



## Motor feedback systems rotary HIPERFACE® SKS/SKM36

SKM36S-HVA0-K02



**Model Name** > SKM36S-HVA0-K02  
**Part No.** > 1036559



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



**Safety-related parameters**

Safety integrity level:	SIL2 (IEC 61508), SILCL2 (IEC 62061)
Category:	3 (EN ISO 13849)
Performance level:	PL d EN ISO 13849 <sup>1)</sup>
TM (mission time):	20 a (EN ISO 13849)
PFHD: probability of dangerous failure per hour:	1.3 * 1E-08 <sup>2)</sup>
MTTFd: mean time to dangerous failure:	874 a (EN ISO 13849)

<sup>1)</sup> For more detailed information on the exact configuration of your machine/unit, please consult your relevant SICK branch office. <sup>2)</sup> The values displayed apply to a diagnostic degree of coverage of 90%, which must be achieved by the external drive system

**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)

Differential non-linearity:	(Non-linearity within a sine/cosine period)
Operating speed:	6,000 /min, up to which the absolute position can be reliably produced
Available memory area:	1,792 Byte, 1,792 Byte (E2PROM 2048)
Integral non-linearity typ.:	± 120 angular seconds (Error limits for evaluating sine/cosine period)

### Mechanical data

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Shaft diameter:	6 mm
Flange type/stator coupling:	Servo-/face mount flange
Dimensions:	See dimensional drawing
Mass:	0.14 kg
Moment of inertia of the rotor:	6 gcm <sup>2</sup>
Maximum angular acceleration:	500,000 rad/s <sup>2</sup>
Operating torque:	0.6 Ncm
Start up torque:	0.9 Ncm
Life of ball bearings:	2.0 x 10 <sup>9</sup> revolutions
Connection type:	Male connector M12, 8-pin, radial
Shaft version:	Solid shaft
Permissible Load capacity of shaft:	10 N (radial), 5 N (axial)

### Electrical data

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Electrical interface:	HIPERFACE
Operating voltage range/supply Voltage:	7 V DC ... 12 V DC
Recommended supply voltage:	8 V DC
Output frequency for sine/cosine signals:	0 kHz ... 65 kHz
Operating power consumption (no load):	60 mA <sup>1)</sup>

<sup>1)</sup> Without load

### Interfaces

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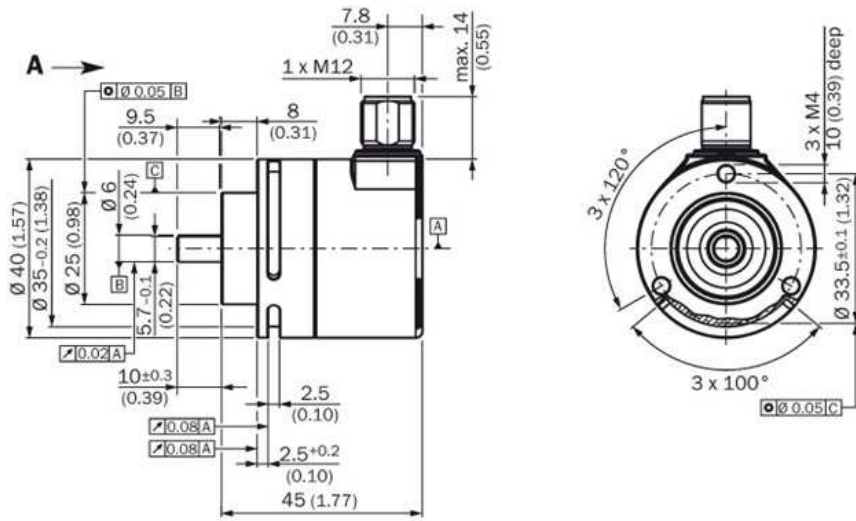
Type of code for the absolute value:	Binary
Code sequence:	Increasing, for clockwise shaft rotation, looking in direction "A" (see dimensional drawing)
Interface signals:	Parameter channel RS 485: digital, Process data channel SIN, REFSIN, COS, REFCOS: analog, differential

### Ambient data

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Working temperature range:	-20 °C ... +100 °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)
Enclosure rating:	IP 65 (according to IEC 60529), with mating connector inserted

Dimensional drawing



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