Length measurement system LMSMA32
www.wachendorff-automation.com/lmsma32

Wachendorff Automation
... systems and encoders
• Complete systems
• Industrial rugged encoders to suit your application
• Standard range and customer versions
• Maximum permissible loads
• 48-hour express production
• Made in Germany
• Worldwide distributor network
Robust length measurement system LMSMA32

- Compact system with new spring-loaded arm, including WDGI 58B encoder and 200 mm measuring wheel
- Up to 0.008 mm/impulse for measurement results
- Suitable for many surfaces
- Absorbent mounting
- Contact pressure – easily adaptable by intelligent central adjustment
- Easy to dismantle through pre-assembled angle bracket

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### Resolution WDGI 58B10 with

<table>
<thead>
<tr>
<th>Resolution</th>
<th>PPR</th>
<th>Pulse/mm</th>
<th>mm/pulse</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 ppr</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2000 ppr</td>
<td>10</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>5000 ppr</td>
<td>25</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>25000 ppr</td>
<td>125</td>
<td>0.008</td>
<td>0.008</td>
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</tbody>
</table>

### Mechanical Data of the system modules

#### Housing encoder
- Flange: clamping flange
- Flange material: aluminium
- Housing cap: die cast aluminium, powder coated

#### Shaft(s)
- Material: stainless steel
- Starting torque: approx. 1 Ncm at ambient temperature
- Shaft: Ø 10 mm with flat
- Shaft length: 20 mm
- Max. permissible shaft loading radial: 220 N
- Max. permissible shaft loading axial: 120 N

#### Bearings
- Max. operating speed: 8000 rpm

#### Spring loaded arm
- Adjustable prestressing force: 0 N up to 30 N in steps of 5 N
- Length of spring lever axis: 120 mm
- Material: die cast aluminium
- Interlock: Spring loaded arm can be interlocked at 100° to start position
- Contact pressure: adjustable, 10°-step equates 5 N pressure increase

#### Machinery Directive: basic data safety integrity level
- MTTF<sub>b</sub>: 200 a
- Mission time (T<sub>m</sub>): 25 a
- Nominal service life (L10h): 1 x 10<sup>11</sup> revs. at 20 % rated shaft load and 8000 rpm
- Diagnostic coverage (DC): 0 %

### Electrical Data

#### Power supply/current consumption
- 4.75 VDC up to 5.5 VDC: max. 100 mA
- 10 VDC up to 30 VDC: max. 100 mA

#### Output circuit
- TTL, HTL

#### Channels
- ABN and inverted signals

#### Load
- max. 40 mA / channel

#### Circuit protection
- 10 VDC up to 30 VDC, HTL only

### Accuracy
- Phase offset: 90° ± max. 7.5 % of the pulse length
- Pulse/pause-ratio: 50 % ± max. 7 %

### General Data
- Weight: approx. 1100 g
- Connection: Connector radial
- Protection rating (EN 60529): IP67, shaft sealed to IP65

### Operating temperature
- LMSxxxKH: -10 °C up to +70 °C
- LMSxxxKG: -10 °C up to +70 °C
- LMSxxxNG: -10 °C up to +50 °C

### Range of application measuring wheel U = 200 mm

<table>
<thead>
<tr>
<th>Measuring Wheel Type</th>
<th>Range of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMSxxxKH: (even)</td>
<td>Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.</td>
</tr>
<tr>
<td>LMSxxxKG: (fluted)</td>
<td>Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.</td>
</tr>
<tr>
<td>LMSxxxNG: (pimpled)</td>
<td>Textiles.</td>
</tr>
</tbody>
</table>

### More information
- General technical data and safety incremental encoders
  www.wachendorff-automation.com/gtd
- Options
  www.wachendorff-automation.com/acc
Description

SC8 radial, 8-pin, connector connected to encoder housing

Assignment

<table>
<thead>
<tr>
<th>Assignment</th>
<th>SC8</th>
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<tbody>
<tr>
<td>Type</td>
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Circuit

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<th>Description</th>
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<td>+UB</td>
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<tr>
<td>3</td>
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<td>B</td>
</tr>
<tr>
<td>5</td>
<td>N</td>
</tr>
<tr>
<td>6</td>
<td>A inv.</td>
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<tr>
<td>7</td>
<td>B inv.</td>
</tr>
<tr>
<td>8</td>
<td>N inv.</td>
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<tr>
<td>n. c.</td>
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<tr>
<td>Shield</td>
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Order No:

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<th>mm/pulses</th>
<th>Pulses</th>
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<tr>
<td>0.1</td>
<td>• • • • • •</td>
</tr>
<tr>
<td>0.04</td>
<td>• • • • • •</td>
</tr>
<tr>
<td>0.008</td>
<td>• • • • • •</td>
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</table>

**VDC**

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<th>2</th>
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<th>2</th>
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<tbody>
<tr>
<td>10 up to 30 HTL</td>
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<td>•</td>
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<td>•</td>
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</tr>
<tr>
<td>4.75 up to 5.5 TTL</td>
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</table>

Range of appl.*

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* Range of application measuring wheel U = 200 mm

1 LMSxxxKH Plastic, painted surfaces, paper, pastebard, wood, metal, textiles.
2 LMSxxxKG Plastic, painted surfaces, paper, pastebard, wood, metal, textiles.
3 LMSxxxNG Textiles.

For further assistance please feel free to contact us.
We would be happy to help you to find the suitable resolution, measurement wheel, cable length or other accessory to optimize your application.
For further information please contact our local distributor.
Here you find a list of our distributors worldwide.

Wachendorff Automation GmbH & Co. KG
Industriestrasse 7 • D-65366 Geisenheim

Tel.: +49 (0) 67 22 / 99 65 - 25
Fax: +49 (0) 67 22 / 99 65 - 70
E-Mail: wdg@wachendorff.de
www.wachendorff-automation.com