



AHM36B-BZQC000S28

AHS/AHM36

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
AHM36B-BZQC000S28	1102009

Other models and accessories → www.sick.com/AHS_AHM36

Detailed technical data

Features

Special device	✓
Specialty	Blind hollow shaft 12 mm Customized clamping ring
Standard reference device	AHM36B-BDQC012X12, 1092007
Additional information	Customer should use a min. 15 mm shaft

Performance

Max. resolution (number of steps per revolution x number of revolutions)	12 bit x 12 bit (4,096 x 4,096)
Error limits G	0.35° (at 20 °C) ¹⁾
Repeatability standard deviation σ_r	0.25° (at 20 °C) ²⁾

¹⁾ In accordance with DIN ISO 1319-1, position of the upper and lower error limit depends on the installation situation, specified value refers to a symmetrical position, i.e. deviation in upper and lower direction is the same.

²⁾ In accordance with DIN ISO 55350-13; 68.3% of the measured values are inside the specified area.

Interfaces

Communication interface	IO-Link
Communication Interface detail	IO-Link V1.1 / COM3 (230,4 kBaud)
Smart Sensor	Efficient communication, Enhanced Sensing
Process data	Position, speed
Parameterising data	Number of steps per revolution Number of revolutions PRESET Counting direction Sampling rate for speed calculation Unit for output of the speed value
Status information	Via status LED
Initialization time	2 s ¹⁾
Cycle time	≤ 3.2 ms

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

Electrical data

Connection type	Male connector, M12, 4-pin, universal
Supply voltage	18 ... 30 V
Power consumption	≤ 1.5 W
Reverse polarity protection	✓
MTTFd: mean time to dangerous failure	240 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 design	Blind hollow shaft
Shaft diameter	12 mm
Weight	0.12 kg ¹⁾
Shaft material	Stainless steel
Flange material	Aluminum
Housing material	Zinc
Start up torque	< 0.5 Ncm
Operating torque	< 0.5 Ncm
Permissible movement static	± 0.3 mm (radial) ± 0.3 mm (axial)
Permissible movement dynamic	± 0.1 mm (radial) ± 0.1 mm (axial)
Moment of inertia of the rotor	15 gcm ²
Bearing lifetime	2.0 x 10 ⁹ revolutions
Angular acceleration	≤ 500,000 rad/s ²
Operating speed	≤ 6,000 min ⁻¹

¹⁾ Based on devices with male connector.

Ambient data

EMC	According to EN 61000-6-2, EN 61000-6-3 and EN 61131-9
Enclosure rating	IP65 (IEC 60529)
Permissible relative humidity	90 % (Condensation not permitted)
Operating temperature range	-20 °C ... +70 °C
Storage temperature range	-40 °C ... +100 °C, without package
Resistance to shocks	100 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration	20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

Classifications

ECI@ss 5.0	27270502
ECI@ss 5.1.4	27270502
ECI@ss 6.0	27270590
ECI@ss 6.2	27270590
ECI@ss 7.0	27270502
ECI@ss 8.0	27270502

Dimensional drawing (Dimensions in mm (inch))

[illegible]

A diagram of a circular object, possibly a cell or a microorganism, with four internal dots and four external labels (1, 2, 3, 4) connected by lines to the dots.

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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:

Contacts and other locations –www.sick.com