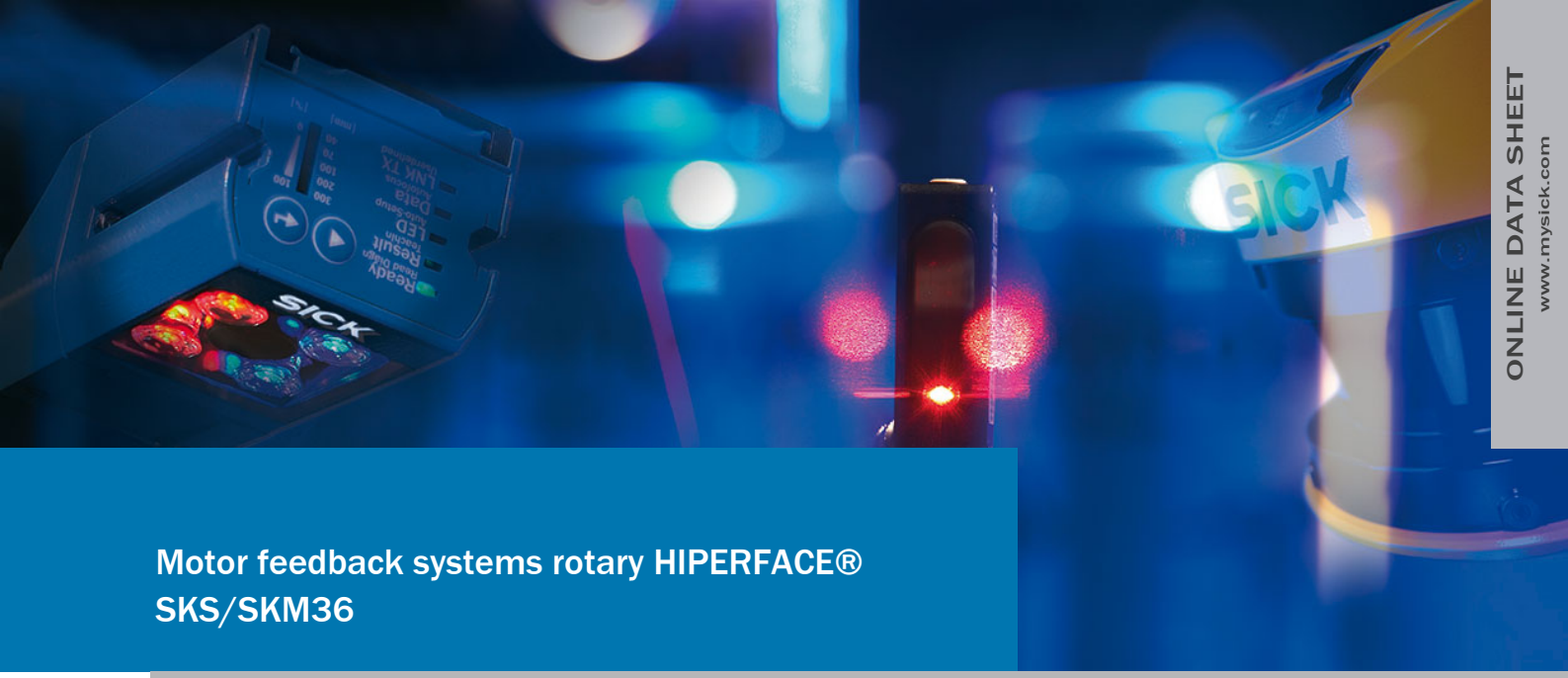


ONLINE DATA SHEET
www.mysick.com

Motor feedback systems rotary HIPERFACE®
SKS/SKM36

SKM36-HFA0-K02

SICK
Sensor Intelligence.

SICK
Sensor Intelligence.

Motor feedback systems rotary HIPERFACE® SKS/SKM36

Model Name > SKM36-HFA0-K02
Part No. > 1034094

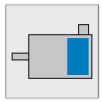


Illustration may differ

At a glance

- Motor feedback systems for the standard performance range
- 128 sine/cosine periods per revolution
- Absolute position with a resolution of 4,096 increments per revolution and 4,096 revolutions with the multiturn system
- Programming of the position value and electronic type label
- HIPERFACE® interface
- Integrated version and stand-alone design
- Certified according to SIL2/PL d (only valid for SKS36S/SKM36S-H...)
- Conforms to RoHs

Your benefits

- The small dimension allows manufacturers of low-power and minimal-power motors to considerably reduce the size of their motors
- The stand-alone version is ideally suited as a master and path encoders
- The SKS/SKM36 motor feedback systems have strongly penetrated the drive technology market
- The consistent mechanical components in SEK/SEL37 allow for a high degree of flexibility with various encoder systems

Performance

Number of sine/cosine periods per revolution:	128
Number of the absolute ascertainable revolutions:	4,096 (Multiturn)
Total number of steps:	16,777,216
Measuring step:	2.5 angular seconds (at interpolation of the sine/cosine signals with e.g. 12 Bit)
Error limits for the digital absolute value:	± 320 angular seconds (via RS485)
Integral non-linearity typ.:	± 80 angular seconds (Error limits for evaluating sine/cosine period)
Differential non-linearity:	± 40 angular seconds (Non-linearity within a sine/cosine period)
Operating speed:	9,000 /min, up to which the absolute position can be reliably produced
Available memory area:	1,792 Byte (EEPROM 2048)

Mechanical data

Flange type/stator coupling:	Spring mounting plate
Dimensions:	See dimensional drawing
Mass:	0.07 kg
Moment of inertia of the rotor:	4.5 gcm²
Maximum angular acceleration:	500,000 rad/s²

Operating torque:	0.2 Ncm
Start up torque:	0.3 Ncm
Permissible shaft movement, radial, static:	± 0.1 mm
Permissible shaft movement, radial, dynamic:	± 0.05 mm
Permissible shaft movement, axial, static:	± 0.2 mm
Permissible shaft movement, axial, dynamic:	± 0.1 mm
Life of ball bearings:	3.6 x 10^9 revolutions
Connection type:	Connector, 8-pin, radial
Shaft version:	Tapered shaft

Electrical data

Electrical interface:	HIPERFACE
Operating voltage range/supply Voltage:	7 V DC ... 12 V DC
Recommended supply voltage:	8 V DC
Operating current:	60 mA
Output frequency for sine/cosine signals:	0 kHz ... 65 kHz

Without load;

Interfaces

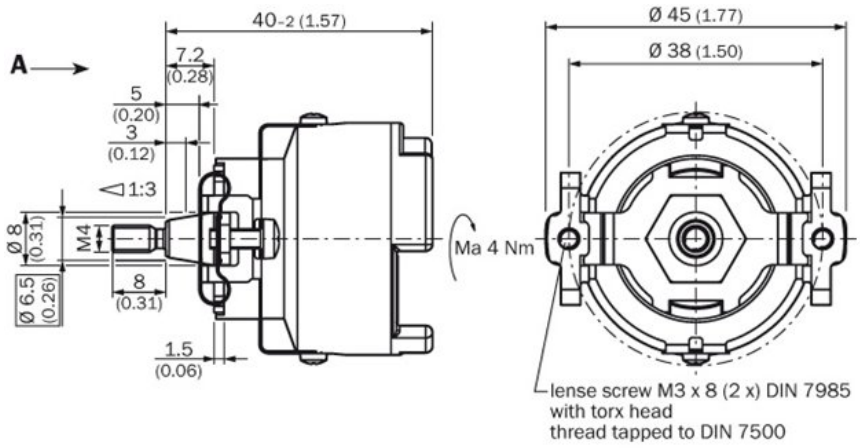
Type of code for the absolute value:	Binary
Code sequence:	Increasing, for clockwise shaft rotation, looking in direction "A" (see dimensional drawing)
Interface signals:	Process data channel SIN, REFSIN, COS, REFCOS: analog, differential parameter channel RS 485: digital

Ambient data

Working temperature range:	-20 °C ... 110 °C
Storage temperature range:	-40 °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:	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:	IP 50, according to IEC 60529, with mating connector inserted and closed cover

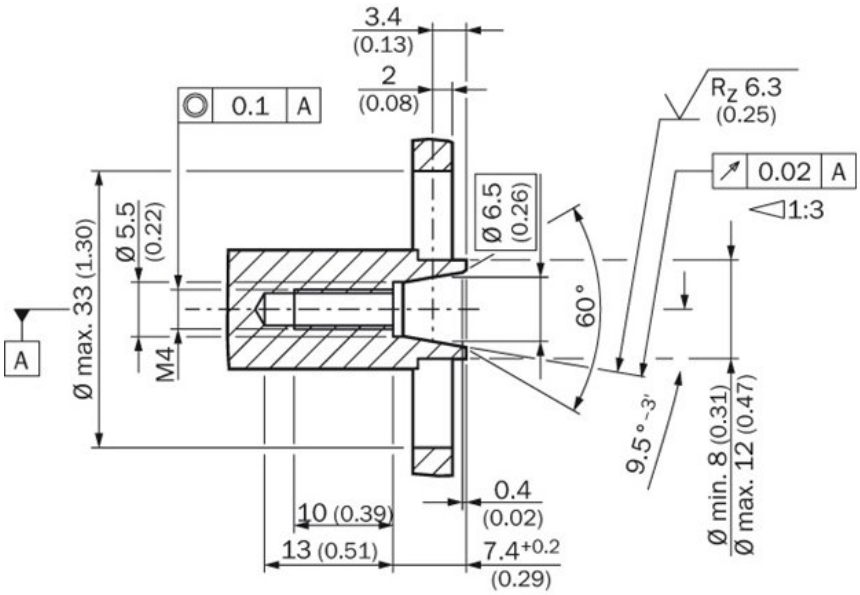
[1)] The EMC according to the standards quoted is achieved when the motor feedback system is mounted in an electrically conductive housing, which is connected to the central earthing point of the motor controller via a cable screen. This is also where the GND (0 V) connection of the power supply voltage is linked to earth. Users must perform their own tests when other screen designs are used.

Dimensional drawing



All dimensions in mm (inch)

Proposed fitting



All dimensions in mm (inch)

· USmod 4c int40

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