

BKS09-ATBM0220

Compact

WIRE DRAW ENCODERS

SICK
Sensor Intelligence.

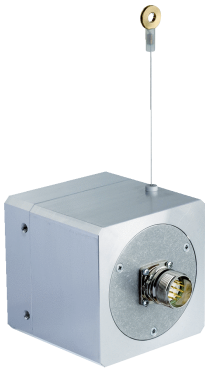


Illustration may differ



Ordering information

Type	Part no.
BKS09-ATBM0220	1035240

Other models and accessories → www.sick.com/Compact

Detailed technical data

Performance

Measurement range	0 m ... 2 m
Linearity	$\leq \pm 0.7$ mm
Measuring step	≥ 0.05 mm
Traversing speed	3.5 m/s
Repeat accuracy, typ.	3 measuring steps

Interfaces

Encoder	Absolute encoders
Electrical interface	SSI
Connection type	Male connector M23, 12-pin, radial
Clock frequency	1 MHz ¹⁾
Interface signals	Clock +, Clock -, Data +, Data-
Type of code for the absolute value	24 bit/Gray

¹⁾ Minimum, LOW level (Clock +): 500 ns.

Electrical data

Initialization time	¹⁾
Position forming time	0.1 ms
Supply voltage	12 V ... 30 V
Code sequence	Rising at wire pull-out
MTTFd: mean time to dangerous failure	150 years (EN ISO 13849) ²⁾

¹⁾ Valid positional data can be read once this time has elapsed.

²⁾ This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Mechanical data

Weight (mechanics)	1.5 kg
Measuring wire material	Highly flexible stranded steel (PA 12 sheathed)
Housing material	Aluminum
Spring return force	5 N ... 6 N ¹⁾
Life of wire draw mechanism	Typ. 800,000 cycles ^{2) 3)}
Measuring wire diameter	0.6 mm
Wire acceleration	≤ 20 m/s ²

¹⁾ These values were measred at an ambient temperature of 25 °C. There may be variations at other temperatures.

²⁾ A cycle consists of the wire being pulled out and drawn in.

³⁾ The service life depends on the type of load. This is influenced by environmental conditions, the installation location, the measuring range in use, the traversing speed, and acceleration.

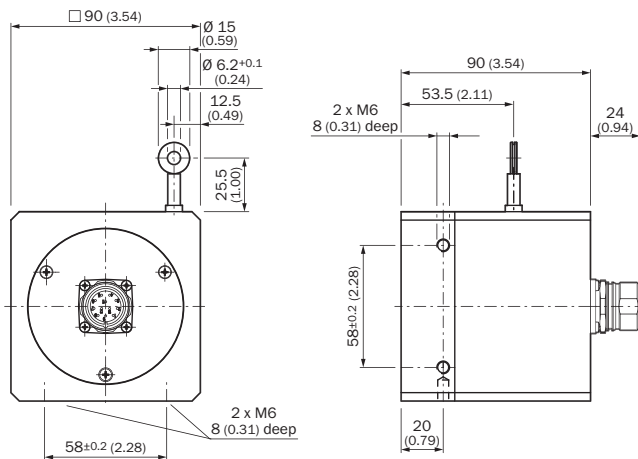
Ambient data

EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating encoder	IP52, Note required mounting position (according to IEC 60529)
Resistance to shocks	20 g, 6 ms (according to EN 60068-2-27)
Frequency range of resistance to vibrations	10 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
Working temperature range (encoder)	-10 °C ... +70 °C
Storage temperature range	-20 °C ... +80 °C
Relative humidity/condensation	90 % (Condensation not permitted)

Classifications

ECI@ss 5.0	27270590
ECI@ss 5.1.4	27270590
ECI@ss 6.0	27270590
ECI@ss 6.2	27270590
ECI@ss 7.0	27270590
ECI@ss 8.0	27270590
ECI@ss 8.1	27270590
ECI@ss 9.0	27270590
ETIM 5.0	EC001486
ETIM 6.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

Other models and accessories → www.sick.com/Compact

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: cable Head B: Flying leads Cable: SSI, TTL, HTL, PUR, halogen-free, shielded	LTG-2612-MW	6028516
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 2 m	DOL-2312-G02MLA5	2030680
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 3 m	DOL-2312-G03MMA1	2029201
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 5 m	DOL-2312-G05MMA1	2029202
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 7 m	DOL-2312-G07MLA5	2030683
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 10 m	DOL-2312-G10MLA5	2030686
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 10 m	DOL-2312-G10MMA1	2029203
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 15 m	DOL-2312-G15MLA5	2030690
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 1.5 m	DOL-2312-G1M5MA1	2029200

	Brief description	Type	Part no.
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 20 m	DOL-2312-G20MLA5	2030693
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, PUR, halogen-free, shielded, 20 m	DOL-2312-G20MMA1	2029204
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 25 m	DOL-2312-G25MLA5	2030697
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, PUR, shielded, 30 m	DOL-2312-G30MLA5	2030700
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, PUR, halogen-free, shielded, 30 m	DOL-2312-G30MMA1	2029205

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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