

DLS40

Compact and slim incremental encoder for economical speed measurement

SICK
Sensor Intelligence.

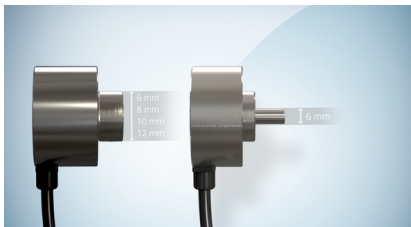
Advantages



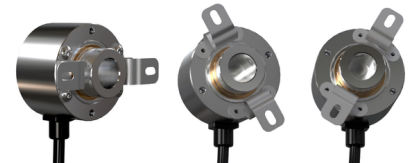
Even with tight installation space, the DLS40 incremental encoder can be easily integrated into machines. In addition to its slim housing with integrated flange, the blind hollow shaft also saves space. The universal stator coupling ensures great flexibility in the installation position. This enables particularly compact machine designs in the development of new machine.



Very compact: With solid shaft only 20 mm, with blind hollow shaft 25 mm



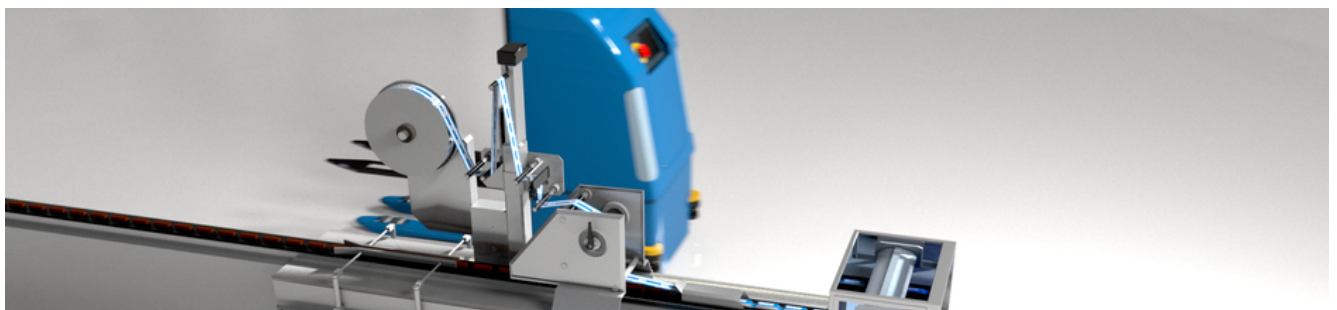
The encoder is available with a 6 mm solid shaft or hollow shafts with a diameter of 6, 8, 10 or 12 mm



The universal stator coupling can be mounted at various points on the machine and thus adapted to it



The DLS40 can be integrated into numerous applications while saving space and enables particularly compact machine designs.



Versatile, powerful, universally applicable

With up to 1,024 pulses per revolution, the DLS40 incremental encoder enables precise speed and position measurements at up to 6,000 revolutions per minute. When combined with various output signals and numerous hollow shaft diameters as well as a solid shaft variant, the encoder is suitable for many automation systems and applications.



Packing machines

The DLS40 provides very accurate data for the positioning of packaging bags before they are cut



Automated guided vehicle (AGV)

The encoder delivers exact speed data from the drive unit to the vehicle controller – including information on the direction of travel

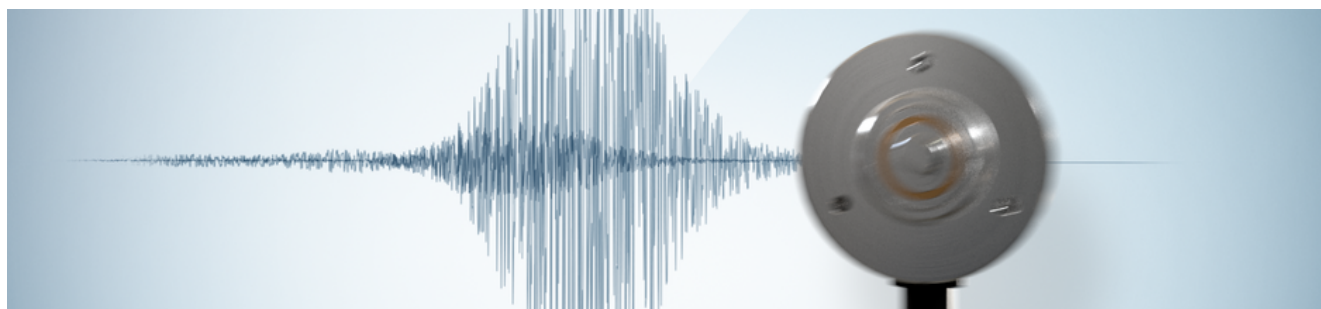


Many common output signals

Many common output signals: 4.5 V to 5.5 V, TTL RS 422; 10 V to 27 V, HTL Push Pull; 10 V to 27 V, Open Collector

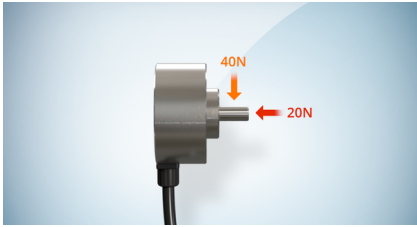


The DLS40 offers particularly accurate speed and position data, and is well-suited to many applications thanks to its different output signals and performance parameters.

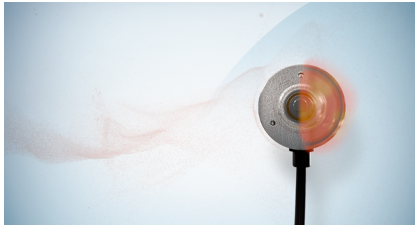


Resilient

The DLS40 is compact and economical without doing away with essential features. Despite the slim housing, the permissible shaft loading of 40 N (radial) and 20 N (axial) provides the high resistance required for many applications. Special mechanically adjustable locking threads have been used to withstand the high shock and vibration loads of modern dynamic applications. These ensure that the screws do not loosen on their own. The housing also provides very good protection against electromagnetic interference, which means the DLS40 can be used in many demanding applications.



Easily withstands strong shaft loading up to 40 N radial and 20 N axial



Can withstand very different ambient conditions thanks to IP50 and a wide operating temperature range from $-10\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$



Thanks to the electromagnetic compatibility of the encoder, electromagnetic fields do not affect measurement accuracy



The rugged design of the DLS40 ensures high reliability and makes it possible to use it under demanding ambient conditions.

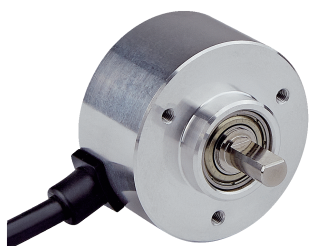


Online access to product data

The type label of the encoder was inscribed by laser engraving. The advantage: This protects it from wear. Current product information, technical data and operating instructions can be accessed online using a QR code. As no paper is used, this type of data access is also sustainable.



Permanently attached: The laser-engraved type label is durable, which means the encoder information is legible for a very long time. Thanks to cloud-based documentation, the information can be viewed anywhere and around the clock.



Technical data overview

Pulses per revolution	0 ... 1024
Mechanical design	Solid shaft, face mount flange Blind hollow shaft
Shaft diameter	6 mm, With face 6 mm 8 mm 10 mm 12 mm
Connection type	Cable, 8-wire, radial Cable, 5-wire, radial
Communication interface	Incremental
Communication Interface detail	TTL / RS-422 HTL / Push pull Open Collector
Supply voltage	4.5 ... 5.5 V 10 ... 27 V
Enclosure rating	IP50
Output frequency	≤ 150 kHz
Operating temperature range	-10 °C ... +70 °C

Product description

The DLS40 incremental encoder is a reliable solution for measuring rotation speed and position. With various unique features, it is fundamentally redefining the operating principle of encoders. The housing integrated in the flange enables a low-cost, slim and compact design and therefore uncomplicated installation, especially in tight spaces. The DLS40 offers solid shafts and blind hollow shafts with a variety of mechanical and electrical interfaces. In addition, the encoder is equipped with an easily-accessible laser-marked QR code which enables direct access to the operating instructions.

At a glance

- Pulses per revolution: Up to 1,024
- Housing diameter: 40 mm
- Solid shaft and blind hollow shaft
- Enclosure rating: IP50 (Solid shaft)
- Communication interfaces: TTL/RS-422, HTL/Push Pull, Open Collector
- Connection type: cable
- Slim, compact design

Your benefits

- The compact design facilitates the integration of the encoder even where installation space is limited and helps reduce machine size
- The flange with integrated housing enables a very compact and cost-efficient design
- A wide variety of output signal options makes it easy to find the right solution for every application

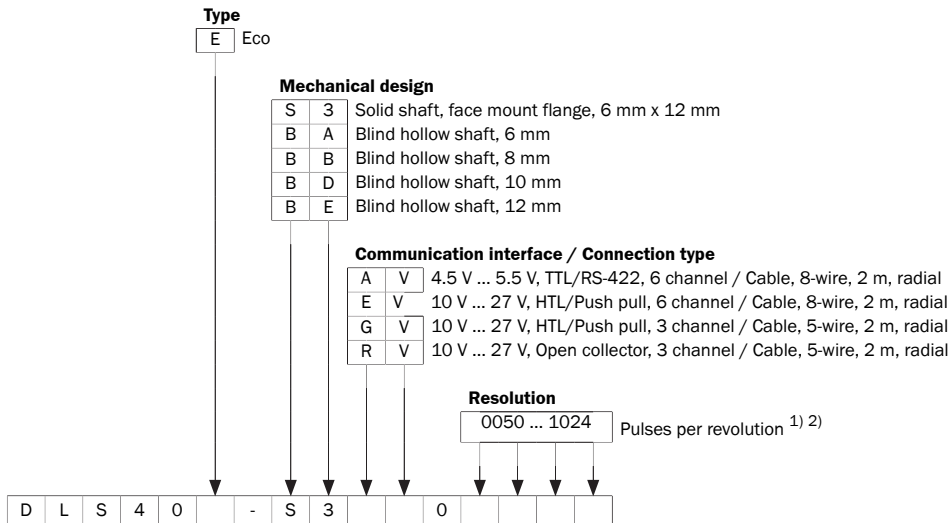
Fields of application

A large range of applications for the measurement of speed and position, e.g. in

- Printing and packaging
- Paper processing
- Processing, forming and cutting of metal, wood and glass
- Automated guided vehicle systems (AGV systems)
- Manufacture and filling of bottles
- Asynchronous motors
- Cable manufacturing

Type code

Other models and accessories → www.sick.com/DLS40



¹⁾ See table "Pulses per revolution".

²⁾ Other pulses upon request.

Pulses per revolution (other pulses upon request)

DLS40
50
60
100
200
360
400
500
600
1000
1024

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