

WACHENDORFF
Automation GmbH & Co. KG

Datasheet

Length measurement system LMSCA22

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
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	
$MTTF_d$	1200 a
Mission time (T_M)	20 a
Nominale service life ($L_{10}h$)	1.7 x 10^{10} 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, pasteboard, wood, metal, textiles.
	LMSxxxKG: (fluted)	Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.
	LMSxxxNG: (pimpled)	Textiles.

Range of application measuring wheel U = 150 mm

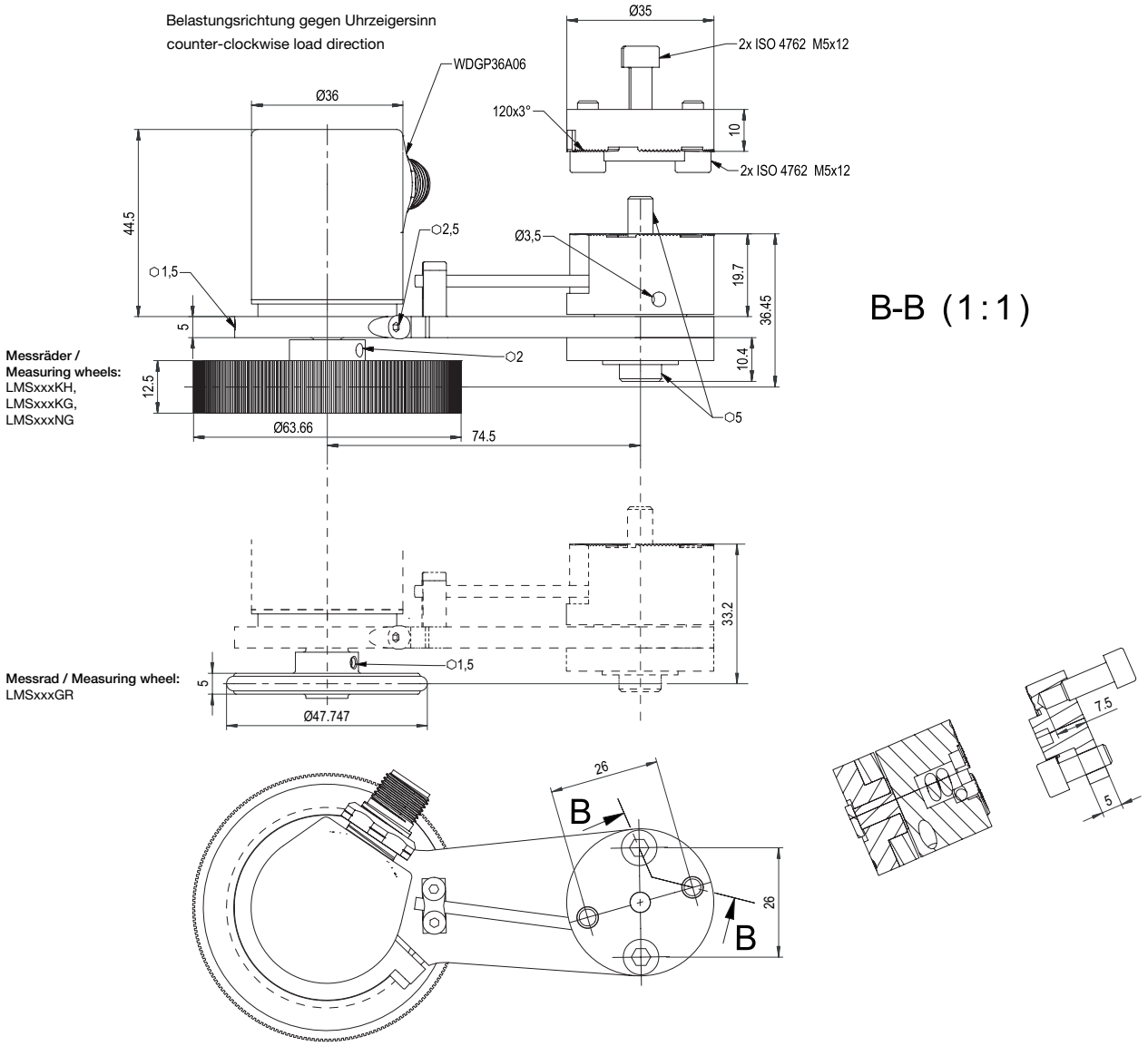
	LMSxxxGR: (even)	Wood, metal, conveyor belts, paper, textiles.

More information

General technical data and safety incremental encoders
www.wachendorff-automation.com/gtd

Options
www.wachendorff-automation.com/acc

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.:



mm/pulses	Pulses	LMSCA2210000 24KH	LMSCA2210000 05KH	LMSCA2210000 24KG	LMSCA2210000 05KG	LMSCA2210000 24NG	LMSCA2210000 05NG	LMSCA2201000 24KH	LMSCA2201000 05KH	LMSCA2201000 24KG	LMSCA2201000 05KG	LMSCA2201000 24NG	LMSCA2201000 05NG	LMSCA2200400 24KH	LMSCA2200400 05KH	LMSCA2200400 24KG	LMSCA2200400 05KG	LMSCA2200400 24NG	LMSCA2200400 05NG	LMSCA2200125 24KH	LMSCA2200125 05KH	LMSCA2200125 24KG	LMSCA2200125 05KG	LMSCA2200125 24NG	LMSCA2200125 05NG
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.



mm/pulses	Pulses	LMSCA2210000 24GR	LMSCA2210000 05GR	LMSCA2201000 24GR	LMSCA2201000 05GR	LMSCA2200400 24GR	LMSCA2200400 05GR	LMSCA2200100 24GR	LMSCA2200100 05GR
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
Automation GmbH & Co. KG
Authorized Distributor

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

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