



Datasheet

Length measurement system LMSMA32 conical

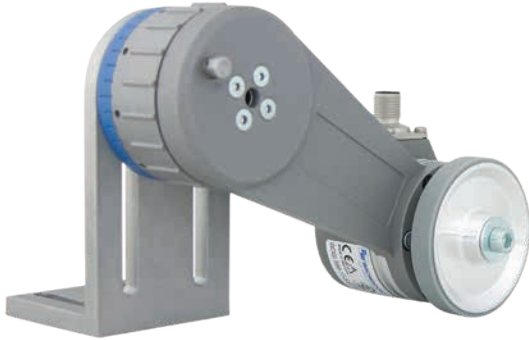
www.wachendorff-automation.com/lmsma32-conical

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 LMSMA32 with measuring wheel KW (conical)



- Compact system with new spring-loaded arm, including special 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
- Easy to dismantle through pre-assembled angle bracket

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Resolution encoder 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 | conical |
| 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 _a | 200 a |
| Mission time (T _M) | 25 a |
| Nominale service life (L _{10h}) | 1 x 10 ¹¹ 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. 1100 g |
| Connection | Connector radial |
| Protection rating (EN 60529) | IP67, shaft sealed to IP65 |

Operating temperature

| | |
|-----------|---------------------|
| LMSxxxKW: | -30 °C up to +80 °C |
|-----------|---------------------|

Measuring wheel U = 200 mm



MRA200KW: (even) **Range of application:** greased metals, steel profiles, laquered surfaces, synthetics, paper, paperboard, wood, textiles, wire, leather

Other features / characteristics:

Optimum wear values under high mechanical loads.
Load High resistance to oils, fuels, ozone and weathering.

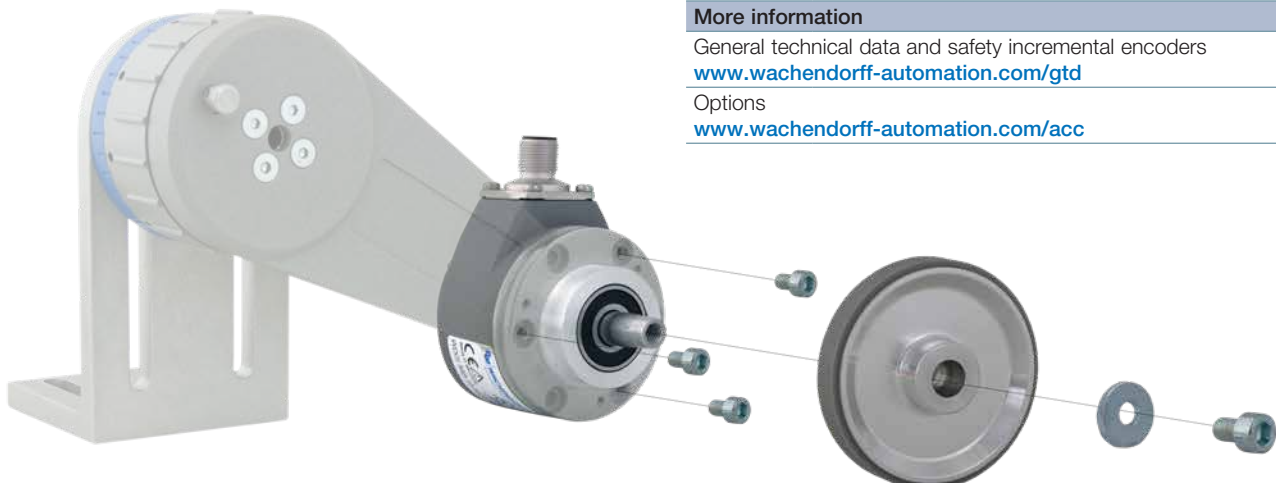
More information

General technical data and safety incremental encoders

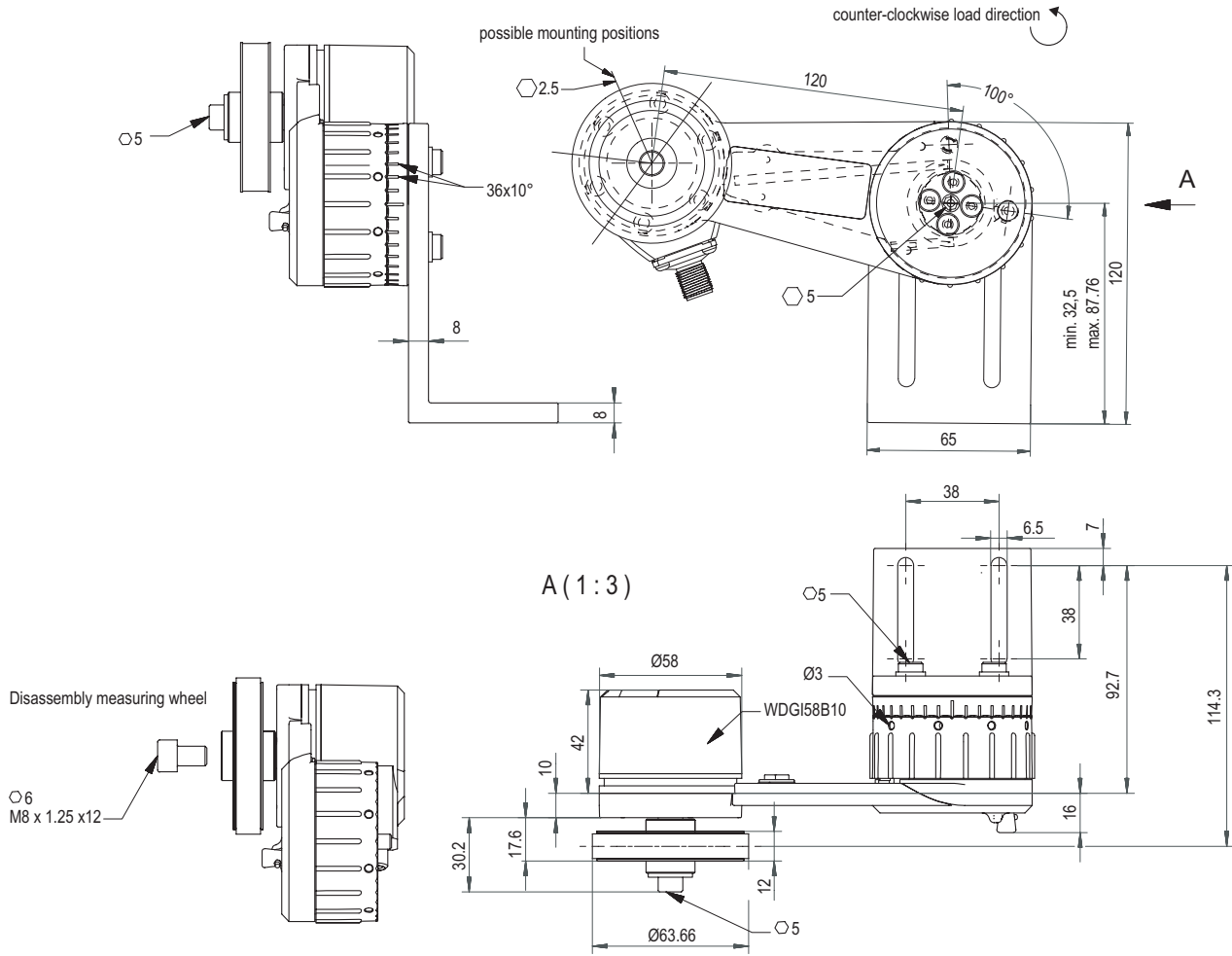
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Options

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Sensor-connector (M12x1) SC, 8-pin



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 | - |

Order No.:



LMSMA32100024KW10
 LMSMA32100005KW10
 LMSMA32010024KW10
 LMSMA32010005KW10
 LMSMA32004024KW10
 LMSMA32004005KW10
 LMSMA32000824KW10
 LMSMA32000805KW10

| mm/pulses | Pulses | LMSMA32100024KW10 | LMSMA32100005KW10 | LMSMA32010024KW10 | LMSMA32010005KW10 | LMSMA32004024KW10 | LMSMA32004005KW10 | LMSMA32000824KW10 | LMSMA32000805KW10 |
|--------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 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 | | | • | • | • | • | • | | • |

Measuring wheel U = 200 mm MRA200KW:

Range of application: greased metals, steel profiles, laquered surfaces, synthetics, paper, paperboard, wood, textiles, wire, leather

Other features / characteristics: Optimum wear values under high mechanical loads. Load High resistance to oils, fuels, ozone and weathering.

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



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