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DATA SHEET

VFS60A-THPZ0-S02

VFS60
Motor feedback systems

SICK Sensor Intelligence



Illustration may differ

MOTOR FEEDBACK SYSTEMS

VFS60A-THPZ0-S02

ORDERING INFORMATION

Type	part no.
VFS60A-THPZ0-S02	1038080

Further device versions and accessories at www.sick.com/VFS60

DETAILED TECHNICAL DATA

FEATURES

Special device	✓
Specialty	Customized stator coupling
Standard reference device	VFS60A-THPK01024, 1036749

PERFORMANCE

Number of lines per revolution	1,024 [1]
Reference signal, number	1
Reference signal, position	90° electric, logically gated with A and B
Measuring step deviation	± 0.01°

[1] Factory programmed number of lines: 1024, level of output signal: TTL.

INTERFACES

Communication interface	Incremental
Initialization time	30 ms
Power consumption	≤ 0.7 W (without load)

ELECTRONICS

Connection type	Cable, 8-wire, radial, 1.5 m [1]
Supply voltage	4.5 V ... 32 V
Power consumption	≤ 0.7 W (without load)
Maximum output frequency	≤ 820 kHz
Maximum load current	≤ 30 mA

[1] The universal cable connection is positioned so that it is possible to lay it without bends in a radial or axial direction.

MECHANICS

Shaft version	Through hollow shaft
Shaft diameter	15 mm
Shaft material	Metal
Flange type / stator coupling	Standard
Dimensions	See dimensional drawing
Weight	+ 0.2 kg
Moment of inertia of the rotor	40 gcm²
Operating speed	9,000 min^{-1} [1]
Angular acceleration	≤ 500,000 rad/s²
Operating torque	0.6 Ncm (+20 °C)
Start up torque	+ 0.8 Ncm (+20 °C)
Permissible movement static	± 0.3 mm, radial ± 0.5 mm, axial
Permissible movement dynamic	± 0.1 mm, radial ± 0.01 mm, axial
Life of ball bearings	3.0 x 10^9 revolutions

[1] Allow for self-heating of 3.3 K per 1,000 rpm when designing the operating temperature range.

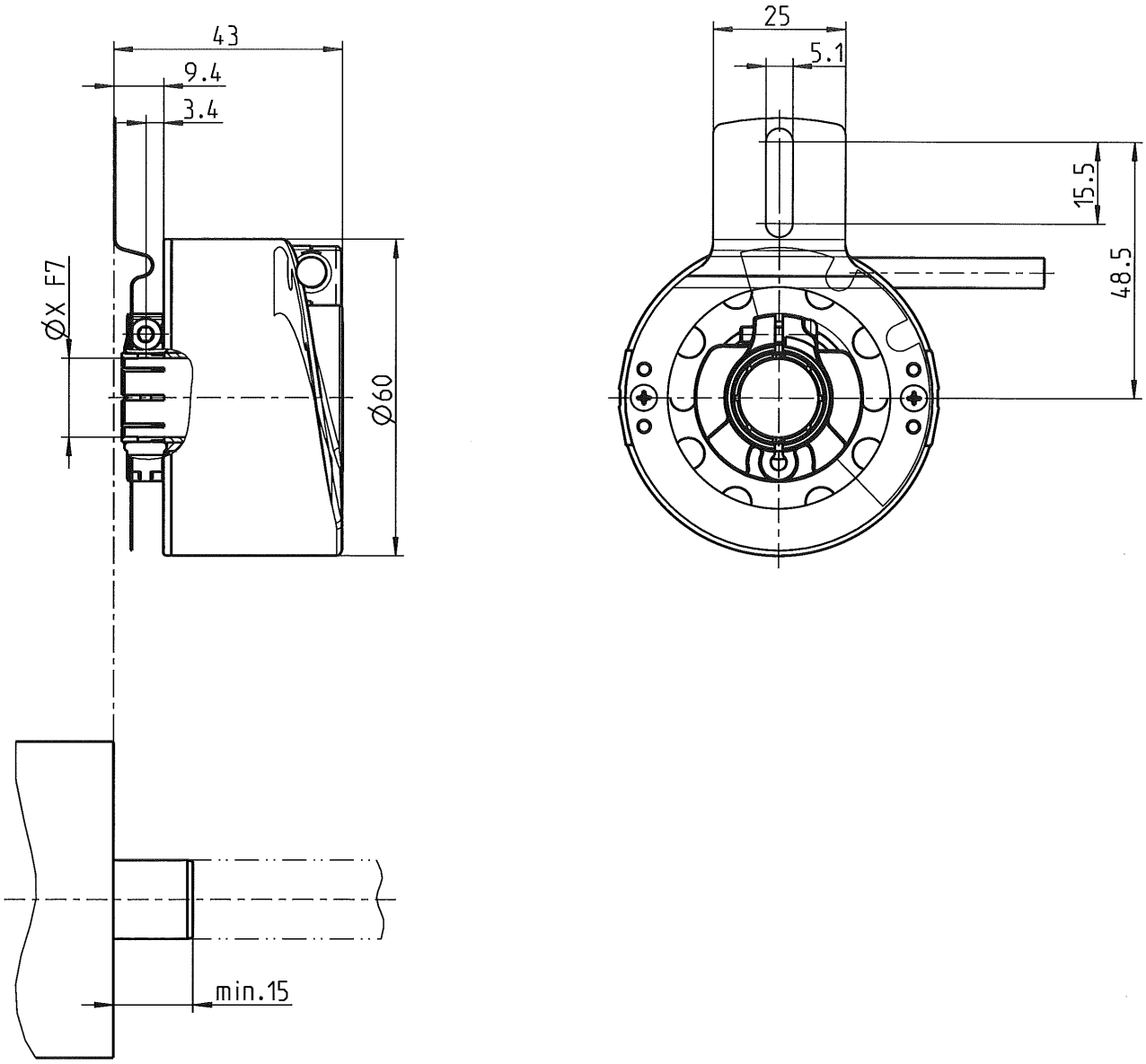
AMBIENT DATA

Operating temperature range	–30 °C ... +100 °C
Storage temperature range	–40 °C ... +100 °C, without package
Relative humidity/condensation	90 %, Condensation not permitted
Resistance to shocks	70 g, 6 ms (according to EN 60068-2-27)
Frequency range of resistance to vibrations	30 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)
EMC	According to EN 61000-6-2 and EN 61000-6-4
Enclosure rating	IP65, shaft side (IEC 60529) IP65, housing side, cable connection (IEC 60529)

CERTIFICATES

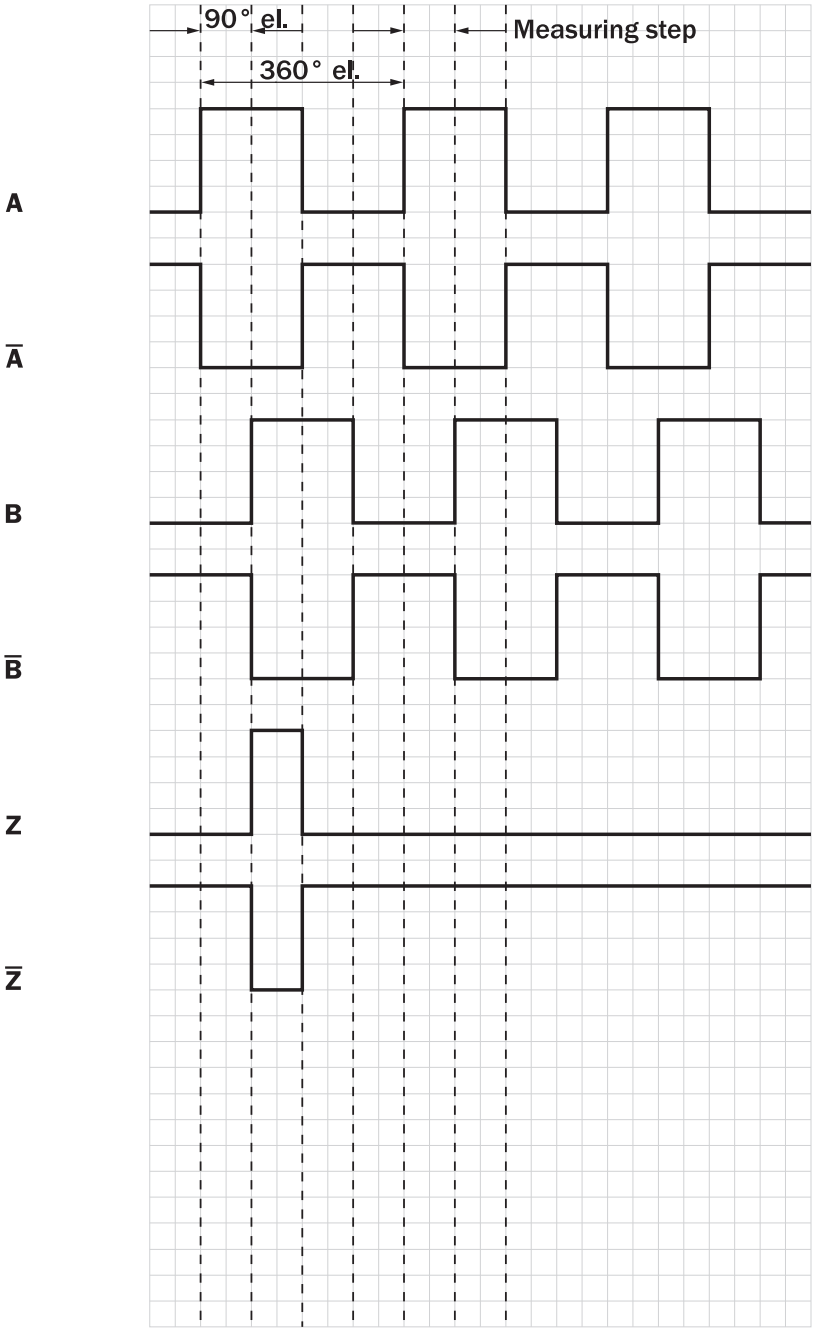
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING



Dimensions in mm (inch)

DIAGRAMS



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1038080

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WALDKIRCH
GERMANY
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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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