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# More Precision

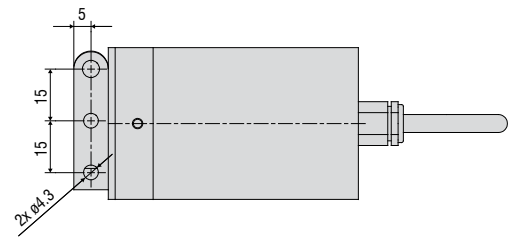
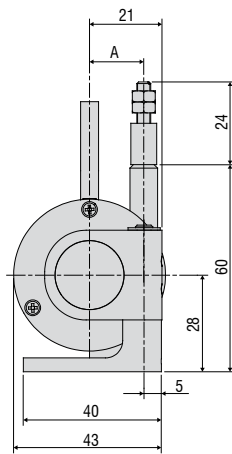
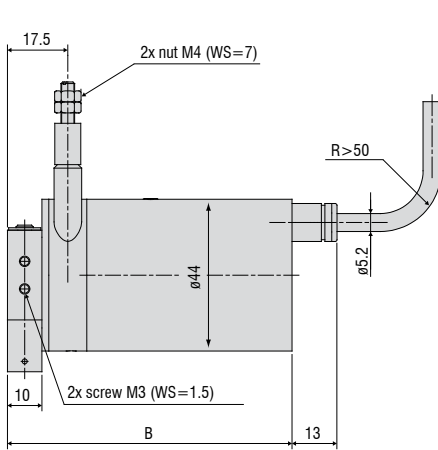
**wireSENSOR** // Draw-wire displacement sensors





- Miniature design
- Optional IP 67 (MPW)
- For fast measurement and harsh environments

Model MP / MPW



Measuring range (mm)	A (mm)	B (mm)
100 / 300 / 500 / 1000-MP	15.7	82.5
100 / 300 / 500 / 1000-MPW	15.7	86.5

Model	WDS-100 MP(W)	WDS-300 MP(W)	WDS-500 MP(W)	WDS-1000 MP(W)
Output	P			
Measuring range	100mm	300mm	500mm	1000mm
Linearity	<0.1% FSO	-	<0.5mm	<1mm
	<0.25% FSO	-	<0.75mm	-
	<0.5% FSO	<0.5mm	-	-
Resolution	0.15mm	0.2mm	quasi infinite	
Sensor element	wire potentiometer		hybrid potentiometer	
Temperature range	-20 ... +80 °C			
Material	housing	aluminium		
	draw wire	stainless steel (ø 0.45mm)		
Wire mounting	thread M4			
Sensor mounting	swivel flange in two axes 180° / 360°			
Wire acceleration	appr. 30g			
Wire retraction force (min)	7N	7N	6.5N	5N
Wire extension force (max)	8.5N	8.5N	8.5N	8N
Protection class	series MP	IP 65		
	series MPW	IP 67		
Vibration	20g, 20Hz - 2kHz			
Mechanical shock	50g, 10ms			
Electrical connection	integrated cable, axial, 3-leads, 1m			
Weight	appr. 270g			

FSO = Full Scale Output

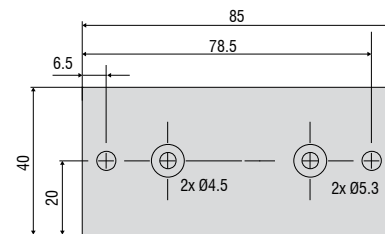
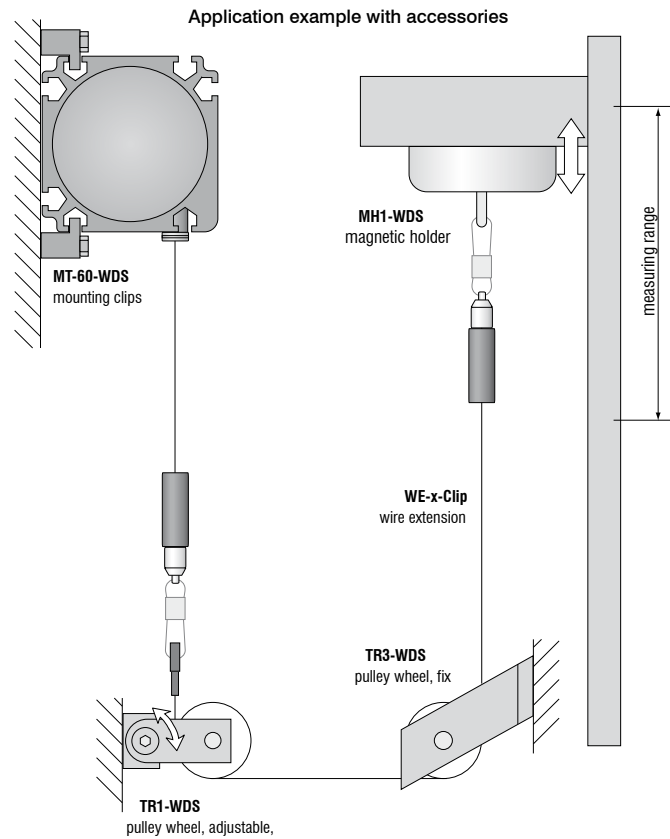
Specifications for analog outputs on page 51.

### Article description

WDS -	100 -	MP -	C -	P
			Output option: P: potentiometer	
			Connection: C: integrated cable, axial, 1m	
		Model MP / MPW (IP67)		
	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



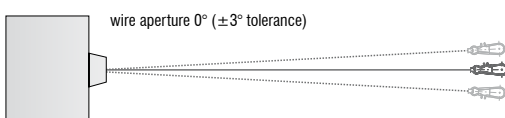
Mounting plate WDS-MP60

**Installation information:**

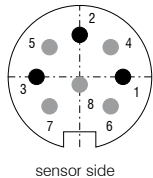
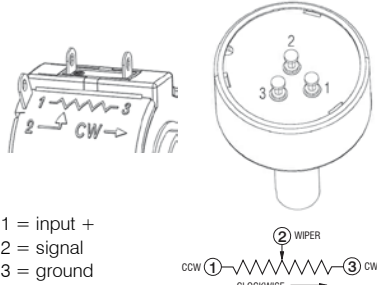
**Wire attachment:** The free return of the measurement wire is not permissible and it is essential that this is avoided during installation.

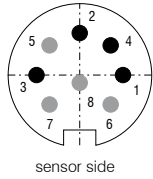
**Wire exit angle:**

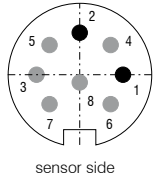
When mounting a draw-wire displacement sensor, a straight wire exit ( $\pm 3^\circ$  tolerance) must be taken into account. If this tolerance is exceeded, increased material wear on the wire and at the wire aperture must be expected.



Output	Plug M16 -SA / -SR	Integrated cable -CA / -CR	Open contacts
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Potentiometric output (P)		 <p>sensor side</p> <p>1 = input + 2 = ground 3 = signal</p>	<p>white = input + brown = ground green = signal</p>	 <p>1 = input + 2 = signal 3 = ground</p> <p>② WIPER CCW ① ———— ③ CW CLOCKWISE →</p>
Supply voltage	max. 32VDC at 1kOhm / 1 Wmax			
Resistance	1kOhm ± 10% (potentiometer)			
Temperature coefficient	±0.0025% FSO/°C			

Voltage output (U)		 <p>sensor side</p> <p>1 = supply 2 = ground 3 = signal 4 = ground</p>	<p>white = supply brown = ground green = signal yellow = ground</p>
Supply voltage	14 ... 27VDC (non stabilised)		
Current consumption	max. 30mA		
Output voltage	0 ... 10VDC Option 0 ... 5 / ±5V		
Load impedance	>5kOhm		
Signal noise	0.5mV <sub>eff</sub>		
Temperature coefficient	±0.005% FSO/°C		
Electromagnetic compatibility (EMC)	EN 61000-6-4 EN 61000-6-2		
<b>Adjustment ranges</b> (if supported by the model)			
Zero	±20% FSO		
Sensitivity	±20%		

Current Output (I)		 <p>sensor side</p> <p>1 = supply 2 = ground</p>	<p>white = supply brown = ground</p>
Supply voltage	14 ... 27VDC (non stabilised)		
Current consumption	max. 35mA		
Output current	4 ... 20mA		
Load	<600Ohm		
Signal noise	<1,6 μA <sub>eff</sub>		
Temperature coefficient	±0.01% FSO/°C		
Electromagnetic compatibility (EMC)	EN 61000-6-4 EN 61000-6-2		
<b>Adjustment range</b> (if supported by the model)			
Zero	±18% FSO		
Sensitivity	±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



Color recognition sensors, LED analyzers and color inline spectrometer



Measurement and inspection systems