



# SKM36-HVVO-K02

SKS/SKM36

MOTOR FEEDBACK SYSTEMS ROTARY HIPERFACE®

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
SKM36-HV0-K02	1035602

Other models and accessories → [www.sick.com/SKS\\_SKM36](http://www.sick.com/SKS_SKM36)

### Detailed technical data

#### Performance

<b>Sine/cosine periods per revolution</b>	128
<b>Number of the absolute ascertainable revolutions</b>	4,096
<b>Total number of steps</b>	16,777,216
<b>Measuring step</b>	2.5 " For interpolation of the sine/cosine signals with, e. g., 12 bits
<b>Integral non-linearity</b>	± 120 Winkelsekunden, Error limits for evaluating sine/cosine period
<b>Differential non-linearity</b>	Non-linearity within a sine/cosine period
<b>Operating speed</b>	≤ 6,000 min <sup>-1</sup> , up to which the absolute position can be reliably produced
<b>Available memory area</b>	1,792 Byte

#### Interfaces

<b>Type of code for the absolute value</b>	Binary
<b>Code sequence</b>	Increasing, when turning the shaft For clockwise rotation, looking in direction "A" (see dimensional drawing), For clockwise shaft rotation, looking in direction "A" (see dimensional drawing)
<b>Communication interface</b>	HIPERFACE®

#### Electrical data

<b>Connection type</b>	Cable, 8-wire, 1.5 m
<b>Supply voltage</b>	7 V DC ... 12 V DC
<b>Recommended supply voltage</b>	8 V DC
<b>Power consumption</b>	60 mA <sup>1)</sup>
<b>Output frequency for sine/cosine signals</b>	≤ 65 kHz

<sup>1)</sup> Without load.

#### Mechanical data

<b>Shaft version</b>	Solid shaft
<b>Flange type / stator coupling</b>	Servo-/face mount flange, stator coupling
<b>Dimensions</b>	See dimensional drawing

<b>Weight</b>	≤ 0.07 kg
<b>Moment of inertia of the rotor</b>	6 gcm <sup>2</sup>
<b>Operating speed</b>	9,000 min <sup>-1</sup> , 9,000 U/min
<b>Angular acceleration</b>	≤ 500,000 rad/s <sup>2</sup>
<b>Operating torque</b>	0.6 Ncm
<b>Start up torque</b>	+ 0.9 Ncm
<b>Permissible radial shaft movement</b>	± 0.15 mm
<b>Permissible axial shaft movement</b>	± 0.3 mm
<b>Permissible Load capacity of shaft</b>	10 N (radial) 5 N (axial)
<b>Life of ball bearings</b>	2.0 x 10 <sup>9</sup> revolutions

## Ambient data

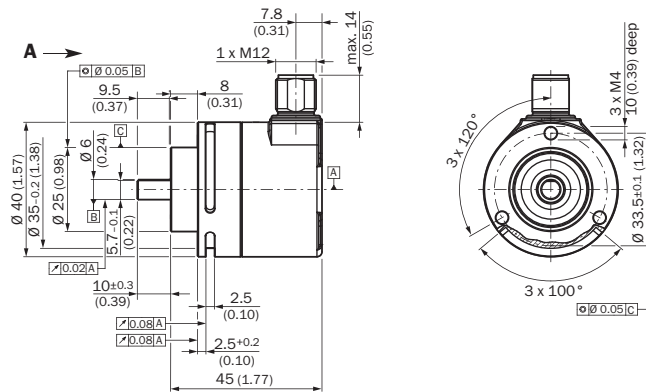
<b>Operating temperature range</b>	-20 °C ... +100 °C
<b>Storage temperature range</b>	-40 °C ... +125 °C, without package
<b>Relative humidity/condensation</b>	90 %, Condensation not permitted
<b>Resistance to shocks</b>	100 g, 6 ms, 6 ms (according to EN 60068-2-27)
<b>Frequency range of resistance to vibrations</b>	50 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
<b>EMC</b>	According to EN 61000-6-2 and EN 61000-6-3
<b>Enclosure rating</b>	IP50, with mating connector inserted (according to IEC 60529)

## Classifications

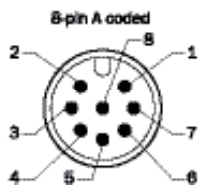
<b>ECl@ss 5.0</b>	27270590
<b>ECl@ss 5.1.4</b>	27270590
<b>ECl@ss 6.0</b>	27270590
<b>ECl@ss 6.2</b>	27270590
<b>ECl@ss 7.0</b>	27270590
<b>ECl@ss 8.0</b>	27270590
<b>ECl@ss 8.1</b>	27270590
<b>ECl@ss 9.0</b>	27270590
<b>ECl@ss 10.0</b>	27273805
<b>ECl@ss 11.0</b>	27273901
<b>ETIM 5.0</b>	EC001486
<b>ETIM 6.0</b>	EC001486
<b>ETIM 7.0</b>	EC001486
<b>UNSPSC 16.0901</b>	41112113

### Dimensional drawing (Dimensions in mm (inch))

General tolerances according to DIN ISO 2768-mk



### PIN assignment

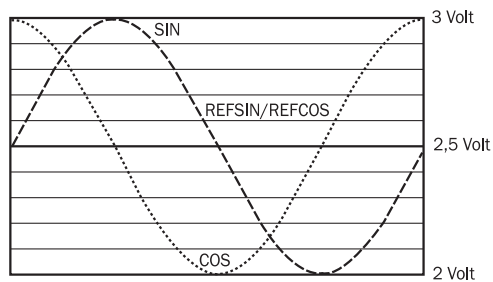


View of the plug-in face

PIN	Colour of wires	Signal	Explanation
1	brown	REFSIN	Process data channel
2	white	+ SIN	Process data channel
3	black	REFCOS	Process data channel
4	pink	+ COS	Process data channel
5	grey or yellow	Daten +	RS-485 Parameter channel
6	green or purple	Daten -	RS-485 Parameter channel
7	blue	GND	Ground connection
8	red	+ U <sub>s</sub>	Encoder Supply voltage
	Screen		Housing potential










### Diagrams

Signal diagram for clockwise shaft rotation, looking in direction "A" (see dimensional drawing) 1 period = 360° : 128



## Recommended accessories

 Other models and accessories → [www.sick.com/SKS\\_SKM36](http://www.sick.com/SKS_SKM36)

	Brief description	Type	Part no.
<b>Flanges</b>			
	Flange adapter, adaption of 25 mm spigot face mount flange to 60s face mount flange with 36 mm centering collar, Aluminum	BEF-FA-025-036	2034226
	Flange adapter, adapts SKS/SKM36 servo/face mount flange encoder with 25 mm centering collar to size 60 mm face mount flange with 36 mm centering collar, Aluminum	BEF-FA-025-036-SK	2083558
	Flange adapter, adaption of 25 mm spigot face mount flange to 50 mm servo flange, Aluminum	BEF-FA-025-050	2032622
	Flange adapter, adapts SKS/SKM36 face mount flange encoder with 25 mm centering collar to 50 mm servo flange, Aluminum	BEF-FA-025-050-SK	2083559
	Flange adapter, adaption of 25 mm spigot face mount flange to 60 mm square installation plate, Aluminum	BEF-FA-025-060RCA	2032623
	Flange adapter, adaption of 25 mm spigot face mount flange to 60 mm square installation plate with shock-absorber, Aluminum	BEF-FA-025-060RSA	2032624
	Flange adapter, adapts SKS/SKM36 servo/face mount flange encoder with 25 mm centering collar to 60 mm square mounting plate, Aluminum	BEF-FA025060R-CASK	2083560
	Flange adapter, adapts SKS/SKM36 face mount flange encoder with 25 mm centering collar to 60 mm square mounting plate with shock absorbers, Aluminum	BEF-FA025060RSASK	2083561
	Flange adapter, adapts SKS/SKM36 servo/face mount flange encoder with 25 mm centering collar to 63 mm square mounting plate, Aluminum	BEF-FA025063RECSK	2083562
<b>Mounting brackets and plates</b>			
	Mounting brackets for encoders with a centering spigot 25 mm, mounting kit for face mount flange included	BEF-WF-25	2032621
	Mounting bracket for SKS/SKM36 servo/face mount flange encoder with 25 mm centering collar, mounting kit for face mount flange included	BEF-WF-25-SK	2083557
<b>Programming and configuration tools</b>			
	SVip® LAN programming tool for all motor feedback systems	PGT-11-S LAN	1057324
	SVip® WLAN programming tool for all motor feedback systems	PGT-11-S WLAN	1067474

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)