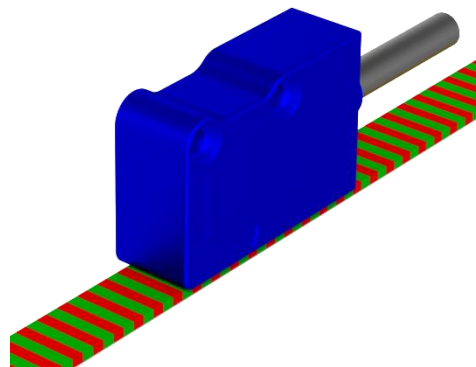


# Datasheet

- Magnetic sensor for very small measurements
- Resolutions up to 0.5  $\mu\text{m}$  programmable (Pr) through the serial interface
- Mounting of the magnetic sensor through wide alignment tolerances
- As a cable standard with low friction coefficient and oil resistant
- Protected against inversion of power supply polarity
- IP-Rating: IP67



## Mechanical Data

Materia	Housing Cable <sup>1)</sup>	Aluminium; die-cast PVC, $\varnothing 6,1$ (=8-wire)
	Power Supply	0,35 mm <sup>2</sup>
	Signals	0,14 mm <sup>2</sup>
	Length	2 m (standard)
	Bending Radius	> 60 mm
Weight		40 g
Pole Pitch		1+1 mm
Resolution		10; 5; 1; 0,5 $\mu\text{m}$
Accuracy		$\pm 6 \mu\text{m}$
Repeatability		$\pm 1$ Increment
Distance	Sensor-Magnetic Scale	0.1 ... 0.4 mm (with magnetic scale WM1)
Reference Index		C = at constant distance (1 mm)
Traversing Speed <sup>2)</sup>		< 0,6 m/s (resolution: 0,5 $\mu\text{m}$ ) < 6 m/s (resolution: 10 $\mu\text{m}$ )
Relative Humidity		100%
Operating Temperature		0 °C ... +50 °C
Storage Temperature		-20 °C ... +80 °C

1) PUR cable, cable with reduced section or other length on request

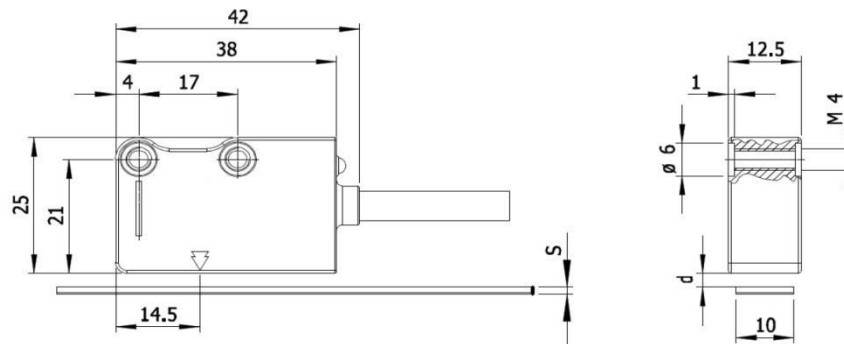
2) The indicated speeds are referred to a maximum frequency of 300 kHz.

## Electrical Data

Power Supply		5 VDC ... 28 VDC $\pm 5\%$
Power Consumption	unload load	< 60 mA < 140 mA (with 5 V and R = 120 $\Omega$ ) < 90 mA (with 28 V and R = 1,2 k $\Omega$ )
Frequency		< 300 kHz < 500 kHz (on request)
Output		Line Driver (ABZ, ABZ) Push-Pull (ABZ)
Vibration	EN 60068-2-6	300 m/s <sup>2</sup> [55 ... 2.000 Hz]
Shock	EN 60068-2-27	1.000 m/s <sup>2</sup> (11 ms)
IP-Rating		IP67

# Datasheet

## Dimensions



Value in mm	WM1	WM1 + DB01	WM1 + PS1
<b>s</b>	1,3	1,6	2,1
<b>d IMS1</b>	0,1 ... 0,4	N. A.	N. A.

s = width

d = distance to be observed between the sensor and the surface of the magnetic tape  
 (or rather cover tape/ Support)

## Ordering Example

<b>Type</b>	<b>IMS1 - 10 - C - 528V - Y - M02/N - SC</b>
<b>Resolution</b> [ $\mu\text{m}$ ]	0,5 / 1 / 5 / 10
<b>Index- Pulse periodic</b>	<b>C</b> = at constant pitch (1 mm)
<b>Output Voltage</b>	<b>528V</b> = 5VDC ... 28 VDC
<b>Output Circuit</b>	<b>Y</b> = Push-Pull (ABZ) <b>L</b> = Line Driver (ABZ, $\overline{\text{ABZ}}$ )
<b>Cable</b> <sup>1) 2)</sup>	M01/N = 1m <b>M02/N</b> = 2m M03/N = 3m
<b>Connection</b>	<b>SC</b> = open Cable <b>C3</b> = C3 <b>C4</b> = C4

<sup>1)</sup> Different lengths are available in the following version

$L_{\text{MAX}}$  = 10 m sensor cable

$L_{\text{MAX}}$  = 100 m sensor cable (2m) + extension cable (power supply 0.5 mm<sup>2</sup>)

<sup>2)</sup> With a traversing speed about 1 m / s, a cable for continuous movements recommended