



## Datasheet

### Length measurement system LMSLA12

[www.wachendorff-automation.com/lmsla12](http://www.wachendorff-automation.com/lmsla12)

#### 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 LMSLA12



- Complete system, consisting of incremental encoder, linear equalization shaft encoder holder and measuring wheel
- Excellent print layout, thanks to a resolution of 0.008 mm/pulse
- Various measuring wheels for different surfaces available
- High service life, thanks to highest bearing loads and parallel guided free from backlash

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### Resolution WDGI 58B10 with

200 ppr:	1 pulse/mm = 1.0 mm/pulse
2000 ppr:	10 pulses/mm = 0.1 mm/pulse
5000 ppr:	25 pulses/mm = 0.04 mm/pulse
25000 ppr:	125 pulses/mm = 0.008 mm/pulse

### Mechanical Data of the system modules

#### Housing encoder

Flange	clamping flange
Flange material	aluminium
Housing cap	die cast aluminum, powder coated

#### Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1 Ncm at ambient temperature

Shaft	Ø 10 mm shaft with flat
Shaft length	L: 20 mm
Max. permissible shaft loading radial	220 N
Max. permissible shaft loading axial	120 N

#### Bearings

Max. operating speed	8000 rpm
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#### Encoder holder

Adjustable prestressing force	25 N
Spring travel	8.5 mm
Material	Aluminum

### Machinery Directive: basic data safety integrity level

MTTF <sub>d</sub>	200 a
Mission time (T <sub>m</sub> )	25 a
Nominal service life (L <sub>10h</sub> )	1 x 10 <sup>11</sup> revs. at 20 % rated shaft load and 8000 rpm
Diagnostic coverage (DC)	0 %

### Electrical Data

Power supply/	4,75 VDC up to 5,5 VDC: max. 100 mA
Current consumption	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. 570 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

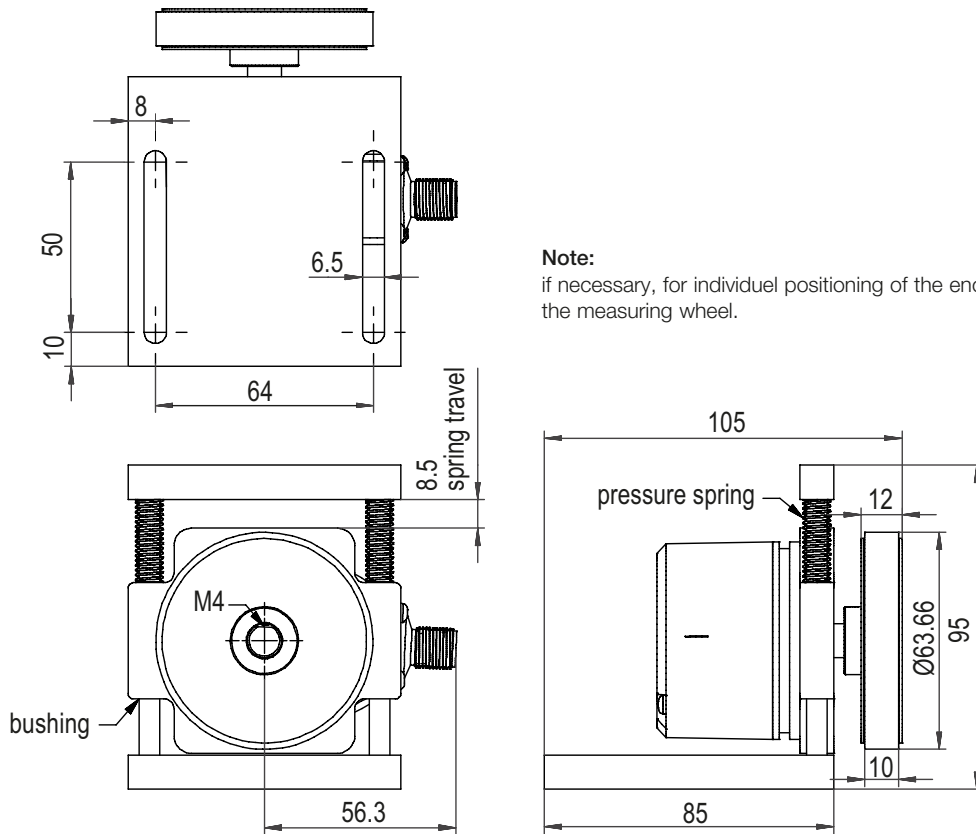
 LMSxxxKH: (even)	Plastic, painted surfaces, paper, paste-board, wood, metal, textiles.
 LMSxxxKG: (fluted)	Plastic, painted surfaces, paper, paste-board, wood, metal, textiles.
 LMSxxxNG: (pimpled)	Textiles.

### More information

General technical data  
[www.wachendorff-automation.com/gtd](http://www.wachendorff-automation.com/gtd)  
Options  
[www.wachendorff-automation.com/acc](http://www.wachendorff-automation.com/acc)

Customs tariff number: 90318020  
Country of origin: Germany

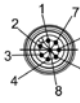
Sensor-connector (M12x1) SC, 8-pin



**Note:**  
if necessary, for individual positioning of the encoder, please remove the measuring wheel.

**Description**

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

Assignment	
	<b>SC8</b>
	<b>8-pin</b>
	
<b>Circuit</b>	P05, R05, P24, R24
<b>GND</b>	1
<b>+UB</b>	2
<b>A</b>	3
<b>B</b>	4
<b>N</b>	5
<b>Light reserve warning</b>	-
<b>A inv.</b>	6
<b>B inv.</b>	7
<b>N inv.</b>	8
<b>n. c.</b>	-
<b>Shield</b>	-

Order No.:

mm/pulses	Pulses	LMSLA12100024KH10						LMSLA12100005KH10						LMSLA12100024KG10						LMSLA12100005KG10											
		LMSLA12010024KH10						LMSLA12010005KH10						LMSLA12010024KG10						LMSLA12010005KG10											
		LMSLA12004024KH10						LMSLA12004005KH10						LMSLA12004024KG10						LMSLA12004005KG10											
		LMSLA12000824KH10						LMSLA12000805KH10						LMSLA12000824KG10						LMSLA12000805KG10											
1,0	200	•	•	•	•	•	•																								
0,1	2000							•	•	•	•	•	•																		
0,04	5000													•	•	•	•	•	•												
0,008	25000																			•	•	•	•	•	•						
<b>VDC</b>																															
10 up to 30 HTL		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•	
4,75 up to 5,5 TTL			•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
<b>Range of appl.*</b>		1	1	2	2	3	3	1	1	2	2	3	3	1	1	2	2	3	3	1	1	2	2	3	3	1	1	2	2	3	3

- \* Range of application measuring wheel U = 200 mm  
**1 LMSxxxKH** Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.  
**2 LMSxxxKG** Plastic, painted surfaces, paper, pasteboard, 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.

**WACHENDORFF**  
The Encoder Experts

**Authorized Distributor**

For further information please contact our local distributor.  
Here you find a list of our distributors worldwide.

<https://www.wachendorff-automation.com/contact-sales-en/>

**WACHENDORFF**

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](mailto:wdg@wachendorff.de)  
[www.wachendorff-automation.com](http://www.wachendorff-automation.com)

