



# Datasheet

## Length measurement system LMSMA35

[www.wachendorff-automation.com/lmsma35](http://www.wachendorff-automation.com/lmsma35)

### 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 LMSMA35



- Compact system with new spring-loaded arm, including WDGI 58Z encoder and 500 mm measuring wheel
- Up to 0.02 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 58Z10 with

500 ppr:	1 pulse/mm = 1.0 mm/pulse
5000 ppr:	10 pulses/mm = 0.1 mm/pulse
12500 ppr:	25 pulses/mm = 0.04 mm/pulse
25000 ppr:	50 pulses/mm = 0.02 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>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. 1250 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)	greased metal, steel profiles, painted surfaces, plastics, paper, pasteboard, wood, textiles, leather, wire.
	LMSxxxKG: (fluted)	greased metal, painted surfaces, plastics, paper, pasteboard, wood, textiles, glass, flooring.
	LMSxxxNG: (pimpled)	plastics, paper, pasteboard, wood, textiles, fleece, carpet, cable measuring.

## More information

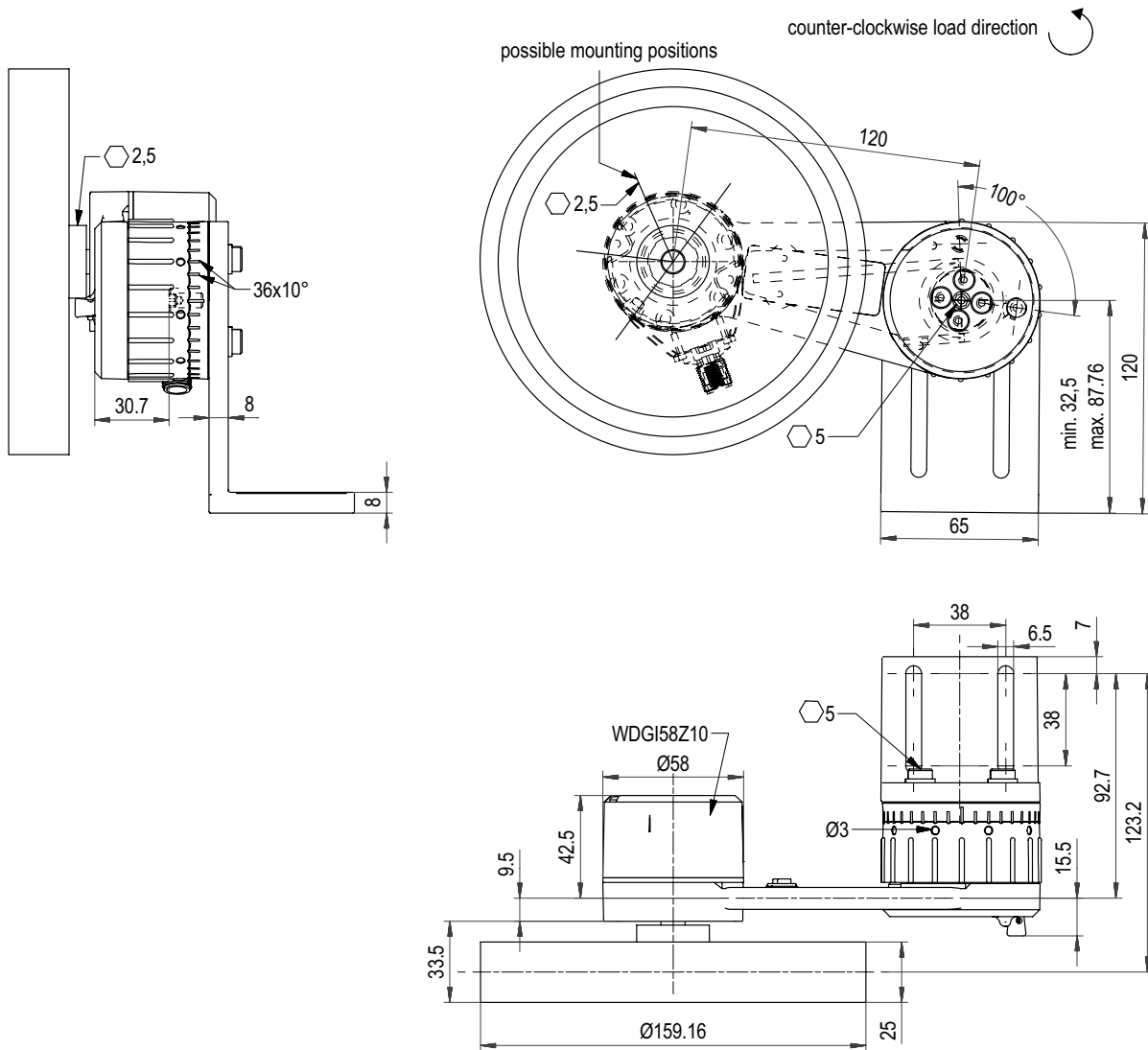
General technical data and safety incremental encoders

[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	
	SC8
	8-pin
Circuit	F05, R05, F24, R24
GND	1
+UB	2
A	3
B	4
N	5
Light reserve warning	-
A inv.	6
B inv.	7
N inv.	8
n. c.	-
Shield	-

Order No.: \_\_\_\_\_



mm/pulses	Pulses	LMSMA35100024KH10	LMSMA35100005KH10	LMSMA35100024KG10	LMSMA35100005KG10	LMSMA35100024NG10	LMSMA35100005NG10	LMSMA35010024KH10	LMSMA35010005KH10	LMSMA35010024KG10	LMSMA35010005KG10	LMSMA35010024NG10	LMSMA35010005NG10	LMSMA35004024KH10	LMSMA35004005KH10	LMSMA35004024KG10	LMSMA35004005KG10	LMSMA35004024NG10	LMSMA35004005NG10	LMSMA35002024KH10	LMSMA35002005KH10	LMSMA35002024KG10	LMSMA35002005KG10	LMSMA35002024NG10	LMSMA35002005NG10
1.0	200	•	•	•	•																				
0.1	5000					•	•	•	•	•	•														
0.04	12500											•	•	•	•	•	•								
0.02	25000																				•	•	•	•	•
VDC																									
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

- \* Range of application measuring wheel U = 500 mm
- 1 LMSxxxKH Greased metal, steel profiles, painted surfaces, plastics, paper, pasteboard, wood, textiles, leather, wire.
  - 2 LMSxxxKG Greased metal, painted surfaces, plastics, paper, pasteboard, wood, textiles, glass, flooring.
  - 3 LMSxxxNG Plastics, paper, pasteboard, wood, textiles, fleece, carpet, cable measuring.

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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