



# Datasheet

## Length measurement system LMSMA22

[www.wachendorff-automation.com/lmsma22](http://www.wachendorff-automation.com/lmsma22)

### 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 LMSMA22



- 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
- Versatile mounting (e.g. mounting profile)

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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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### 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 aluminum
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>a</sub>	200 a
Mission time (T <sub>M</sub> )	25 a
Nominale 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. 880 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
LMSxxxKR:	-30 °C up to +85 °C
LMSxxxNG:	-10 °C up to +50 °C

## Range of application measuring wheel U = 200 mm

	LMSxxxKH: (even)	Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.
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	LMSxxxKG: (fluted)	Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.
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	LMSxxxKR: (Metal, knurled)	Pasteboard, wood, textiles.
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	LMSxxxNG: (pimpled)	Textiles.
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## More information

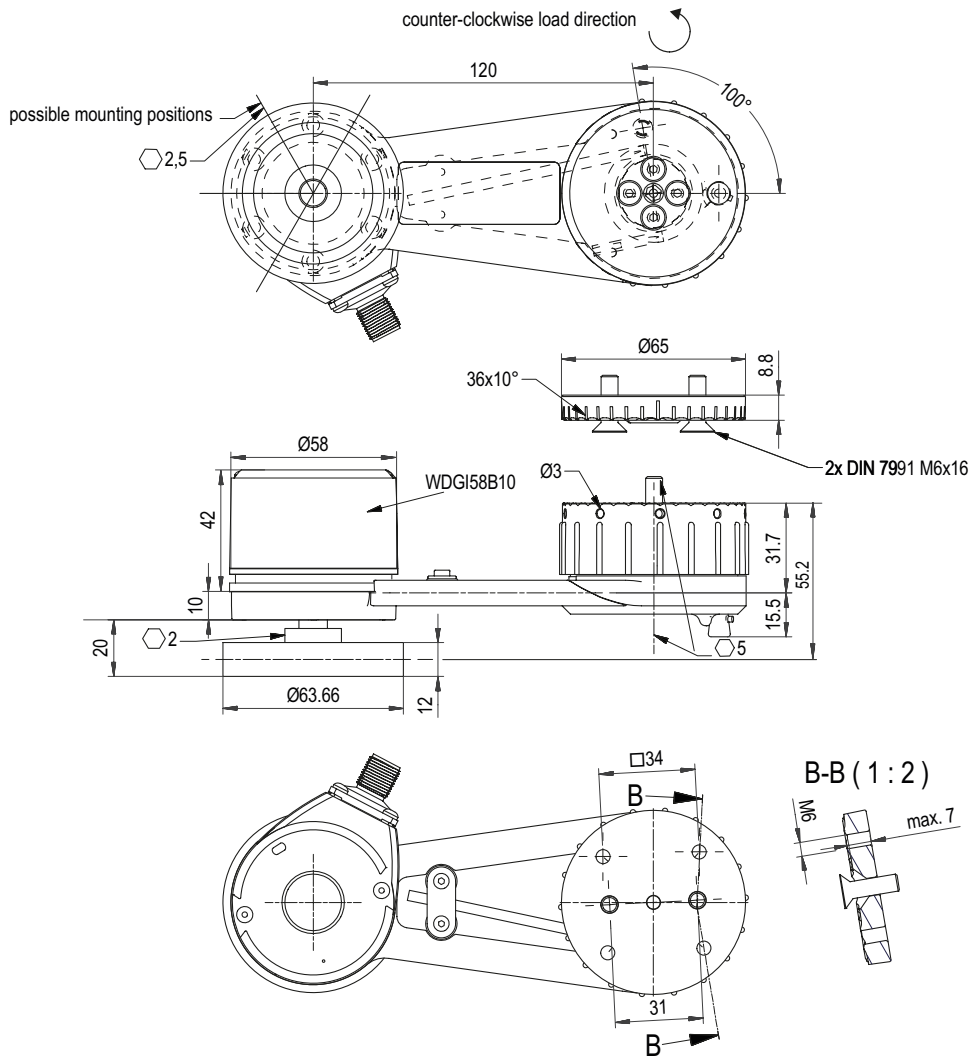
General technical data and safety incremental encoders

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

Options

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

Sensor-connector (M12x1) SC, 8-pin



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.:



LMSMA22100024xx10  
 LMSMA22100005xx10  
 LMSMA22010024xx10  
 LMSMA22010005xx10  
 LMSMA22004024xx10  
 LMSMA22004005xx10  
 LMSMA22000824xx10  
 LMSMA22000805xx10

mm/pulses	Pulses							
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>	xx: please refer measuring wheels							

\* Range of application measuring wheel U = 200 mm

xx = **KH**: LMS200KH Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.

xx = **KG**: LMS200KG Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.

xx = **KR**: LMS200KR Pasteboard, wood, textiles.

xx = **NG**: LMS200NG 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.  
[http://www.wachendorff-automation.com/distributors\\_worldwide.html](http://www.wachendorff-automation.com/distributors_worldwide.html)



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