Length measurement system LMSMA22
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

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

$MTTF_d$	200 a
Mission time (T_M)	25 a
Nominale service life ($L_{10}h$)	1×10^{11} revs. at 20 % rated shaft load and 8000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/ Current consumption	4.75 VDC up to 5.5 VDC: max. 100 mA 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.
	LMSxxxKG: (fluted)	Plastic, painted surfaces, paper, pasteboard, wood, metal, textiles.
	LMSxxxKR: (Metal, knurled)	Pasteboard, wood, textiles.
	LMSxxxNG: (pimpled)	Textiles.

More information

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

Options
www.wachendorff-automation.com/acc
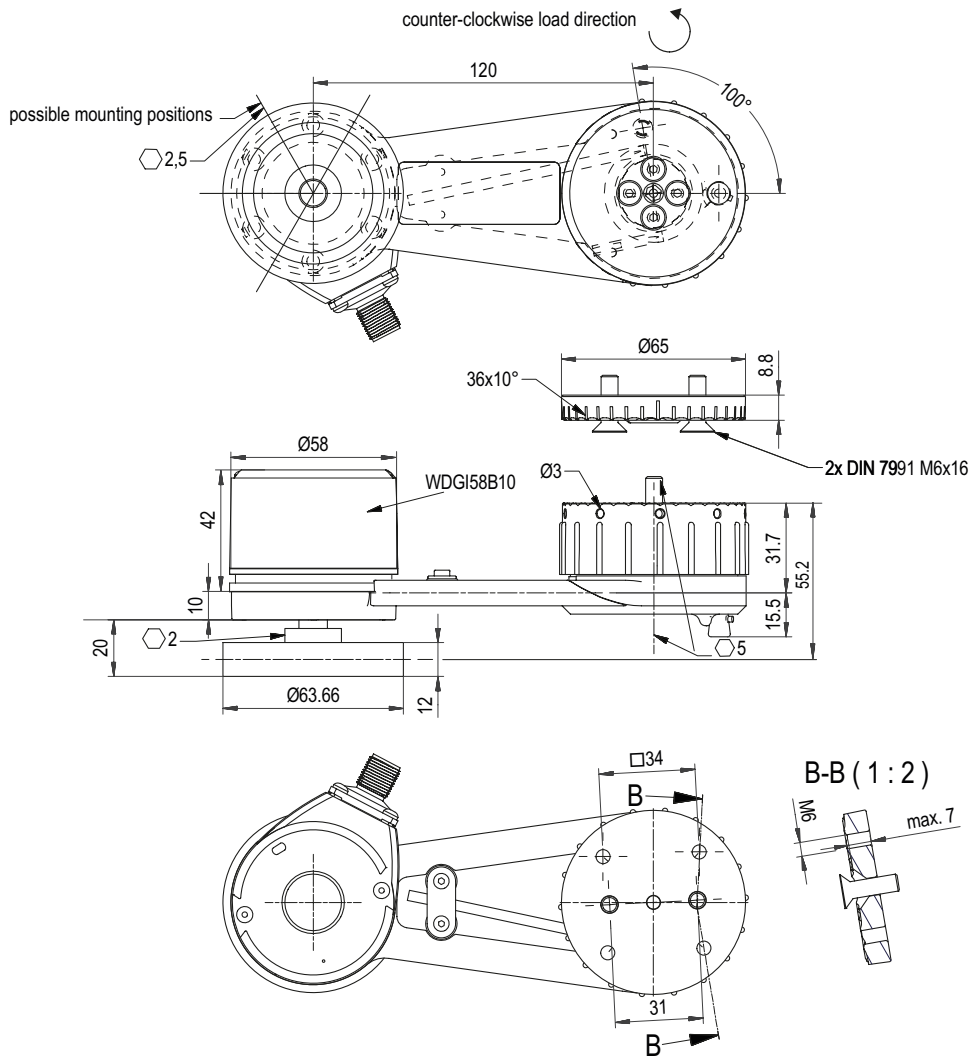
Customs tariff number: 90318020
Country of origin: Germany

Sensor-connector (M12x1) SC, 8-pin

counter-clockwise load direction

possible mounting positions

⬡ 2,5

120

100°

Ø65

8.8

36x10°

2x DIN 7991 M6x16

Ø58

WDGI58B10

Ø3

42

31.7

55.2

10

15.5

20

⬡ 2

5

Ø63.66

12

□34

B-B (1 : 2)

B

M6

max. 7

31

B

Description

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

Assignment	
	SC8
	8-pin
Circuit	P05, R05, P24, 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	-

mm/pulses	Pulses	LMSMA22100024xx10	LMSMA22100005xx10	LMSMA22010024xx10	LMSMA22010005xx10	LMSMA22004024xx10	LMSMA22004005xx10	LMSMA22000824xx10	LMSMA22000805xx10
1.0	200	•	•						
0.1	2000			•	•				
0.04	5000					•	•		
0.008	25000							•	•
VDC									
10 up to 30 HTL		•		•		•		•	
4.75 up to 5.5 TTL			•		•		•		•
Range of appl.*		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.