



Incremental encoders DFS60, Rotary

DFS60E-BHAC01024



Model Name > [DFS60E-BHAC01024](#)
Part No. > [1052676](#)



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: | ± 0.3 ° |
| Measuring step: | 90 ° / electronically/number of lines |
| Initialization time: | 40 ms |
| Pulses per revolution: | 1,024 |

Mechanical data

| | |
|---|--------------------|
| Mechanical interface: | Blind hollow shaft |
| Shaft diameter: | 15 mm |
| Mass: | 0.2 kg |
| Start up torque: | 0.8 Ncm (20 °C) |
| Operating torque: | 0.6 Ncm (20 °C) |
| Permissible movement axial static/dynamic: | ± 0.5 mm, ± 0.2 mm |
| 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 ² |
| Bearing lifetime: | 3.6 x 10 ¹⁰ revolutions |
| Max. angular acceleration: | 500,000 rad/s ² |
| Shaft material: | Metal |

Electrical data

| | |
|--|--|
| Electrical interface: | 4.5 V ... 5.5 V, TTL/RS422, Connector M12, 8-pin, radial |
| Connection type: | Connector M12, 8-pin, radial |
| Maximum output frequency: | 300 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: | 0 °C ... 85 °C |
| Storage temperature range: | -40 °C ... 100 °C, without package |
| Resistance to shocks: | 50 g (according to EN 60068-2-27) |
| Resistance to vibration: | 20 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) |

¹⁾ With mating connector fitted

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Drehzahlbetrachtung



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