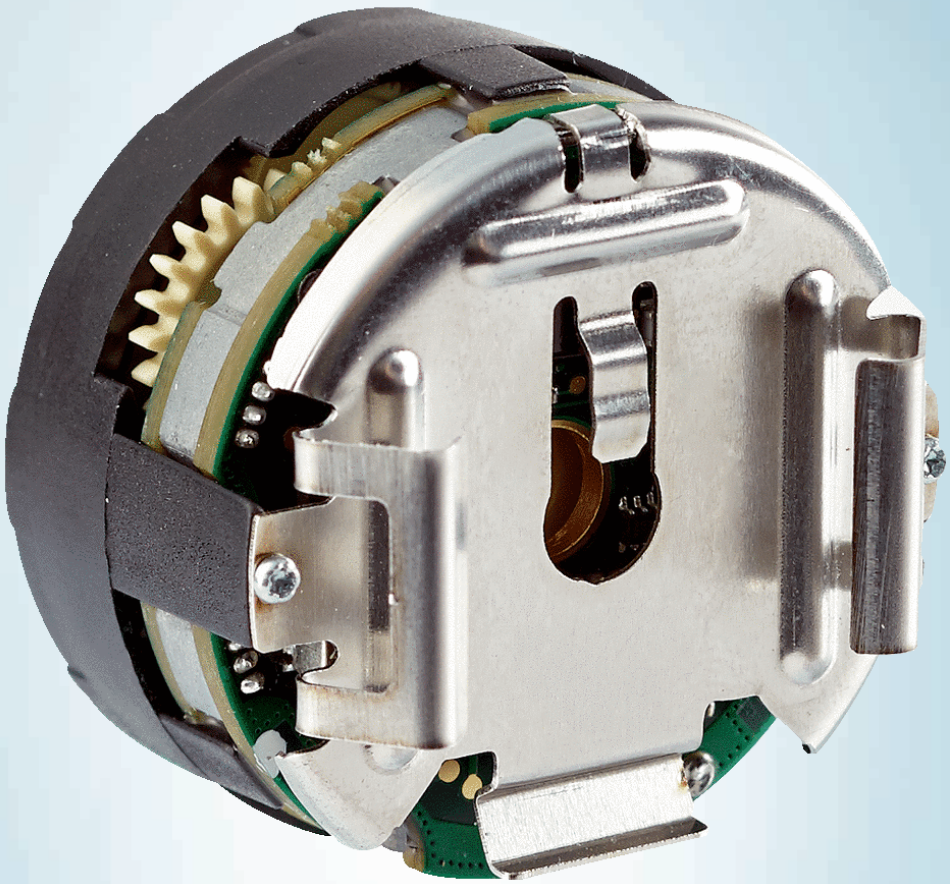
Product data sheet



SEL34-HFB0K02

SEK/SEL34

MOTOR FEEDBACK SYSTEMS ROTARY HIPERFACE®

SICK
Sensor Intelligence.

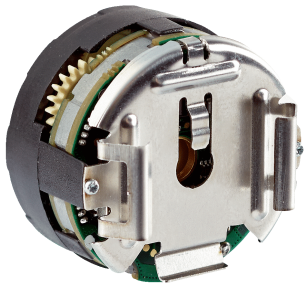


Illustration may differ

Ordering information

Type	Part no.
SEL34-HFB0K02	1053403

Other models and accessories ➜ www.sick.com/SEK_SEL34

Detailed technical data

Performance

Sine/cosine periods per revolution	16
Number of the absolute ascertainable revolutions	4,096
Maximum number of steps per revolution	2,097,152 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 Winkelsekunden, Error limits for evaluating 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	For clockwise shaft rotation, looking in direction “A” (see dimensional drawing)
Communication interface	HIPERFACE®

Electrical data

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

Mechanical data

Shaft version	Tapered shaft
Weight	≤ 0.04 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
Permissible movement of the drive element, static	0 mm

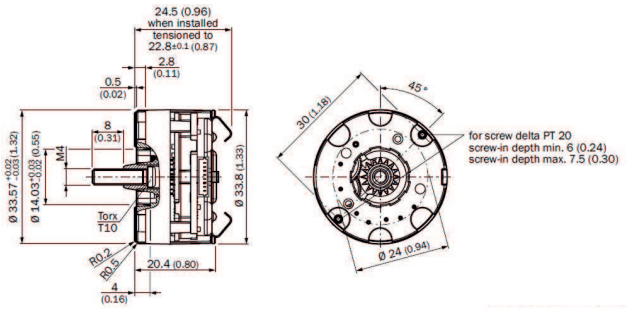
Ambient data

Operating temperature range	–20 °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 (EN 60068-2-27)
Frequency range of resistance to vibrations	50 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)
EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating	IP20, built-on version, with mating connector inserted and closed cover (IEC 60529)

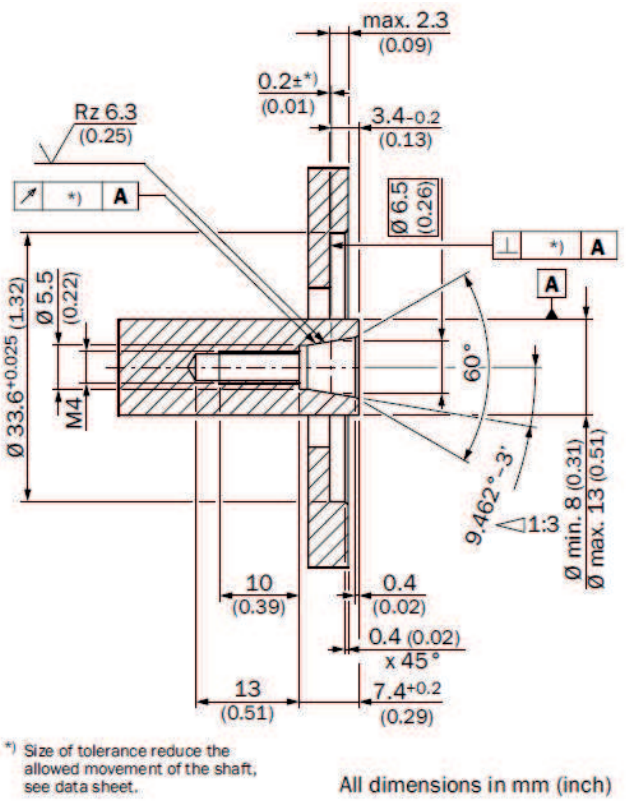
Classifications

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))



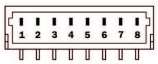
Attachment specifications



*) Size of tolerance reduce the allowed movement of the shaft, see data sheet.

All dimensions in mm (inch)

PIN assignment

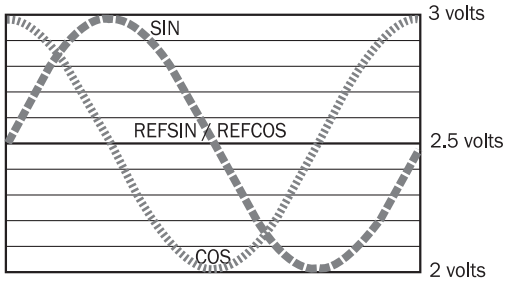


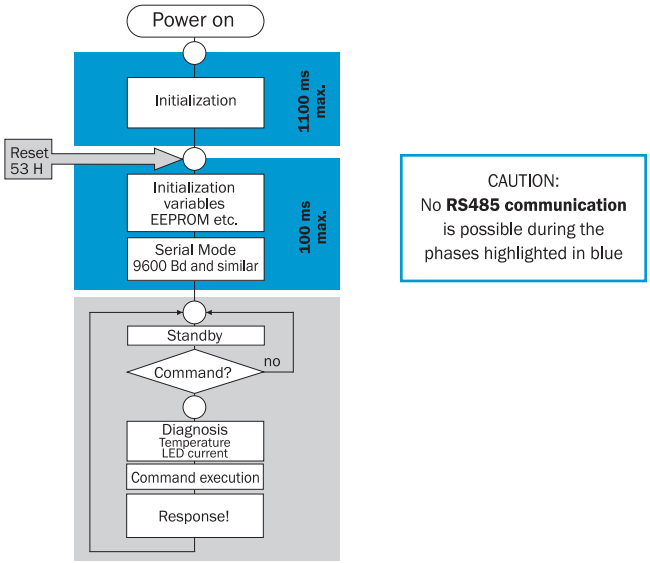
PIN	Signal	Color of wires	Explanation
1	U_s	Red	7 ... 12 V supply voltage
2	+ SIN	White	Process data channel
3	REFSIN	Brown	Process data channel
4	+ COS	Pink	Process data channel
5	REFCOS	Black	Process data channel
6	GND	Blue	Ground connection
7	Data +	Grey or yellow	RS485-parameter channel
8	Data –	Green or purple	RS485-parameter channel

The GND-(0V) connection of the supply voltage has no connection to the housing.

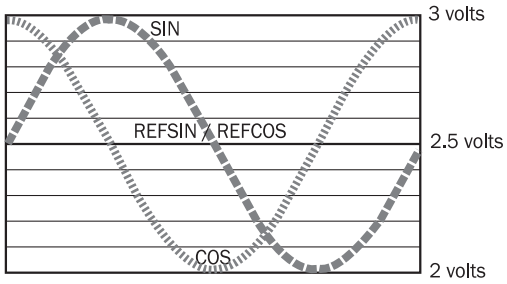
Diagrams

Signal diagram for clockwise rotation of the shaft looking in direction "A" (see dimensional drawing)1 period = 360 ° : 1024





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_SEL34

	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

	Brief description	Type	Part no.
	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

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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.”

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