

ONLINE DATA SHEET
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Absolute encoders
A3M60 PROFIBUS

A3M60B-BGPB013X13



SICK
Sensor Intelligence.

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A3M60 PROFIBUS

Model Name > A3M60B-BGPB013X13
Part No. > 1051325



Illustration may differ

At a glance

- Robust absolute multiturn encoder with up to 31 bits (14 bits singleturn and 17 bits multiturn)
- Face mount flange, servo flange or blind hollow shaft
- Compact design (
- Integrated PROFIBUS interface with DP V0, V1 and V2 functionality (dependent on type)
- Connection system: 3x M12 connectors
- Protection class up to IP67
- Operating temperature: -30 °C to +80 (dependent on type)

Your benefits

- High level of system reliability even in extreme environmental conditions
- Lower maintenance costs due to non-contact single and multiturn magnetic scanning
- Space-saving, cost-efficient design ensures easy integration into applications with limited space
- High level of productivity due to quick communication and position calculation
- Immune to contamination and condensation, making it ideal for harsh environmental conditions
- Very good price-performance ratio

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)
Repeatability (Ta not constant):	± 0.25 ° (at room temperature)
Initialization time:	Ca. 1 s

Mechanical data

Mechanical interface:	Blind hollow shaft
Shaft diameter:	14 mm
Mass:	0.28 kg
Start up torque:	1 Ncm (+20 °C)
Operating torque:	0.8 Ncm (+20 °C)
Bearing lifetime:	3.0 x 10^9 revolutions

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Max. angular acceleration:	500,000 rad/s²
Permissible movement axial static/dynamic:	± 0.5 mm, ± 0.2 mm
Permissible movement radial static/dynamic:	± 0.3 mm, ± 0.1 mm
Shaft material:	Stainless steel
Flange material:	Aluminum
Housing material:	Aluminum

Electrical data

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

Interfaces

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

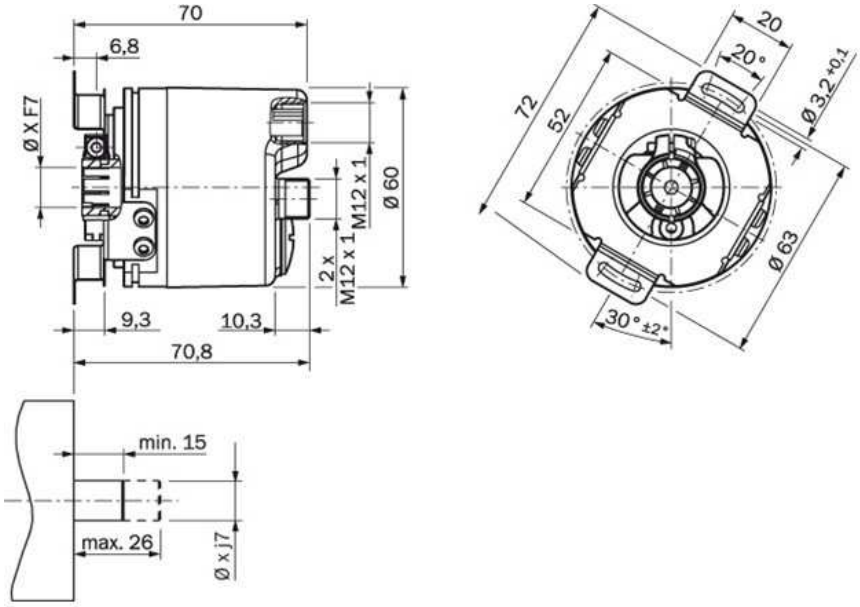
Ambient data

EMC:	(according to EN 61000-6-2 and EN 61000-6-3)
Enclosure rating:	IP 65 (according to IEC 60529), Shaft, IP 67 (according to IEC 60529), housing [1]
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

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Dimensional drawing



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