



## Datasheet

### Length measurement system LMSCA22

[www.wachendorff-automation.com/lmsca22-wdgp](http://www.wachendorff-automation.com/lmsca22-wdgp)

#### 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 LMSCA22



- Ultra compact system with new spring-loaded arm, including WDGP 36A encoder and 150 mm or 200 mm measuring wheel
- Up to 0.01 mm/impulse for measurement results
- Suitable for many surfaces
- Absorbent mounting
- Contact pressure – easily adaptable by intelligent central adjustment

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### Resolution WDGP 36A with

#### Measuring systems LMSxxxKH, LMSxxxKG, LMSxxxNG:

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
16000 ppr:	80 pulses/mm = 0.0125 mm/pulse

#### Measuring system LMSxxxGR:

150 ppr:	1 pulse/mm = 1.0 mm/pulse
1500 ppr:	10 pulses/mm = 0.1 mm/pulse
3750 ppr:	25 pulses/mm = 0.04 mm/pulse
15000 ppr:	100 pulses/mm = 0.01 mm/pulse

### Mechanical Data of the system modules

#### Housing encoder

Flange	synchro flange
Flange material	aluminium
Housing cap	stainless steel

#### Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 0.2 Ncm at ambient temperature

Shaft	Ø 6 mm shaft with flat
Shaft length	L: 11.5 mm
Max. permissible shaft loading radial	80 N
Max. permissible shaft loading axial	50 N

#### Bearings

Max. operating speed	12000 rpm
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#### Spring loaded arm

Adjustable prestressing force	0 N up to 20 N in steps of 5 N
Length of spring lever axis	74.5 mm
Material	aluminum
Contact pressure	adjustable, 3°-step equates 5 N pressure increase

### Machinery Directive: basic data safety integrity level

MTTF <sub>a</sub>	1200 a
Mission time (T <sub>M</sub> )	20 a
Nominal service life (L <sub>10h</sub> )	1.7 x 10 <sup>10</sup> revs. at 20 % rated shaft load and 12000 rpm
Diagnostic coverage (DC)	0 %

### Electrical Data

Power supply/ Current consumption	4.75 VDC up to 32 VDC: typ. 80 mA
Output circuit	TTL, HTL
Pulse frequency	HTL up to 16384 ppr: max. 600 kHz TTL up to 16384 ppr: max. 1 MHz
Channels	ABN and inverted signals
Load	max. 40 mA / channel
Circuit protection	inverse-polarity and short-circuit protection

### Accuracy

Phase offset	90° ± max. 8.5 % of a period duration
pulse-/pause-ratio	50 % ± max. 7 %


### General Data


Weight	approx. 270 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
LMSxxxGR:	-40 °C up to +85 °C


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

 LMSxxxKH: (even)	Plastic, painted surfaces, paper, paste-board, wood, metal, textiles.
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 LMSxxxKG: (fluted)	Plastic, painted surfaces, paper, paste-board, wood, metal, textiles.
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 LMSxxxNG: (pimpled)	Textiles.
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### Range of application measuring wheel U = 150 mm

 LMSxxxGR: (even)	Wood, metal, conveyor belts, paper, textiles.
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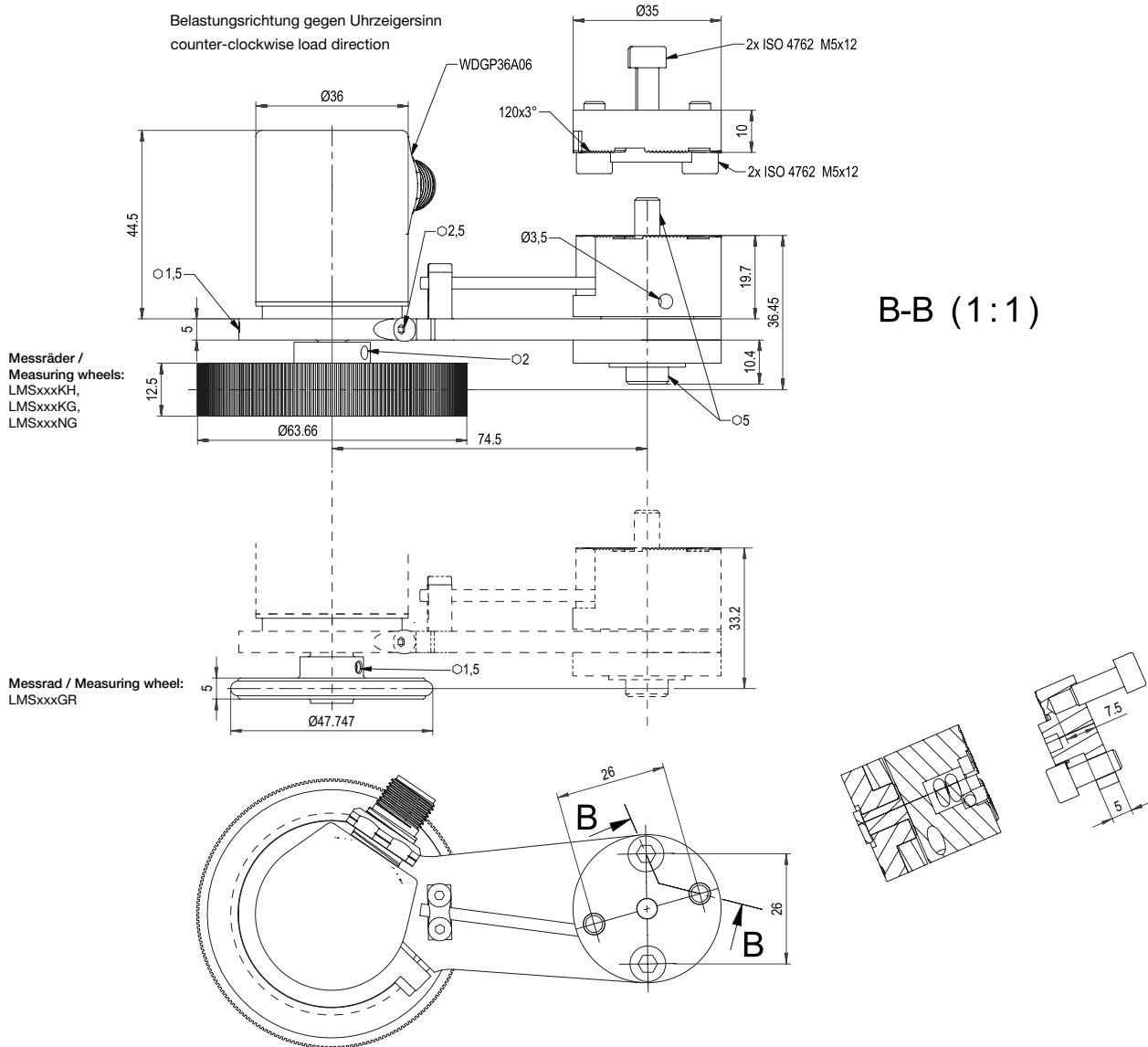
### More information

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)

Customs tariff number: 90318020  
Country of origin: Germany

**Sensor-connector (M12x1) SC, 8-pin**




**Description**

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


Assignment	
	SC8
	8-pin
GND	1
+UB	2
A	3
B	4
N	5
SET	-
A inv.	6
B inv.	7
N inv.	8
n. c.	-
Shield	-

Order No.:



		LMSA221000024KH	LMSA221000005KH	LMSA221000024KG	LMSA221000005KG	LMSA220100024NG	LMSA220100005NG	LMSA220100024KH	LMSA220100005KH	LMSA220100024KG	LMSA220100005KG	LMSA220100024NG	LMSA220100005NG	LMSA220040024KH	LMSA220040005KH	LMSA220040024KG	LMSA220040005KG	LMSA220012524KH	LMSA220012505KH	LMSA220012524KG	LMSA220012505KG				
mm/pulses	Pulses																								
1.0	200	•	•	•	•	•	•																		
0.1	2000					•	•	•	•	•	•														
0.04	5000											•	•	•	•	•	•								
0.0125	16000																•	•	•	•	•	•			
VDC																									
4.75 up to 32 HTL		•		•		•		•		•		•		•		•		•		•		•			
4.75 up to 32 TTL			•		•		•		•		•		•		•		•		•		•				
Range of appl.*		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.



		LMSA221000024GR	LMSA221000005GR	LMSA220100024GR	LMSA220100005GR	LMSA220040024GR	LMSA220010024GR	LMSA220010005GR	
mm/pulses	Pulses								
1.0	150	•	•						
0.1	1500		•	•					
0.04	3750				•	•			
0.01	15000						•	•	
VDC									
4.75 up to 32 HTL		•		•		•		•	
4.75 up to 32 TTL			•		•		•		

Range of LMSxxxGR application measuring wheel U = 150 mm  
Wood, metal, conveyor belts, paper, 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/>

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