



More Precision.

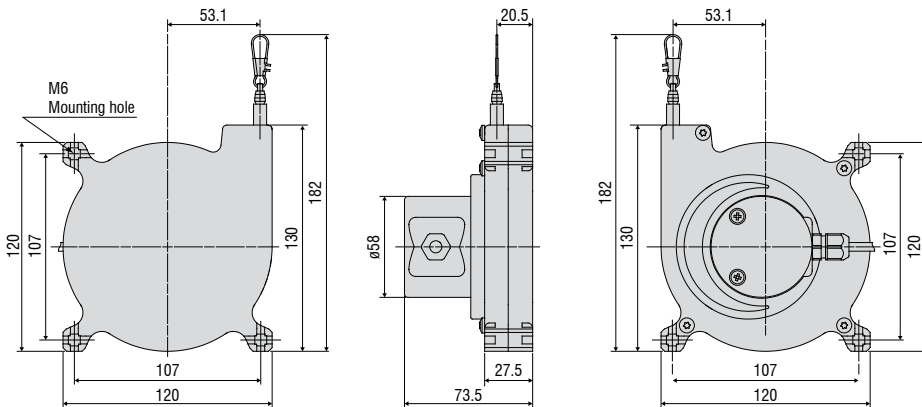
wireSENSOR // Draw-wire displacement sensors



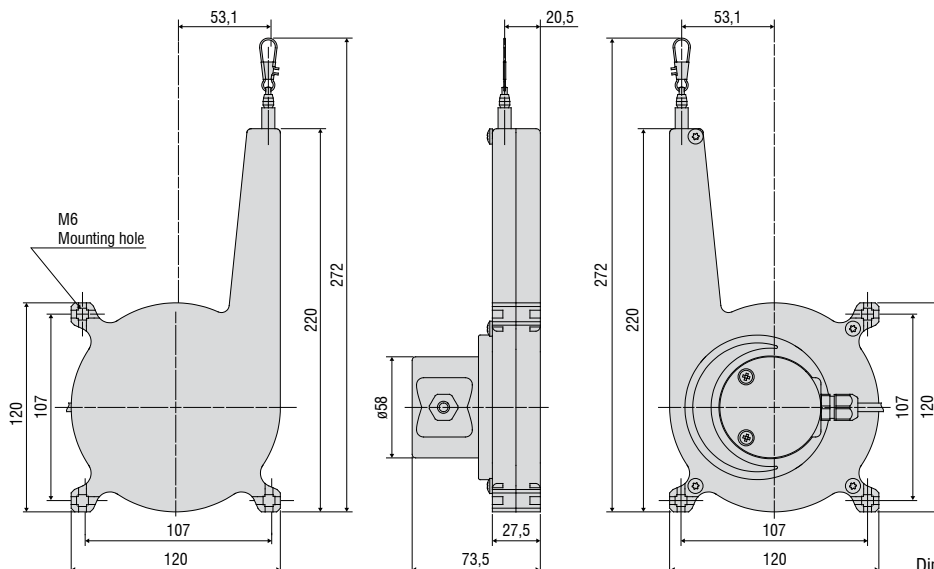


- Robust plastic housing
- Customer-specific designs
- Potentiometer, current or voltage output

MK120 model (measuring range 3000, 5000 mm)



MK120 model (measuring range 7500 mm)



Dimensions in mm, not to scale.

Model	WPS-3000-MK120	WPS-5000-MK120	WPS-7500-MK120
Measuring range	3000 mm	5000 mm	7500 mm
Analog output	Potentiometer, current, voltage		
Resolution	Hybrid potentiometer P10 towards infinity		
Linearity	Hybrid potentiometer P10 $\leq \pm 0.15\%$ FSO		
	$\leq \pm 4.5$ mm	$\leq \pm 7.5$ mm	$\leq \pm 11.25$ mm
Sensor element	Hybrid potentiometer		
Wire extension force (max.)	approx. 10 N		
Wire retraction force (min.)	approx. 4 N		
Wire acceleration (max.)	approx. 6 g		
Material	Housing	Plastics (PA 6)	
	Measuring wire	Polyamide-coated stainless steel (\varnothing 0.45 mm)	
Wire mounting	Wire clip		
Mounting	Mounting holes or mounting grooves on the sensor housing		
Temperature range	Storage	-20 ... +80 °C	
	Operation	-20 ... +80 °C	
Connection	integrated cable, radial, length 1 m		
Shock (DIN EN 60068-2-27)	40 g / 6 ms in 3 axes, 2 directions and 3000 shocks each		
Vibration (DIN EN 60068-2-6)	3 g / 10 ... 5000 Hz in 3 axes and 10 cycles each		
Protection class (DIN EN 60529)	IP65		
Weight	approx. 850 g (incl. cable)		

FSO = Full Scale Output

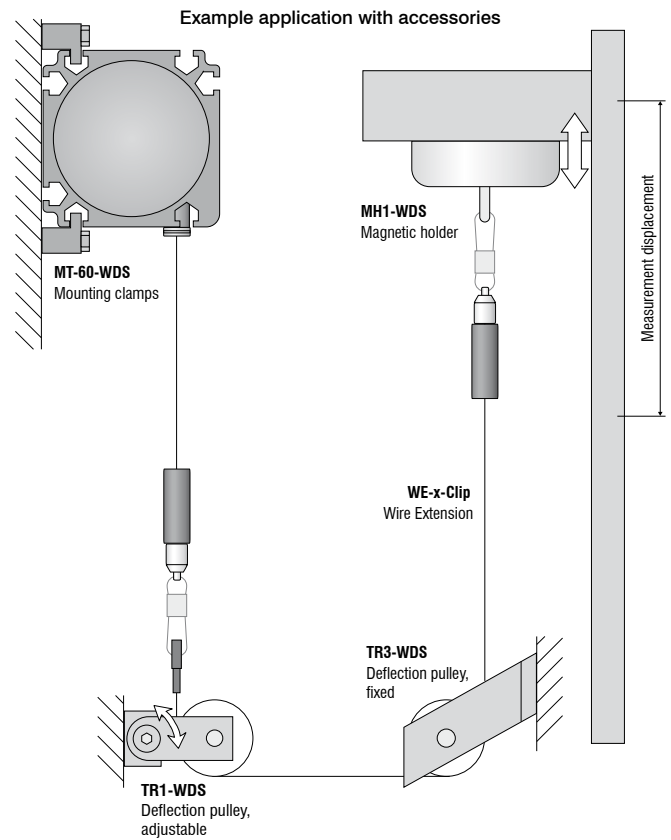
Specifications for analog outputs from page 54 onwards.

Article designation

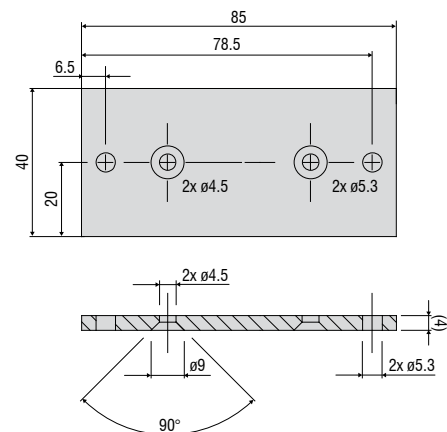
WPS -	3000 -	MK120 -	CR -	P
				Output: P: potentiometer U: voltage I: current
			Connection CR: integrated cable, radial, 1 m	
		MK120 series		
Measuring range in mm				

Accessories

WE-xxx-M4	Wire extension with M4 wire connection, x=wire length
WE-xxx-Clip	Wire extension with eyelet, x = wire length
WE-xxx-Clip-WSS	Wire extension with clip and uncoated wire d=0.45 mm
WE-xxx-Ring-PW	Wire extension with plastic ring and para-aramid wire, 1 mm
GK1-WDS	Fork head for M4
MH1-WDS	Magnetic holder for wire attachment
MH2-WDS	Magnetic holder for sensor mounting
MT-60-WDS	Mounting clamps for WDS-P60
FC8	Mating plug for WDS straight, 8-pin
FC8/90	Mating plug, 90° angled for WDS
PC3/8-WDS	Sensor cable, 3 m long
PS2020	Power supply unit 24 V / 2.5 A; input 100-240 VAC, output 24 VDC / 2.5 A; mounting onto symmetrical standard rail 35 mm x 7.5 mm, DIN 50022)
WDS-MP60	Mounting plate for P60 models
PC2/10-WDS-A	Cable for SSI encoder, 2 m long
PC2/10-WDS-E	Cable for incremental encoder, 2 m long
PC10/10-WDS-A	Cable for SSI encoder, 10 m long
PC10/10-WDS-E	Cable for incremental encoder, 10 m long

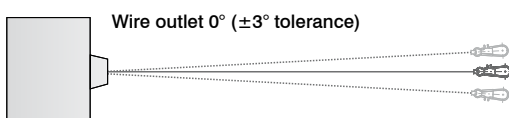


WDS-MP60
Mounting plate for P60 models

**Installation instructions:**

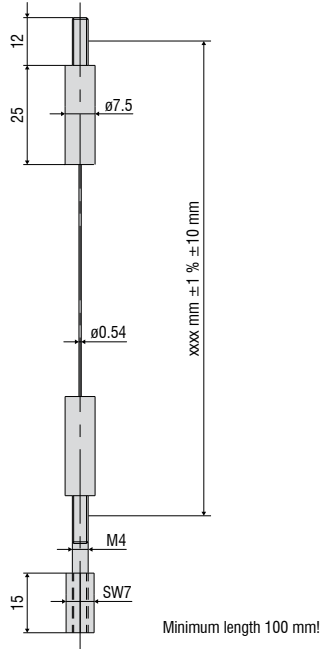
Wire attachment: during installation, do not allow at any time the measuring wire to freely return.

Angle of wire outlet: Make sure during installation that the wire outlet is straight (tolerance of $\pm 3^\circ$). Exceeding this tolerance leads to increased wear of the wire material and on the wire outlet.



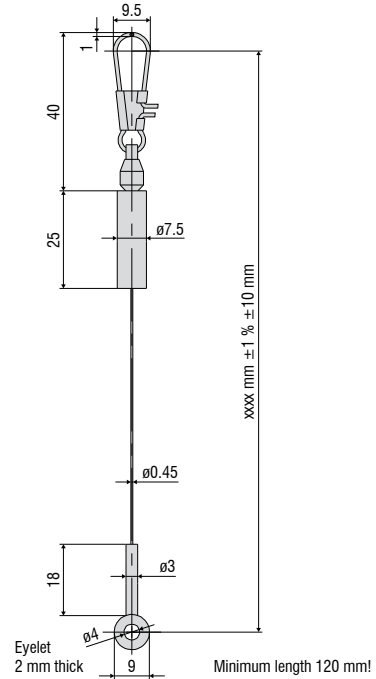
WE-xxxx-M4

Wire extension with M4 wire connection, x=wire length



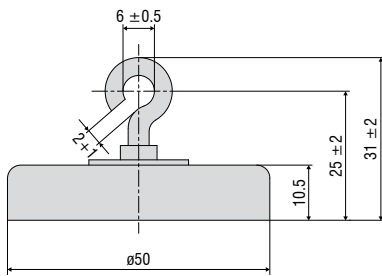
WE-xxxx-Clip

Wire extension with eyelet, x = wire length



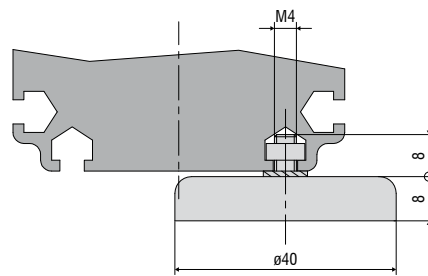
MH1-WDS

Magnetic holder for wire attachment



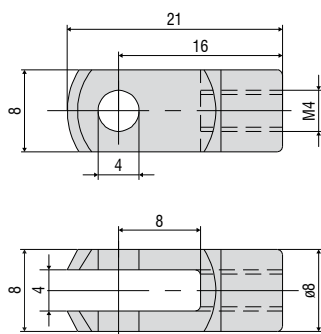
MH2-WDS

Magnetic holder for sensor mounting



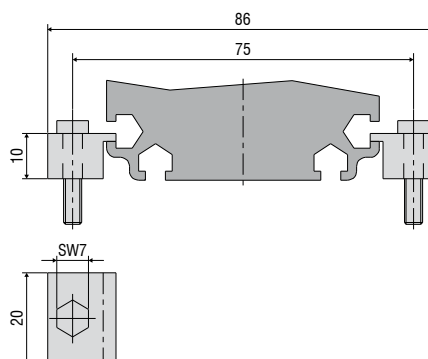
GK1-WDS

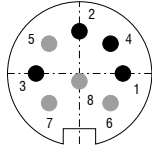
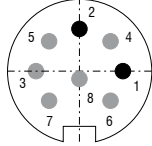
Fork head for M4



MT-60-WDS

Mounting clamps for WDS-P60



Output		Connector M16 -SA / -SR	Integrated cable -CA / -CR	Open contacts
Potentiometer 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 ← → CW ③ CLOCKWISE →</p>
Input voltage	max. 32 VDC with 1 kOhm / max. 1 W			
Resistance	1 kOhm $\pm 10\%$ (resistance divider)			
Temperature coefficient	$\pm 0.0025\%$ FSO/ $^{\circ}$ C			
Voltage output (U)		 <p>Sensor side</p> <p>1 = Power supply 2 = Ground 3 = Signal 4 = Ground</p>	<p>White = Supply Brown = Ground Green = Signal Yellow = Ground</p>	
Operating voltage	14 ... 27 VDC (non-stabilized)			
Current consumption	max. 30 mA			
Output voltage	0 ... 10 VDC Option 0 ... 5 / ± 5 V			
Load resistance	> 5 kOhm			
Output noise	0.5 mV _{eff}			
Temperature coefficient	$\pm 0.005\%$ FSO/ $^{\circ}$ C			
Electromagnetic compatibility (EMC)	EN 61000-6-4 EN 61000-6-2			
Adjustment range (if supported by the model)				
Zero	$\pm 20\%$ FSO			
Sensitivity	$\pm 20\%$			
Current output (I)		 <p>Sensor side</p> <p>1 = Power supply 2 = Ground</p>	<p>White = Supply Brown = Ground</p>	
Operating voltage	14 ... 27 VDC (non-stabilized)			
Current consumption	max. 35 mA			
Output current	4 ... 20 mA			
Load	< 600 Ohm			
Output noise	$< 1.6 \mu\text{A}_{\text{eff}}$			
Temperature coefficient	$\pm 0.01\%$ FSO/ $^{\circ}$ C			
Electromagnetic compatibility (EMC)	EN 61000-6-4 EN 61000-6-2			
Adjustment range (if supported by the model)				
Zero	$\pm 18\%$ FSO			
Sensitivity	$\pm 15\%$			

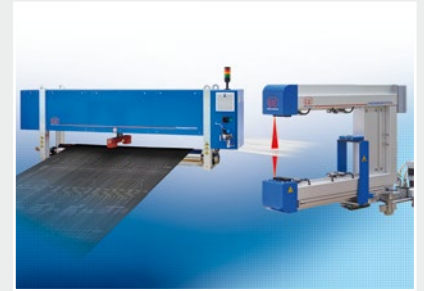
Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection