



Incremental encoders DDS50

DDS50E-S4AR00360



Model Name > [DDS50E-S4AR00360](#)
Part No. > [1038656](#)



Illustration may differ

At a glance

- Compact diameter of 50 mm
- Choice of various electric interfaces: TTL/RS-422, HTL/push pull and open collector NPN
- Face mount flange with solid shaft
- Connection type using axial cable outlet
- Line counts from 100 up to 2,500 possible
- Working temperature range: -10 °C ... 70 °C
- Enclosure rating: IP65

Your benefits

- Compact design easily fits in applications with limited installation space
- Extensive incremental encoders product portfolio means users can select the right solution for their requirements
- Excellent price-performance ratio with a rugged IP 65 enclosure rating

The product has been discontinued. Please follow the "replacement product" link for information about alternative products.



Performance

| | |
|---------------------------|---------------------------------|
| Error limits: | $\pm 0.08^\circ$ |
| Measuring step deviation: | $\pm 0.025^\circ$ ¹⁾ |
| Measuring step: | 0.25° ²⁾ |
| Pulses per revolution: | 360 |

¹⁾ Measuring step x 0.1 ²⁾ $360^\circ / (\text{number of lines} \times 4)$

Mechanical data

| | |
|---------------------------------|---------------------------------|
| Mechanical interface: | Solid shaft, Face mount flange |
| Shaft diameter: | 8 mm x 15.5 mm |
| Mass: | 145 g |
| Start up torque: | 1 Ncm (20 °C) |
| Operating torque: | 4 Nmm (20 °C) |
| Maximum operating speed: | 6,000 U/min ¹⁾ |
| Moment of inertia of the rotor: | 0.8 kg/mm ² |
| Bearing lifetime: | 2 x 10 ⁹ revolutions |

Max. angular acceleration: $5 \times 10^5 \text{ rad/s}^2$
Permissible shaft loading radial/axial: 50 N, 30 N

¹⁾ Self-warming 3.3 K per 1,000 1/min

Electrical data

Electrical interface: 4.5 V ... 5.5 V, TTL/RS422, Cable, axial, 1.5 m
Connection type: Cable, axial, 1.5 m
Operating power consumption (no load): 100 mA
Supply voltage: 4.5 V ... 5.5 V
Output current: 20 mA
Maximum output frequency: 300 kHz
Reference signal, number: 1
Reference signal, position: 90 °, electronically, gated with A and B

Ambient data

EMC: EN 61000-6-2, EN 61000-6-4
Protection class housing side with cable outlet: IP 65
Protection class shaft side: IP 65
Air humidity: 90 % ¹⁾
Working temperature range: -10 °C ... 70 °C
Storage temperature range: -25 °C ... 85 °C, without package
Resistance to shocks: 100 g, 6 ms (EN 60068-2-27)
Resistance to vibration: 5 g, 10 Hz ... 200 Hz (EN 60068-2-6)
Enclosure rating: IP 65

¹⁾ Condensation of the optical scanning not permitted

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