Product data sheet



SEK37-HFA0-K02

SEK/SEL37

MOTOR FEEDBACK SYSTEMS ROTARY HIPERFACE®

SICK
Sensor Intelligence.

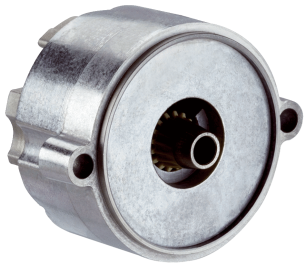


Illustration may differ

Ordering information

Type	Part no.
SEK37-HFA0-K02	1037376

Other models and accessories ➜ www.sick.com/SEK_SEL37

Detailed technical data

Performance

Sine/cosine periods per revolution	16
Number of the absolute ascertainable revolutions	1
Maximum number of steps per revolution	512 via RS485
Total number of steps	512
Measuring step	20 ″ For interpolation of the sine/cosine signals with, e. g., 12 bits
Integral non-linearity	± 288 Winkelsekunden, Error limits for evaluating sine/cosine period, typical values at nominal position ± 0.1 mm und +20 °C
Differential non-linearity	± 144 ″, Non-linearity within a sine/cosine period, typical values at nominal position ± 0.1 mm und +20 °C
Operating speed	≤ 6,000 min^{-1}, up to which the absolute position can be reliably produced
Available memory area	1,792 Byte

Interfaces

Type of code for the absolute value	Binary
Code sequence	Increasing, when turning the shaft For clockwise rotation, looking in direction “A” (see dimensional drawing), For clockwise shaft rotation, looking in direction “A” (see dimensional drawing)
Communication interface	HIPERFACE®

Electrical data

Connection type	Male connector, 8-pin, axial
Supply voltage	7 V DC ... 12 V DC
Recommended supply voltage	8 V DC
Power consumption	< 50 mA [1]

[1] Without load.

Mechanical data

Shaft version	Tapered shaft
Dimensions	See dimensional drawing
Weight	≤ 0.05 kg
Moment of inertia of the rotor	1 gcm^2

Operating speed	12,000 min^{-1}, 12,000 U/min
Angular acceleration	≤ 500,000 rad/s^2
Permissible radial shaft movement	± 0.15 mm
Permissible axial shaft movement	± 0.3 mm

Ambient data

Operating temperature range	–40 °C ... +115 °C
Storage temperature range	–50 °C ... +125 °C, without package
Relative humidity/condensation	90 %, Condensation not permitted
Resistance to shocks	100 g, 10 ms, 10 ms (according to EN 60068-2-27)
Frequency range of resistance to vibrations	50 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
EMC	According to EN 61000-6-2 and EN 61000-6-3 [1)]
Enclosure rating	IP40, built-on version, with mating connector inserted and closed cover (according to IEC 60529)

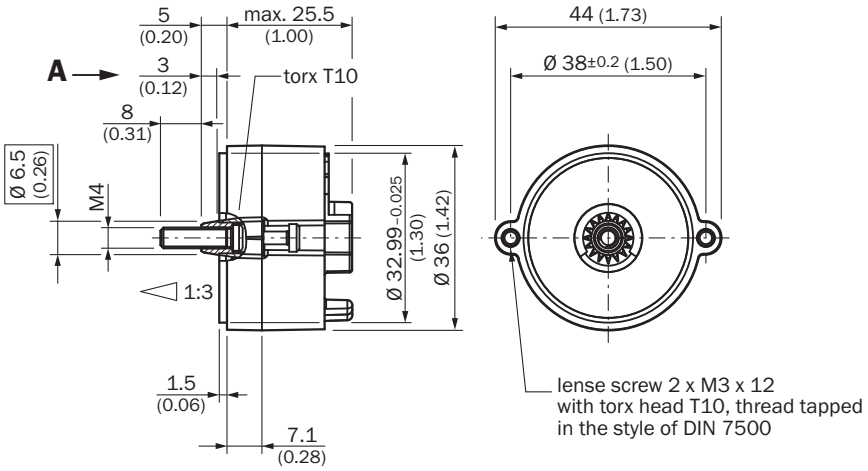
[1)] The EMC according to the standards quoted is achieved when the motor feedback system is mounted in an electrically conductive housing, which is connected to the central earthing point of the motor controller via a cable screen. If other shielding concepts are used, users must perform their own tests.

Classifications

ECl@ss 5.0	27270590
ECl@ss 5.1.4	27270590
ECl@ss 6.0	27270590
ECl@ss 6.2	27270590
ECl@ss 7.0	27270590
ECl@ss 8.0	27270590
ECl@ss 8.1	27270590
ECl@ss 9.0	27270590
ECl@ss 10.0	27273805
ECl@ss 11.0	27273901
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))

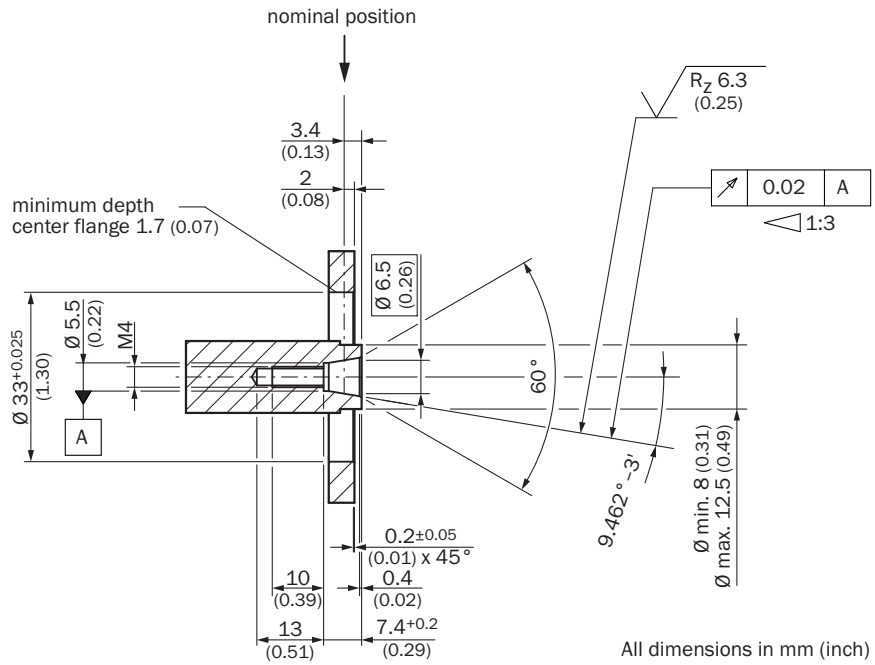
General tolerances according to DIN ISO 2768-mk



Axial

Attachment specifications

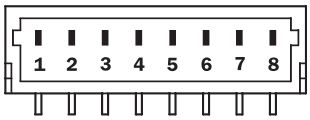
General tolerances according to DIN ISO 2768-mk



Axial

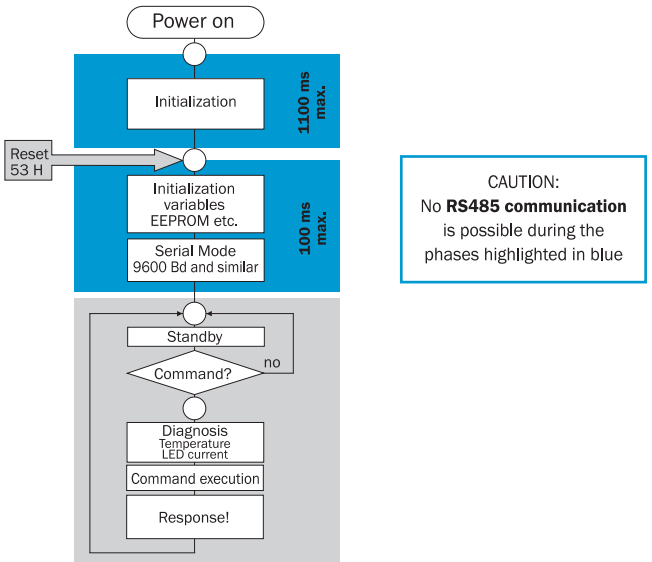
PIN assignment

View of the plug-in face

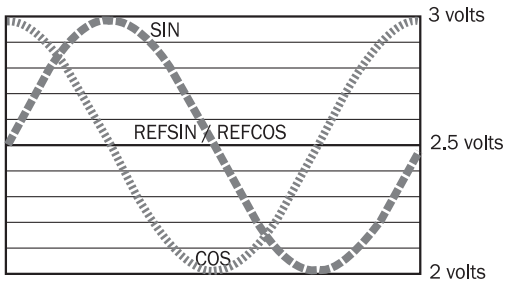


PIN	Signal	Wire colors (cable connection)	Explanation
1	U_S	Red	Supply voltage
2	+ SIN	White	Process data channel
3	REFSIN	Brown	Process data channel
4	+ COS	Pink	Process data channel
5	REFCOS	Black	Process data channel
6	GND	Blue	Ground connection
7	Data +	Gray or yellow	Parameter channel RS 485
8	Data -	Green or purple	Parameter channel RS 485
The GND connection (0 V) of the supply voltage is not connected to the housing			

Diagrams



Signal diagram for clockwise shaft rotation, looking in direction “A” (see dimensional drawing) 1 period = 360° : 16



Recommended accessories

Other models and accessories ➜ www.sick.com/SEK_SEL37

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: cable Head B: Flying leads Cable: HIPERFACE®, HIPERFACE®, PUR, halogen-free, shielded	LTG-2708-MW	6028361
	Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: HIPERFACE®, unshielded, 0.2 m	DOL-0J08-G0M2XB6	2031086

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:

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