



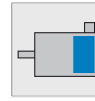
Motor feedback systems rotary HIPERFACE®

SEK90-HN050AK02



Model Name > [SEK90-HN050AK02](#)

Part No. > [1038271](#)



At a glance

- HIPERFACE® motor feedback systems for large hollow shaft and torque motors
- 64 sine/cosine periods per revolution
- Absolute position with a resolution of 2,048 increments per revolution
- Programming of the position value and electronic type label
- HIPERFACE® interface
- Turn & play - for simple assembly without tools
- High resistance to shock and vibration due to holistic scanning
- Bearingless motor feedback system

Your benefits

- Direct seat on the drive shaft renders transmission elements such as toothed belt or coupling superfluous
- The simplified, compact design is wear-free, thus helping to reduce maintenance costs
- Measuring accuracy is no longer affected by magnetic fields thanks to the capacitive measuring principle
- Time-saving mounting, since no mounting tools are required: simply fit it on, turn it and start
- The minimal dimensions enable you to save space and weight, allowing for a more efficient use of space



Performance

Number of sine/cosine periods per revolution:	64
Number of the absolute ascertainable revolutions:	1 (Singleturn)
Total number of steps:	2,048 via RS485
Measuring step:	5 angular seconds (at interpolation of the sine/cosine signals with e.g. 12 Bit)
Integral non-linearity typ.:	± 72 angular seconds (Error limits for evaluating sine/cosine period) typical values at nominal position ± 0,1 mm and + 20 °C
Differential non-linearity:	± 45 angular seconds (Non-linearity within a sine/cosine period) typical values at nominal position ± 0,1 mm and + 20 °C
Operating speed:	3,000 /min, up to which the absolute position can be reliably produced
Available memory area:	1,792 B (EEPROM 2048) ¹⁾
Latency:	100 µs

¹⁾ If applying the electronic type label, in connection with numeric controllers, attention should be paid to Patent EP 425 912 B 2, application of the electronic type label in connection with speed regulation ist exempt.

Mechanical data

Shaft diameter:	50 mm
Dimensions:	See dimensional drawing
Mass:	0.13 kg
Moment of inertia of the rotor:	340 gcm ²
Operating speed:	3,000 /min
Angular acceleration:	500,000 rad/s ²
Permissible shaft movement, radial, static:	± 0.2 mm
Permissible shaft movement, radial, dynamic:	± 0.05 mm
Connection type:	Connector, 8-pin
Permissible axial shaft movement:	± 0.5 mm ¹⁾
Shaft version:	Through hollow shaft

¹⁾ Relative to the installation position, as described in the assembly instructions (order nr. 8013609) and in the proposed customer fitting

Electrical data

Electrical interface:	HIPERFACE
Operating voltage range/supply Voltage:	7 V DC ... 12 V DC
Recommended supply voltage:	8 V DC
Operating current:	150 mA ¹⁾

¹⁾ Without load

Interfaces

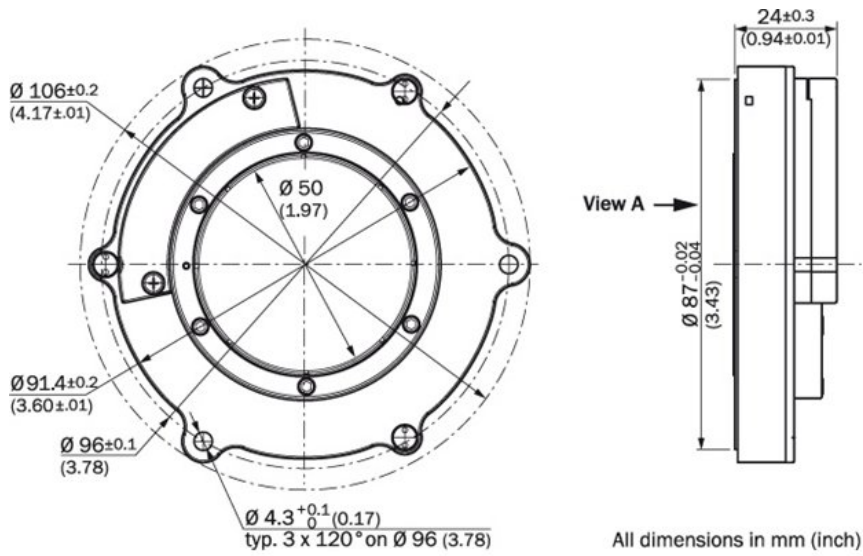
Type of code for the absolute value:	Binary
Code sequence:	Increasing, for clockwise shaft rotation, looking in direction "A" (see dimensional drawing)
Interface signals:	Process data channel SIN, REFSIN, COS, REFCOS: analog, differential parameter channel RS 485: digital

Ambient data

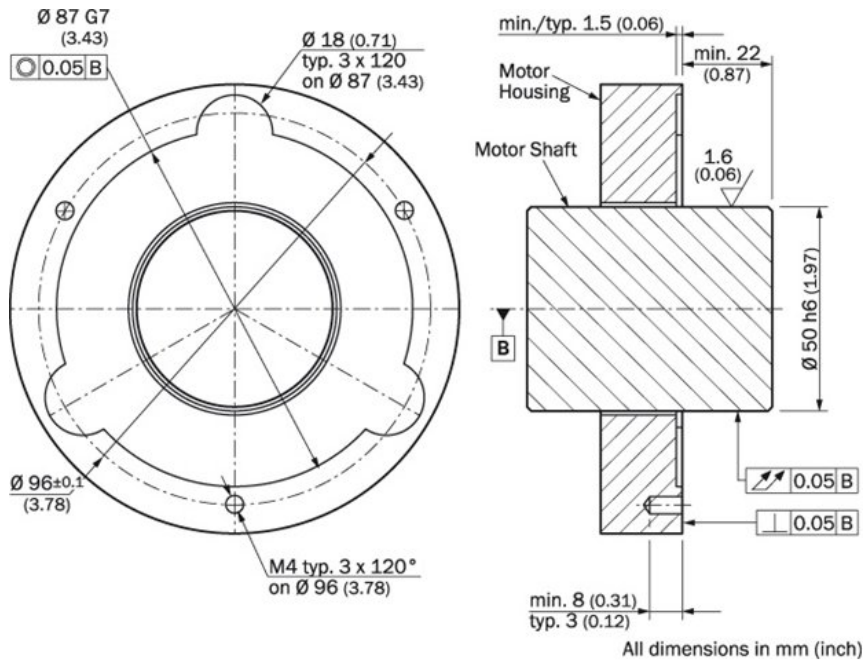
Working temperature range:	-30 °C ... 115 °C
Storage temperature range:	-50 °C ... 125 °C, without package
Relative humidity/Condensation:	90 %, Condensation not permitted
Resistance to shocks:	100 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration:	30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
EMC:	According to EN 61000-6-2 and EN 61000-6-3 ¹⁾
Enclosure rating:	IP 40, according to IEC 60529, with mating connector inserted and closed cover

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. Users must perform their own tests when other screen designs are used.

Dimensional drawing



Proposed fitting



Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com