



## Incremental encoders DFS60, Rotary

DFS60B-BDCC10000



**Model Name** > **DFS60B-BDCC10000**  
**Part No.** > **1065156**



*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:	Electronically/number of lines
Initialization time:	40 ms
Pulses per revolution:	10,000

**Mechanical data**

Mechanical interface:	Blind hollow shaft
Shaft diameter:	10 mm
Mass:	0.2 kg
Start up torque:	0.8 Ncm (20 °C)
Operating torque:	0.6 Ncm (20 °C)
Permissible movement radial static/dynamic:	± 0.3 mm, ± 0.1 mm
Maximum operating speed:	6,000 /min
Moment of inertia of the rotor:	40 gcm <sup>2</sup>

Bearing lifetime: 3.6 x 10<sup>10</sup> revolutions  
Max. angular acceleration: 500,000 rad/s<sup>2</sup>  
Shaft material: Metal

#### Electrical data

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Electrical interface: 10 V ... 32 V, TTL/RS422, Connector M12, 8-pin, radial  
Connection type: Connector M12, 8-pin, radial  
Maximum output frequency: 600 kHz  
Reference signal, number: 1  
Reference signal, position: 90 °, electronically, gated with A and B  
Operating voltage range: 10 V ... 32 V  
Load current max.: 30 mA  
Power consumption: 0.5 W (without load)  
MTTFd: mean time to dangerous failure: 300 a (EN ISO 13849-1) <sup>1)</sup>

<sup>1)</sup> 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

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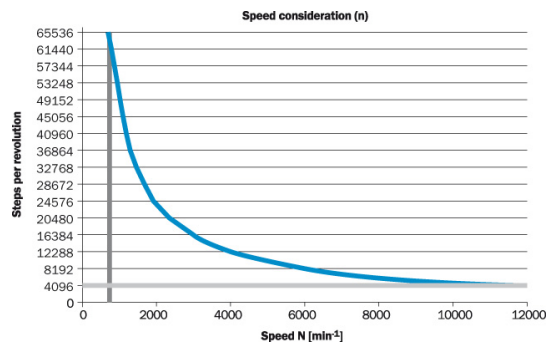
EMC: (according to EN 61000-6-2 and EN 61000-6-3)  
Working temperature range: -30 °C ... 100 °C  
Storage temperature range: -40 °C ... 100 °C, without package  
Resistance to shocks: 70 g (according to EN 60068-2-27)  
Resistance to vibration: 30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)  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

<sup>1)</sup> With mating connector fitted



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## Drehzahlbetrachtung



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