



A3M60B-BEPB013X13

A3M60 PROFIBUS

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
A3M60B-BEPB013X13	1038825

Other models and accessories → www.sick.com/A3M60_PROFIBUS

Detailed technical data

Performance

Max. number of steps per revolution	8,192 (programmable)
Max. number of revolutions	8,192, programmable
Resolution power	8,192 x 8,192
Resolution	13 bit x 13 bit
Error limits	± 0.5° (at room temperature)
Repeat accuracy	± 0.25°, at room temperature
Initialization time	Approx. 1 s

Interfaces

PROFIBUS

Electrical interface	PROFIBUS DP
Bus interface	PROFIBUS DP
Data protocol	PROFIBUS DP V0, PROFIBUS DP V1 + V2
Data transmission rate (baud rate)	12 MBaud
Bus termination	DIP switch

Electrical data

Connection type	3 x M12, 5-pin, axial
Operating voltage range	10 V ... 32 V
Reverse polarity protection	✓
MTTFd: mean time to dangerous failure	60 years (EN ISO 13849-1) ¹⁾

¹⁾ 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

Mechanical interface	Blind hollow shaft
Shaft diameter	12 mm
Weight	0.28 kg
Shaft material	Stainless steel
Flange material	Aluminum

Housing material	Aluminum
Start up torque	1 Ncm (+20 °C)
Operating torque	0.8 Ncm (+20 °C)
Permissible movement axial static/dynamic	± 0.5 mm, ± 0.2 mm
Permissible movement radial static/dynamic	± 0.3 mm, ± 0.1 mm
Bearing lifetime	3.0 x 10 ⁹ revolutions
Max. angular acceleration	≤ 500,000 rad/s ²
Operating speed	6,000 /min self warming 45 K at maximum operating speed

Ambient data

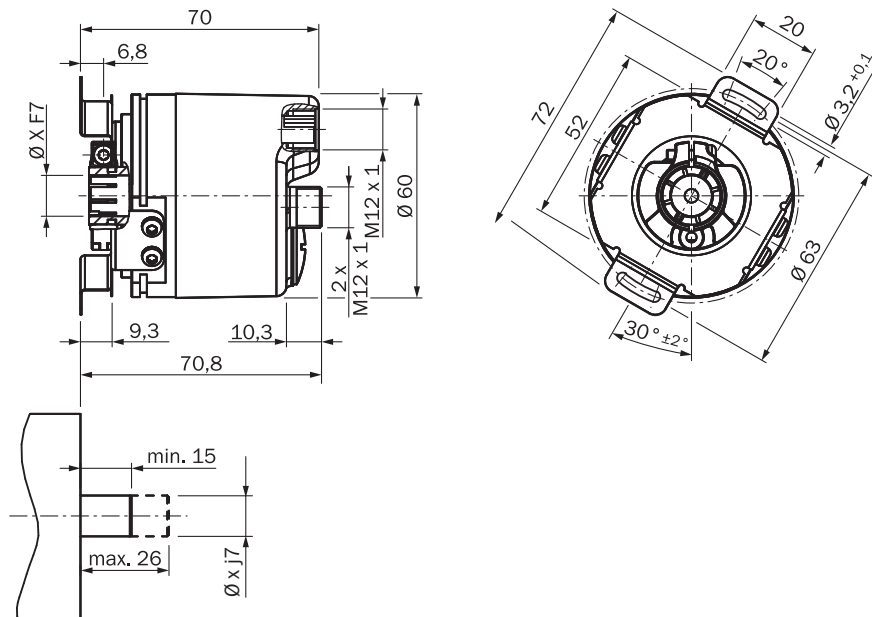
EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating	IP 67, housing (according to IEC 60529) ¹⁾ IP 65, Shaft (according to IEC 60529)
Permissible relative humidity	95 % (Condensation not permitted)
Working temperature range	-10 °C ... +70 °C
Storage temperature range	-40 °C ... +100 °C
Resistance to shocks	100 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration	30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

¹⁾ With mating connector fitted.

Classifications



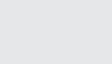
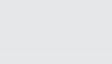


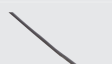
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ECI@ss 8.0	27270502
ECI@ss 8.1	27270502
ECI@ss 9.0	27270502
ETIM 5.0	EC001486
ETIM 6.0	EC001486
UNSPSC 16.0901	41112113












Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

Other models and accessories → www.sick.com/A3M60_PROFIBUS

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: cable Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, shielded	LTG-2102-MW	6021355
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: cable Cable: PROFIBUS DP, PUR, halogen-free, unshielded, 5 m Voltage supply	DOL-1202-W05MC	6042067
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PROFIBUS DP, PUR, halogen-free, unshielded, 10 m Voltage supply	DOL-1202-W10MC	6042068
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: cable Cable: Power, drag chain use, PUR, halogen-free, shielded, 5 m	DOL-1205-G05MAC	6036384
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PROFIBUS DP, PUR, halogen-free, shielded, 5 m	DOL-1205-G05MQ	6026006
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PUR, halogen-free, shielded, 10 m	DOL-1205-G10MAC	6036385
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PROFIBUS DP, PVC, shielded, 10 m	DOL-1205-G10MQ	6026008

	Brief description	Type	Part no.
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 20 m	DOL-1205-G20MAC	6036386
	Head A: female connector, M12, 5-pin, angled, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, shielded, 5 m	DOL-1205-W05MQ	6041423
	Head A: female connector, M12, 5-pin, angled, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, shielded, 10 m	DOL-1205-W10MQ	6041425
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, halogen-free, shielded, 5 m Wire shield Al-Pt film, overall shield C-screen tin-plated	STL-1205-G05MQ	6026005
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, halogen-free, shielded, 10 m Wire shield Al-Pt film, overall shield C-screen tin-plated	STL-1205-G10MQ	6026007
	Head A: male connector, M12, 5-pin, angled, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, shielded, 5 m	STL-1205-W05MQ	6041426
	Head A: male connector, M12, 5-pin, angled, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, PUR, shielded, 10 m	STL-1205-W10MQ	6041427
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303
	Head A: female connector, M12, 5-pin, straight, B-coded Head B: - Cable: PROFIBUS DP, shielded	DOS-1205-GQ	6021353
	Head A: female connector, M12, 5-pin, angled, B-coded (B-reverse) Head B: - Cable: PROFIBUS DP, PROFIBUS DP, shielded	DOS-1205-WQ	6041429
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: - Cable: PROFIBUS DP, shielded	STE-1205-GQ	6021354
	Head A: male connector, M12, 5-pin, angled, B-coded Head B: - Cable: PROFIBUS DP, shielded	STE-1205-WQ	6041428
	Cable: unshielded, set of connectors	DOS-3XM12-W	2058177
	Head A: male connector, M12, 4-pin, straight, B-coded Cable: PROFIBUS DP, terminal resistor	STE-END-Q	6021156

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

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