



Incremental encoders DFS60, Rotary

DFS60E-S4WA00500



Model Name > [DFS60E-S4WA00500](#)
Part No. > [1058816](#)



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:	$\pm 0.3^\circ$
Measuring step deviation:	$\pm 0.2^\circ$
Measuring step:	$90^\circ / \text{electronically/number of lines}$
Initialization time:	30 ms
Pulses per revolution:	500

Mechanical data

Mechanical interface:	Solid shaft, Face mount flange
Shaft diameter:	10 mm x 19 mm
Mass:	0.3 kg
Operating torque:	0.3 Ncm
Maximum operating speed:	10,000 /min
Moment of inertia of the rotor:	6.2 gcm ²
Bearing lifetime:	3.6×10^{10} revolutions

Max. angular acceleration: 500,000 rad/s²

Electrical data

Electrical interface: 10 V ... 32 V, HTL/Push pull, 0-SET, Connector M23, 12-pin, radial
Connection type: Connector M23, 12-pin, radial
Maximum output frequency: 300 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: 0.7 W (without load)
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), housing side¹⁾
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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