to 4,5 mA	3,8 up to 4,0 mA	
	100%	15,5 up to 25,0 mA	20,0 up to 20,5 mA	

¹⁾Insulation between sensor and magnetic flap indicator from + 150°C medium temperature.

Dimensions and sizes



	MRK110-S		MRK110-SIL / Ex-SIL	
	[mm]	[inch]	[mm]	[inch]
Wide aluminium housing B _G	58	2 ² / ₇	81,5	3 ¹ / ₅
Total width B	~185	~7 ² / ₇	~210	~8 ¹ / ₄
Diameter sensor tube ØSr	16	⁵ / ₈	16	⁵ / ₈
Inactive zone Z _{ia}	60	2 ¹ / ₃	60	2 ¹ / ₃
Measuring range E	450-5000	17 ⁵ / ₇ –196 ⁶ / ₇	450-5000	17 ⁵ / ₇ –196 ⁶ / ₇

Available dimensions

Type	Feature
-S	4..20mA
-SIL	4..20mA, HART protocol, SIL classification
-Ex-SIL	4..20mA, HART protocol, Ex approval, SIL classification

Size-E				Medium temperature <150°C / 320°F			Medium temperature > 150°C / 320°F <i>(with insulation)</i>		
min		max.		Typ					
[mm]	[inch]	[mm]	[inch]	-S	-SIL	-Ex-SIL	-S	-SIL	-Ex-SIL
330	13	380	15	15-17067	15-17080	15-17092	15-17052	15-17074	15-17086
381	15	880	34 ² / ₃	15-17068	15-17081	15-17093	15-17053	15-17075	15-17087
881	34 ² / ₃	1380	54 ¹ / ₃	15-17069	15-17082	15-17094	15-17054	15-17076	15-17088
1381	54 ³ / ₈	1880	74	15-17070	15-17083	15-17095	15-17055	15-17077	15-17089
1881	74	2380	93 ⁵ / ₇	15-17071	15-17084	15-17096	15-17056	15-17078	15-17090
2381	93 ³ / ₄	2880	113 ² / ₅	15-17073	15-17085	15-17097	15-17057	15-17079	15-17091

Version	Features	Article-No.
Seperator	HART transparent, SIL classification	20-10028
Ex-Seperator	HART transparent, Ex approval, SIL classification	20-10029
Front display for separator	mA display	20-10030



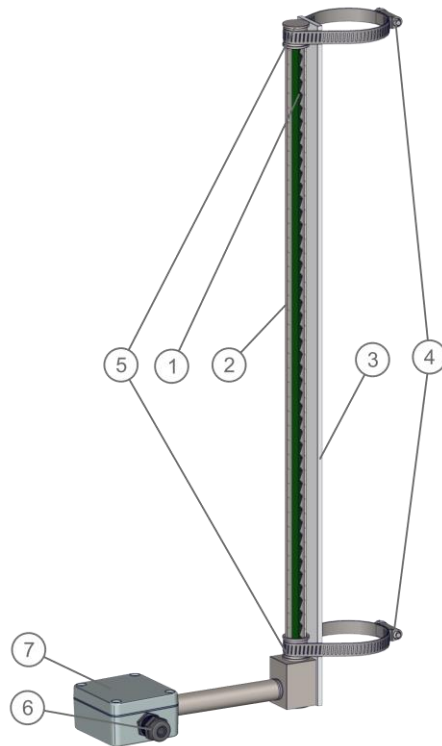
WARNING

Danger due to incorrectly categorised measurement technology

Measurement technology without a corresponding classification in safety-related or Ex applications represents a hazard.

- Use measuring equipment with appropriate classification.
- Use an appropriate supply isolator

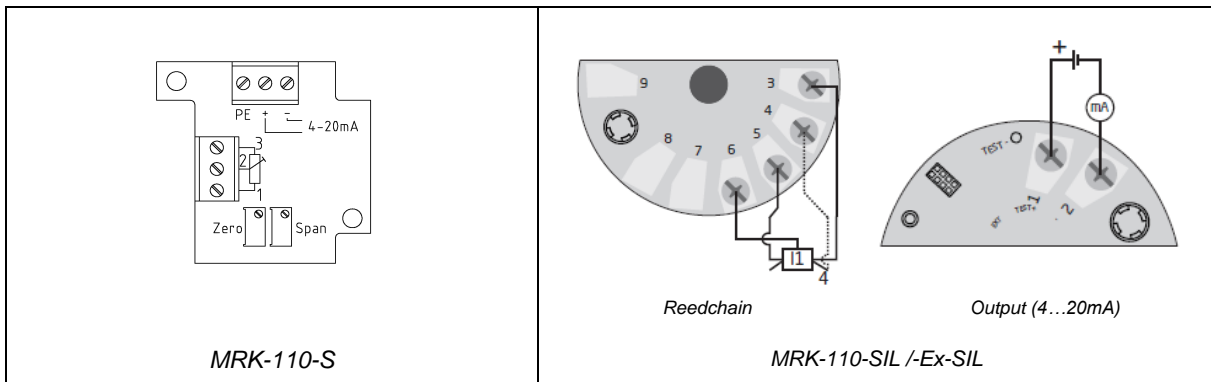
Basic equipment



Ex.: MRK110-S

Pos.	Description		Quantity
1	Reedchain		1
2	Sensor tube		1
3	Insulation strip		1
4	Fastening clamp		2
5	Fastening sleeve		2 ¹⁾
6	Cable gland	-S	M16 x 1,5
		-SIL / -Ex-SIL	M20 x 1,5
7	Aluminium housing		1

Electrical connection



MRK-110-S

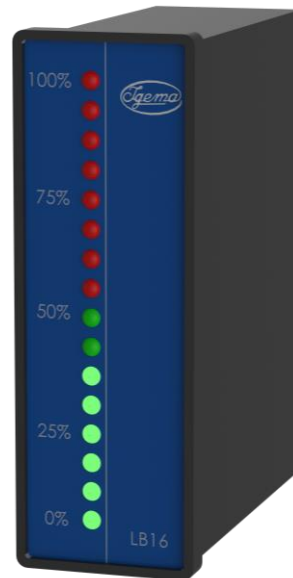
Reedchain

MRK-110-SIL /-Ex-SIL

Output (4...20mA)

Accessories

Strip indicator



Type	Data sheet	Article-No.
Strip indicator LB16	D-08-D-50976-EN	20-00135



Direct download



Product page on the Internet

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