

## Compact length measurement system LMS24



### The Measuring system includes:

Encoder WDG24C, spring lever WDGFS10000 and measuring wheel MRD40GR06

Fields of application: Pasteboard, soft plastics, textiles, wood, rubber.

### Encoder specifications

**Pulses per revolution** 1 ppr up to 128 ppr, 256 ppr, 512 ppr, 1024 ppr

### Mechanical Data

Housing encoder:

- Synchro flange: Aluminium
- Cap: Aluminium
- Shaft: Ø 6 mm
- Material: stainless steel

- Spring lever: Aluminium
- Measuring wheel: Aluminium, circumference = 125 mm

Spring travel at tension: 50 N ≈ 6 mm

Max. operating speed: 12000 min<sup>-1</sup>  
Weight: ca. 100 g  
Connections: cable or connector outlet

Protection rating (EN 60529): IP65 all around with SK6/SK8, opt. IP67 all around housing IP40 with K7, L7

Operating temperature: -20 °C up to +80 °C  
Storage temperature: -20 °C up to +80 °C

### Machinery Directive: basic data safety integrity level

MTTF<sub>d</sub>: 200 a  
Mission time (T<sub>m</sub>): 25 a  
Nominale service life (L<sub>10h</sub>): 6.8 x 10<sup>11</sup> revs. at 12000 rpm and 20 % rated shaft load  
Diagnostic coverage (DC): 0 %

### Electrical Data

Power supply/ Open circuit current consumption: 4,75 VDC up to 5,5 VDC: max. 40 mA  
5 VDC up to 30 VDC: max. 40 mA

Output circuit: TTL, RS422 compatible, inv. TTL  
HTL (TTL at 5 VDC)  
HTL, inv. (TTL/RS422 comp. at 5 VDC)

Pulse frequency: TTL up to 64 I/U: max. 20 kHz  
HTL up to 1024 I/U: max. 200 kHz

Channels: AB, ABN and inverted signals  
Load: max. 30 mA / channel

Accuracy: Phase offset 90° ± max. 25% of the period duration  
pulse-/pause-ratio at  
1 ppr up to 128 ppr: 50 % ± max. 7 %  
129 ppr - 256 ppr: 50 % ± max. 9 %  
257 ppr - 512 ppr: 50 % ± max. 13 %  
513 ppr - 1024 ppr: 50 % ± max. 18 %

The measuring system includes:

- encoder WDG24C, measuring wheel and spring lever
- very compact construction for use in harsh conditions
- permissible bearing loads similar to our "big encoders"
- IP65 all around, optional IP67 all around with SK6/SK8
- hall effect based signal generation
- resolution up to 0,122 mm

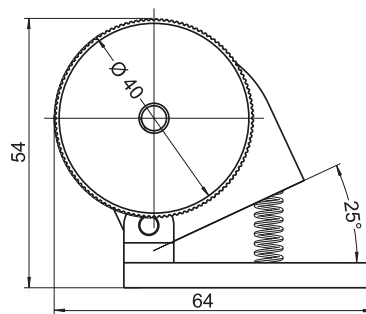
[www.wachendorff-automation.com/lms24](http://www.wachendorff-automation.com/lms24)

Further technical information on:

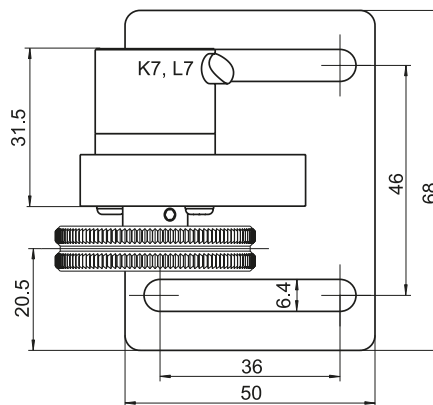
[www.wachendorff-automation.com/gtd](http://www.wachendorff-automation.com/gtd)

Matching accessories on: [www.wachendorff-automation.com/acs](http://www.wachendorff-automation.com/acs)

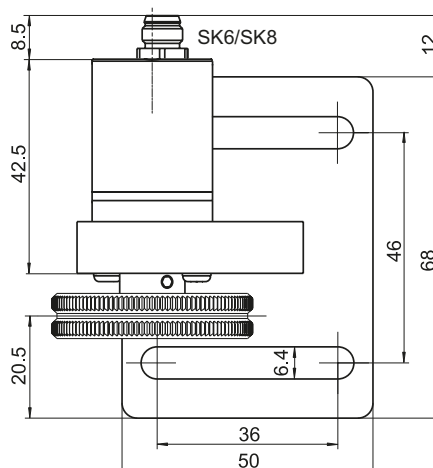
### Measuring system LMS24



### Measuring system LMS24 with cable (2 m) connection K7, L7



### Measuring System LMS24 with connector SK6, SK8



All dimensional specifications in mm.

**Optionen:**

**Cable length:**

The encoder WDG 24C can also be supplied with more than 2m of cable. Please extend the standard order code with a 3 figure number, specifying the cable length in decimetre. The max. permissible cable length is 10 metres with the output circuit M05/N05. With output circuit M30/N30 max. 25 m.  
Example: 3 m cable = 030

**Examples for industrial counters:**



**Compact preset counter and tachometer CUB5**

- 8 digit display
- 36 mm x 72 mm
- display of position, rotation-speed, flow-rate
- optional relays output cards

Further information at:

[www.wachendorff-prozesstechnik.de/cub5](http://www.wachendorff-prozesstechnik.de/cub5)

**Further industrial counters:**

[www.wachendorff-prozesstechnik.de/emg](http://www.wachendorff-prozesstechnik.de/emg)

Customs tariff number: 90318020

Country of origin: Germany

**Ordering information:**

Output circuit:				
Resolution PPR	Power supply VDC	Output circuit	Light reserve warning	Order Key
max. 64	4,75 - 5,5	TTL, RS422 comp., inv.	-	M05
		TTL	-	N05
max. 1024	5 - 30	HTL inverted	-	M30
		HTL	-	N30

**Channels:** AB, ABN

**Pulses per revolution ppr:**  
Output circuit M05 and N05: 16, 32, 64  
Output circuit M30, N30: 1 up to 128, 256, 512, 1024

**Order No.:**

Example	WDG 24C	64	ABN	M30	K7	LMS	
Your system	WDG 24C					LMS	

Electrical connections:			ABN
Order key	Outgoing	Description	
cable: (Length 2 m standard)			
K7	radial	shield not connected	•
L7		shield connected to encoder housing	•
SK6	axial	connector 6-pin	-
SK8	axial	connector 8-pin	•




LMS = spring lever and measuring wheel

**Optionen:**  
Empty = Without option  
In decimetre = Cable length

## Montageanleitung Vollwellengeber WDG/WDGI,

Assembly instructions shaft encoder, Notice de montage codeur rotatif à arbre plein,

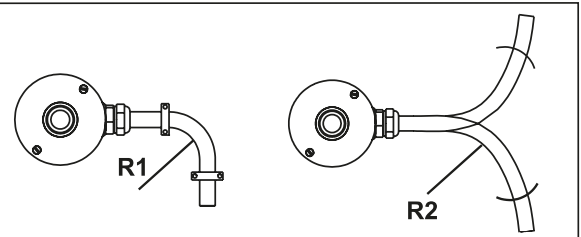
Instrucciones de montaje encoder ad albero pieno, istruzioni di montaggio encoders de eje saliente.

	WDGI ( <b>Stecker</b> , connector, connecteur, conector, spina): -40 °C ... +85 °C (-40 °F ... +185 °F)		-30 °C...+80 °C (-22 °F...+176 °F)
	WDG* + WDGI** ( <b>Kabel</b> , cable, Câble, Cable, cavo): -20 °C ... +80 °C (-4 °F ... +176 °F)		
	Option: * -40 °C ... +80 °C (-40 °F ... +176 °F) ** -40 °C ... +85 °C (-40 °F ... +185 °F)		
	1Vss (1Vpp): -10 °C ... +70 °C (14 °F ... +158 °F)		
	58T: -10 °C ... +70 °C (58T: +14 °F ... +158 °F)		

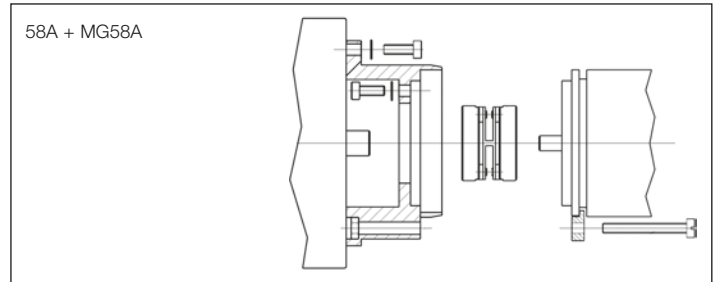
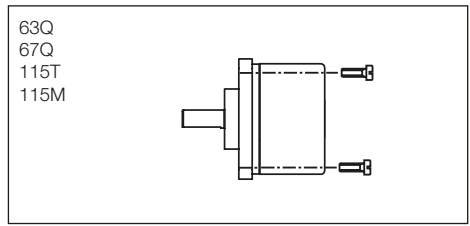
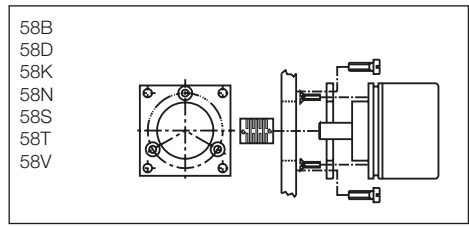
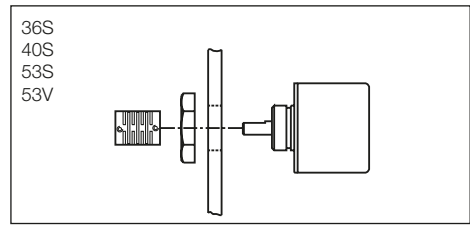
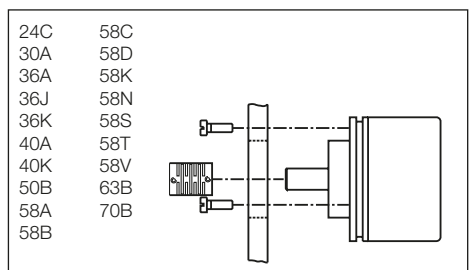
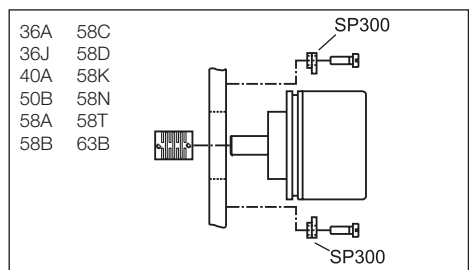
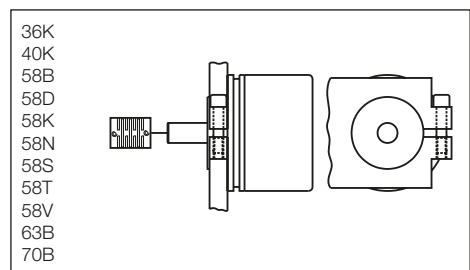
**Montage nur qualifiziertes Personal,** Assembly only qualified personnel,  
Montage par qualifié personnel, Montaggio solo personale qualificato,  
Montaje solamente personal cualificado

**Sicherheitsmassnahmen/Safety instructions:** Einsatz nur in Industrieumgebung und NICHT in sicherheitsrelevanten Bereich. Only for use in industrial environments and NOT for safety-relevant areas. Utilisation uniquement dans un environnement industriel et PAS dans un domaine lié à la sécurité. Utilicelo sólo en entornos industriales y NO en áreas relevantes para la seguridad. Utilizzare solo in ambienti industriali e NON in aree riguardanti la sicurezza.


**Power supply:**  
**Class 2 only**



Kabel ø cable, Câble, Cable, cavo	R1	R2	Temperatur Temperature, Température, Temperatura, Temperatura
≤ 7 mm	31,5 mm	94,5 mm	T > -20 °C (-4 °F)
> 7 mm	41,5 mm	124,5 mm	T > -20 °C (-4 °F)
≤ 7 mm	46,5 mm	139,5 mm	T > -40 °C (-40 °F)
> 7 mm	62,3 mm	186,9 mm	T > -40 °C (-40 °F)



Standard (no IP67)	F <sub>r</sub> max.	F <sub>a</sub> max.
24C, 30A, 36A/K/S, 40A/K/S, 58K	80 N	50 N
36J	300 N	300 N
50B	120 N	70 N
53S, 53V	20 N	10 N
58A	125 N	70 N
58B, 58N, 58T, 63B/Q, 67Q	220 N	120 N
WDG58D	400 N	400 N
WDGI58D	500 N	500 N
70B	200 N	150 N
115T/M, 58C	200 N	120 N
58S, 58V	100 N	100 N



Gewinde (8.8) Screw thread, Filet, Rosca, filetto
M2.5
M3
M4
M5, M14
M6

Empfohlenes Anzugsdrehmoment Recommended starting torque Moment de rotation recommandé appliqué à l'écrou Par de apriete recomendado coppia di spunto consigliata
1.5 Nm
1 Nm
2 Nm
3 Nm
6 Nm
8 Nm

Frühwarnausgang Early-warning output Sortie d'alerte Salida de advertencia prematura uscita di preavvertimento	IRLED	IRLED
Schaltung Circuit Couplage Conmutación collegamento	G24, I24, G05, I05, 524	high low

