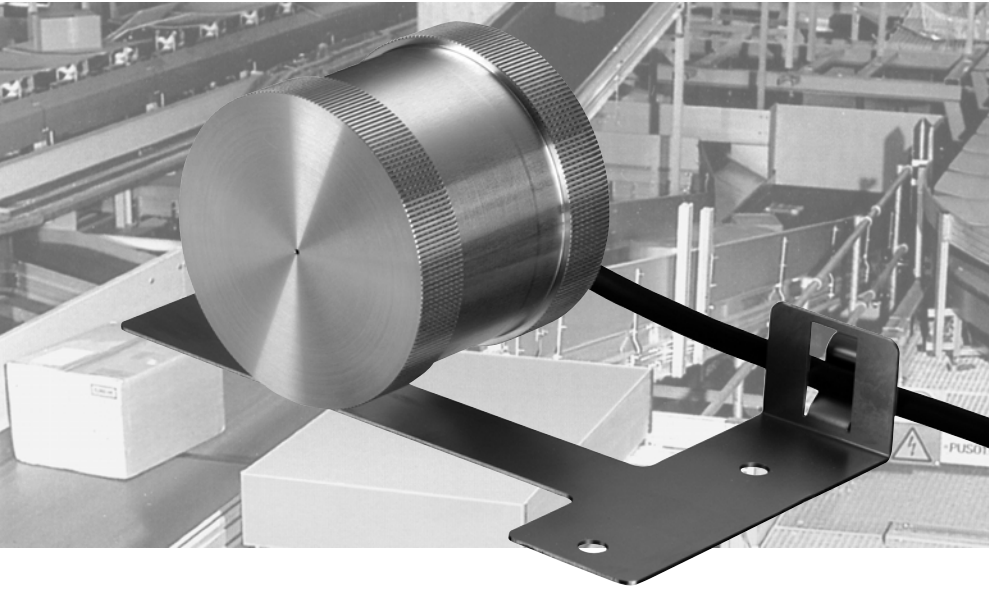


DKV 60: Incremental measuring wheel encoder



The basis of the product is the DKS 40 incremental encoder . The DKS 40 and therefore the DKV 60 utilise Mini-Disc technology, making the DKV 60, extremely robust and resistant to shock and vibration. The DKV 60 also features a high protection rating (IP 65).


Specify your own individual measuring wheel encoder!

Possible product variations:

- Interface
TTL/RS422, HTL/push-pull
- Measuring drum
Knurled surface,
'O' ring surface
- Cable outlet 1.5 m

The product versatility enables many uses, e. g. in:

- Woodworking machinery
- Steel and sheet processing machinery
- Storage and conveying technology
- Sorting systems
- Conveyor belts
- Textile machinery
- Printing and paper

	Number of lines
	1 up to 2,048
Incremental Encoder	

The DKV 60 incremental measuring wheel encoder is a cost-effective and extremely compact solution for the direct determination of position and speed of a conveyor belt.

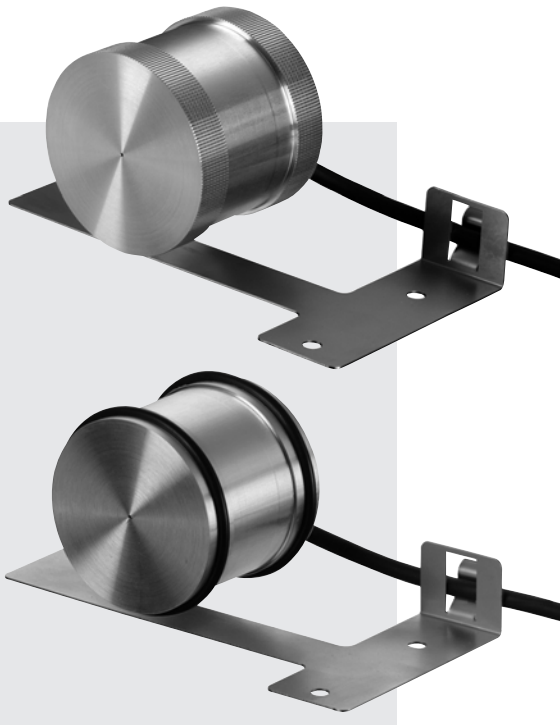
The DKV 60 incremental measuring wheel encoder can be fitted directly to the conveyor belt, without the need of any mechanical accessories.

SICK | STEGMANN

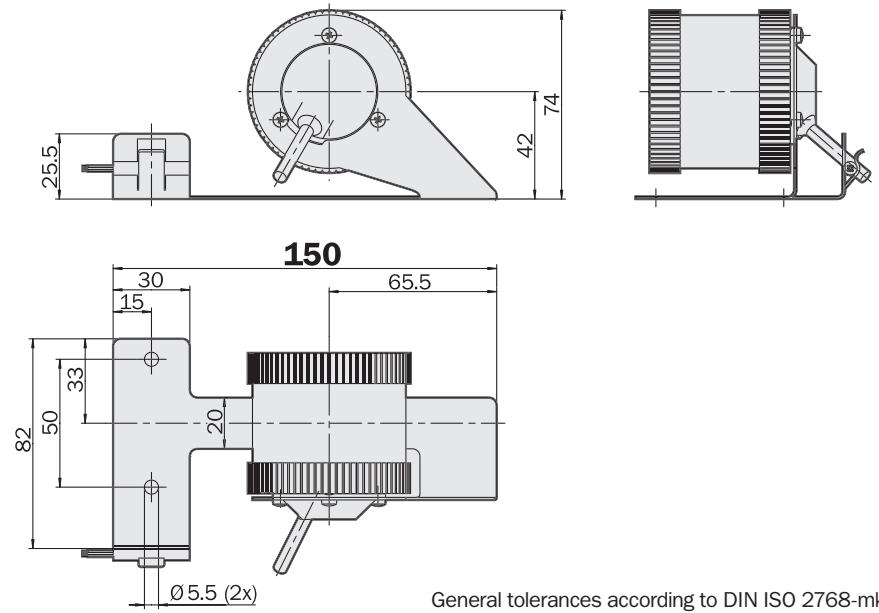
Number of lines
1 up to 2,048

Incremental Encoder

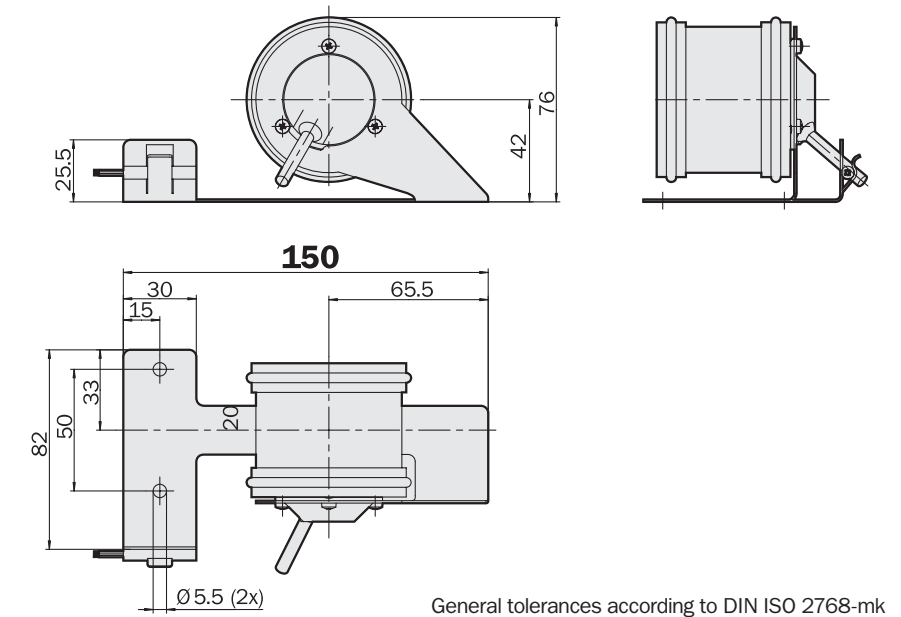
- Cable outlet
- Protection rating up to IP 65
- Electrical interfaces
 TTL and HTL



Dimensional drawing DKV 60 knurled surface



Dimensional drawing DKV 60 'O' ring surface



Core assignment/8-core cable

Core colours	Signal for TTL and HTL	Explanation
Red	+ U _s	supply voltage ¹⁾
Blue	GND	encoder ground connection
White	A	signal line
Pink	B	signal line
Lilac	Z	signal line
Brown	\bar{A}	signal line
Black	\bar{B}	signal line
Yellow	\bar{Z}	signal line
Screen	Screen	Screen

¹⁾ Potential free to housing

Accessories

Connection systems

Technical Data to DIN 32878		DKV 60	DKV										
Pulses per 200 mm	1 to 2,048												
Electrical interface	4.5 ... 5.5 V, TTL/RS 422, 6-channel												
	10 ... 30 V, HTL, 6-channel												
Mass	0.42 kg												
Reference signal													
Number	1												
Position	90° electr., logically linked with A and B												
Error limits													
Knurled surface	± 0.5 mm/m												
'O' ring surface	± 4 mm/m												
Max. operating speed	1,500 min ⁻¹												
Bearing lifetime	2 x 10 ⁹ revolutions												
Working temperature range	- 10 ... + 60 °C												
Storage temperature range	- 40 ... + 70 °C												
Permissible relative humidity ¹⁾	90 %												
EMC ²⁾													
Resistance													
to shocks ³⁾	50/7 g/ms												
to vibration ⁴⁾	20/10 ... 2000 g/Hz												
Protection class IEC 60529	IP 65												
Load current													
4.5 ... 5.5 V, TTL/RS 422	Max. 30 mA												
10 ... 30 V, HTL/push-pull	Max. 30 mA												
No-load operating current													
4.5 ... 5.5 V, TTL/RS 422	40 mA												
10 ... 30 V, HTL/push-pull	40 mA												
Initialisation time after power on	40 ms												

¹⁾ Condensation of the optical scanning is not permitted

²⁾ To DIN EN 61000-6-2 and DIN EN 61000-6-3

³⁾ To DIN EN 60068-2-27

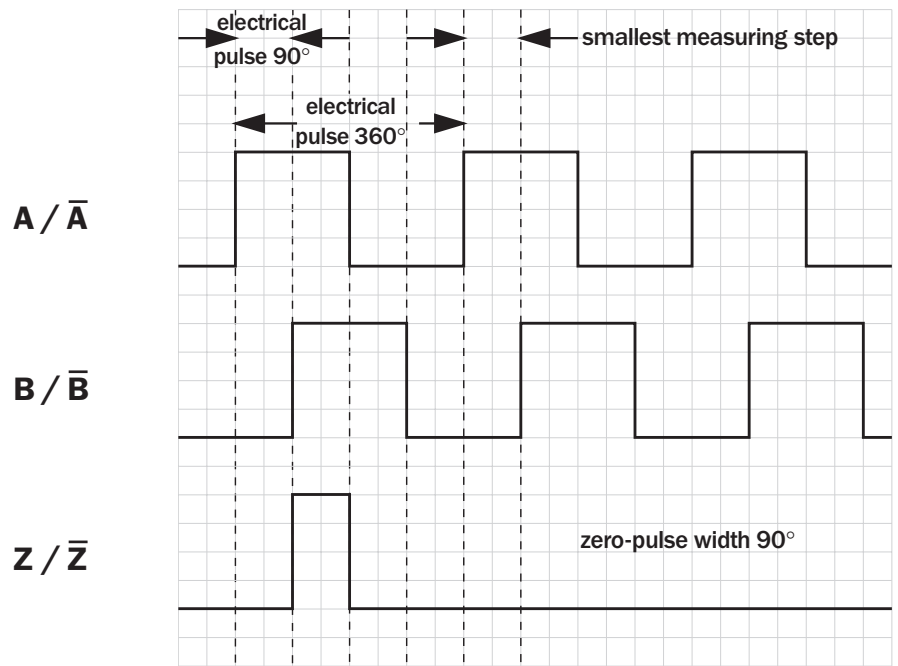
⁴⁾ To DIN EN 60068-2-6

Number of lines
1 up to 2,048

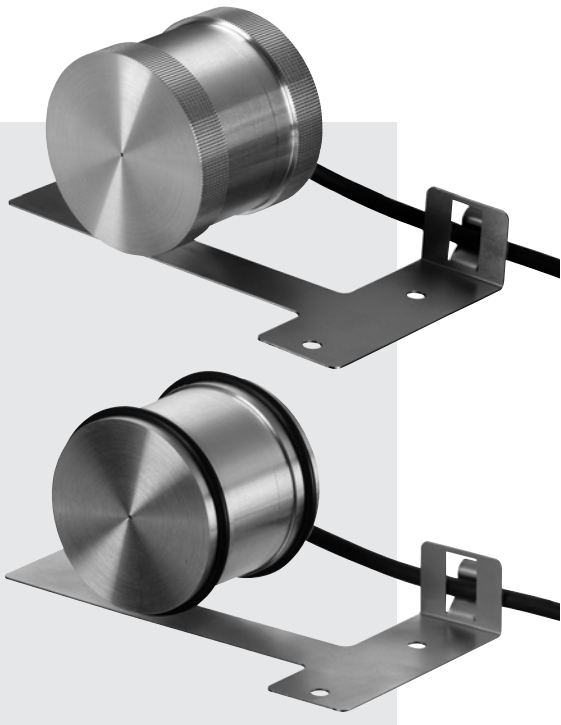
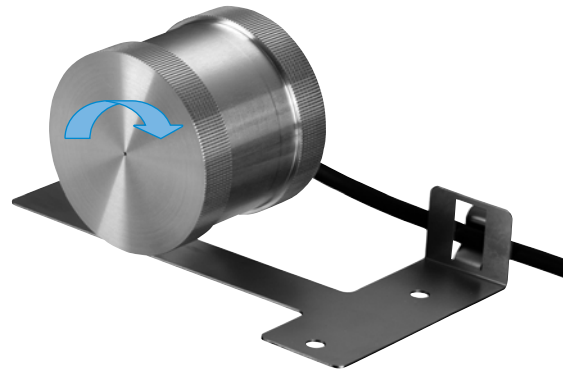
Incremental Encoder

- Cable outlet
- Protection rating up to IP 65
- Electrical interfaces
 TTL and HTL

Signal outputs



Cw looking at the measuring drum



Accessories

Connection systems

Order information

Incremental Encoder DKV 60

Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8	Point 9	Point 10	Point 11	Point 12	Point 13	Point 14
D	K	V	6	0	-			K					

<p>Electrical interface</p> <p>4.5 ... 5.5 V, TTL/RS 422 6-channel = A</p> <p>10 ... 30 V, HTL/push-pull 6-channel = E</p>	<p>Mechanical version</p> <p>Measuring drum, knurled surface DIN82-RAA 1 = 1</p> <p>Measuring drum, 'O' ring surface EPDM, Highly abrasion-resistant = 2</p>	<p>Connection type</p> <p>Cable 8-core, 1,5 m = K</p>	<p>Pulses per 200 mm</p> <p>Always 5 characters in clear text.</p>
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Order example

DKV 60; 4.5 ... 5.5 V, TTL/RS 422; 6-channel; Measuring drum knurled surface

Type	Part no.	Pulses/200 mm	Resolution	Smallest measuring step
DKV60-A1K00020	1 035 039	20	1 pulse = 10 mm	2.5 mm
DKV60-A1K00200	1 035 040	200	1 pulse = 1 mm	0.25 mm
DKV60-A1K01000	1 035 041	1000	1 pulse = 0.2 mm	0.05 mm
DKV60-A1K02000	1 035 042	2000	1 pulse = 0.1 mm	0.025 mm

DKV 60; 4.5 ... 5.5 V, TTL/RS 422; 6-channel; Measuring drum 'O' ring surface; EPDM, Highly abrasion-resistant


Type	Part no.	Pulses/200 mm	Resolution	Smallest measuring step
DKV60-A2K00020	1 035 043	20	1 pulse = 10 mm	2.5 mm
DKV60-A2K00200	1 035 044	200	1 pulse = 1 mm	0.25 mm
DKV60-A2K01000	1 035 045	1000	1 pulse = 0.2 mm	0.05 mm
DKV60-A2K02000	1 035 046	2000	1 pulse = 0.1 mm	0.025 mm

DKV 60; 10 ... 30 V, HTL/push-pull; 6-channel; Measuring drum knurled surface

Type	Part no.	Pulses/200 mm	Resolution	Smallest measuring step
DKV60-E1K00020	1 035 047	20	1 pulse = 10 mm	2.5 mm
DKV60-E1K00200	1 035 048	200	1 pulse = 1 mm	0.25 mm
DKV60-E1K01000	1 035 049	1000	1 pulse = 0.2 mm	0.05 mm
DKV60-E1K02000	1 035 050	2000	1 pulse = 0.1 mm	0.025 mm

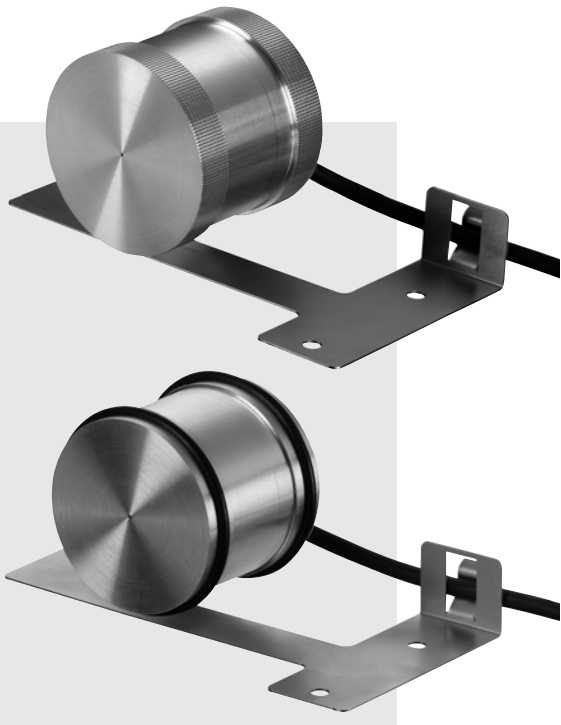
DKV 60; 10 ... 30 V, HTL/push-pull; 6-channel; Measuring drum 'O' ring surface; EPDM, Highly abrasion-resistant

Type	Part no.	Pulses/200 mm	Resolution	Smallest measuring step
DKV60-E2K00020	1 035 051	20	1 pulse = 10 mm	2.5 mm
DKV60-E2K00200	1 035 052	200	1 pulse = 1 mm	0.25 mm
DKV60-E2K01000	1 035 053	1000	1 pulse = 0.2 mm	0.05 mm
DKV60-E2K02000	1 035 054	2000	1 pulse = 0.1 mm	0.025 mm

 **Number of lines**
1 up to 2,048

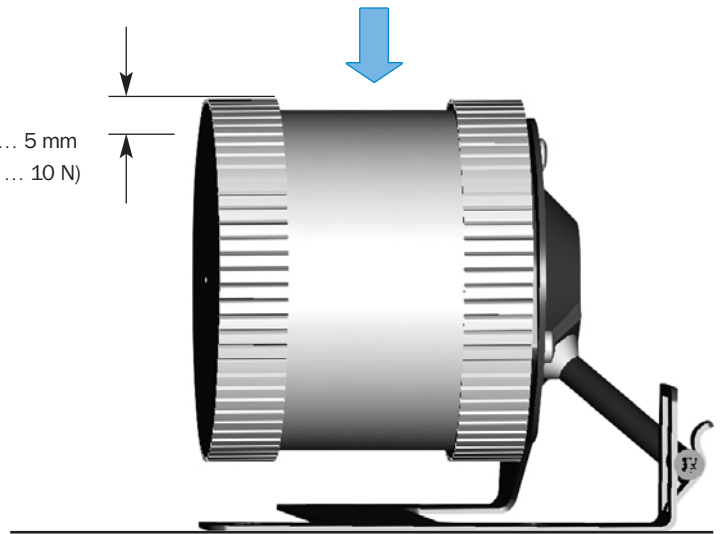
Incremental Encoder

- Cable outlet
- Protection rating up to IP 65
- Electrical interfaces
TTL and HTL



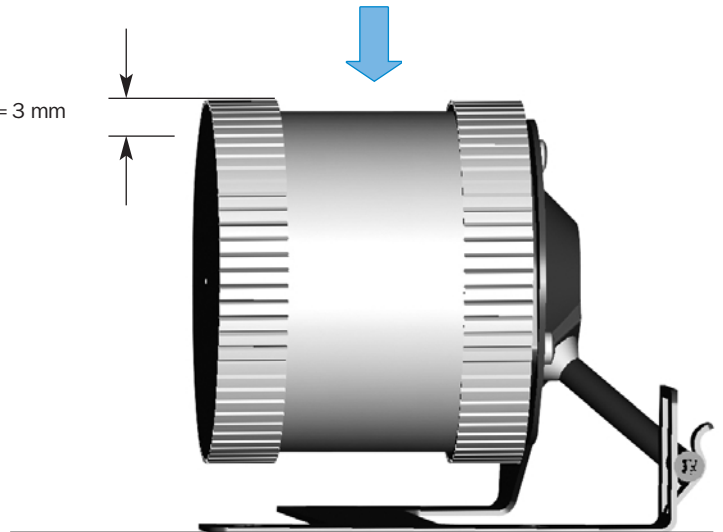
Working position/force

Working position/
force = 2 ... 5 mm
(5 ... 10 N)

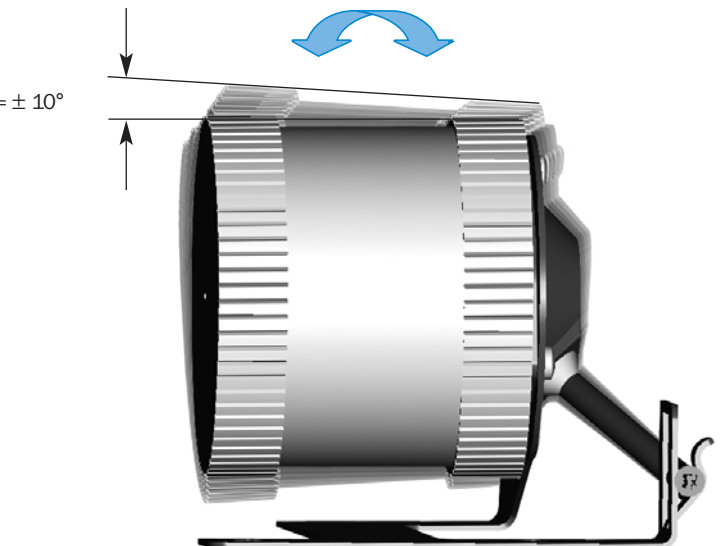


Max. deflection

Max. deflection Y = 3 mm



Max. deflection X = ± 10°



Dimensional drawings and order information

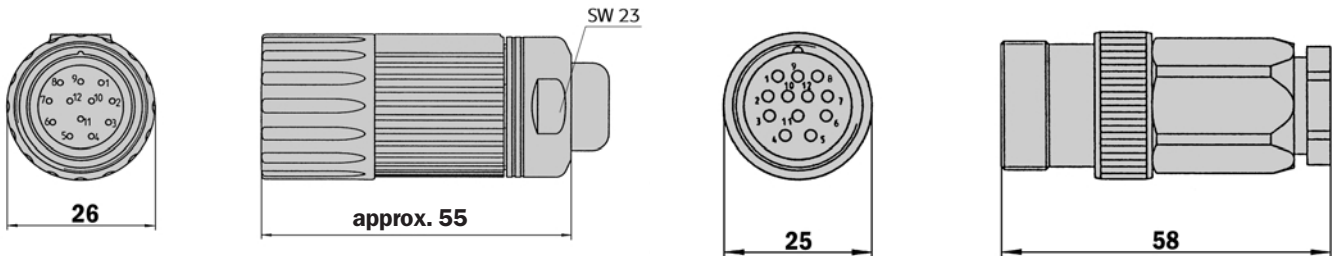
Screw-in system M23, 12-pin

Cable connector M23 female, 12-pin, straight, screened

Type	Part no.	Contacts
DOS-2312-G	6 027 538	12

Cable connector M23, 12-pin, straight, screened

Type	Part no.	Contacts
STE-2312-G	6 027 537	12



Connector M23 female, 12-pin, straight, cable 11-cores, 4 x 2 x 0.25 + 2 x 0.5 + 1 x 0.14 mm² with screening, cable diameter 7.8 mm

Type	Part no.	Contacts	Cable length
DOL-2312-G02MLA3	2 030 682	12	2.0 m
DOL-2312-G07MLA3	2 030 685	12	7.0 m
DOL-2312-G10MLA3	2 030 688	12	10.0 m
DOL-2312-G15MLA3	2 030 692	12	15.0 m
DOL-2312-G20MLA3	2 030 695	12	20.0 m
DOL-2312-G25MLA3	2 030 699	12	25.0 m
DOL-2312-G30MLA3	2 030 702	12	30.0 m

Connector M23 female, 12-pin, straight, cable 12-cores, 4 x 2 x 0.25 + 2 x 0.5 + 2 x 0.14 mm² with screening, capable of being dragged, cable diameter 7.8 mm

Type	Part no.	Contacts	Cable length
DOL-2312-G1M5MA3	2 029 212	12	1.5 m
DOL-2312-G03MMA3	2 029 213	12	3.0 m
DOL-2312-G05MMA3	2 029 214	12	5.0 m
DOL-2312-G10MMA3	2 029 215	12	10.0 m
DOL-2312-G20MMA3	2 029 216	12	20.0 m
DOL-2312-G30MMA3	2 029 217	12	30.0 m

Cable 8 core, per meter, 4 x 2 x 0.15 mm² with screening, cable diameter 5.6 mm

Type	Part no.	Wires
LTG-2308-MWENC	6 027 529	8

Cable 11-core, per meter, 4 x 2 x 0.25 + 2 x 0.5 + 1 x 0.14 mm² with screening, cable diameter 7.5 mm

Type	Part no.	Wires
LTG-2411-MW	6 027 530	11

Cable 12 core, per meter, 4 x 2 x 0.25 + 2 x 0.5 + 2 x 0.14 mm² with screening, capable of being dragged, cable diameter 7.8 mm

Type	Part no.	Wires	Explanation
LTG-2512-MW	6 027 531	12	
LTG-2612-MW	6 028 516	12	UV and salt water resistant

Contact:

Australia

Phone +61 3 9497 4100
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium / Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 5091-4900
E-Mail sac@sick.com.br

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +852-2763 6966
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 (0)2 11 53 01-250
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91 (11)2696 7651
E-Mail ayograj@tecnovaglobal.com

Italia

Phone +39 011 79 79 65
E-Mail Luca.Craverio@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail info@sick.jp

Korea

Phone +82-2 786 6321/4
E-Mail kang@sickkorea.net

Netherlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

Republika Slovenija

Phone +386 (0)1-47 69 990
E-Mail selanm@sick.com

Russia

Phone +7 95 775 05 30
E-Mail info@sick-automation.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 8 680 64 50
E-Mail info@sick.se

Türkiye

Phone +90 216 388 95 90 pbx
E-Mail info@sick.com.tr

Taiwan

Phone +886 2 2365-6292
E-Mail sickgrc@ms6.hinet.net

USA

Phone +1 937-454-1956
E-Mail sales@stegmann.com

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