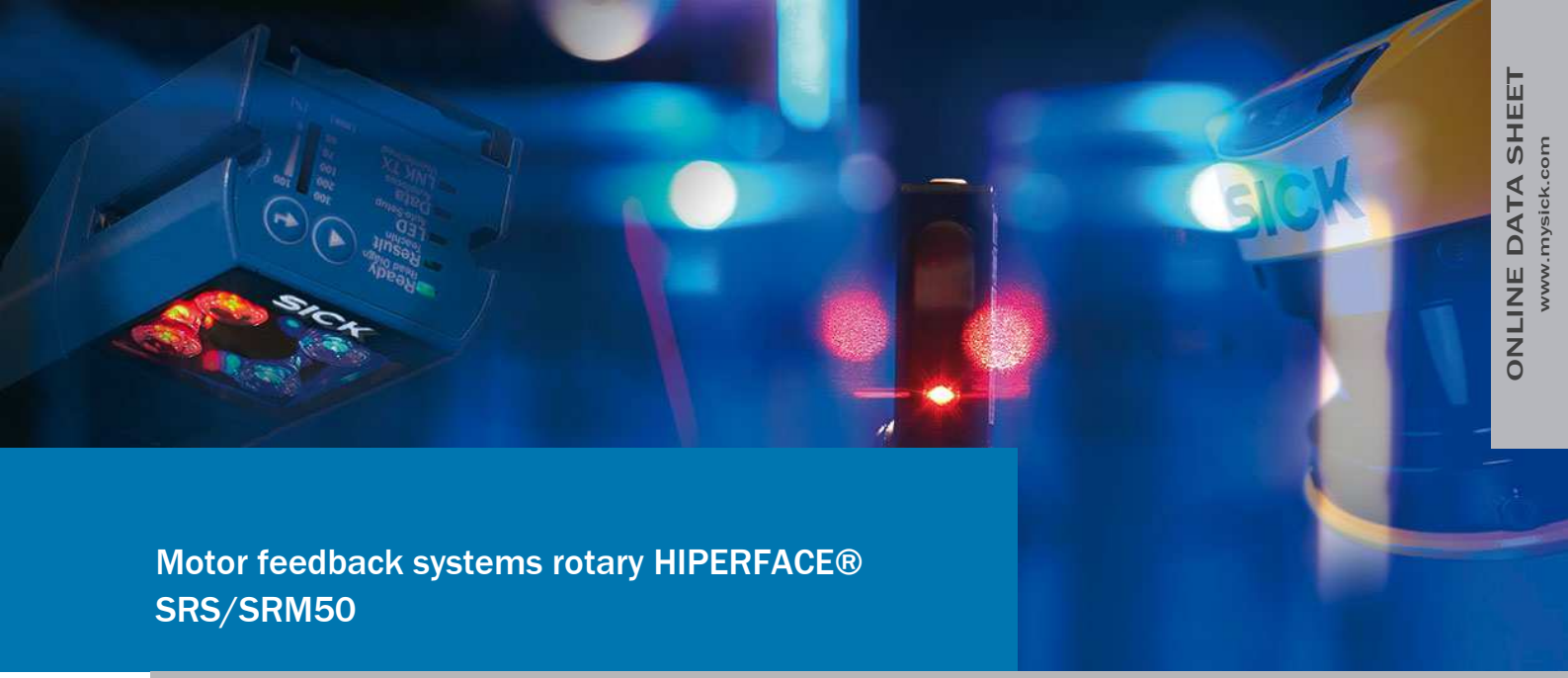

ONLINE DATA SHEET
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Motor feedback systems rotary HIPERFACE®
SRS/SRM50

SRM50S-HGV0-K22

SICK
Sensor Intelligence.

Motor feedback systems rotary HIPERFACE® SRS/SRM50

Model Name > SRM50S-HGV0-K22
Part No. > 1051804

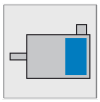


Illustration may differ

At a glance

- Motor feedback systems for the top performance range
- 1,024 sine/ cosine periods per revolution
- Absolute position with a resolution of 32,768 increments per revolution and 4,096 revolutions with the multiturn system
- HIPERFACE® interface: Programming of the position value and electronic type label
- Insert shaft or tapered shaft with various torque supports
- Integrated version, mounted version or stand-alone design
- Certified according to SIL2/PL d (only valid for SRS50S/SRM50S...)
- Conforms to RoHs

Your benefits

- Motor feedback system with HIPERFACE® interface
- High shock/vibration resistance thanks to built-in metal code disk
- Consistent motor design due to identical size of single and multiturn design
- To use of a motor feedback system certified to SIL2/PL d makes it easier to have your system certified.
- Very smooth running thanks to maximum ball bearing distance

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)
Maximum demand rate:	Continuous (analog signals)
PFHD: probability of dangerous failure per hour:	1.0 * 1E-08 [2)]
MTTFd: mean time to dangerous failure:	1,073 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:	1,024
Number of the absolute ascertainable revolutions:	4,096 (Multiturn)
Total number of steps:	134,217,728
Measuring step:	0.3 angular seconds at interpolation of the sine/cosine signals with e.g. 12 Bit

Differential non-linearity:	± 7 angular seconds (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.:	± 45 angular seconds (Error limits for evaluating sine/cosine period) without mechanical tension of the stator coupling

Mechanical data

Flange type/stator coupling:	Resolver support
Dimensions:	See dimensional drawing
Moment of inertia of the rotor:	10 gcm²
Maximum operating speed:	12,000 /min
Maximum angular acceleration:	200,000 rad/s²
Operating torque:	0.2 Ncm
Start up torque:	0.4 Ncm
Permissible shaft movement, radial, static:	± 0.25 mm
Permissible shaft movement, radial, dynamic:	± 0.1 mm
Permissible shaft movement, axial, static:	± 0.75 mm
Permissible shaft movement, axial, dynamic:	± 0.2 mm
Life of ball bearings:	3.6 x 10^9 revolutions
Connection type:	Cable, 8-pin, radial, 200 mm
Shaft version:	Tapered shaft
Angular motion perpendicular to the rotational axis, static:	± 0.005 mm/mm
Angular motion perpendicular to the rotational axis, dynamic:	± 0.002 mm/mm
GEWICHT01:	0.2 kg

Electrical data

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 ... 200 kHz
Operating power consumption (no load):	80 mA [1]

[1] Without load

Interfaces

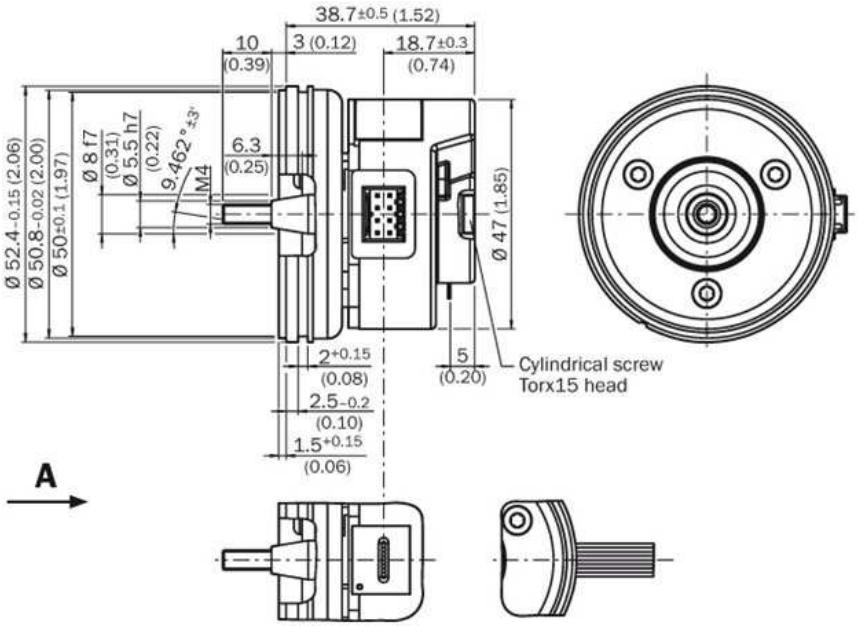
Type of code for the absolute value:	Binary
Code sequence:	Increasing, for clockwise shaft rotation, looking in direction "A" (see dimensional drawing)
Interface signals:	Parameter channel RS 485: digital, Process data channel SIN, REFSIN, COS, REFCOS: analog, differential

Ambient data

Working 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/according to EN 60068-2-27
Resistance to vibration:	20 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 40 (according to IEC 60529), with mating connector inserted

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



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