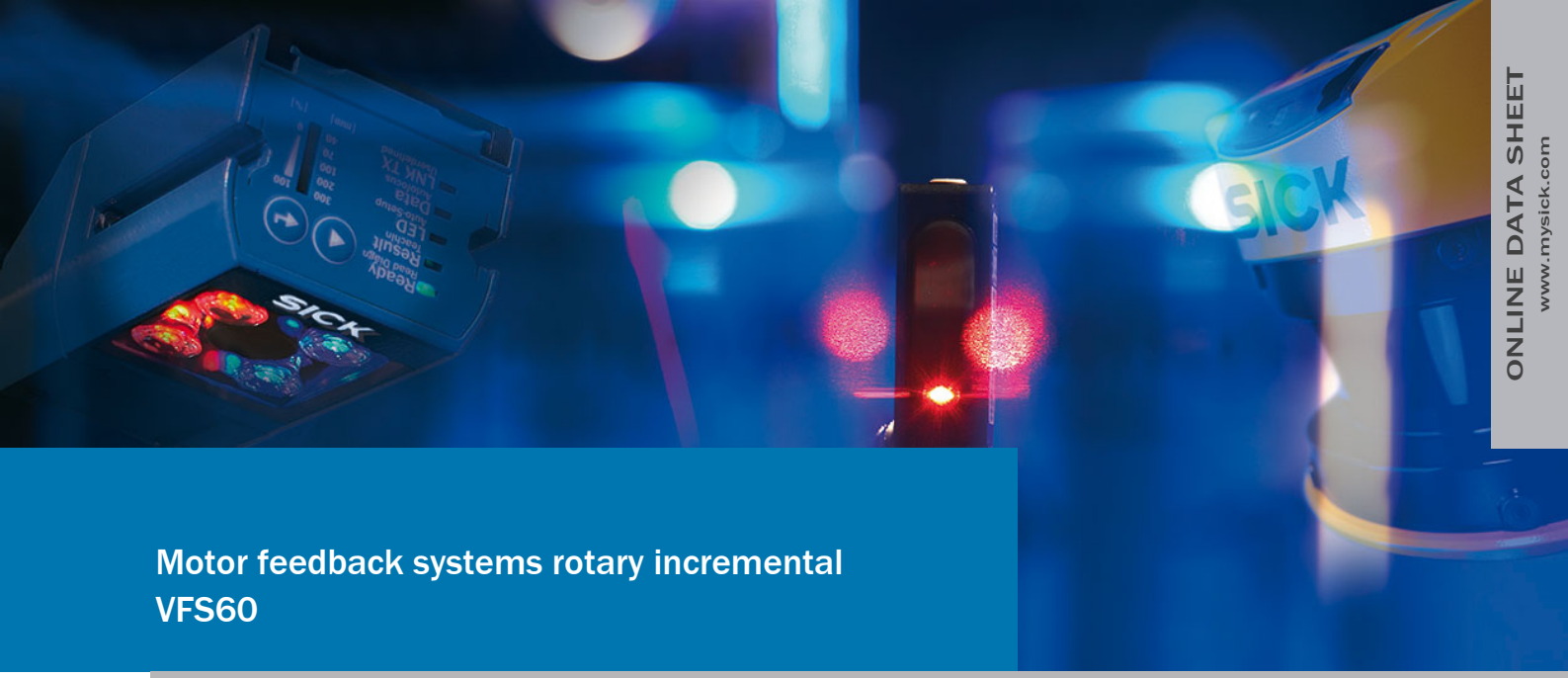


ONLINE DATA SHEET
www.mysick.com

Motor feedback systems rotary incremental
VFS60

VFS60E-BDNJ01024

SICK
Sensor Intelligence.

Motor feedback systems rotary incremental
VFS60

Model Name > VFS60E-BDNJ01024
Part No. > -*

Illustration may differ

* When ordering for the first time, please use the information in "Model Name" instead of "Part No."

At a glance

- TTL, HTL or sine 0.5 VSS interfaces
- Resolution of up to 65,536 lines per revolution
- Individual programming of the interface, line count and of the zero pulse
- Direct programming via RS485
- Excellent concentricity through large distance between the ball bearings
- Exceptional robustness an protection class IP 65
- Mechanical flexibility through blind hollow shaft and through hollow shafts with diameters of 8 to 15 mm, available with various torque supports
- Temperature range from -30 °C to +100 °C

Your benefits

- Programmable version for a reduced product variety
- Various programming tools designed to take into account your own programming requirements
- High performance and reliability even in rough ambient conditions
- Large ball bearing distances reduce uneven wear and minimize vibration on the motor feedback housing, which increases the motor feedback system's service life
- High vibration resistance and extended temperature range through nickel code disk

Performance

Number of lines per revolution:	1,024
Reference signal, number:	1
Reference signal, position:	90 ° electronically, gated with Sin. and Cos.
Error limits:	± 0.3 °
Measuring step deviation:	± 0.2 °
Maximum initialisation time:	40 ms

Mechanical data

Shaft version:	Blind hollow shaft
Shaft diameter:	10 mm
Shaft material:	Metal
Shaft plug-in length:	15 mm ... 42 mm
Flange type/stator coupling:	Standard

Dimensions:	See dimensional drawing
Mass:	0.2 kg
Moment of inertia of the rotor:	40 gcm²
Maximum operating speed:	6,000 /min [1]
Maximum angular acceleration:	500,000 rad/s²
Operating torque:	0.6 Ncm (20 °C)
Start up torque:	0.8 Ncm (20 °C)
Permissible shaft movement, radial, dynamic:	± 0.1 mm
Permissible shaft movement, axial, dynamic:	± 0.2 mm
Life of ball bearings:	3.0 x 10^9 revolutions
Connection type:	Cable, 8-pin, radial, 0.5 m [2]

[1] Self-warming 3.3 K/1,000 1/min, when applying note working temperature range [2] The universal cable outlet is positioned in such a way, that it is possible to lay the cable in a radial or axial direction without kinking it

Electrical data

Electrical interface:	Sinus 0.5 VPP
Operating voltage range/supply Voltage:	4.5 V ... 5.5 V
Maximum output frequency:	200 kHz
Load resistance:	120 Ω
Signal SIN COS before differential generation:	0.5 V ± 20 %
Signal Z before differential generation LOW:	1.6 V ± 15 %
Signal Z before differential generation HIGH:	2.9 V ± 15 %
Signal offset Z:	2.5 V ± 10 %
Operating power consumption (no load):	40 mA [1]

[1] Without load

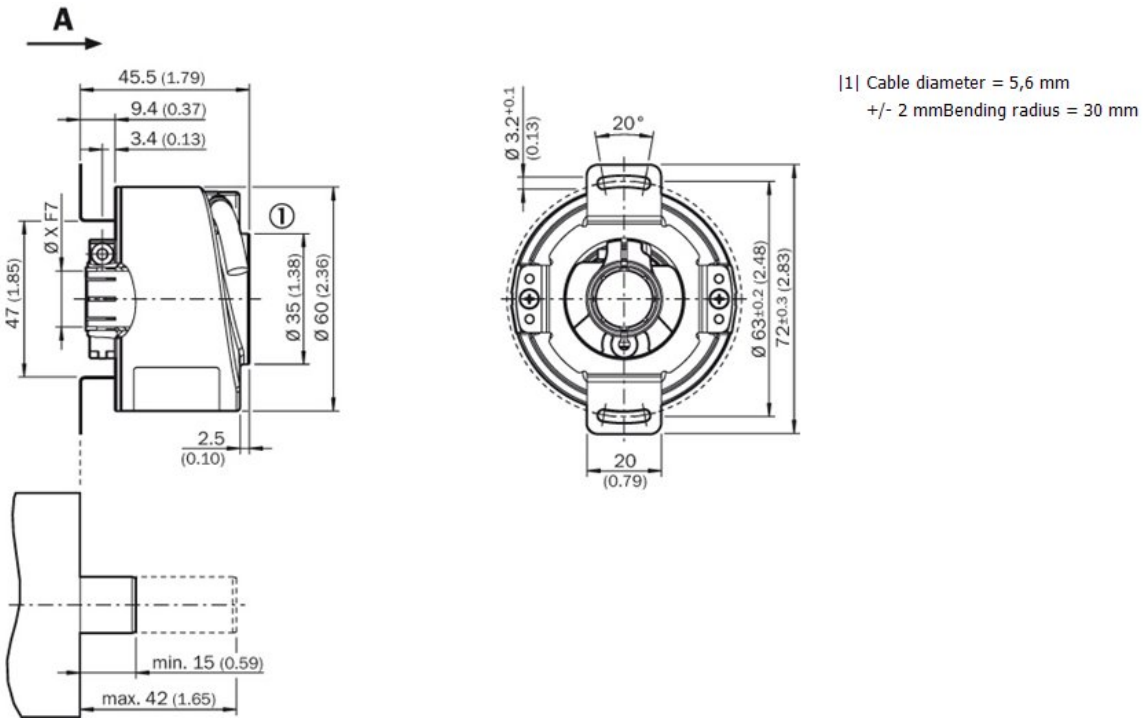
Interfaces

Interface signals:	Process data channel SIN, SIN_, COS, COS_: analog, differential, Process data channel Z, Z_: digital differential

Ambient data

Working temperature range:	-30 °C ... 100 °C
Storage temperature range:	-40 °C ... 100 °C, without package
Relative humidity/Condensation:	90 %, condensation of the optical scanning not permitted
Resistance to shocks:	70 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration:	30 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), shaft side, IP 67 (according to IEC 60529), housing side cable outlet

Dimensional drawing



|1| Cable diameter = 5,6 mm
+/- 2 mmBending radius = 30 mm

· USmod 4c int40

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