



Incremental encoders DFS60, Rotary

DFS60B-S4AA00100



Model Name > [DFS60B-S4AA00100](#)
Part No. > [1037206](#)



Illustration may differ

At a glance

- Compact installation depth
- High resolution up to 16 bits
- Optionally programmable: Output voltage, zero pulse position, zero pulse width and number of pulses
- Connection: Radial or axial cable outlet, M23 or M12 connector, axial or radial
- Electrical interfaces: 5V & 24V TTL/RS-422, 24 V HTL/push pull
- Mechanical interfaces: face mount or servo flange, blind or through hollow shaft
- Remote zero set possible

Your benefits

- Reduced storage costs and downtime due to customer-specific programming
- Variety of different mechanical and electrical interfaces enable the encoder to be optimally adjusted to fit the installation situation
- Excellent concentricity even at high speeds
- High resolution of up to 16 bits ensures precise measurements
- Permanent and safe operation due to a high enclosure rating, temperature resistance and a long bearing lifetime
- Programmability via the PGT-08 programming software and the PGT-10-S display programming tool allow the encoder to be adapted flexibly and quickly according to customer needs
- Programmable zero pulse position simplifies installation



Performance

| | |
|---------------------------|-------------------------------------|
| Error limits: | ± 0.05 ° |
| Measuring step deviation: | ± 0.01 ° |
| Measuring step: | 90 °/electronically/number of lines |
| Initialization time: | 40 ms |
| Pulses per revolution: | 100 |

Mechanical data

| | |
|---------------------------------|--------------------------------|
| Mechanical interface: | Solid shaft, Face mount flange |
| Shaft diameter: | 10 mm x 19 mm |
| Mass: | 0.3 kg |
| Start up torque: | 0.5 Ncm (+20 °C) |
| Operating torque: | 0.3 Ncm (+20 °C) |
| Maximum operating speed: | 10,000 /min |
| Moment of inertia of the rotor: | 6.2 gcm ² |

| | |
|---|------------------------------------|
| Bearing lifetime: | 3.6 x 10 ¹⁰ revolutions |
| Max. angular acceleration: | 500,000 rad/s ² |
| Permissible shaft loading radial/axial: | 40 N (axial), 80 N (radial) |

Electrical data

| | |
|--|---|
| Electrical interface: | 4.5 V ... 5.5 V, TTL/RS422, Connector M23, 12-pin, radial |
| Connection type: | Connector M23, 12-pin, radial |
| Maximum output frequency: | 600 kHz |
| Reference signal, number: | 1 |
| Reference signal, position: | 90 °, electronically, gated with A and B |
| Operating voltage range: | 4.5 V ... 5.5 V |
| Load current max.: | 30 mA |
| MTTFd: mean time to dangerous failure: | 300 a (EN ISO 13849-1) ¹⁾ |

¹⁾ 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 40°C, frequency of use 8760 h/a. All

electronic failures are considered hazardous. For more information, see document no. 8015532.

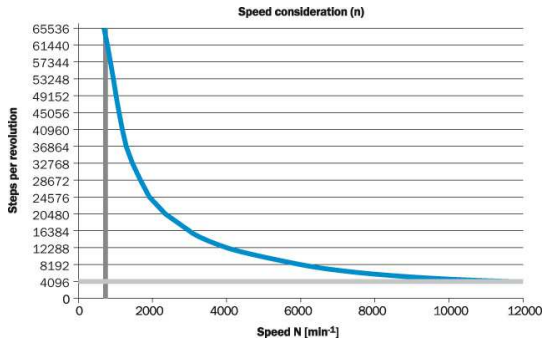
Ambient data

| | |
|--------------------------------|--|
| EMC: | (according to EN 61000-6-2 and EN 61000-6-3) |
| Working temperature range: | -30 °C ... +100 °C |
| Storage temperature range: | -40 °C ... +100 °C, without package |
| Resistance to shocks: | 70 g (according to EN 60068-2-27) |
| Resistance to vibration: | 30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6) |
| Enclosure rating: | IP 65 (according to IEC 60529), shaft side, IP 67 (according to IEC 60529), housing side |
| Permissible relative humidity: | 90 % (condensation of the optical scanning not permitted) |

¹⁾ With mating connector fitted

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Drehzahlbetrachtung



Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com