



# A3M60B-BDPB013X13

A3M60 PROFIBUS

**ABSOLUTE ENCODERS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
A3M60B-BDPB013X13	1038824

Other models and accessories → [www.sick.com/A3M60\\_PROFIBUS](http://www.sick.com/A3M60_PROFIBUS)

### Detailed technical data

#### Performance

<b>Max. number of steps per revolution</b>	8,192, programmable
<b>Max. number of revolutions</b>	8,192, programmable
<b>Max. resolution (singleturn, multiturn)</b>	8,192 (13 bit), 8,192 (13 bit)
<b>Error limits</b>	± 0.5° (at room temperature)
<b>Repeatability</b>	± 0.25° (at room temperature)

#### Interfaces

<b>Electrical interface</b>	PROFIBUS DP
<b>Data protocol</b>	PROFIBUS DP V0, PROFIBUS DP V1 + V2
<b>Data transmission rate (baud rate)</b>	12 MBaud
<b>Parameterising data</b>	Number of steps per revolution, number of revolutions, PRESET, counting direction
<b>Bus termination</b>	DIP switch
<b>Initialization time</b>	Approx. 1 s

#### Electrical data

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

<sup>1)</sup> 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

<b>Mechanical interface</b>	Blind hollow shaft
<b>Shaft diameter</b>	10 mm
<b>Weight</b>	0.28 kg
<b>Shaft material</b>	Stainless steel
<b>Flange material</b>	Aluminum
<b>Housing material</b>	Aluminum
<b>Start up torque</b>	

	+20 °C	1 Ncm
<b>Operating torque</b>	+20 °C	0.8 Ncm
<b>Permissible shaft movement, axial static/dynamic</b>		± 0.5 mm, ± 0.2 mm
<b>Permissible shaft movement, radial static/dynamic</b>		± 0.3 mm, ± 0.1 mm
<b>Bearing lifetime</b>		3.0 x 10 <sup>9</sup> revolutions
<b>Angular acceleration</b>		≤ 500,000 rad/s <sup>2</sup>
<b>Operating speed</b>		≤ 6,000 min <sup>-1</sup> self warming 45 K at maximum operating speed

#### Ambient data

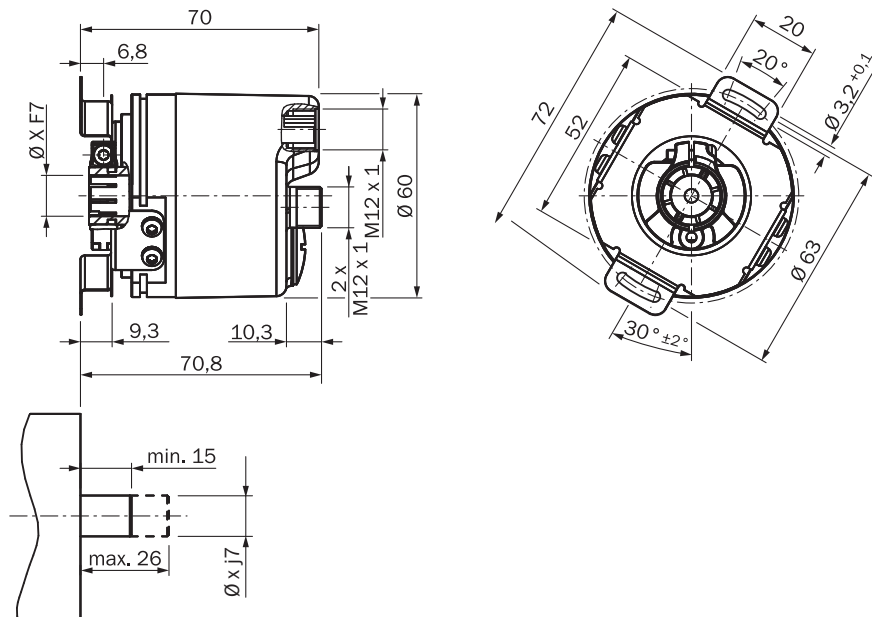
<b>Enclosure rating</b>	IP67, housing (according to IEC 60529) <sup>1)</sup> IP65, Shaft (according to IEC 60529)
<b>Permissible relative humidity</b>	95 % (Condensation not permitted)
<b>Operating temperature range</b>	-10 °C ... +70 °C
<b>Storage temperature range</b>	-40 °C ... +100 °C
<b>Resistance to shocks</b>	100 g, 6 ms (according to EN 60068-2-27)
<b>Resistance to vibration</b>	30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

<sup>1)</sup> With mating connector fitted.

#### Classifications







<b>ECI@ss 5.0</b>	27270502
<b>ECI@ss 5.1.4</b>	27270502
<b>ECI@ss 6.0</b>	27270590
<b>ECI@ss 6.2</b>	27270590
<b>ECI@ss 7.0</b>	27270502
<b>ECI@ss 8.0</b>	27270502
<b>ECI@ss 8.1</b>	27270502
<b>ECI@ss 9.0</b>	27270502
<b>ETIM 5.0</b>	EC001486
<b>ETIM 6.0</b>	EC001486
<b>UNSPSC 16.0901</b>	41112113

### Dimensional drawing (Dimensions in mm (inch))



### Recommended accessories

Other models and accessories → [www.sick.com/A3M60\\_PROFIBUS](http://www.sick.com/A3M60_PROFIBUS)

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

	Brief description	Type	Part no.
	Head A: female connector, M12, 5-pin, straight Head B: open cable ends 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: open cable ends Cable: PROFIBUS DP, drag chain use, twisted pair, PUR, halogen-free, shielded, 5 m	DOL-1205-W05MQ	6041423
	Head A: female connector, M12, 5-pin, angled, B-coded Head B: open cable ends Cable: PROFIBUS DP, twisted pair, drag chain use, PUR, halogen-free, shielded, 10 m	DOL-1205-W10MQ	6041425
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: open cable ends Cable: PROFIBUS DP, drag chain use, twisted pair, 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: open cable ends Cable: PROFIBUS DP, drag chain use, twisted pair, 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: open cable ends Cable: PROFIBUS DP, drag chain use, twisted pair, PUR, shielded, 5 m	STL-1205-W05MQ	6041426
	Head A: male connector, M12, 5-pin, angled, B-coded Head B: open cable ends Cable: PROFIBUS DP, drag chain use, twisted pair, PUR, shielded, 10 m	STL-1205-W10MQ	6041427
	Head A: female connector, M12, 5-pin, straight, B-coded Head B: male connector, M12, 5-pin, straight, B-coded Cable: PROFIBUS DP, twisted pair, drag chain use, PUR, halogen-free, shielded, 10 m Wire shield Al-Pt film, overall shield C-screen tin-plated	DSL-1205-G10MQ	6032640
	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.”

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