



**Absolute encoders
AHS/AHM36 CANopen, Rotary**

AHM36A-BACK014x12



Model Name > [AHM36A-BACK014x12](#)
Part No. > [1065991](#)



Illustration may differ

At a glance

- Compact 36 mm absolute encoder with max. 26 bits (singleturn: 14 bits, multiturn: 12 bits)
- Face mount flange, servo flange, blind hollow shaft
- Rotatable M12 connector or rotatable cable outlet
- CANopen interface with programmable configuration
- Diagnostic functions: temperature, operating time, etc. (depending on the type)
- Protection class up to IP 67 (depending on the type)
- Operating temperature: -40 °C to +85 °C (depending on the type)

Your benefits

- Simple, time-saving mechanical installation due to a rotatable connector or rotatable cable outlet, various mounting hole patterns, and many different shafts
- Simple network installation with various configuration options
- Intelligent diagnostic functions evaluate maintenance intervals for the entire system, thereby increasing system reliability
- Customizable Easy setup for various applications allowing binary, non-binary, and non-integer resolutions with the round axis functionality (advanced version)
- Reliable operation in harsh environments thanks to the rugged, reliable, fully magnetic sensor system
- Space-efficient and cost-effective design that is suitable for applications where space is tight
- High performance at a cost-efficient price



Performance

Max. number of steps per revolution:	16,384
Max. number of revolutions:	4,096, number of revolutions from 1 to 4,096 programmable
Resolution power:	16,384 x 4,096
Resolution:	14 bit x 12 bit
Error limits:	± 0.35 ° (at 20°C)
Repeatability (Ta not constant):	± 0.2 ° (at 20°C)
Measuring step:	± 0.022 ° (360 °/number of steps)
Initialization time:	2 s ¹⁾

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

Mechanical data

Mechanical interface:	Blind hollow shaft
Shaft diameter:	6 mm
Start up torque:	1 Ncm (+20 °C) ¹⁾
Operating torque:	< 1 Ncm (+20 °C) ²⁾
Maximum operating speed::	6,000 /min ^{3) 4)}
Moment of inertia of the rotor:	15 gcm ²
Bearing lifetime:	2.0 x 10 ⁹ revolutions
Max. angular acceleration:	500,000 rad/s ²
Permissible movement axial static/dynamic:	± 0.3 mm, ± 0.1 mm
Permissible movement radial static/dynamic:	± 0.3 mm, ± 0.1 mm
Shaft material:	Stainless steel
Housing material:	Zinc
Material, cable:	PUR

1) 2) 4) ³⁾ Self warming of 5,5 K per 1000 revolutions/min when applying note working temperature range

Electrical data

Power consumption:	Without load
Operating voltage range:	10 V ... 30 V
MTTFd: mean time to dangerous failure:	270 a (EN ISO 13849-1) ¹⁾
Connection type:	Cable, 5-wire, universal, 1.5 m
Reverse polarity protection:	1
Power consumption max. without load:	1.5 W

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:	CANopen
Bus:	CANopen
Address setting:	0 ... 127
Data transmission rate (baud rate):	20 kbit/s ... 1,000 kbit/s, default: 125 kbit/s
Status information:	CANopen Status über Status-LED
Bus termination:	Via external termination resistance ¹⁾
Encoder profile:	CANopen CiA DS-301 V4.02, CiA DSP-305 LSS, Encoder Profile: - CiA DS-406, V3.2. - Class C2
Parameterising data:	Abtaste für Geschwindigkeitsberechnung, Number of revolutions, Einheit für Ausgabe des Geschwindigkeitswerts, Elektronische Nocken (2 Kanäle x 8 Nocken), PRESET, Endless operating functionality (only Multiturn version), Number of steps per revolution, Counting direction
PDO data:	Speed, Position, Temperature
Available diagnostics data:	Betriebsstundenzähler Power-On/Motion, Maximale Geschwindigkeit, Minimale und maximale Betriebsspannung, Minimale und maximale Temperatur, Power-On Zähler, Zähler für Richtungsänderungen/Anzahl Bewegung cw/Anzahl Bewegungen ccw

¹⁾ See accessories

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