

Measuring wheel systems

Compact-Line	Measuring wheel system MWE11	With spring bracket, contact force max. 10 N
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With incremental encoder Sendix 2400.

Measuring wheel systems from Kübler are the ideal solution for reliable speed measurement, position detection and length measurement in applications with linear movements. These are recorded rotationally via the measuring wheel with attached encoder directly on the surface of the material to be measured and converted into linear data.

The compact measuring wheel system MWE11 with the smallest size can be integrated very flexibly, even in the tightest installation spaces.



Push-Pull HTL

Features

• Easy handling

Measuring wheel, sensor and spring bracket are pre-assembled and therefore easy to install: screw on - connect - done.

• Compact design

Dimensions of the complete unit only 74 x 50 x 52 mm.

• Measuring wheels in 2 variants

Circumference 100 mm - measuring wheel coating available with diamond knurl or rubber surface.

Order code with incremental encoder	05.2400 . 0040 . 1000 . 50 XX
	Type 1

1 *Measuring wheel, circumference / coating*
 45 = 100 mm / diamond knurl (aluminum)
 49 = 100 mm / Rubber, Shore hardness 60
 (other measuring wheels on request)

Mounted encoder
 2400 incremental

Output circuit / supply voltage encoder
 push-pull (with inverted signal) / 8 ... 30 V DC

Type of connection
 radial cable, 2 m PVC

Pulse rate
 1000 ppr
 (other options on request)


Calculation of the linear resolution

	Measuring step (Dinstance/pulse)	Resolution (pulses/Dinstance)
Calculation	$\frac{\text{Distance}}{\text{ppr}} = \frac{\text{Measuring wheel circumference}}{\text{Pulse number encoder}}$	$\frac{\text{ppr}}{\text{Distance}} = \frac{\text{Pulse number encoder}}{\text{Measuring wheel circumference}}$
Example Measuring wheel circumference = 100 mm Pulse number encoder = 1000 ppr	$\frac{100 \text{ mm}}{1000 \text{ ppr}} = 0.1 \text{ mm / puls}$	$\frac{1000 \text{ ppr}}{100 \text{ mm}} = 10 \text{ pulses / mm}$

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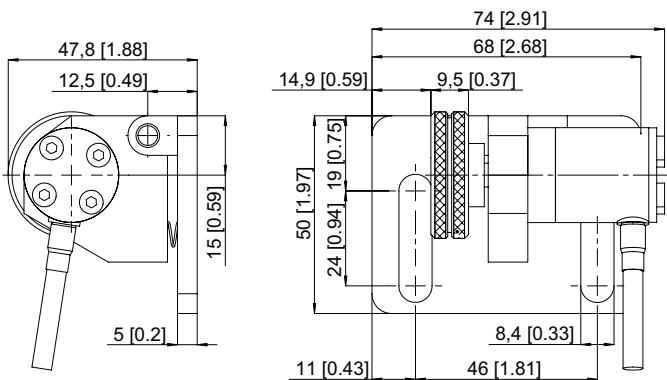
Single components	Order no.																
Measuring wheels																	
<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;"></td> <td style="width: 10%; text-align: center;">Option ❶</td> <td style="width: 60%;">circumference / coating</td> <td style="width: 15%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">45</td> <td>100 mm / diamond knurl (aluminum)</td> <td style="text-align: right;">8.0000.3113.0006</td> </tr> <tr> <td></td> <td style="text-align: center;">49</td> <td>100 mm / Rubber, Shore hardness 60</td> <td style="text-align: right;">8.0000.3123.0006</td> </tr> <tr> <td></td> <td></td> <td style="font-size: small;">(other measuring wheels on request)</td> <td></td> </tr> </table>		Option ❶	circumference / coating			45	100 mm / diamond knurl (aluminum)	8.0000.3113.0006		49	100 mm / Rubber, Shore hardness 60	8.0000.3123.0006			(other measuring wheels on request)		
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Evaluation	Order no.
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2; padding-left: 10px;"> <p>Multifunction device:</p> <ul style="list-style-type: none"> - Tachometer with limit values - Position indicators with limit values - Time preset counter </div> </div>	6.924.01XX.XXX

Further accessories can be found at: kuebler.com/accessories
 Cables and connectors can be found at: kuebler.com/connection-technology

Dimensions

Dimensions in mm [inch]



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Technology in detail

Various mounting options

The measuring wheel system can be placed on the material to be measured in different ways.

Setting the preload

The distance between the MWE11 measuring wheel system and the material to be measured can be adjusted via 2 slotted holes. This simultaneously sets the desired preload of the spring.

Contact force of the measuring wheel on the material to be measured

Symbol	Description	Value
①	Preload, recommended	5 N
②	Operating travel, max.	10 mm
③	Contact force in relation to spring deflection	Linear relationship (1:1)