DBS50 Core

The MultiFit Incremental Encoder

INCREMENTAL ENCODERS

SICK
Sensor Intelligence.

DBS50 Core
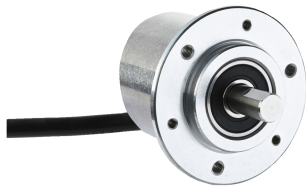
Technical data overview

Pulses per revolution	0 ... 2,500
Mechanical design	Solid shaft, face mount flange Solid shaft, face mount flange 3xM4
Shaft diameter	8 mm
Connection type	Cable, 8-wire, universal Cable, 5-wire, universal Cable, 8-wire, with male connector, M12, 8-pin, universal Cable, 8-wire, with male connector, M23, 12-pin, universal
Communication interface	Incremental
Communication Interface detail	TTL / RS-422 HTL / Push pull Open Collector
Supply voltage	4.5 ... 5.5 V 7 ... 30 V 7 ... 27 V 4.5 ... 30 V
Enclosure rating	IP65
Output frequency	≤ 300 kHz
Operating temperature range	–20 °C ... +85 °C –20 °C ... +70 °C

Product description

The DBS50 Core incremental encoder features impressively high mechanical flexibility, excellent technical properties, and a number of variations. The DBS50 Core has a 50 mm diameter face mount flange and an 8 mm diameter solid shaft. The housing, which measures 37 mm in diameter and less than 36 mm in length, is extremely compact and saves valuable installation space. The DBS50 Core offers a comprehensive range of mounting options thanks to its numerous mounting hole patterns, servo clamps, servo grooves, and triangular servo clamps. The encoder has compact dimensions and a universal cable connection that allows for cables to run in an axial or radial direction.

At a glance

- Universal cable connection
- Face mount flange with 8 mm solid shaft
- Face mount flange with 2 mounting hole patterns, servo clamps with servo grooves or triangular servo clamps
- Communication interfaces: TTL/RS-422, HTL/push pull, Open Collector
- Number of lines from 10 to 2,500 possible
- Temperature range: –20 °C ... +85 °C
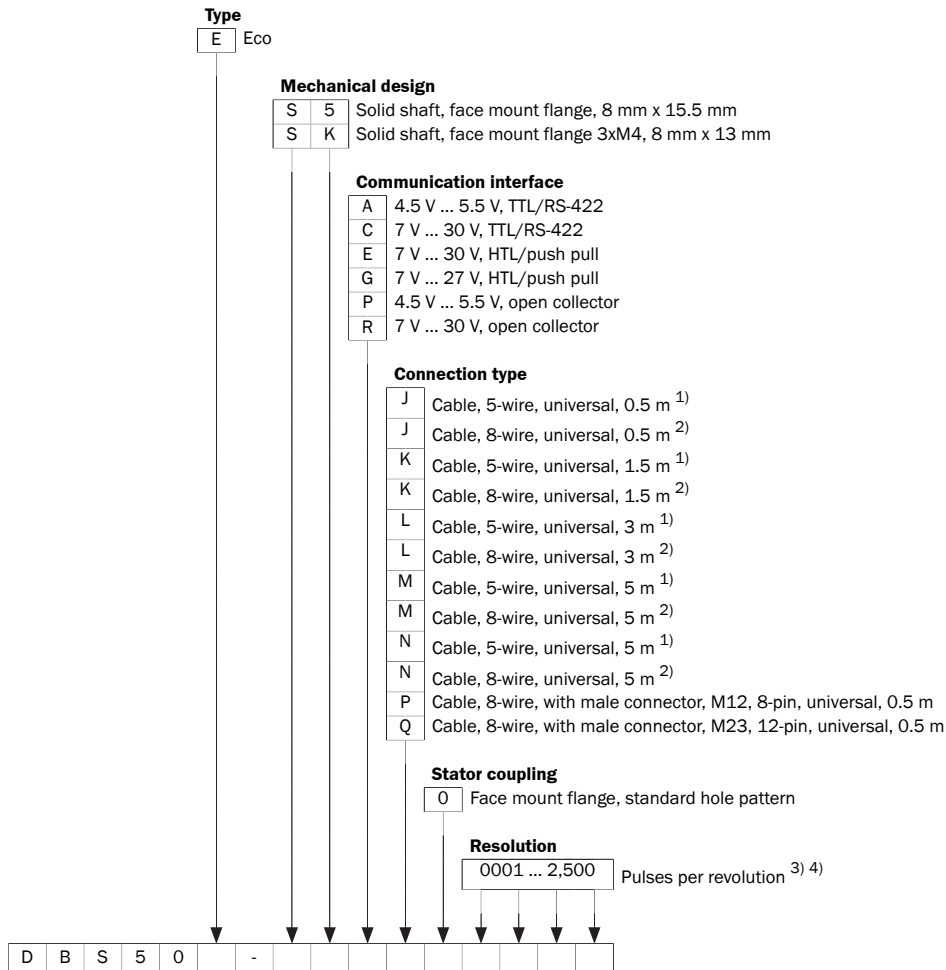- Enclosure rating: IP65

Your benefits

- The universal cable connection enables the device to be used in tight spaces and provides cable routing flexibility
- The different flanges allow the device to be mounted with servo clamps, or mounted at the front or rear side. This enables the device to be replaced without modifying the application
- The high flexibility of the mechanical interface of the encoder and the available accessories allow for the use of a single design in many applications
- The compact housing diameter saves valuable space
- Long-term and reliable operation thanks to a high enclosure rating, temperature resistance and bearing lifetime

Fields of application

There are numerous application possibilities for positioning and speed measurement, such as in the textile industry, propulsion technology, storage and conveyor, packaging machines, printing presses, glass industry, and elevators

Type code

Other models and accessories ➜ www.sick.com/DBS50_Core

Type
| E | Eco |

Mechanical design
| S | 5 | Solid shaft, face mount flange, 8 mm x 15.5 mm |
| S | K | Solid shaft, face mount flange 3xM4, 8 mm x 13 mm |

Communication interface
A	4.5 V ... 5.5 V, TTL/RS-422
C	7 V ... 30 V, TTL/RS-422
E	7 V ... 30 V, HTL/push pull
G	7 V ... 27 V, HTL/push pull
P	4.5 V ... 5.5 V, open collector
R	7 V ... 30 V, open collector

Connection type
J	Cable, 5-wire, universal, 0.5 m [1]
J	Cable, 8-wire, universal, 0.5 m [2]
K	Cable, 5-wire, universal, 1.5 m [1]
K	Cable, 8-wire, universal, 1.5 m [2]
L	Cable, 5-wire, universal, 3 m [1]
L	Cable, 8-wire, universal, 3 m [2]
M	Cable, 5-wire, universal, 5 m [1]
M	Cable, 8-wire, universal, 5 m [2]
N	Cable, 5-wire, universal, 5 m [1]
N	Cable, 8-wire, universal, 5 m [2]
P	Cable, 8-wire, with male connector, M12, 8-pin, universal, 0.5 m
Q	Cable, 8-wire, with male connector, M23, 12-pin, universal, 0.5 m

Stator coupling
| O | Face mount flange, standard hole pattern |

Resolution
| 0001 ... 2,500 | Pulses per revolution [3] [4] |

| D | B | S | 5 | 0 | - | | | | | | | | | | |

[1] Only for G, P and R communication interface.

[2] Only for A, C and E communication interface.

[3] See "Pulses per revolution" table.

[4] Other pulses upon request.

Pulses per revolution (other pulses upon request)

DBS50E		
0010	0250	0600
0020	0256	1000
0050	0300	1024
0100	0360	1200
0120	0400	2000
0125	0500	2048
0200	0512	2500

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.