



Motor feedback systems rotary HIPERFACE® SKS/SKM36

SKS36S-HVA0-K02



Model Name > SKS36S-HVA0-K02
Part No. > 1036557



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 ¹⁾
TM (mission time):	20 a (EN ISO 13849)
PFHD: probability of dangerous failure per hour:	1.3 * 1E-08 ²⁾
MTTFd: mean time to dangerous failure:	100 a (EN ISO 13849)

¹⁾ For more detailed information on the exact configuration of your machine/unit, please consult your relevant SICK branch office. ²⁾ 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:	1 (Singleturn)
Total number of steps:	4,096
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.:	± 120 angular seconds (Error limits for evaluating sine/cosine period)
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 (EEPROM 2048)

Mechanical data

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 ²
Maximum angular acceleration:	500,000 rad/s ²
Operating torque:	0.6 Ncm
Start up torque:	0.9 Ncm
Life of ball bearings:	2.0 x 10 ⁹ revolutions
Connection type:	Connector M12, 8-pin, radial
Shaft version:	Solid shaft
Permissible Load capacity of shaft:	10 N (radial) 5 N (axial)

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 ... 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

Technical drawing of a mechanical part (Fig. 10.10) showing a cross-section with various dimensions and tolerances. The part has a total length of 45 mm and a maximum height of 14 mm. Key features include a central hole with a diameter of 10 mm, a threaded hole with a diameter of 8 mm, and a slot with a width of 6 mm. Surface finish requirements are indicated by symbols like 0.05, 0.08, and 0.2.



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