



## Absolute encoders A3M60 PROFIBUS

A3M60B-BEPB013X13



**Model Name** > A3M60B-BEPB013X13  
**Part No.** > 1038825



*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                          |
| Max. number of revolutions:          | 8,192                          |
| 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:       | 12 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 <sup>9</sup> revolutions |

|                                             |                            |
|---------------------------------------------|----------------------------|
| Max. angular acceleration:                  | 500,000 rad/s <sup>2</sup> |
| 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

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|                                        |                                     |
|----------------------------------------|-------------------------------------|
| Operating voltage range:               | 10 V ... 32 V                       |
| MTTFd: mean time to dangerous failure: | 60 a (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.

## Interfaces

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|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Electrical interface:               | 3 x M12, 5-pin, axial               |
| Bus:                                | Profibus DP                         |
| Data protocol:                      | PROFIBUS DP V0, PROFIBUS DP V1 + V2 |
| Data transmission rate (baud rate): | 12 MBaud                            |
| Bus termination:                    | DIP switch                          |

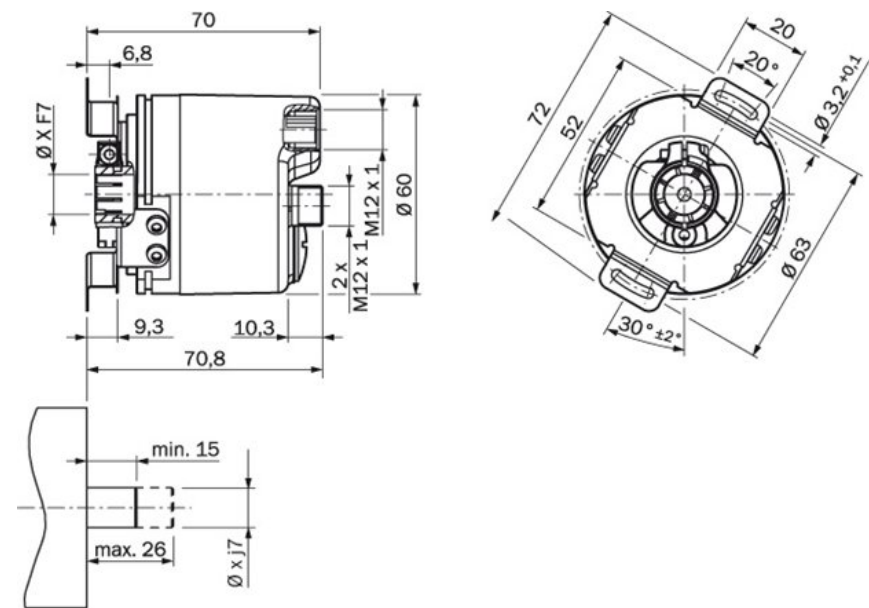
## Ambient data

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|                                |                                                                                |
|--------------------------------|--------------------------------------------------------------------------------|
| 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 |
| Permissible relative humidity: | 95 % (Condensation not permitted)                                              |
| Working temperature range:     | -10 °C ... 70 °C                                                               |
| Storage temperature range:     | -40 °C ... 100 °C                                                              |
| Resistance to shocks:          | 80 g (according to EN 60068-2-27)                                              |
| Resistance to vibration:       | 30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)                           |

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

Dimensional drawing



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