

# DDS50E-S4GS01000

DDS50

INCREMENTAL ENCODERS

**SICK**  
Sensor Intelligence.

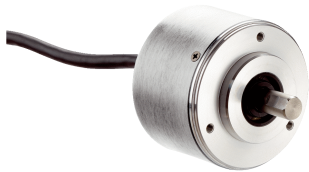


Illustration may differ



## Ordering information

Type	Part no.
DDS50E-S4GS01000	1038758

Other models and accessories → [www.sick.de/DDS50](http://www.sick.de/DDS50)

## Detailed technical data

### Performance

<b>Pulses per revolution</b>	1,000
<b>Error limits</b>	± 0.03°
<b>Measuring step deviation</b>	± 0.009° <sup>1)</sup>
<b>Measuring step</b>	0.09° <sup>2)</sup>

<sup>1)</sup> Measuring step x 0.1.

<sup>2)</sup> 360° / (number of lines x 4)

### Interfaces

<b>Electrical interface</b>	Cable, axial, 3 m
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### Electrical data

<b>Electrical interface</b>	HTL/Push pull
<b>Connection type</b>	Cable, axial, 3 m
<b>Operating power consumption (no load)</b>	≤ 100 mA
<b>Supply voltage</b>	7 V ... 24 V
<b>Output current</b>	≤ 20 mA
<b>Maximum output frequency</b>	≤ 300 kHz
<b>Reference signal, number</b>	1
<b>Reference signal, position</b>	90°, electronically, gated with A and B

### Mechanical data

<b>Mechanical interface</b>	Solid shaft, Face mount flangeSolid shaft
<b>Shaft diameter</b>	8 mm x 15.5 mm
<b>Mass</b>	145 g
<b>Start up torque</b>	1 Ncm (+20 °C)
<b>Operating torque</b>	4 Nmm (+20 °C)
<b>Permissible shaft loading radial/axial</b>	50 N, 30 N
<b>Maximum operating speed</b>	6,000 U/min <sup>1)</sup>
<b>Moment of inertia of the rotor</b>	0.8 kg/mm <sup>2</sup>
<b>Bearing lifetime</b>	2 x 10 <sup>9</sup> revolutions

<sup>1)</sup> Self-warming 3.3 K per 1,000 1/min.

<b>Max. angular acceleration</b>	5 x 10 <sup>5</sup> rad/s <sup>2</sup>
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<sup>1)</sup> Self-warming 3.3 K per 1,000 1/min.

#### Ambient data

<b>EMC</b>	EN 61000-6-2, EN 61000-6-4
<b>Enclosure rating</b>	IP 65
<b>Protection class according to IEC 60529</b>	IP 65
<b>Air humidity</b>	90 % <sup>1)</sup>
<b>Working temperature range</b>	-10 °C ... +70 °C
<b>Storage temperature range</b>	-25 °C ... +85 °C, without package
<b>Resistance to shocks</b>	100 g, 6 ms (EN 60068-2-27)
<b>Resistance to vibration</b>	5 g, 10 Hz ... 200 Hz (EN 60068-2-6)

<sup>1)</sup> Condensation of the optical scanning not permitted.

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