

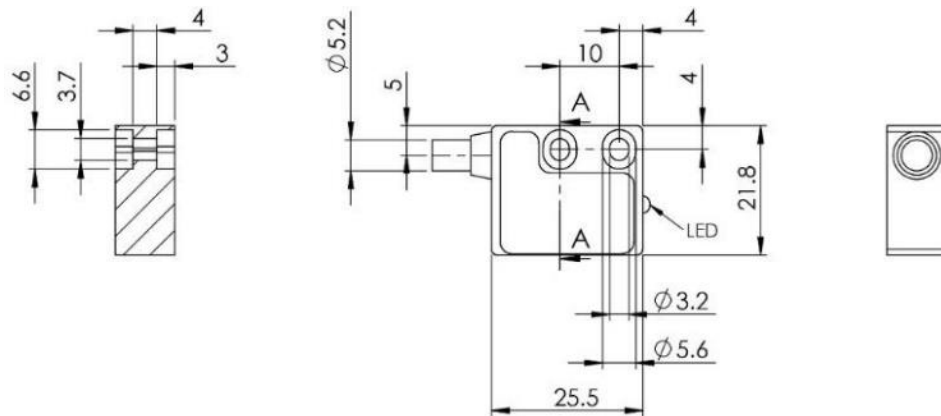
- High reliability non- contact sensing technology
- Industry standard digital and analogue output options
- Customer selectable resolutions from 0.5um to 100µm
- Axis lengths of up to 50 m
- Excellent dirt immunity
- High speed operation



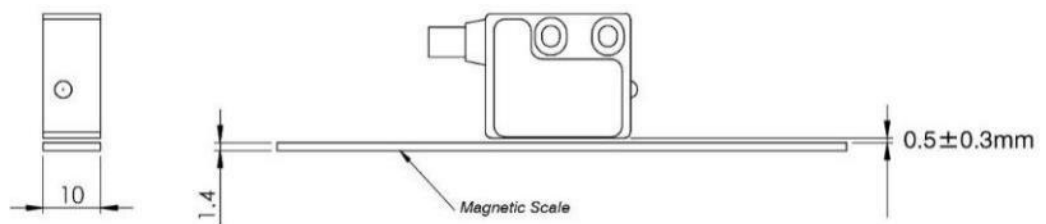
System data:

Feature	Technical Data	Additional information
Measuring Principle	Incremental	
Scale embodiment	TR20	Pole pitch: 2mm
Resolution	Max.0.5um	
System accuracy	$\pm (0.002+0.03 \times L)$ mm	L in m
Repeat accuracy	± 0.001 mm	
Sensor/band reading distance	0.5±0.3mm	
Travel speed	≤5m/s	
Operating voltage	5VDC±5%	
Current consumption	Max.35mA	
Output Signals	A+, A-, B+, B-, Z+, Z- (Index pulse)	Digital Signal
Output Levels	digital output 5V-TTL differential	
LED Logic	Green/Red	Red: reading distance isn't ok, or magnetic tape was damaged; Green: reading distance is ok
Housing	Alloy	
Operating temperature	-10~+70°C	
Storage temperature	-30~+80°C	
Protection category	IP67	
Humidity	max. 95%, non-condensing	same with TR20

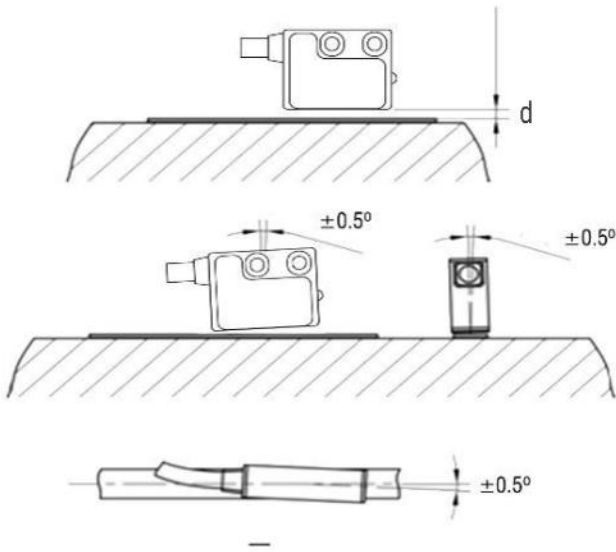
Dimension (Unit: mm)



Installation (Unit: mm)

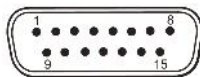
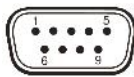


Installation (Unit: mm)



Output definition:

Signal	Colour	9-way D-type	15-way D-type
VCC	Red	5	7
GND	Black	9	2
A+	White	4	14
A-	Grey	8	6
B+	Blue	3	13
B-	Purple	7	5
Z+	Brown	2	12
Z-	Orange	6	4
PE	Screen	Shield	Shield



Travel Speed:

Resolution (mm)	Travel speed Vmax. (m/s)									
	0.02	0.03	0.03	0.03	0.06	0.13	0.25	0.47	0.63	1.14
0.0005	0.04	0.05	0.06	0.06	0.13	0.25	0.49	0.93	1.25	2.27
0.001	0.22	0.25	0.28	0.31	0.63	1.25	2.45	4.67	6.25	11.36
0.005	0.44	0.50	0.55	0.63	1.25	2.50	4.90	9.35	12.50	22.73
0.01	1.10	1.25	1.39	1.56	3.13	6.25	12.25	23.36	31.25	56.82
0.025	2.20	2.50	2.77	3.13	6.25	12.50	24.51	46.73	62.50	113.64
0.05	4.39	5.00	5.54	6.25	12.50	25.00	49.02	93.46	125.00	227.27
0.1	22.76	20.00	18.04	16.00	8.00	4.00	2.04	1.07	0.80	0.44
Pulse interval (μs)										
Counting Frequency (Hz)	10,984	12,500	13,858	15,625	31,250	62,500	122,549	233,645	312,500	568,182

Order table:

Feature	Order data	Specifications	Additional information	
Resolution	Y	0.0001mm		
	Z	0.0005mm		
	X	0.001mm	Standard	
	C	0.002mm		
	D	A	0.005mm	
	E		0.01mm	
	F		0.02mm	
	G		0.025mm	
	K		0.05mm	
		0.5	0.5m	Standard
Cable length	1	B	1m	
	3		3m	
			Max. 10m	
Connections		C	= Open cable ends	
	D2		D2 = Connection by 9-way D-type connector	
	D15		D15 = Connection by 15-way D-type connector	

Order code:

MRS10/MR20/MRS20/MR50/MRS50 - -
A B C