

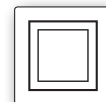
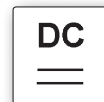
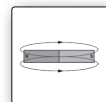
dimensions                    **20 x 20 x 89.5mm**

**absolute**                    resolution                    **10µm**



- ✓ **robust metal housing**
- ✓ **very easy installation of the complete measuring system**
- ✓ **high initial acceleration is possible**
- ✓ **resistant to wear maintaining high accuracy**
- ✓ **linear resolution 10µm**
- ✓ **The max. measured length is 5120mm**

**insensitive to dirt, humidity and vibration**



**description**

The linear measurement system consists of two parts: The sensing head and the magnetic tape. This is protected by a carrier strip on the rear and a magnetically permeable masking tape made of stainless steel. A double-faced adhesive tape glued to the rear side is used as a fixture.

The magnetic tape with a width of 20mm has on the one side north and south poles alternating in longitudinal direction with exactly defined pole width, on the other side is the information for the position. The sensor is once positioned to the desired zero-point and the system will be parameterized accordingly.

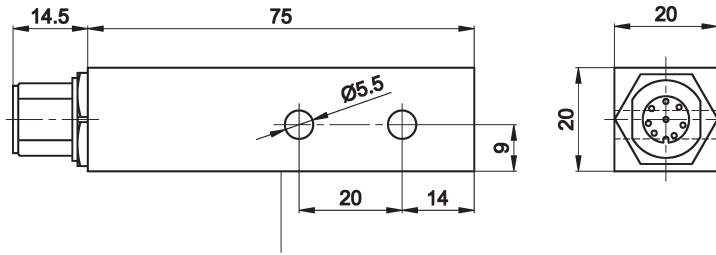
Both signals always result in the exact position, even if the

sensing head is moved when the operating voltage is deactivated. The appropriate values can be processed via RS485 and/or SSI interface. Both **WP054900** with two switching outputs and **WP054905** with analogue output are suitable as display units. The precision of the system, taking into account the magnetic tape length "L" in meters is:  $(0.05 + 0.03 \times L)$  mm. The magnetic tape has to be approx. 85mm longer than the measured distance.

**application examples**

- ▶ Absolute linear measurements

article-no.	MW208120
operating voltage	10 ... 30V DC
output signal	RS485 / SSI



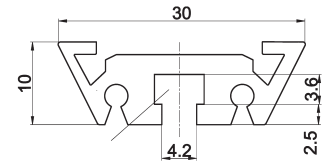
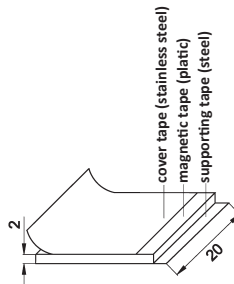
active measuring surface

### TECHNICAL DATA

sensing range	max. 1mm
output signal	RS485/SSI
resolution	10µm
operating voltage	10 ... 30V DC
current consumption (w/o load)	< 125mA
power consumption	< 3VA
accuracy *	±(0.05+0.03*L)mm
repeat accuracy	max. 0.01mm
traversing speed	< 5m/sec
vibration resistance	10g/50Hz
humidity	100% rh, condensation permitted
display (signal)	-
short-circuit protection	+
reverse polarity protection	+
housing material	aluminum
dimensions	20x20x89.5mm
operating temperature	-20 ... +60°C
system of protection (EN 60529)	IP65
connection	M12-connector, 8-pin
connection accessories	e.g. VK205A25

\* L = magnetic tape length in m  
at +20° C

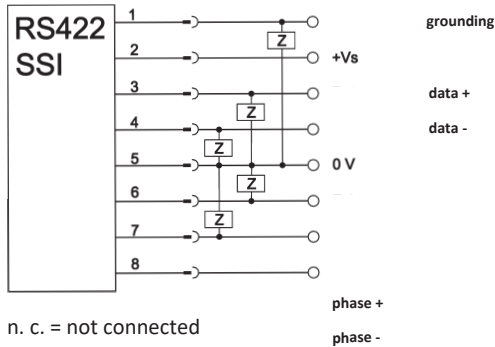
article-no.	AM000069	AM000117
version	magnetic tape	profile rail
operating temperature	-20 ... +70°C	-
humidity	100% rh, condensation permitted	-
material	see drawing	aluminum
mounting	glued joint	-



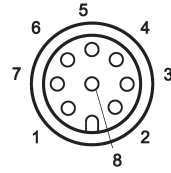
T groove for hexagon screw M4

### connection

cable device

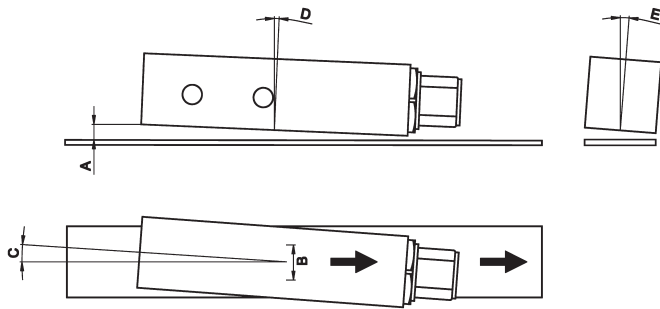


pin configuration M12-connector

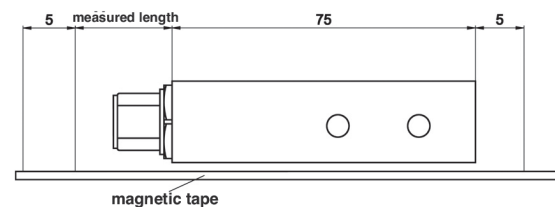


wire colors: wh = white (1), bn = brown (2), gn = green (3),  
ye = yellow (4), gy = grey (5), pk = pink (6), bu = blue (7), rd = red (8)

### mounting notes MW208120



### determination of the magnetic tape length



measured length + 35mm + (2\*10mm) = magnetic tape length

### MW208120

sensing range	A	max. 1.0mm
lateral offset	B	max. $\pm 0.5$ mm
misalignment	C	$< \pm 1^\circ$
longitudinal inclination	D	$< \pm 0.5^\circ$
lateral inclination	E	$< \pm 3^\circ$

When mounting the sensor and the magnetic tape, please observe the correct alignment of both system components. Arrow marking on tape and sensor must point in the same direction when mounted.

This data sheet contains the available standard versions only. Kindly request the availability of other output- and connection functions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets - ipf-SENSORFLEX®" or search our Website for "VK".

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

You also find this data sheet, as well as contact details under [www.ipf-electronic.com](http://www.ipf-electronic.com)