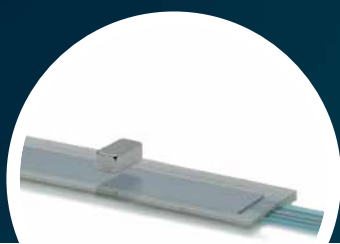
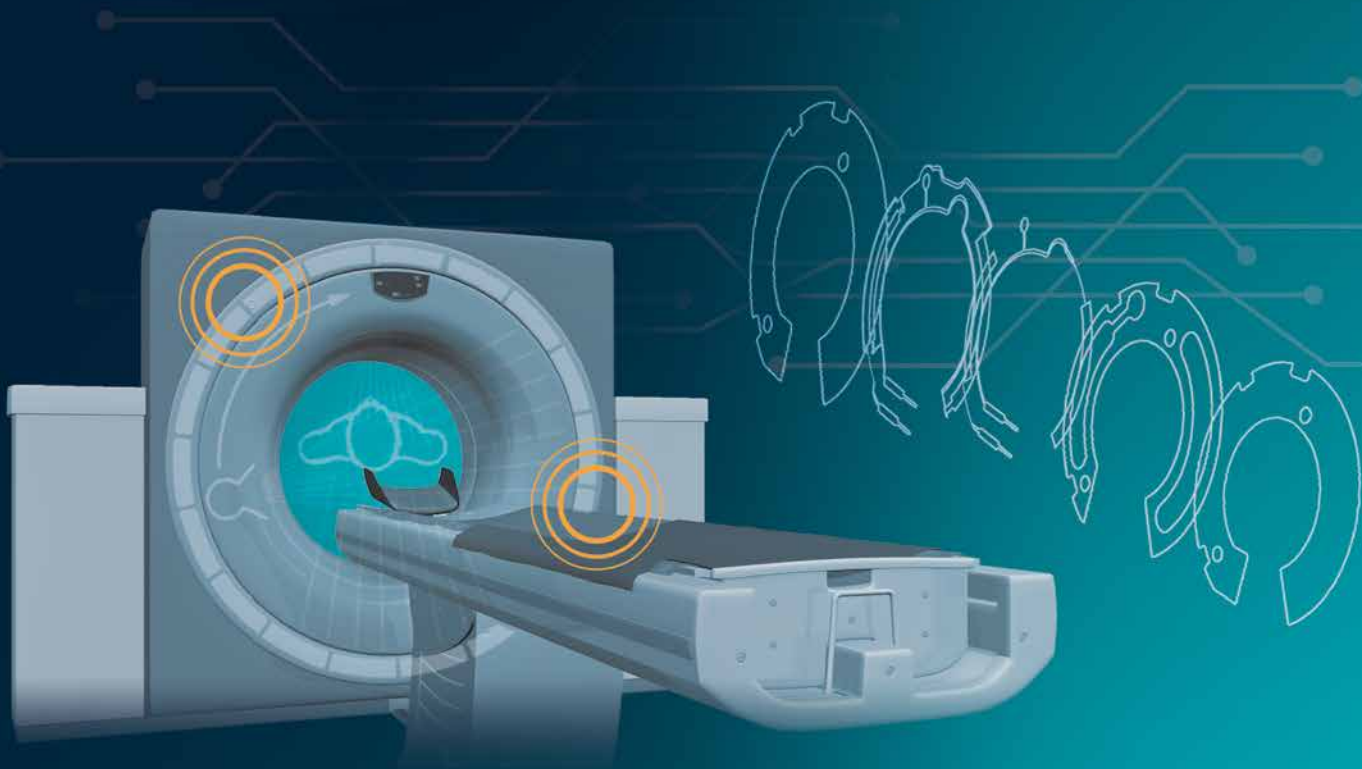


# LINEAR AND ROTARY SENSORS

Product Range



▶ MMP



▶ WPL-0S linear



▶ HWL 60



▶ PE rotary

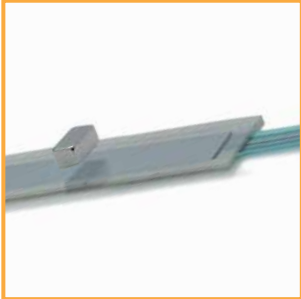
USA

FIRST IN SENSORS

metallux USA, Inc.

# METALLUX – LINEAR- AND ROTARY SENSORS

## MMP LINEAR MEMBRANE SENSOR CONTACTLESS, MAGNETIC

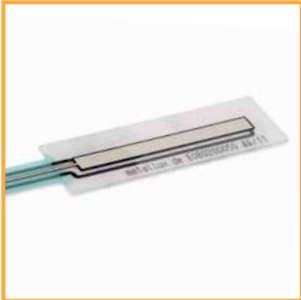


Dimensions with cable	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 123 – 573 mm Width: 22 mm	> 50 mio.	– 25 – +85 °C **	50 – 500 mm

Resistance range	Independent linearity	Voltage range	Technology
2.5 kΩ per 100 mm stroke	± 2 %	5 V, others on request	Magnetic membrane potentiometer

**Special features:** contactless, absolute sensor IP 65, easy to install, flat, customized design, ESD uncritically, EMC normally uncritically, minimal current demand, therefore ideally suited for battery-driven applications.

## MTP MEMBRANE SENSOR LINEAR



Dimensions with cable	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 98 – 568 mm Width: 22 mm, smaller width on request	> 5 mio.	– 25 – +85 °C **	30 – 500 mm

Resistance range	Independent linearity	Voltage range	Technology
2.5 kΩ per 100 mm stroke	± 2 %	5 V, others on request	Membrane potentiometer

**Special features:** flat, sensor element IP 65, easy to install with self-adhesive tape, high life cycle, customized design, ESD uncritically, EMC uncritically, very low current demand

## MTP-LX MEMBRANE SENSOR LINEARIZED ON FR4 BASE



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 124 – 574 mm Width: 21 mm	> 25 mio.	– 25 – +105 °C **	50 – 500 mm

Resistance range	Independent linearity	Voltage range	Technology
4 kΩ per 100 mm stroke	± 0.3 % **	5 V, others on request	Membrane potentiometer on FR4 substrate

**Special features:** linearized, sensor element IP 65, easy to install, high life cycle

## MTP ROTARY MEMBRANE SENSOR ROTARY



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 40 – 200 mm, larger on request	> 5 mio.	– 25 – +85 °C	25° – 345°

Resistance range	Independent linearity	Voltage range	Axis diameter
2.5 kΩ per 90 °	± 2 %	5 V, others on request	Variable

**Special features:** flat, sensor element IP 65, easy to install with self-adhesive tape, high life cycle

# METALLUX – LINEAR- AND ROTARY SENSORS

## HMS 220

### ROTARY HALL-TECHNOLOGY SENSOR



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 22.2 mm	> 10 mio.	-40 – 85 °C **	0° – 360 freely programmable

Voltage range	Independent linearity	Axis diameter	Thread
0.5 – 4.5 volt at 5 V supply voltage, output signal: 10 – 90 %	± 0.5 %	6.0 mm	M 10 x 0.75

**Special features:** contactless, output programmable, IP 63, resolution 12 Bit, customized design, analog output or SPI-output

## POH 120

### POTENTIOMETER HALL-TECHNOLOGY



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 13 mm	> 200 mio.	-40 – +85 °C **	0° – 360°

Voltage range	Independent linearity	Axis diameter
0.5 – 4.5 volt at 5 V supply voltage, output signal: 10 – 90 %	± 0.5 %	Decoupled 3 mm axis

**Special features:** contactless, no mechanical abrasion, output programmable, IP 65 with axis, IP 67 uncoupled unencumbered, resolution 12 Bit, customized design

## POL 120

### POTENTIOMETER CONDUCTIVE PLASTIC



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 13 mm	> 3 mio.	-25 – +85 °C	308°*

Resistance range	Independent linearity	Axis diameter
10 kΩ *	± 2,5 %	3 mm

**Special features:** IP 65, easy assembly, long endurance, customized design possible, smallest dimensions

## POL 220

### POTENTIOMETER CONDUCTIVE PLASTIC



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 22.2 mm	> 10 mio.	-25 – +85 °C	320°*

Resistance range	Independent linearity	Axis diameter	Thread
5 kΩ *	± 2 % *	6 mm	M 10 x 0.75

**Special features:** metal housing, high life cycle, with switching function, highest precision, customized design

# METALLUX – LINEAR- AND ROTARY SENSORS

## POL 230

### POTENTIOMETER CONDUCTIVE PLASTIC, BALL BEARING



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 22.2 mm	> 20 mio.	–25 – 85 °C	340°*

Resistance range	Independent linearity	Axis diameter
5 kΩ*	± 2%*	3 mm

**Special features:** metal-housing 2 x ball bearing, with switching function, highest precision, IP 63

## POL 790

### POTENTIOMETER CONDUCTIVE PLASTIC, ROBUST



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 79 mm	> 10 mio.	–25 – 85 °C	355°*

Resistance range	Independent linearity	
5 kΩ**	± 2%*	

**Special features:** robust versions, highest precision, customized design, IP 67, connector type: M 12 x 1, 4-pole

## POL 200

### POTENTIOMETER CONDUCTIVE PLASTIC



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Ø 20 mm	> 1 mio.	–25 – +85 °C	320°*

Resistance range	Independent linearity	Axis diameter
10 kΩ*	± 2%	6 mm*

**Special features:** Plastic housing, variable rotation angle, special axes, precision in small dimensions and cost-efficient, IP 50

## WPL-LH LINEAR

### POTENTIOMETRIC POSITION SENSOR – CONDUCTIVE PLASTIC



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 74 – 362 mm Ø 16 mm	> 5 mio.	–25 – +85 °C, extended temperature on request	25 mm up to 300 mm

Resistance range	Independent linearity	Technology
10 kΩ – 21 kΩ	± 2%	Conductive plastic

**Special features:** aluminium housing, IP 63, ball coupling, double bearing, cable, plug connection optional

\* other values on request, \*\* limited performance data subject to temperature and assembly conditions

# METALLUX – LINEAR- AND ROTARY SENSORS

## WPL-0S

### POTENTIOMETRIC POSITION SENSOR – CONDUCTIVE PLASTIC



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 145 mm Width: 20 mm	> 10 mio.	-25 – +85 °C	105 mm (others on request)

Resistance range	Independent linearity	Technology
5 k $\Omega$	Linearized $\pm 0.25\%$ *	Conductive plastic

**Special features:** space saving (without plunger), little installation space required, flexible, precise, customized design

## HWL 60

### POTENTIOMETER CONDUCTIVE PLASTIC – HOLLOW SHAFT



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
32 x 30 mm	> 3 mio.	-25 – +85 °C	320° *

Resistance range	Independent linearity	Axis diameter
10 k $\Omega$ *	$\pm 2\%$	Hollow shaft $\varnothing$ 5 mm

**Special features:** plastic housing, hollow shaft, floating mounting, numerous applications, IP 50

## PE LINEAR

### POTENTIOMETER-ELEMENT FOR POSITION SENSING



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
Length: 45 – 525 mm Width: 10 mm*	> 50 mio.	-40 – +125 °C	20 – 500 mm

Resistance range	Independent linearity	Technology
5 k $\Omega$ *	< $\pm 2\%$ *	Conductive plastic

**Special features:** optional linearity  $\pm 0.25\%$ , customized design as from 500 units, different substrates possible

## PE ROTARY

### POTENTIOMETER-ELEMENT FOR ANGLE SENSING



Dimensions	Life time/Cycles	Operating temperature	Electrical distance/angle
$\varnothing$ 13 – 200 mm, bigger on request	> 50 mio.	-40 – +125 °C **	25° – 355° *

Resistance range	Independent linearity	Technology
5 k $\Omega$ *	$\pm 2\%$	Conductive plastic

**Special features:** optional linearity  $\pm 0.25\%$ , customized design as from 500 units

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