



# More Precision.

**wire**SENSOR

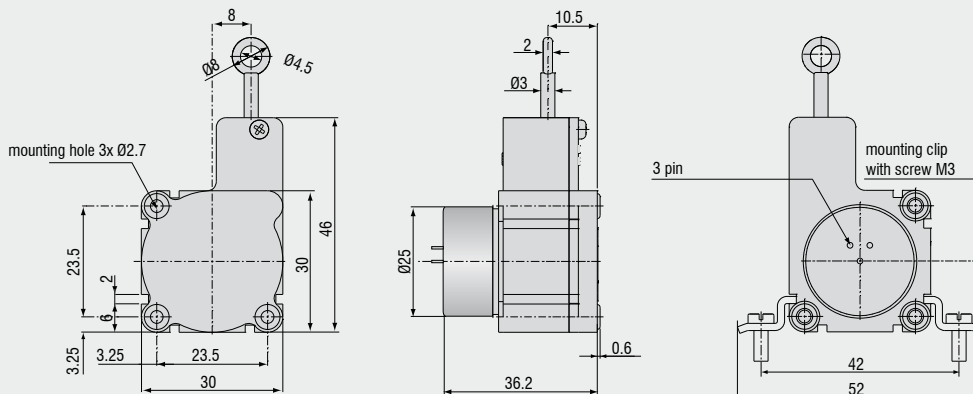
Draw-wire displacement sensors



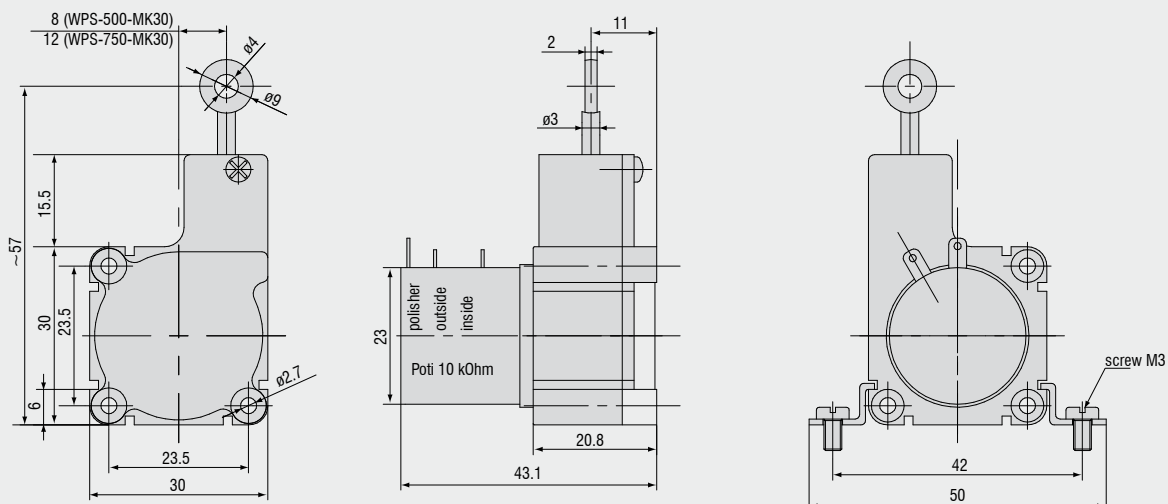


- Robust plastic housing
- Customized versions for OEM
- Conductive plastic/wire/hybrid potentiometer
- Smallest design in its class

Model MK30-P (Measuring range 50mm)



Model MK30-P (Measuring range 150/250/500/750/1000/1250mm)



Model		WPS-50-MK30	WPS-150-MK30	WPS-250-MK30	WPS-500-MK30	WPS-750-MK30
Output		P				
Measuring range		50mm	150mm	250mm	500mm	750mm
Linearity	conductive plastic pot. P50	±0.5% FSO	0.25mm	-	-	-
	wire pot. P25	±0.25% FSO	-	-	0.625mm	1.25mm
	hybrid pot. P25	±0.25% FSO	-	0.375mm	-	-
	hybrid pot. P10	±0.1% FSO	-	-	0.25mm	0.5mm
Resolution	conductive plastic pot.		quasi infinite			
	wire pot.		-	0.1mm	0.1mm	0.15mm
conductive plastic pot./hybrid pot.			quasi infinite			
Sensor element		conductive plastic/wire/hybrid potentiometer				
Temperature range		-20 ... +80°C				
Material	housing	plastic				
	draw wire	coated polyamid stainless steel (ø 0.36mm)				
Wire mounting		eyelet				
Sensor mounting		mounting holes / mounting grooves				
Wire acceleration		appr. 5g				
Wire retraction force (min)		appr. 1N				
Wire extension force (max)		appr. 2.5N				
Protection class DIN EN 60529		IP 20				
Electrical connection		soldering tag				
Weight		appr. 45g				

FSO = Full Scale Output

Specifications for analog outputs on page 43.

#### Article description

**WPS - 50 - MK30 - P25**

Output option:  
 potentiometer P50 (linearity ±0.5 % FSO)  
 potentiometer P25 (linearity ±0.25 % FSO)  
 potentiometer P10 (linearity ±0.1 % FSO)

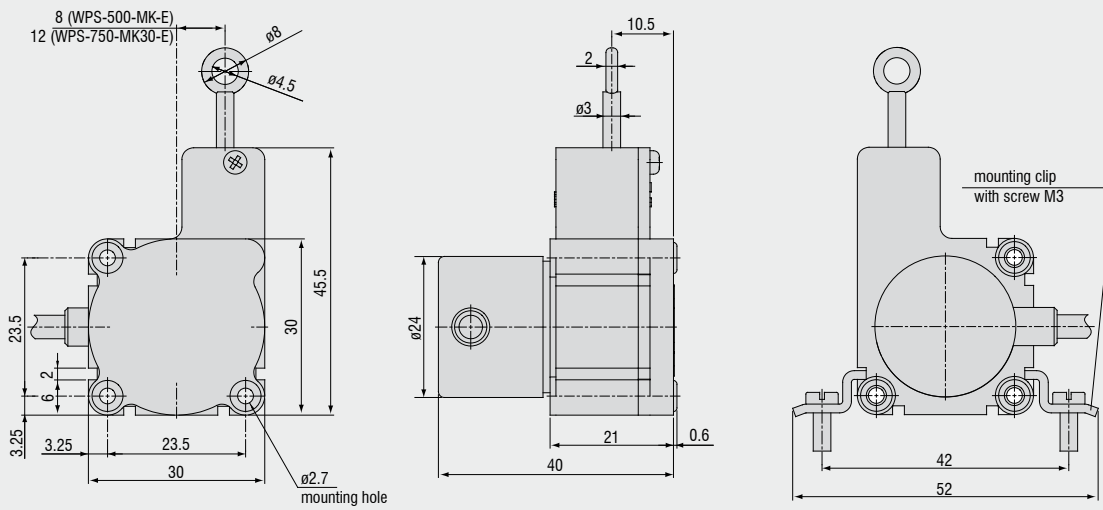
Model MK30

Measuring range in mm



- Robust plastic housing
- Customized versions for OEM
- Smallest design in its class
- Incremental encoder

### Model MK30



Model		WPS-500-MK30	WPS-750-MK30
Output		E/E830	E/E830
Measuring range		500mm	750mm
Linearity E	±0.05% FSO	0.25mm	0.375mm
Resolution		10 Pulses/mm	6.7 Pulses/mm
		0.1mm	0.15mm
Sensor element		Incremental encoder	
Temperature range		-20 ... +80°C	
Material	housing	plastic	
	draw wire	coated polyamid stainless steel (ø 0.36mm)	
Wire mounting		eyelet	
Sensor mounting		mounting holes / mounting grooves	
Wire acceleration		appr. 5g	
Wire retraction force (min)		appr. 1N	
Wire extension force (max)		appr. 2.5N	
Protection class DIN EN 60529		IP54	
Electrical connection		cable radial, 1m	
Weight		ca. 80g	

FSO = Full Scale Output  
 Specifications for digital outputs on page 44.

#### Article description

**WPS - 500 - MK30 - E830**

Output option:  
 encoder E (5 ... 24VDC)  
 encoder E830 (8 ... 30VDC)

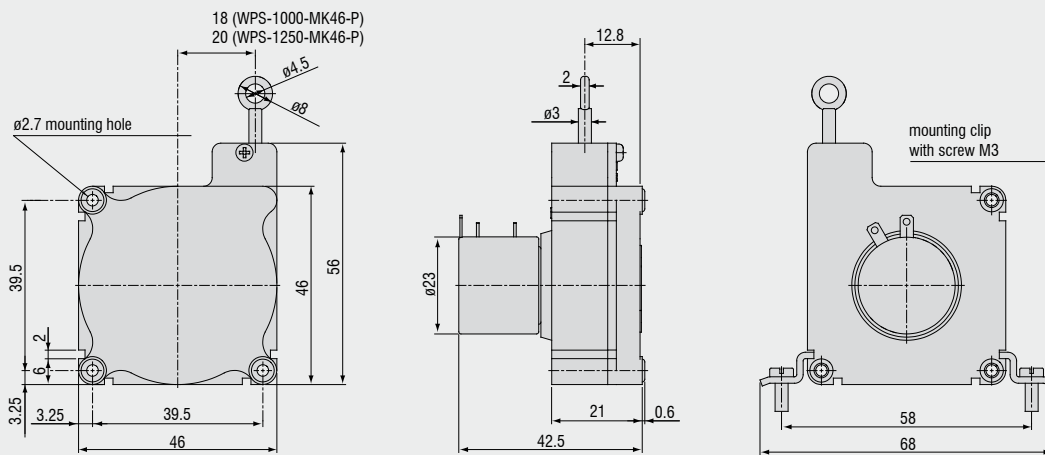
Model MK30

Measuring range in mm

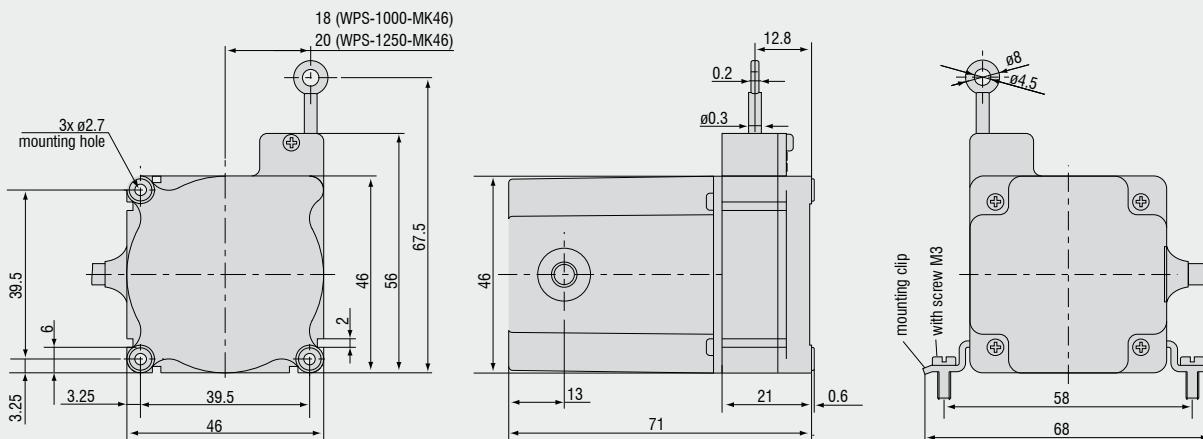


- Robust plastic housing
- Customized versions for OEM
- Wire/hybrid potentiometer

#### Model MK46 Output P10/P25



#### Model MK46 Output CR-P25



Model			WPS-1000-MK46	WPS-1250-MK46
Output			P	
Measuring range			1000mm	1250mm
Linearity	wire pot. P25	$\pm 0.25\%$ FSO	2.5mm	3.12mm
	hybrid pot. P10	$\pm 0.1\%$ FSO	1mm	1.2mm
Resolution	wire pot. P25		0.3mm	0.4mm
	hybrid pot. P10		quasi infinite	
Sensor element			wire/hybrid potentiometer	
Temperature range			-20 ... +80°C	
Material	housing		plastic	
	draw wire		coated polyamid stainless steel ( $\varnothing$ 0.36 mm)	
Wire mounting			eyelet	
Sensor mounting			mounting holes / mounting grooves	
Wire acceleration			appr. 5g	
Wire retraction force (min)			appr. 1N	
Wire extension force (max)			1.6N	1.5N
Protection class DIN EN 60529			IP 20	
Electrical connection	P10, P25		soldering tag	
	CR-P25		integrated cable, radial, 1m	
Weight			appr. 80g	

FSO = Full Scale Output  
 Specifications for analog outputs on page 43.

#### Article description

##### WPS - 1000 - MK46 - P25

Output option:  
 potentiometer P25 (linearity  $\pm 0.25\%$  FSO)  
 potentiometer P10 (linearity  $\pm 0.1\%$  FSO)  
 potentiometer CR-P25, integrated cable, radial, 1m

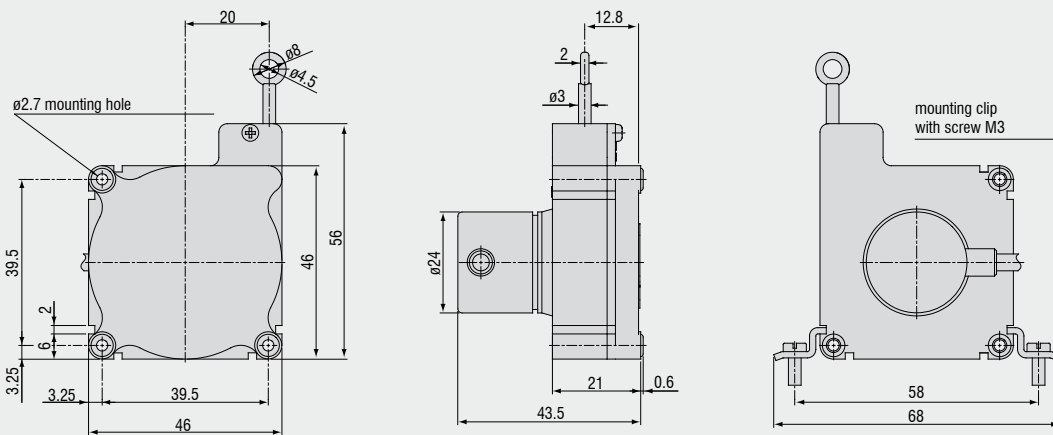
Model MK46

Measuring range in mm



- Robust plastic housing
- Customized versions for OEM
- Incremental encoder

Model MK46



Model		WPS-1250-MK46	
Output			E/E830
Measuring range			1250mm
Linearity	encoder	±0.05% FSO	0.625mm
Resolution			4 Pulses/mm
			0.25mm
Sensor element			incremental encoder
Temperature range			-20 ... +80°C
Material	housing		plastic
	draw wire		coated polyamid stainless steel (ø 0.36mm)
Wire mounting			eyelet
Sensor mounting			mounting holes / mounting grooves
Wire acceleration			appr. 5g
Wire retraction force (min)			appr. 1N
Wire extension force (max)			1.5N
Protection class DIN EN 60529			IP54
Electrical connection			cable radial, 1m
Weight			appr. 120g

FSO = Full Scale Output  
 Specifications for digital outputs on page 44.

#### Article description

**WPS - 1250 - MK46 - E**

Output option:  
 encoder E (5 ... 24VDC)  
 encoder E830 (8 ... 30VDC)

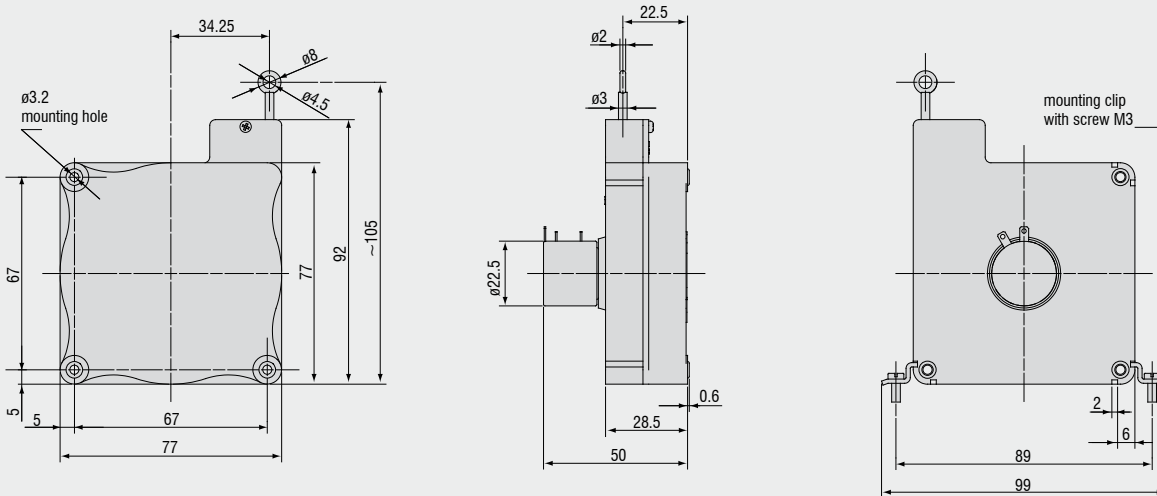
Model MK46

Measuring range in mm

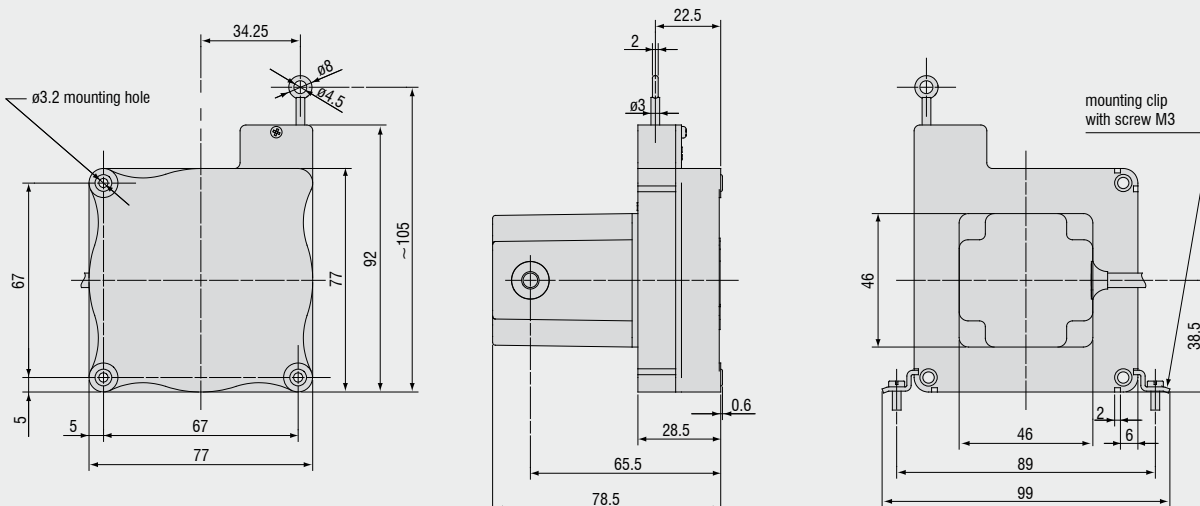


- Robust plastic housing
- Customized versions for OEM
- Wire potentiometer

Model MK77 Output P25



Model MK77 Output CR-P25



Model		WPS-2100-MK77	
Output			P25
Measuring range			2100mm
Linearity	wire pot.	$\pm 0.25\%$ FSO	5.25mm
Resolution	wire pot.		0.55mm
Sensor element			wire potentiometer
Temperature range			-20 to 80°C
Material	housing		plastic
	draw wire		coated polyamid stainless steel
Wire mounting			eyelet
Sensor mounting			mounting holes / mounting grooves
Cable diameter			0.45mm
Wire retraction force (min)			3.5N
Wire extension force (max)			5N
Wire acceleration			5g
Protection class			IP 20
Electrical connection	P25		soldering tag
	CR-P25		integrated cable radial, 1m
Weight	P25		ca. 0.2kg
	CR-P25		ca. 0.25kg

FSO = Full Scale Output  
 Specifications for analog outputs on page 43.

#### Article description

##### WPS - 2100 - MK77 - P25

Output option:  
 potentiometer P25 (linearity  $\pm 0.25\%$  FSO)  
 potentiometer CR-P25, integrated cable, radial, 1m

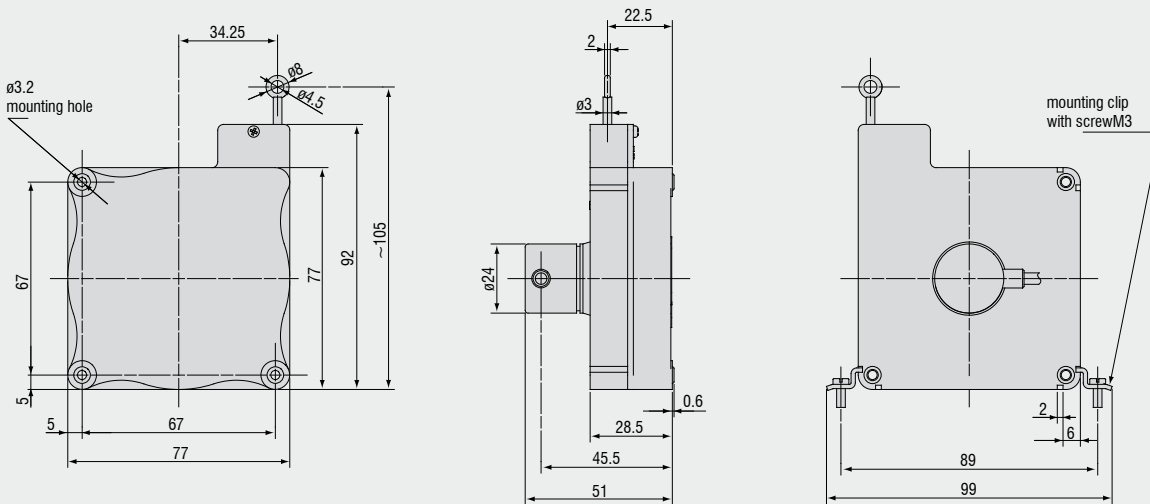
Model MK77

Measuring range in mm



- Robust plastic housing
- Customized versions for OEM
- Incremental/absolute encoder

### Model MK77



Model	WPS-2100-MK77	
Output	E/E830	
Measuring range	2100mm	
Linearity	1.05mm	
	±0.05% FSO	
Resolution	0.43mm	
Sensor element	incremental encoder	
Temperature range	-20 to 80°C	
Material	housing	Plastic
	draw wire	coated polyamid stainless steel (ø 0.45mm)
Wire mounting	Eyelet	
Cable diameter	0.45mm	
Sensor mounting	mounting holes / mounting grooves	
Wire retraction force (min)	3.5N	
Wire extension force (max)	5N	
Wire acceleration	5g	
Protection class	IP 54	
Electrical connection	cable radial, 2m	
Weight	appr. 0.27kg	

FSO = Full Scale Output  
 Specifications for digital outputs on page 44.

#### Article description

**WPS - 2100 - MK77 - E**

Output option:  
 encoder E (5 ... 24VDC)  
 encoder E830 (8 ... 30VDC)

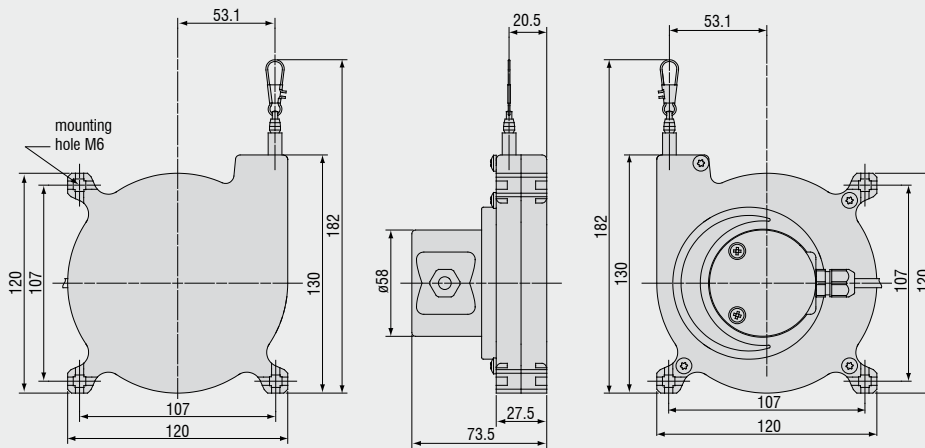
Model MK77

Measuring range in mm

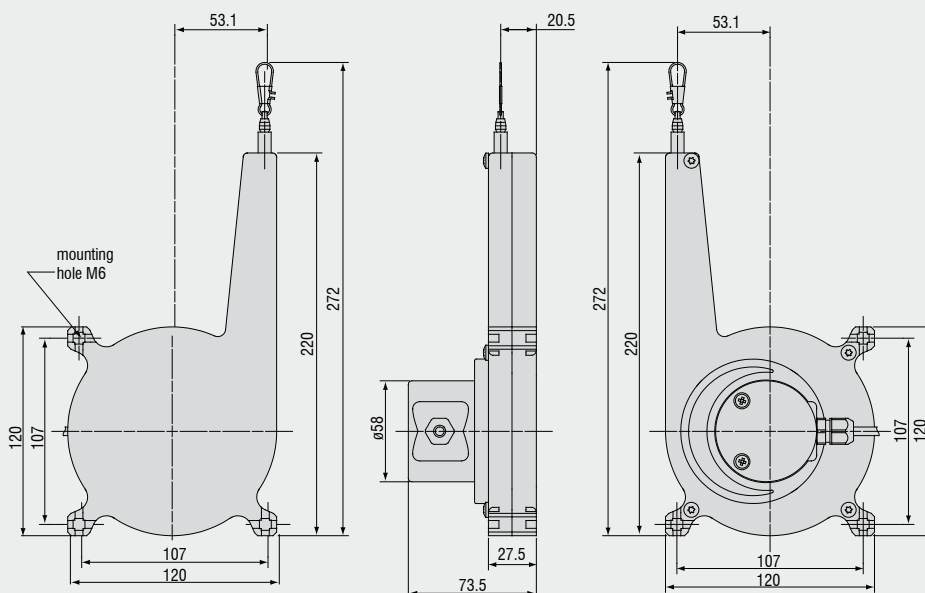


- Robust plastic housing
- Customized versions for OEM
- Potentiometer, current and voltage output

**Model MK120 (Measuring range 3000, 5000mm)**



**Model MK120 (Measuring range 7500mm)**



Model	WPS-3000-MK120	WPS-5000-MK120	WPS-7500-MK120
Output	P/U/I		
Measuring range	3000mm	5000mm	7500mm
Linearity	±0.15% FSO	±4.5mm	±7.5mm
Resolution	quasi infinite		
Temperature range	-20 to 80°C		
Material	housing	plastic PA6	
	draw wire	0.45mm coated	
Wire mounting	wire clip		
Wire acceleration		2.5g	1.5g
Wire retraction force (min)	5.5N	5N	7N
Wire retraction force (max)		8N	13N
Electrical connection	integrated cable, radial, 1m length		
Protection class	IP 65		
Weight		0.75kg	0.9kg

FSO = Full Scale Output  
 Specifications for analog outputs on page 43.

#### Article description

**WPS - 3000 - MK120 - CR - P**

Output option:  
 P: potentiometer  
 U: voltage  
 I: current

Connection CR: integrated cable, radial, 1m

Model MK120

Measuring range in mm

## High performance sensors made by Micro-Epsilon



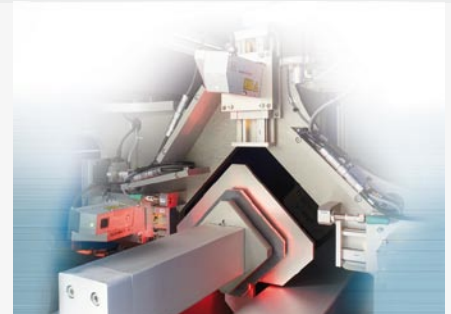
### Sensors and systems for displacement, position and dimension

Eddy current displacement sensors  
Optical and laser sensors  
Capactive sensors  
Linear inductive sensors  
Draw wire displacement sensors  
Laser micrometer  
2D/3D profile sensors (laser scanner)  
Image processing



### Sensors and systems for non-contact temperature measurement

IR handheld  
Stationary IR sensors  
Thermal imager



### Turn key systems for quality inspection

of plastics and film  
of tires and rubber  
of endless band material  
of automotive components  
of glass



**MICRO-EPSILON**

#### MICRO-EPSILON Headquarters

Koenigbacher Str. 15 · 94496 Ortenburg / Germany  
Tel. +49 (0) 8542 / 168-0 · Fax +49 (0) 8542 / 168-90  
info@micro-epsilon.com · www.micro-epsilon.com

#### MICRO-EPSILON UK Ltd.

Unit 1 Pioneer Business Park · Ellesmere Port · CH65 1AD  
Phone +44 (0) 151 355 6070  
info@micro-epsilon.co.uk · www.micro-epsilon.co.uk

#### MICRO-EPSILON USA

8120 Brownleigh Dr. · Raleigh, NC 27617 / USA  
Phone +1/919/787-9707 · Fax +1/919/787-9706  
info@micro-epsilon.us · www.me-sensor.com