

## MW208120

### Linear and angular measurement • magnetic

Displacement sensor, magnetic, 20x90x20mm, absolute, 10µm, Sn: 1, 10-30V DC, TTL level, M12 connector 8-pin, IP65, aluminum, 5m/s



For length measurement, rotational speed or angle measurement, magnetic measuring systems are used. These systems operate in a way that the sensor moves without contact over a flexible magnetic tape, or it is situated above the rotating magnetized measuring wheel. The magnetic tape is applied to a 0.3mm thick steel strip and is located on the circumference of the various measuring wheels. The magnetization is carried out with defined pole pitches. By scanning of the magnetic poles an analog signal is generated, which is converted into digital square wave signals that can be processed by a downstream electronics and, if necessary, be displayed. The sensor detects the pitch of the strip and converts the information into a high-resolution path or rotation information. To read out the magnetic lines no direct contact is required. Magnetic sensors are insensitive to dirt, oils and moisture and relatively stable at shock and vibration. For users, this opens up a wide field of applications, e.g. for plants and systems in the timber industry, at linear axes, in outdoor areas or with machine tools.

#### Electrical features

Resolution	0.01 mm
Type of electrical connection	Connector M12
Type of switching output	TTL level
Operating principle	Absolute
Short-circuit protection	Yes
No-load current	125 mA
Power consumption	3 VA
Number of pins	8
Pulse interval	10 µs
Reverse polarity protection	Yes
Absolute repeat accuracy	0.01 mm
Supported communication interface	SSI
Operating voltage (DC)	10 - 30 V
Measuring range	1 - 5120 mm

**Mechanical features**

Width	20 mm
Height	20 mm
Storage temperature	-20 - 80 °C
Length	89.5 mm
Max. traverse speed	5 m/s
Shock resistance, acceleration	50 g
Shock resistance, pulse time	11 ms
Degree of protection (IP)	IP65
Vibration resistance, acceleration	10 g
Housing material	Aluminum
Vibration resistance Frequency	5 - 150 Hz
Ambient temperature	60 °C

**Other features**

Relative air humidity (non-condensing)	0 - 100 %
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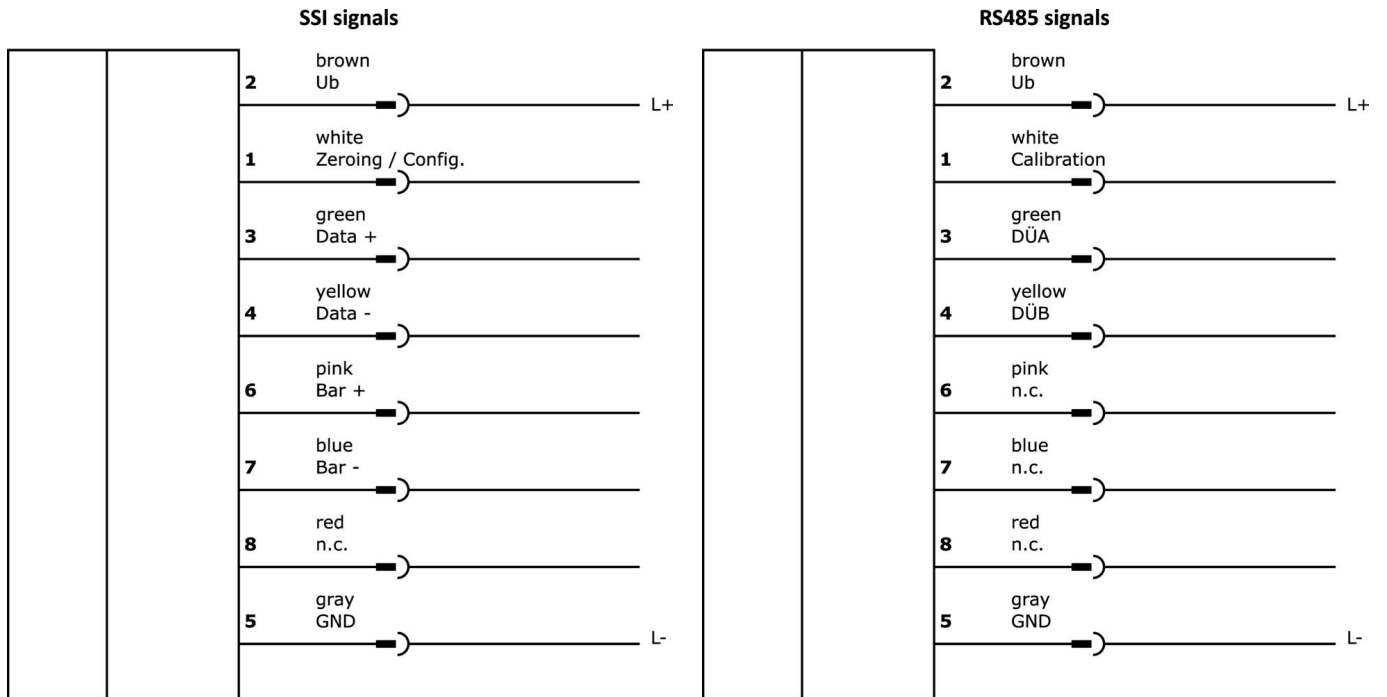
**Classification**

ETIM 8	EC001852 Displacement sensor
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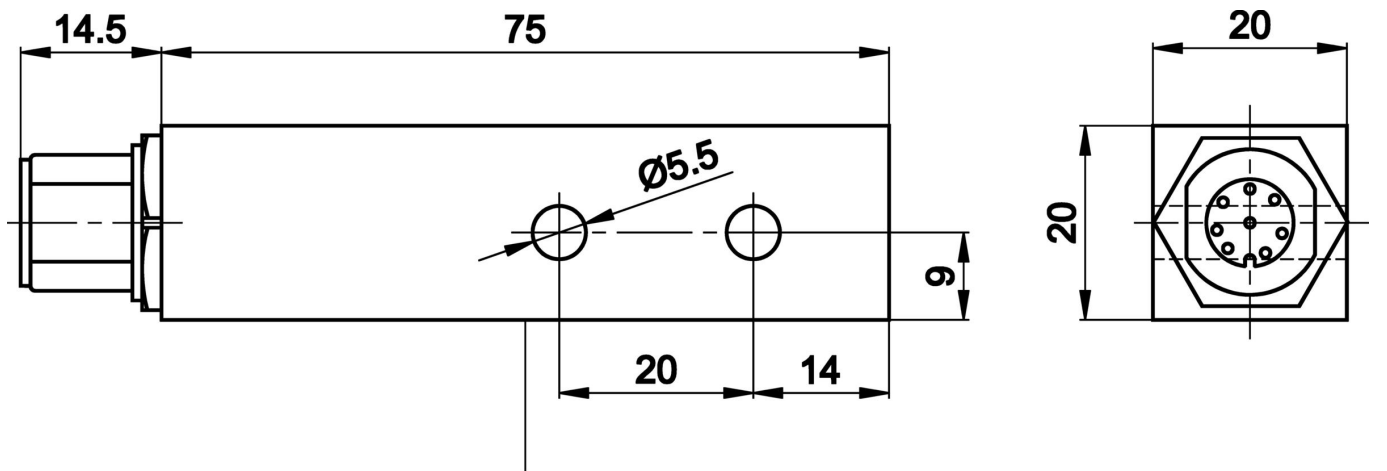
**More**

IPF Product Group	235 magnetic linear measurement systems
packaging dimensions	160 x 99 x 60 mm
gross weight	150 g
Customs tariff number	90318020
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**aktive Messfläche**

**Extract accessories program**

**VK205A21**



Connection cable, 2m, M12  
Female (socket) 8pin Angular, Free conductor end, 8x0.25mm<sup>2</sup>, PUR (Polyurethane), Ø6.6mm, 30V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone..

**VK205A25**



Connection cable, 2m, M12  
Female (socket) 8pin Straight, Free conductor end, 8x0.25mm<sup>2</sup>, PUR (Polyurethane), Ø6.6mm, 30V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...

**VK200021**



Connection cable, 2m, M12  
Female (socket) 3pin Angular, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK200025**



Connection cable, 2m, M12  
Female (socket) 3pin Straight, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK003020**



Cable socket, angular, self-assembly, screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

**VK003024**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

**VK00382D**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 2A, 30V, -25-85°C, M12 Female (socket) 8pin, IP67, PBT

**VK00302D**



Junction box, straight, self assembly, screw connection, Ø4-8mm, 2A, 30V, -30-80°C, M12 receptacle 8pin, IP67, PBT

**VK003021**



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

You can find further accessories on our homepage



**Installation**

Mounting / installation may only be carried out by a qualified electrician!



**Disposal**

WEEE number according to § 6 para. 3 ElektroG: 40951076

**Safety warnings**

/ Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

/ Never use these devices in applications where the safety of a person depends on their functionality.