



# More Precision

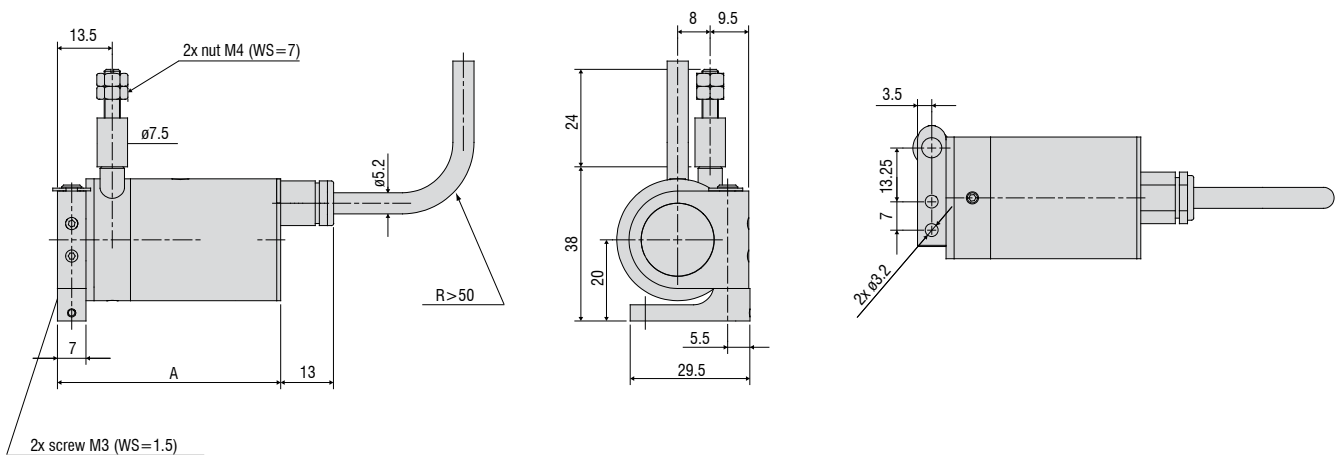
**wireSENSOR** // Draw-wire displacement sensors





- Extreme compact miniature sensor
- Flexible mounting via swivel flange
- High speed measurement, wire acceleration up to 100g

## Model MPM



Measuring range (mm)	A (mm)
50	55
150 / 250	64
50-HG	61
150 / 250-HG	70

Model	WDS-50-MPM	WDS-150-MPM	WDS-250-MPM
Output	P		
Measuring range	50mm	150mm	250mm
Linearity	±0.2% FSO	-	±0.5mm
	±0.25% FSO	±0.125mm	-
Resolution	quasi infinite		
Sensor element	conductive plastic potentiometer	hybrid potentiometer	
Temperature range	-20 ... +80 °C		
Material	housing	aluminium	
	draw wire	stainless steel (ø 0.45mm)	
Sensor mounting	swivel flange in two axes 180° / 360°		
Wire mounting	thread M4		
Wire acceleration	appr. 25g (option HG: 100g)		
Wire retraction force (min)	1.5N (option HG: 10N)		
Wire extension force (max)	3.5N (option HG: 17N)		
Protection class	IP 65		
Vibration	20g, 20Hz - 2kHz		
Mechanical shock	50g, 20ms		
Electrical connection	integrated cable, axial, 3-leads, 1m		
Weight	appr. 150g		

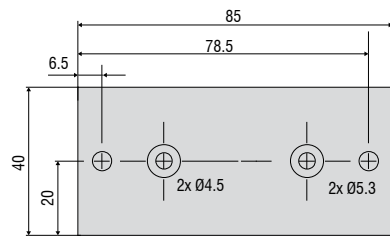
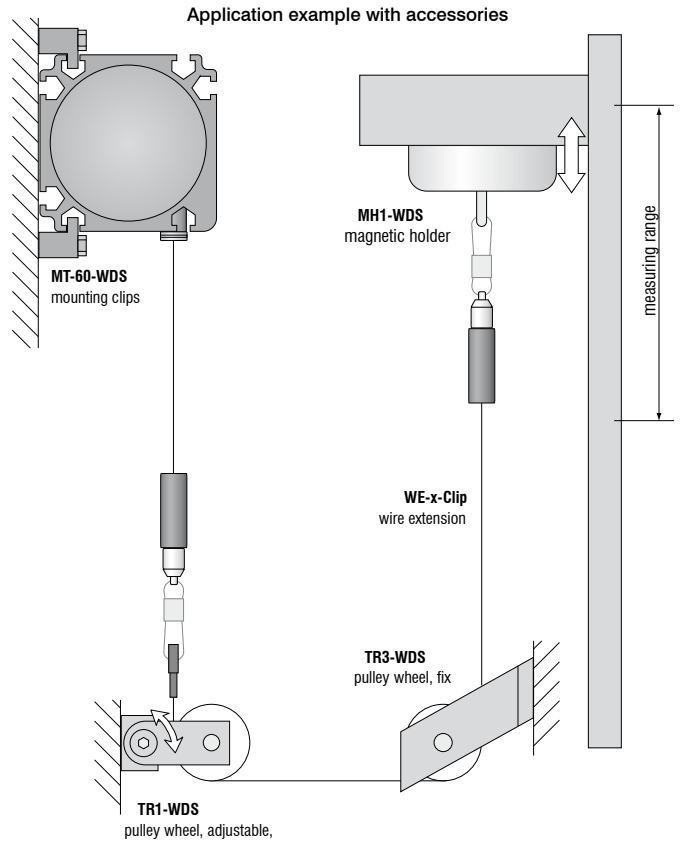
FSO = Full Scale Output  
 Specifications for analogue outputs on page 47.

#### Article description

WDS -	50 -	MPM -	C -	P -	HG
					Option HG: wire acceleration up to 100g
					Output option: P: potentiometer
					Connection: C: integrated cable, axial, 1m
					Model MPM
					Measuring range in mm

**Accessories:**

WE-xxx-M4	Wire extension with M4-wire connection, x=length
WE-xxx-Clip	Wire extension with eyelet, x=length
TR1-WDS	Pulley wheel, adjustable
TR3-WDS	Pulley wheel, fixed
GK1-WDS	Attachment head for M4
MH1-WDS	Magnetic holder for wire mounting
MH2-WDS	Magnetic holder for sensor mounting
MT-60-WDS	Mounting clamp for WDS-P60
FC8	Female connector for WDS, 8-pin
FC8/90	Female connector 90° for WDS
PC 3/8-WDS	Sensor cable, length 3m
PS 2020	(Power Supply 24 V / 2,5 A, Input 100 - 240 VAC, output 24 VDC / 2.5 A, for snap in mounting on DIN 50022 rail)
WDS-MP60	Mounting plate for P60 sensors



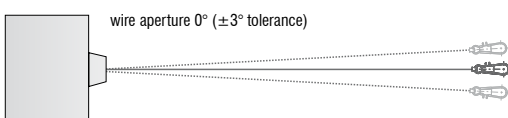
Mounting plate WDS-MP60

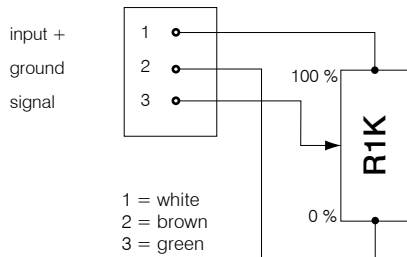
**Installation information:**

**Wire attachment:** The free return of the measurement wire is not permissible and it is essential that this is avoided during installation.

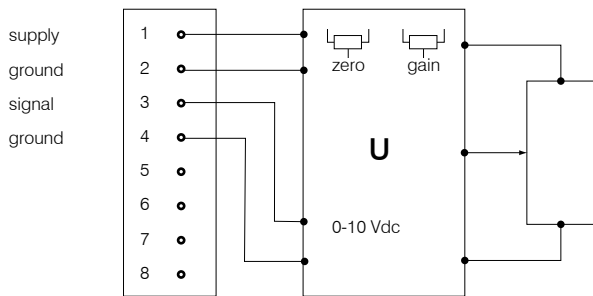
**Wire exit angle:**

When mounting a draw-wire displacement sensor, a straight wire exit ( $\pm 3^\circ$  tolerance) must be taken into account. If this tolerance is exceeded, increased material wear on the wire and at the wire aperture must be expected.



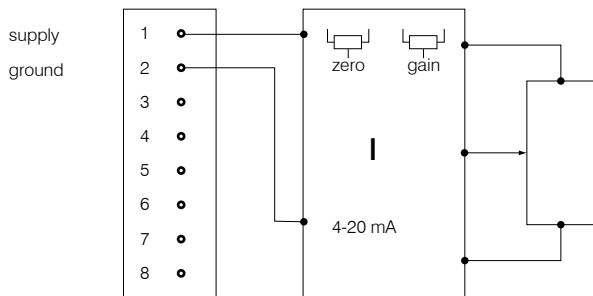


Potentiometric output (P)	
Supply voltage	max. 32VDC at 1kOhm / 1 Wmax
Resistance	1kOhm $\pm$ 10% (potentiometer)
Temperature coefficient	$\pm$ 0.0025% FSO/ $^{\circ}$ C
Sensitivity	depends on measuring range individually shown on test report



Voltage output (U)	
Supply voltage	14 ... 27VDC (non stabilised)
Current consumption	max. 30mA
Output voltage	0 ... 10VDC Option 0 ... 5 / $\pm$ 5V
Load impedance	>5kOhm
Signal noise	0.5mV <sub>eff</sub>
Temperature coefficient	$\pm$ 0.005% FSO/ $^{\circ}$ C
Electromagnetic compatibility (EMC)	EN 50081-2 EN 50082-2

Adjustment ranges	
Zero	$\pm$ 20% FSO
Sensitivity	$\pm$ 20%



Current Output (I)	
Supply voltage	14 ... 27VDC (non stabilised)
Current consumption	max. 35mA
Output current	4 ... 20mA
Load	<600Ohm
Signal noise	<1.6 $\mu$ Aeff
Temperature coefficient	$\pm$ 0.01% FSO/ $^{\circ}$ C
Electromagnetic compatibility (EMC)	EN 50081-2 EN 50082-2

Adjustment range	
Zero	$\pm$ 18% FSO
Sensitivity	$\pm$ 15%

## High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analysers and colour inline spectrometer



Measurement and inspection systems

