SRM50-HGV0-K22
SRS/SRM50

MOTOR FEEDBACK SYSTEMS ROTARY HIPERFACE®

SICK
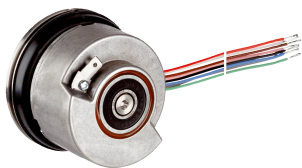Sensor Intelligence.

SRM50-HGV0-K22 | SRS/SRM50
MOTOR FEEDBACK SYSTEMS ROTARY HIPERFACE®

Ordering information

Type	Part no.
SRM50-HGV0-K22	1037082

Illustration may differ

CE

Other models and accessories ➜ www.sick.com/SRS_SRM50

Detailed technical data

Performance

Sine/cosine periods per revolution	1,024
Number of the absolute ascertainable revolutions	4,096
Total number of steps	134,217,728
Measuring step	0.3 ″ For interpolation of the sine/cosine signals with, e. g., 12 bits
Integral non-linearity	Typ. ± 45 ″, Error limits for evaluating sine/cosine period, without mechanical tension of the stator coupling
Differential non-linearity	± 7 ″
Operating speed	≤ 6,000 min⁻¹, up to which the absolute position can be reliably produced
Available memory area	1,792 Byte
System accuracy	± 52 ″

Interfaces

Type of code for the absolute value	Binary
Code sequence	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)
Communication interface	HIPERFACE®

Electrical data

Connection type	Cable, 8-wire, radial, 0.2 m
Supply voltage	7 V DC ... 12 V DC
Recommended supply voltage	8 V DC
Current consumption	80 mA [1]
Output frequency for sine/cosine signals	≤ 200 kHz
MTTF: mean time to dangerous failure	235 years (EN ISO 13849) [2]

[1] Without load.

[2] This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 60 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Mechanical data

Shaft version	Tapered shaft
Flange type / stator coupling	Resolver support, Resolver support
Dimensions	See dimensional drawing

Weight	≤ 0.2 kg
Moment of inertia of the rotor	10 gcm²
Operating speed	≤ 12,000 min⁻¹
Angular acceleration	≤ 200,000 rad/s²
Operating torque	0.2 Ncm
Start up torque	+ 0.4 Ncm
Permissible radial shaft movement	± 0.6 mm
Permissible axial shaft movement	± 0.95 mm
Permissible movement static	± 0.3 mm radial ± 0.75 mm axial
Permissible movement dynamic	± 0.1 mm radial ± 0.2 mm axial
Angular motion perpendicular to the rotational axis, static	± 0.005 mm/mm
Angular motion perpendicular to the rotational axis, dynamic	± 0.0025 mm/mm
Life of ball bearings	3.6×10^9 revolutions

Ambient data

Operating temperature range	–30 °C ... +115 °C
Storage temperature range	–40 °C ... +125 °C, without package
Relative humidity/condensation	90 %, Condensation not permitted
Resistance to shocks	100 g, 10 ms, 10 ms (according to EN 60068-2-27)
Frequency range of resistance to vibrations	20 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)
EMC	According to EN 61000-6-2 and EN 61000-6-3 [1]
Enclosure rating	IP40, with mating connector inserted (IEC 60529)

[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. The GND-(0 V) connection of the supply voltage is also grounded here. If other shielding concepts are used, users must perform their own tests.

Classifications

ECLASS 5.0	27270590
ECLASS 5.1.4	27270590
ECLASS 6.0	27270590
ECLASS 6.2	27270590
ECLASS 7.0	27270590
ECLASS 8.0	27270590
ECLASS 8.1	27270590
ECLASS 9.0	27270590
ECLASS 10.0	27273805
ECLASS 11.0	27273901
ECLASS 12.0	27273901
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486

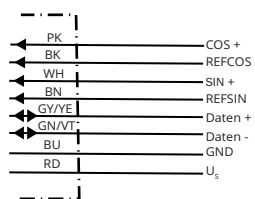| ETIM 8.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))

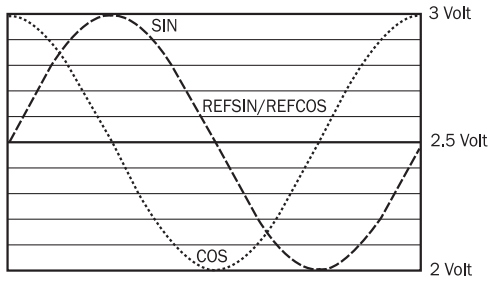Resolver support, tapered shaft
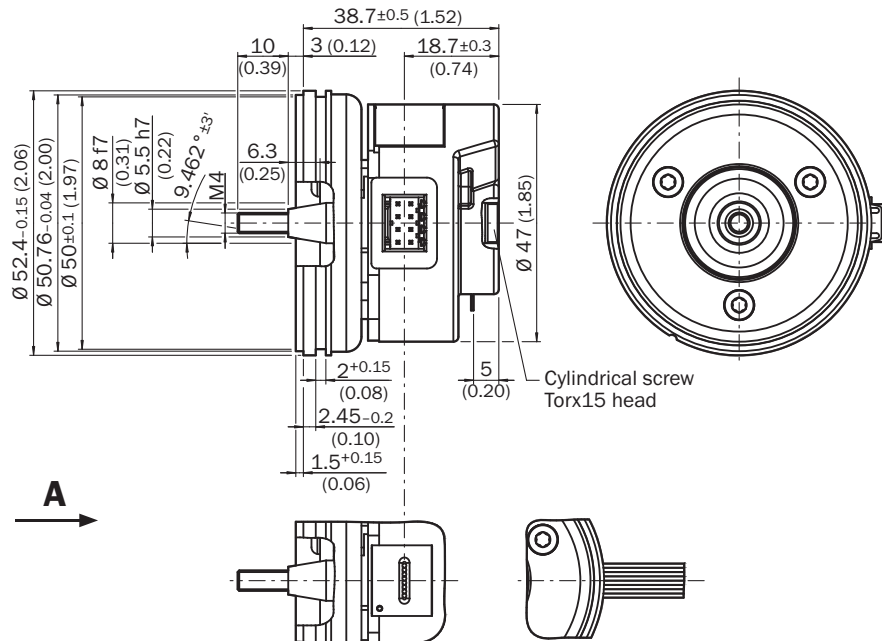
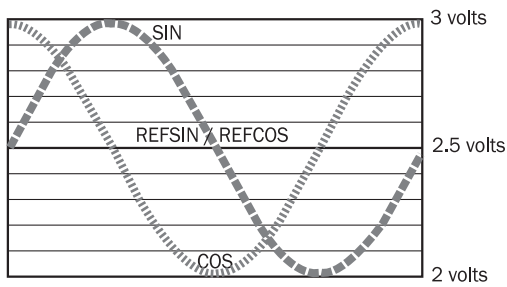General tolerances according to ISO 2768-mk

PIN assignment

Diagrams

Signal specification of the process channel

Signal diagram for clockwise rotation of the shaft looking in direction "A" (see dimensional drawing)1 period = 360 ° : 1024
Signal diagram for clockwise rotation of the shaft looking in direction "A" (see dimensional drawing)1 period = 360 ° : 1024

Recommended accessories

Other models and accessories ➔ www.sick.com/SRS_SRM50

Brief description	Type	Part no.
Programming and configuration tools		
SVip® LAN programming tool for all motor feedback systems	PGT-11-S LAN	1057324
Spare parts		
BEF-MK-S02	BEF-MK-S02	2074582

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."

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