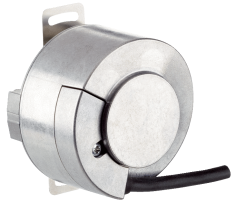


VFS60B-T8CK02048

VFS60

MOTOR FEEDBACK SYSTEMS ROTARY INCREMENTAL

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|------------------|----------|
| VFS60B-T8CK02048 | 1036026 |

Other models and accessories → www.sick.com/VFS60

Illustration may differ



Detailed technical data

Performance

| | |
|---------------------------------------|--|
| Number of lines per revolution | 2,048 |
| Reference signal, number | 1 |
| Reference signal, position | 90° electric, logically gated with A and B |
| Measuring step deviation | ± 0.01° |

Interfaces

| | |
|--------------------------------|-------------|
| Communication interface | Incremental |
|--------------------------------|-------------|

Electrical data

| | |
|---------------------------------|--|
| Connection type | Cable, 8-wire, radial, 1.5 m ¹⁾ |
| Supply voltage | 10 V ... 32 V |
| Current consumption | 40 mA ²⁾ |
| Maximum output frequency | ≤ 600 kHz |
| Maximum load current | ≤ 30 mA |

¹⁾ The universal cable connection is positioned so that it is possible to lay it without bends in a radial or axial direction.

²⁾ Without load.

Mechanical data

| | |
|---------------------------------------|--|
| Shaft diameter | 15 mm |
| Shaft material | Plastic |
| Flange type / stator coupling | Standard |
| Dimensions | See dimensional drawing |
| Weight | + 0.2 kg |
| Moment of inertia of the rotor | 40 gcm ² |
| Operating speed | 12,000 min ⁻¹ ¹⁾ |
| Angular acceleration | ≤ 500,000 rad/s ² |
| Operating torque | 0.6 Ncm (+20 °C) |
| Start up torque | + 0.8 Ncm (+20 °C) |

¹⁾ Allow for self-heating of 3.3 K per 1,000 rpm when designing the operating temperature range.

| | |
|---|-----------------------------------|
| Permissible movement of the drive element, static | ± 0.5 mm radial ± 0.5 mm axial |
| Permissible movement of the drive element, dynamic | ± 0.1 mm radial ± 0.2 mm axial |
| Life of ball bearings | 3.0 x 10 ⁹ revolutions |

¹⁾ Allow for self-heating of 3.3 K per 1,000 rpm when designing the operating temperature range.

Ambient data

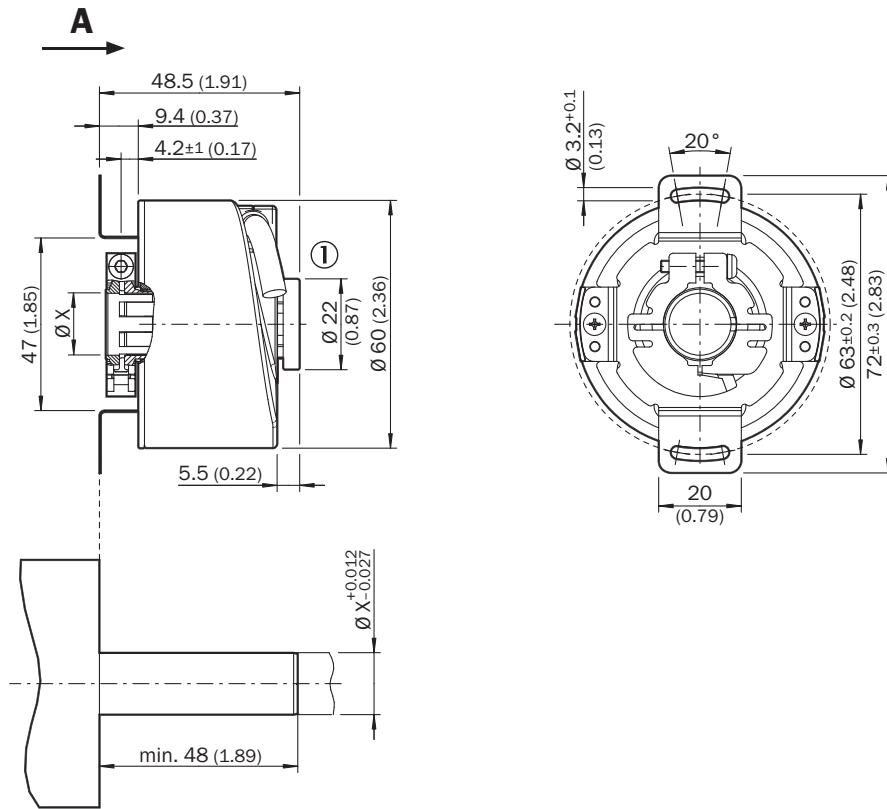
| | |
|--|--|
| Operating temperature range | -30 °C ... +100 °C |
| Storage temperature range | -40 °C ... +100 °C, without package |
| Relative humidity/condensation | 90 %, Condensation not permitted |
| Resistance to shocks | 70 g, 6 ms (according to EN 60068-2-27) |
| Frequency range of resistance to vibrations | 30 g, 10 Hz ... 2,000 Hz (EN 60068-2-6) |
| EMC | According to EN 61000-6-2 and EN 61000-6-4 |
| Enclosure rating | IP65, shaft side (IEC 60529) IP65, housing side, cable connection (IEC 60529) |

Classifications

| | |
|-----------------------|----------|
| eCI@ss 5.0 | 27270501 |
| eCI@ss 5.1.4 | 27270501 |
| eCI@ss 6.0 | 27270590 |
| eCI@ss 6.2 | 27270590 |
| eCI@ss 7.0 | 27270501 |
| eCI@ss 8.0 | 27270501 |
| eCI@ss 8.1 | 27270501 |
| eCI@ss 9.0 | 27270501 |
| eCI@ss 10.0 | 27273805 |
| eCI@ss 11.0 | 27273901 |
| eCI@ss 12.0 | 27273901 |
| ETIM 5.0 | EC001486 |
| ETIM 6.0 | EC001486 |
| ETIM 7.0 | EC001486 |
| ETIM 8.0 | EC001486 |
| UNSPSC 16.0901 | 41112113 |

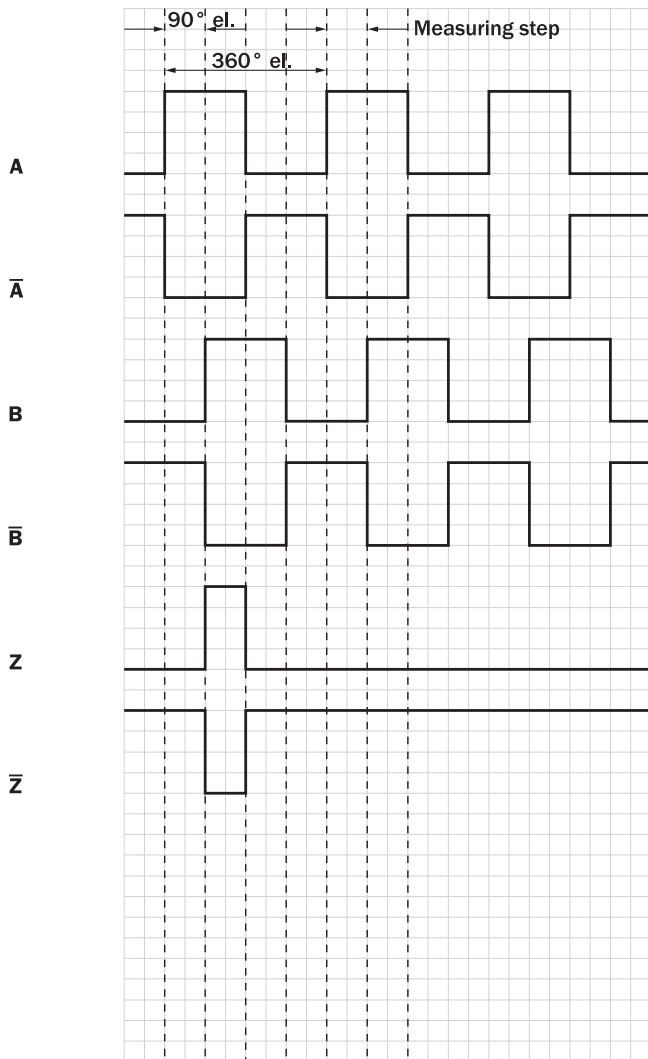
Dimensional drawing (Dimensions in mm (inch))

Through hollow shaft, plastic hollow shaft clamping, cable





General tolerances according to DIN ISO 2768-mk

Diagrams



Recommended accessories

Other models and accessories → www.sick.com/VFS60

| | Brief description | Type | Part no. |
|---|--|-----------------|----------|
| Programming and configuration tools | | | |
|  | SVip® LAN programming tool for all motor feedback systems | PGT-11-S LAN | 1057324 |
| Flanges | | | |
|  | One-sided stator coupling, slot, slot radius 33 mm to 48.5 mm, slot width 5.1 mm | BEF-DS01DFS/VFS | 2047428 |

| | Brief description | Type | Part no. |
|---|---|------------------|----------|
|  | One-sided stator coupling, slot, slot radius 32.25 mm to 141.75 mm, slot width 5.1 mm | BEF-DS02DFS/VFS | 2047430 |
|  | One-sided stator coupling, slot, slot radius 33 mm to 211.9 mm, slot width 5.1 mm | BEF-DS03DFS/VFS | 2047431 |
| Plug connectors and cables | | | |
|  | Head A: cable Head B: Flying leads Cable: SSI, Incremental, HIPERFACE®, PUR, halogen-free, shielded | LTG-2308-MWENC | 6027529 |
|  | Head A: cable Head B: Flying leads Cable: SSI, Incremental, PUR, shielded | LTG-2411-MW | 6027530 |
|  | Head A: cable Head B: Flying leads Cable: SSI, Incremental, PUR, halogen-free, shielded | LTG-2512-MW | 6027531 |
|  | Head A: cable Head B: Flying leads Cable: SSI, TTL, HTL, Incremental, PUR, halogen-free, shielded | LTG-2612-MW | 6028516 |
|  | Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 3 m | DOL-0J08-G03MAA3 | 2046875 |
|  | Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: Incremental, SSI, PUR, halogen-free, shielded, 5 m | DOL-0J08-G05MAA3 | 2046876 |
|  | Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: Incremental, SSI, PUR, halogen-free, shielded, 0.5 m | DOL-0J08-G0M5AA3 | 2046873 |
|  | Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: Incremental, SSI, PUR, halogen-free, shielded, 10 m | DOL-0J08-G10MAA3 | 2046877 |
|  | Head A: female connector, JST, 8-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 1.5 m | DOL-0J08-G1M5AA3 | 2046874 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 2 m | DOL-2312-G02MLA3 | 2030682 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 3 m | DOL-2312-G03MMA3 | 2029213 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 5 m | DOL-2312-G05MMA3 | 2029214 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 7 m | DOL-2312-G07MLA3 | 2030685 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 10 m | DOL-2312-G10MLA3 | 2030688 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 10 m | DOL-2312-G10MMA3 | 2029215 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 15 m | DOL-2312-G15MLA3 | 2030692 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 1.5 m | DOL-2312-G1M5MA3 | 2029212 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 20 m | DOL-2312-G20MLA3 | 2030695 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 20 m | DOL-2312-G20MMA3 | 2029216 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 25 m | DOL-2312-G25MLA3 | 2030699 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 30 m | DOL-2312-G30MLA3 | 2030702 |
|  | Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 30 m | DOL-2312-G30MMA3 | 2029217 |
|  | Head A: male connector, M12, 2-pin, angled, B-coded Head B: Flying leads Cable: Fieldbus, PROFIBUS DP, PUR, halogen-free, shielded, 5 m | YN2B22-050PB1XLEAX | 2106277 |
|  | Head A: male connector, M12, 2-pin, angled, B-coded Head B: Flying leads Cable: Fieldbus, PROFIBUS DP, PUR, halogen-free, shielded, 10 m | YN2B22-100PB1XLEAX | 2106278 |
|  | Head A: female connector, JST, 8-pin, straight Head B: male connector, M23, 17-pin, straight Cable: Incremental, unshielded, 1 m | DSL-2317-G01MJB7 | 2071332 |
|  | Head A: female connector, terminal box, 8-pin, straight Head B: male connector, M23, 17-pin, straight Cable: Incremental, unshielded, 1 m | DSL-2317-G01MJC7 | 2071331 |
|  | Head A: female connector, JST, 8-pin, straight Head B: male connector, M23, 12-pin, straight Cable: Incremental, PUR, halogen-free, shielded, 1 m | STL-2312-G01MAA3 | 2061622 |
|  | Head A: female connector, JST, 8-pin, straight Head B: male connector, M23, 12-pin, straight Cable: Incremental, PUR, halogen-free, shielded, 2 m | STL-2312-G02MAA3 | 2061504 |
|  | Head A: female connector, JST, 8-pin, straight Head B: male connector, M23, 12-pin, straight Cable: Incremental, PUR, halogen-free, shielded, 0.35 m | STL-2312-GM35AA3 | 2061621 |
|  | Head A: female connector, M23, 9-pin, straight Cable: HIPERFACE®, SSI, Incremental, shielded | DOS-2309-G | 6028533 |
|  | Head A: female connector, M23, 12-pin, straight Cable: HIPERFACE®, SSI, Incremental, shielded | DOS-2312-G | 6027538 |
|  | Head A: female connector, M23, 12-pin, angled Cable: HIPERFACE®, SSI, Incremental, shielded | DOS-2312-W01 | 2072580 |
|  | Head A: male connector, M23, 12-pin, straight Cable: HIPERFACE®, SSI, Incremental, RS-422, shielded | STE-2312-G | 6027537 |

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