



- Model with socket (MRS120) or cable (MRS121)
- Extra protection from external factors with scraper structure
- Easy mounting
- Resolution from 1 μm to 100 μm
- High accuracy
- Spiral or cable option
- Measurement up to 100 meters
- Dust, oil and moisture resistant
- Robust aluminum body
- IP67 protection class

MRS 12X series sensor sensors can be used with magnetic stripe tape as well as MPS110 profile system and MPS22X profile system. Without touching the magnetic tape, it moves position 0,1 - 2 mm and precisely reads the position information and sends it as encoder pulse. Its small structure provides maximum installation convenience to the user. Due to the integrated scraper on the sensor body, it is extra protected from dust, dirt, sawdust, etc. which may be formed on the magnetic tape or profile that it moves on. Models with socket (MRS120) and cable (MRS121) are available. Cable type can be requested as PUR or spiral cable.

MRS120 (Model with socket)

- With PUR Cable -



- With Spiral Cable -



MRS121 (Model with cable)

- With PUR Cable -



- With Spiral Cable -



TECHNICAL SPECIFICATIONS

Resolution	1 μm , 5 μm , 10 μm , 25 μm , 50 μm , 62.5 μm , 80 μm , 100 μm (or on request)
Output Signal Type	Push-Pull or TTL RS422 Line Driver
Output Signals	A, /A, B, /B, Z, /Z
Current	Maximum 40 mA / Kanal
Supply Voltage	10...30 VDC or 5 VDC
Body Material	Aluminum
Gap Between Tape and Sensor	0,1 mm to 2 mm
Operating Speed	3 m/s
Repeatability	± 1 Pulse
Operating Temperature Range	-25°C ... +85°C
Protection Class	IP67

Applications:

- Machining Centers
- PVC Cutting Machines
- Wood Cutting Machines
- Lathes, Milling, Drilling, Grinding Machines
- Sheet Metal Working Machines
- Marble Machines
- Welding Machines
- Bending Machines
- Electrical Discharge Machines
- Robotics / Material Handling
- Glass Working Machinery etc...

ORDER SPECIFICATIONS

Power Supply and Output

TTL : 5VDC Supply Voltage,
5 VDC TTL RS422 Line Driver Signal Output
PP : 10...30 VDC Supply Voltage,
10...30 VDC Push-Pull Signal Output
HTL : 10...30 VDC Supply Voltage,
5 VDC TTL RS422 Line Driver Signal Output
HPL : 5...30 VDC Supply Voltage,
5...30 VDC Push-Pull Signal Output

Cable Length

3M : 3 Meters
3.5M : 3,5 Meters
5M : 5 Meters
8M : 8 Meters
10M : 10 Meters
* Please ask for other options

Connector Type

42 : IES, SINO
*Please check page 4
for other options

MRS12X - X X - X X X - X - X X - X X

Model

MRS120 : With Socket
MRS121 : With Cable

Resolution

01 : 1µm | **05** : 5µm
10 : 10µm | **25** : 25µm
62 : 62,5µm | **80** : 80µm
100: 100µm

Signal Output Type

2 : A, B | **3** : A, B, Z
4 : A, /A, B, /B | **6** : A, /A, B, /B, Z, /Z

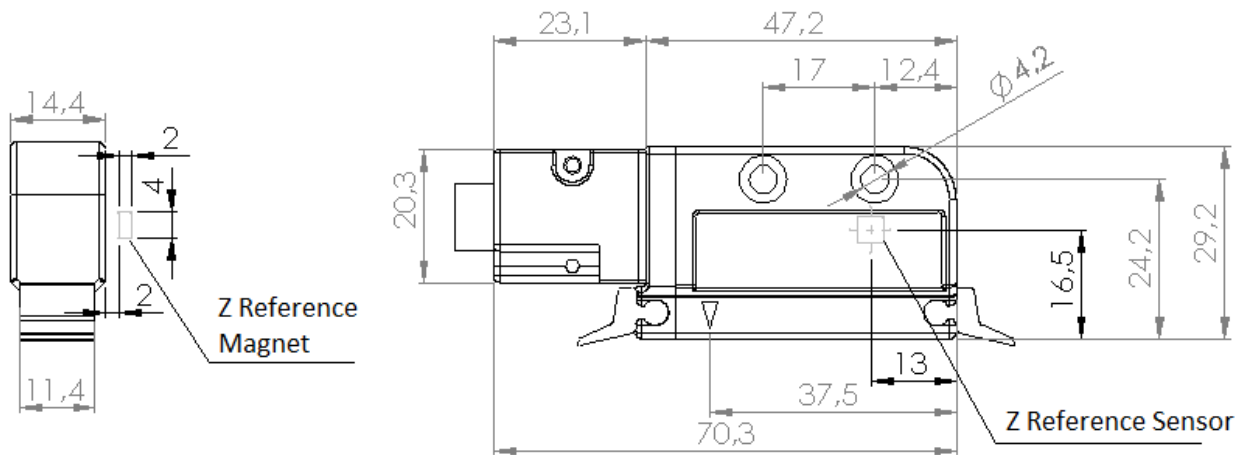
Standard: Z reference signal at every 5 mm
for B5 Tape or every 2 mm for B2 tape
Optional: External Z Reference Signal with
magnet

Cable Type

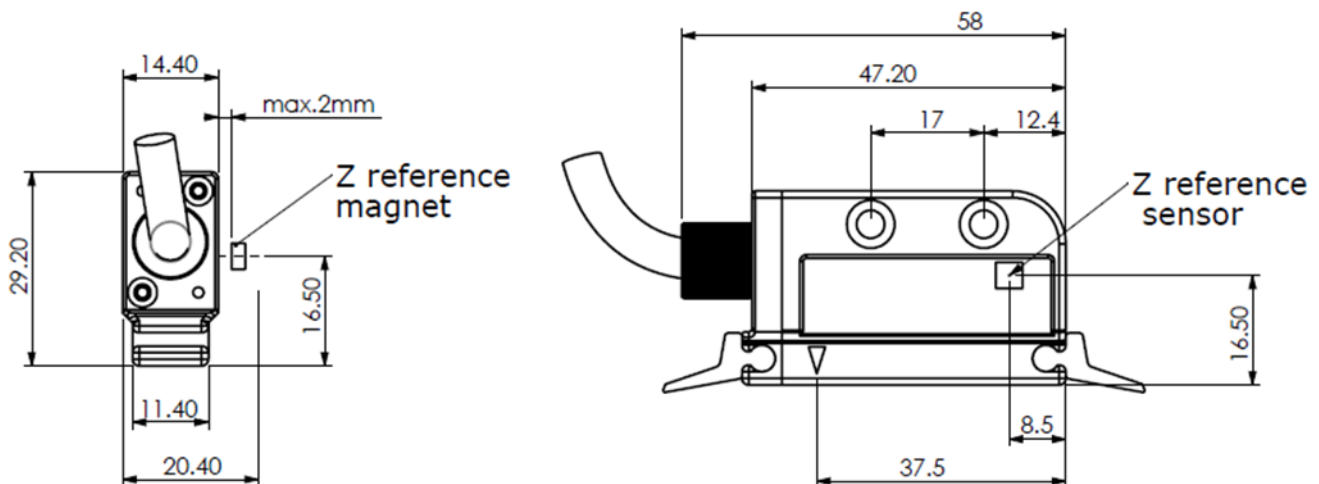
C : PUR Cable
S : Shielded
Spiral

MECHANICAL DIMENSIONS (mm)

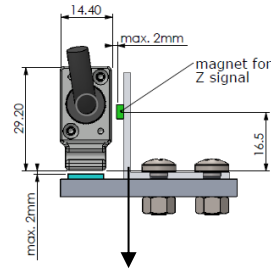
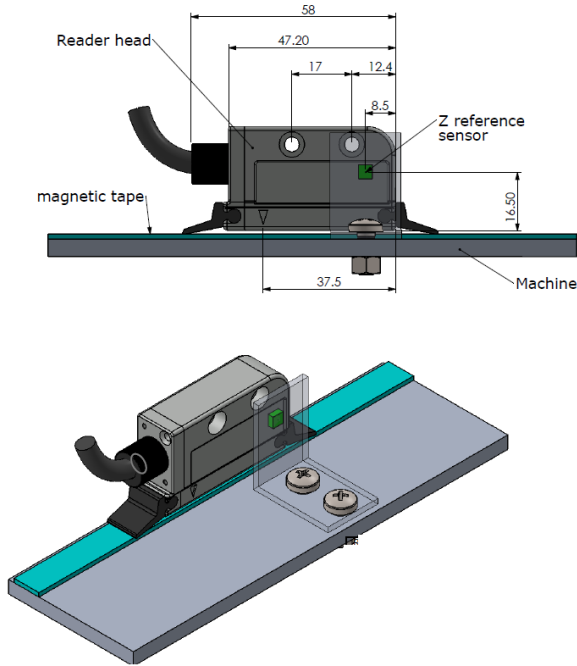
MRS120 (with socket)



MRS121 (with cable)



EXTERNAL Z REFERENCE SIGNAL SETTINGS

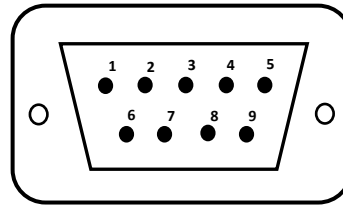


Mounting Bracket For Magnet

The magnet and Z reference sensor must be parallel to each other for the external Z reference signal.

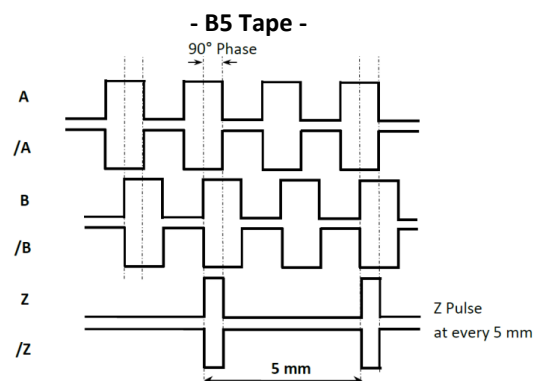
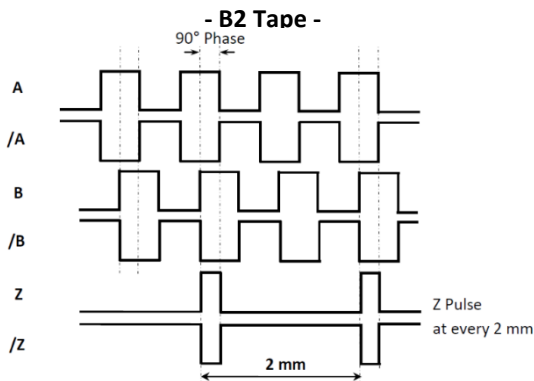
ELECTRICAL CONNECTIONS

D-SUB 9 Pin Socket Pin No	Cable Color	Signal
1	BLUE	/A
2	BLACK	GROUND
3	WHITE	/B
4	-	-
5	GREY	/Z
6	YELLOW	A
7	RED	POWER SUPPLY
8	GREEN	B
9	PINK	Z



*ask for other sockets

In the left tablet the cable colors of sensors output signals are given. If the control circuit is suitable in the Line Driver sensors of the not output signals (/A, /B, /Z) have to be added to the system. If it is not suitable /A, /B, /Z signal cables must be fixed as insulated separately. Don't forget that these edges have electricity too.



Magnetic Tape and Profile Systems That Can Be Used With MRS 12X Reader Sensor:

- MPS110 Profile System
- MPS2XX Profile System
- B Series Magnetic Tape



*Other Socket Connections

S41 Socket

Pin Number	Cable Color	Signal
1	RED	POWER SUPPLY
2	BLACK	GROUND
3	YELLOW	A
4	PINK	Z
5	GREEN	B
6	WHITE	/B
7	GREY	/Z
8	BLUE	/A
9	-	-

S86 Socket

Pin Number	Cable Color	Signal
1	PINK	Z
2	GREEN	B
3	YELLOW	A
4	-	-
5	BLACK	GROUND
6	GREY	/Z
7	WHITE	/B
8	BLUE	/A
9	RED	POWER SUPPLY

S50 ve S58 Socket

Pin Number	Cable Color	Signal
1	PINK	Z
2	GREY	/Z
3	RED	POWER SUPPLY
4	-	-
5	BLACK	GROUND
6	YELLOW	A
7	BLUE	/A
8	WHITE	/B
9	GREEN	B

S57 Socket

Pin Number	Cable Color	Signal
1	YELLOW	A
2	BLUE	/A
3	-	-
4	PINK	Z
5	GREY	/Z
6	-	-
7	-	-
8	BLACK	GROUND
9	-	-
10	GREEN	B
11	WHITE	/B
12	-	-
13	-	-
14	-	-
15	RED	POWER SUPPLY

S87 Socket

Pin Number	Cable Color	Signal
1	-	-
2	RED	POWER SUPPLY
3	BLACK	GROUND
4	BLUE	/A
5	YELLOW	A
6	WHITE	/B
7	GREY	/Z
8	PINK	Z
9	GREEN	B

S71 Socket

Pin Number	Cable Color	Signal
1	BLACK	GROUND
2	BLUE	/A
3	WHITE	/B
4	GREY	/Z
5	RED	POWER SUPPLY
6	YELLOW	A
7	GREEN	B
8	PINK	Z
9	-	-

S42 Socket (IES, SINO Connection)

Pin Number	Cable Color	Signal
1	BLUE	/A
2	BLACK	GROUND
3	WHITE	/B
4	-	-
5	GREY	/Z
6	YELLOW	A
7	RED	POWER SUPPLY
8	GREEN	B
9	PINK	Z

S43 Socket

Pin Number	Cable Color	Signal
1	YELLOW	A
2	BLUE	/A
3	GREEN	B
4	WHITE	/B
5	PINK	Z
6	GREY	/Z
7	-	-
8	-	-
9	RED	POWER SUPPLY
10	-	-
11	BLACK	GROUND
12	-	-
13	-	-
14	-	-
15	SHIELD	GND