



# DFS60B-S1EL01024

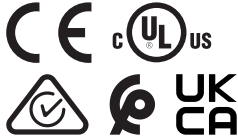
DFS60

INCREMENTAL ENCODERS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type             | part no. |
|------------------|----------|
| DFS60B-S1EL01024 | 1061738  |

Other models and accessories → [www.sick.com/DFS60](http://www.sick.com/DFS60)

### Detailed technical data

#### Safety-related parameters

|                                                          |                                          |
|----------------------------------------------------------|------------------------------------------|
| <b>MTTF<sub>D</sub> (mean time to dangerous failure)</b> | 300 years (EN ISO 13849-1) <sup>1)</sup> |
|----------------------------------------------------------|------------------------------------------|

<sup>1)</sup> 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.

#### Performance

|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| <b>Pulses per revolution</b>                              | 1,024 <sup>1)</sup>                 |
| <b>Measuring step</b>                                     | 90°, electric/pulses per revolution |
| <b>Measuring step deviation at binary number of lines</b> | ± 0.008°                            |
| <b>Error limits</b>                                       | ± 0.05°                             |

<sup>1)</sup> See maximum revolution range.

#### Interfaces

|                                       |                        |
|---------------------------------------|------------------------|
| <b>Communication interface</b>        | Incremental            |
| <b>Communication Interface detail</b> | HTL / Push pull        |
| <b>Number of signal channels</b>      | 6-channel              |
| <b>Initialization time</b>            | 40 ms                  |
| <b>Output frequency</b>               | ≤ 600 kHz              |
| <b>Load current</b>                   | ≤ 30 mA                |
| <b>Power consumption</b>              | ≤ 0.5 W (without load) |

#### Electronics

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| <b>Connection type</b>             | Cable, 8-wire, universal, 3 m <sup>1)</sup> |
| <b>Supply voltage</b>              | 10 ... 32 V                                 |
| <b>Reference signal, number</b>    | 1                                           |
| <b>Reference signal, position</b>  | 90°, electric, logically gated with A and B |
| <b>Reverse polarity protection</b> | ✓                                           |

<sup>1)</sup> The universal cable connection is positioned so that it is possible to lay it without bends in a radial or axial direction.

<sup>2)</sup> Short-circuit opposite to another channel, US or GND permissible for maximum 30 s.

## Short-circuit protection of the outputs



<sup>1)</sup> The universal cable connection is positioned so that it is possible to lay it without bends in a radial or axial direction.

<sup>2)</sup> Short-circuit opposite to another channel, US or GND permissible for maximum 30 s.

## Mechanics

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| <b>Mechanical design</b>              | Solid shaft, Servo flange               |
| <b>Shaft diameter</b>                 | 6 mm<br>With flat                       |
| <b>Shaft length</b>                   | 10 mm                                   |
| <b>Weight</b>                         | + 0.3 kg                                |
| <b>Shaft material</b>                 | Stainless steel                         |
| <b>Flange material</b>                | Aluminum                                |
| <b>Housing material</b>               | Aluminum die cast                       |
| <b>Start up torque</b>                | 0.5 Ncm (+20 °C)                        |
| <b>Operating torque</b>               | 0.3 Ncm (+20 °C)                        |
| <b>Permissible shaft loading</b>      | 80 N (radial)<br>40 N (axial)           |
| <b>Operating speed</b>                | ≤ 9,000 min <sup>-1</sup> <sup>1)</sup> |
| <b>Moment of inertia of the rotor</b> | 6.2 gcm <sup>2</sup>                    |
| <b>Bearing lifetime</b>               | 3.6 x 10 <sup>10</sup> revolutions      |
| <b>Angular acceleration</b>           | ≤ 500,000 rad/s <sup>2</sup>            |

<sup>1)</sup> Allow for self-heating of 3.3 K per 1,000 rpm when designing the operating temperature range.

## Ambient data

|                                      |                                                                                  |
|--------------------------------------|----------------------------------------------------------------------------------|
| <b>EMC</b>                           | According to EN 61000-6-2 and EN 61000-6-4                                       |
| <b>Enclosure rating</b>              | IP67, housing side, cable connection (IEC 60529)<br>IP65, shaft side (IEC 60529) |
| <b>Permissible relative humidity</b> | 90 % (Condensation not permitted)                                                |
| <b>Operating temperature range</b>   | -40 °C ... +100 °C <sup>1)</sup><br>-30 °C ... +100 °C <sup>2)</sup>             |
| <b>Storage temperature range</b>     | -40 °C ... +100 °C, without package                                              |
| <b>Resistance to shocks</b>          | 70 g, 6 ms (EN 60068-2-27)                                                       |
| <b>Resistance to vibration</b>       | 30 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)                                          |

<sup>1)</sup> Stationary position of the cable.

<sup>2)</sup> Flexible position of the cable.

## Certificates

|                                                                              |   |
|------------------------------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                                          | ✓ |
| <b>UK declaration of conformity</b>                                          | ✓ |
| <b>ACMA declaration of conformity</b>                                        | ✓ |
| <b>Moroccan declaration of conformity</b>                                    | ✓ |
| <b>China RoHS</b>                                                            | ✓ |
| <b>cULus certificate</b>                                                     | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270501 |
| <b>ECLASS 5.1.4</b>   | 27270501 |
| <b>ECLASS 6.0</b>     | 27270590 |
| <b>ECLASS 6.2</b>     | 27270590 |
| <b>ECLASS 7.0</b>     | 27270501 |
| <b>ECLASS 8.0</b>     | 27270501 |
| <b>ECLASS 8.1</b>     | 27270501 |
| <b>ECLASS 9.0</b>     | 27270501 |
| <b>ECLASS 10.0</b>    | 27270501 |
| <b>ECLASS 11.0</b>    | 27270501 |
| <b>ECLASS 12.0</b>    | 27270501 |
| <b>ETIM 5.0</b>       | EC001486 |
| <b>ETIM 6.0</b>       | EC001486 |
| <b>ETIM 7.0</b>       | EC001486 |
| <b>ETIM 8.0</b>       | EC001486 |
| <b>UNSPSC 16.0901</b> | 41112113 |

Technical drawing of a mechanical part, showing side and end views with dimensions and tolerances.

**Side View Dimensions:**

- Overall length:  $58 \pm 0.1$  (2.28)
- Distance from left face to start of first step:  $51.5 \pm 0.2$  (2.03)
- Distance from left face to start of second step:  $50 \pm 0.1$  (1.97)
- Distance from left face to start of third step:  $43.1 \pm 0.1$  (1.70)
- Distance from left face to start of fourth step:  $40.1 \pm 0.1$  (1.58)
- Distance from left face to start of fifth step:  $37.1 \pm 0.1$  (1.46)
- Distance from left face to start of sixth step:  $34.1 \pm 0.1$  (1.34)
- Distance from left face to start of seventh step:  $31.1 \pm 0.1$  (1.22)
- Distance from left face to start of eighth step:  $28.1 \pm 0.1$  (1.10)
- Distance from left face to start of ninth step:  $25.1 \pm 0.1$  (0.98)
- Distance from left face to start of tenth step:  $22.1 \pm 0.1$  (0.86)
- Distance from left face to start of eleventh step:  $19.1 \pm 0.1$  (0.74)
- Distance from left face to start of twelfth step:  $16.1 \pm 0.1$  (0.62)
- Distance from left face to start of thirteenth step:  $13.1 \pm 0.1$  (0.50)
- Distance from left face to start of fourteenth step:  $10.1 \pm 0.1$  (0.38)
- Distance from left face to start of fifteenth step:  $7.1 \pm 0.1$  (0.26)
- Distance from left face to start of sixteenth step:  $4.1 \pm 0.1$  (0.14)
- Distance from left face to start of seventeenth step:  $1.1 \pm 0.1$  (0.02)
- Distance from left face to start of eighteenth step:  $0.1 \pm 0.1$  (0.00)

**End View Dimensions:**

- Overall diameter:  $\varnothing 60 \pm 0.05$  (2.36)
- Distance from center to first hole:  $30 \pm 0.05$  (1.18)
- Distance from center to second hole:  $30 \pm 0.05$  (1.18)
- Distance from center to third hole:  $30 \pm 0.05$  (1.18)
- Distance from center to fourth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to fifth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to sixth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to seventh hole:  $30 \pm 0.05$  (1.18)
- Distance from center to eighth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to ninth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to tenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to eleventh hole:  $30 \pm 0.05$  (1.18)
- Distance from center to twelfth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to thirteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to fourteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to fifteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to sixteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to seventeenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to eighteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to nineteenth hole:  $30 \pm 0.05$  (1.18)
- Distance from center to twentieth hole:  $30 \pm 0.05$  (1.18)

**Surface Finish and Tolerances:**

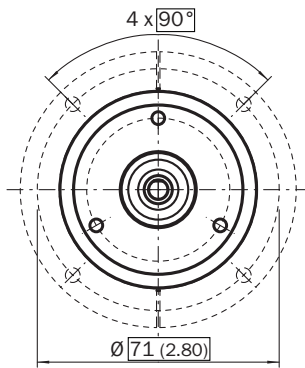
- Surface A:  $R_{\text{max}} 0.1$
- Surface B:  $R_{\text{max}} 0.05$
- Surface C:  $R_{\text{max}} 0.05$

**Assembly Notes:**

- 3 x M4 (6-deep)
- 3 x  $120^\circ$

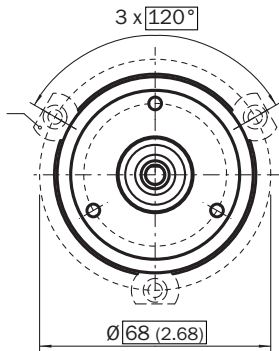
① cable diameter = 5.6 mm +/- 0.2 mm bend radius = 30 mm

## Mounting requirements for half-shell servo clamp



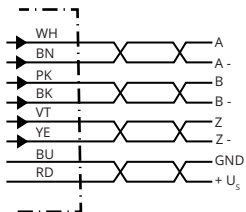
All dimensions in mm (inch)  
part no. 2029165

## Mounting requirements for small servo clamp



All dimensions in mm (inch)  
part no. 2029166

## PIN assignment

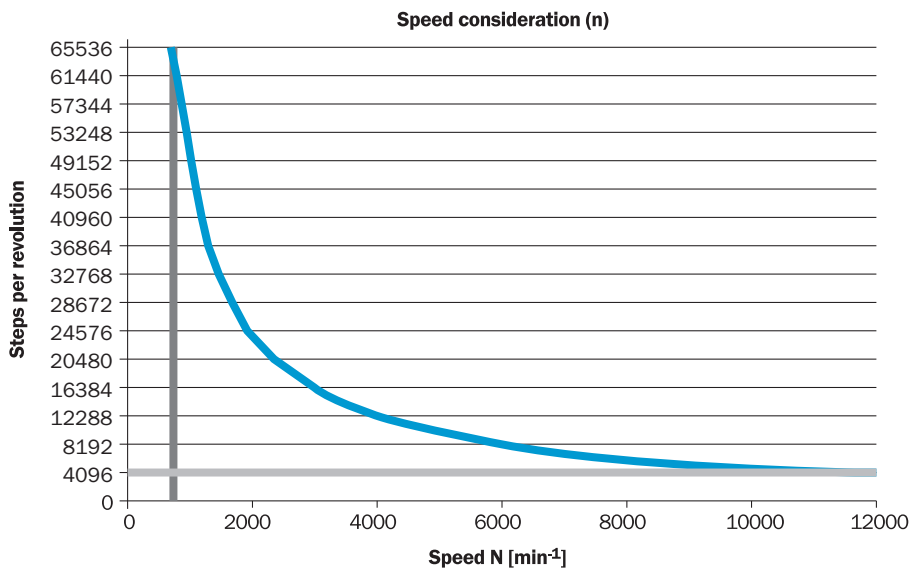


| PINMale connector M12, 8-pin | PINMale connector M23, 12-pin | Wire colors (cable connection) | TTL/HTL signal | Sin/Cos 1.0 V <sub>pp</sub> | Explanation |
|------------------------------|-------------------------------|--------------------------------|----------------|-----------------------------|-------------|
| 1                            | 6                             | Brown                          | A-             | COS-                        | Signal wire |
| 2                            | 5                             | White                          | A              | COS+                        | Signal wire |
| 3                            | 1                             | Black                          | B-             | SIN-                        | Signal wire |
| 4                            | 8                             | Pink                           | B              | SIN+                        | Signal wire |
| 5                            | 4                             | Yellow                         | Z-             | Z                           | Signal wire |

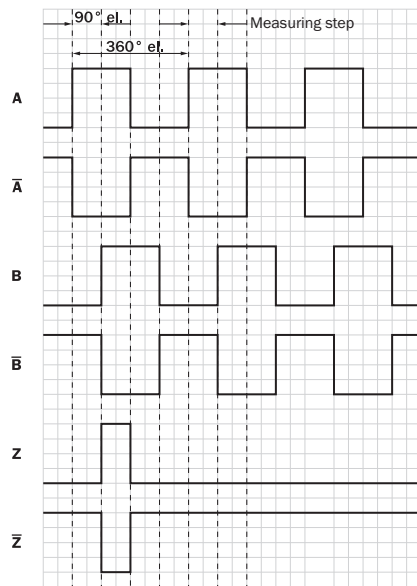
| PINMale connector M12, 8-pin | PINMale connector M23, 12-pin | Wire colors (cable connection) | TTL/HTL signal      | Sin/Cos 1.0 V <sub>PP</sub> | Explanation                                                                       |
|------------------------------|-------------------------------|--------------------------------|---------------------|-----------------------------|-----------------------------------------------------------------------------------|
| 6                            | 3                             | Purple                         | Z                   | Z                           | Signal wire                                                                       |
| 7                            | 10                            | Blue                           | GND                 | GND                         | Ground connection                                                                 |
| 8                            | 12                            | Red                            | +U <sub>S</sub>     | +U <sub>S</sub>             | Supply voltage                                                                    |
| -                            | 9                             | -                              | N.c.                | N.c.                        | Not assigned                                                                      |
| -                            | 2                             | -                              | N.c.                | N.c.                        | Not assigned                                                                      |
| -                            | 11                            | -                              | N.c.                | N.c.                        | Not assigned                                                                      |
| -                            | 7 <sup>1)</sup>               | Orange                         | 0-SET <sup>1)</sup> | N.c.                        | Set zero pulse <sup>1)</sup>                                                      |
| Screen                       | Screen                        | Screen                         | Screen              | Screen                      | Screen connected to housing on encoder side. Connected to ground on control side. |

<sup>1)</sup>For electrical interfaces only: M, U, V, W with 0-SET function on PIN 7 on M23 plug. The 0-SET input is used to set the zero pulse to the current shaft position. If the 0-SET input is applied to U<sub>S</sub> for longer than 250 ms after it has previously been open or applied to GND for at least 1,000 ms, the current shaft position is assigned zero pulse signal "Z".

### maximum revolution range



## signal outputs



CW with view on the encoder shaft in direction “A”, compare dimensional drawing.

| Supply voltage  | Output |
|-----------------|--------|
| 4,5 V ... 5,5 V | TTL    |
| 10 V ... 32 V   | TTL    |
| 10 V ... 32 V   | HTL    |

### Recommended accessories

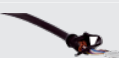
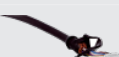
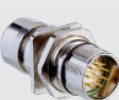
Other models and accessories → [www.sick.com/DFS60](http://www.sick.com/DFS60)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Type       | part no. |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| shaft adaptation                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |          |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Bellows coupling, shaft diameter 6 mm / 10 mm, maximum shaft offset: radial <math>\pm 0.25</math> mm, axial <math>\pm 0.4</math> mm, angular <math>\pm 4^\circ</math>; max. speed 10,000 rpm, <math>-30^\circ\text{C}</math> to <math>+120^\circ\text{C}</math>, max. torque 120 Ncm; material: stainless steel bellows, aluminum hub</li> </ul>                                                                                                                              | KUP-0610-B | 5312982  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Double loop coupling, shaft diameter 6 mm / 10 mm, max. shaft offset: radially <math>\pm 2.5</math> mm, axially <math>\pm 3</math> mm, angle <math>\pm 10</math> degrees; max. speed 3,000 rpm, <math>-30</math> to <math>+80</math> degrees Celsius, torsional spring stiffness of 25 Nm/rad</li> </ul>                                                                                                                                                                      | KUP-0610-D | 5326697  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Spring washer coupling, shaft diameter 6 mm / 10 mm, Maximum shaft offset: radial <math>\pm 0.3</math> mm, axial <math>\pm 0.4</math> mm, angular <math>\pm 2.5^\circ</math>; max. speed 12,000 rpm, <math>-10^\circ</math> to <math>+80^\circ\text{C}</math>, max. torque 60 Ncm; material: aluminum flange, glass fiber-reinforced polyamide membrane and hardened steel coupling pin</li> </ul>                                                                            | KUP-0610-F | 5312985  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Bar coupling, shaft diameter 6 mm / 10 mm, max. shaft offset: radial <math>\pm 0.3</math> mm, axial <math>\pm 0.3</math> mm, angular <math>\pm 3^\circ</math>; max. speed 10,000 rpm, <math>-10^\circ</math> to <math>+80^\circ\text{C}</math>, max. torque: 80 Ncm, material: fiber-glass reinforced polyamide, aluminum hub</li> </ul>                                                                                                                                      | KUP-0610-S | 2056407  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Claw coupling, shaft diameter 6 mm / 10 mm, damping element 80 shore blue, maximum shaft offset: radial <math>\pm 0.22</math> mm, axial <math>\pm 1</math> mm angular <math>\pm 1.3^\circ</math>, max. speed 19,000 rpm, angle of twist max. <math>10^\circ</math>, <math>-30^\circ\text{C}</math> to <math>+80^\circ\text{C}</math>, max. torque 800 Ncm, tightening torque of screws: ISO 4029 150 Ncm, material: aluminum flange, damping element: polyurethane</li> </ul> | KUP-0610-J | 2127056  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Bar coupling, shaft diameter 6 mm / 8 mm, maximum shaft offset radial <math>\pm 0.3</math> mm, axial <math>\pm 0.2</math> mm, angle <math>\pm 3^\circ</math>, max. speed 10,000 rpm, torsion spring rigidity 38 Nm/wheel; material: fiber-glass reinforced polyamide, aluminum hub</li> </ul>                                                                                                                                                                                 | KUP-0608-S | 5314179  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Cross-slotted coupling, shaft diameter 6 mm / 6 mm, maximum shaft offset: radial <math>\pm 0.3</math> mm, axial <math>\pm 0.2</math> mm, angle <math>\pm 3^\circ</math>; max. speed 10,000 rpm, <math>-10^\circ</math> to <math>+80^\circ\text{C}</math>, max. torque 80 Ncm; material: fiber-glass reinforced polyamide, aluminum hub</li> </ul>                                                                                                                             | KUP-0606-S | 2056406  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Shaft adaptation</li> <li><b>Product:</b> Shaft couplings</li> <li><b>Description:</b> Bellows coupling, shaft diameter 6 mm / 6 mm, maximum shaft offset: radial <math>\pm 0.25</math> mm, axial <math>\pm 0.4</math> mm, angular <math>\pm 4^\circ</math>; max. speed 10,000 rpm, <math>-30^\circ\text{C}</math> to <math>+120^\circ\text{C}</math>, max. torque 120 Ncm; material: stainless steel bellows, aluminum hub</li> </ul>                                                                                                                               | KUP-0606-B | 5312981  |



|                                                                                     | Brief description                                                                                                                                                                                                                                                                                            | Type           | part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| measuring wheels and measuring wheel mechanics                                      |                                                                                                                                                                                                                                                                                                              |                |          |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminum measuring wheel with studded polyurethane surface for 6 mm solid shaft, circumference 200 mm</li> </ul> | BEF-MR06200APN | 4084747  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminium measuring wheel with O-ring (NBR70) for 6 mm solid shaft, circumference 200 mm</li> </ul>              | BEF-MR006020R  | 2055222  |
|    | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Measuring wheel with O-ring (NBR70) for 6 mm solid shaft, circumference 300 mm</li> </ul>                        | BEF-MR006030R  | 2055634  |
|   | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminium measuring wheel with O-ring (NBR70) for 6 mm solid shaft, circumference 500 mm</li> </ul>              | BEF-MR006050R  | 2055225  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminum measuring wheel with cross-knurled surface for 6 mm solid shaft, circumference 200 mm</li> </ul>        | BEF-MR06200AK  | 4084745  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminum measuring wheel with smooth polyurethane surface for 6 mm solid shaft, circumference 200 mm</li> </ul>  | BEF-MR06200AP  | 4084746  |
|  | <ul style="list-style-type: none"> <li><b>Product segment:</b> Measuring wheels and measuring wheel mechanics</li> <li><b>Product family:</b> Measuring wheels</li> <li><b>Description:</b> Aluminum measuring wheel with ridged polyurethane surface for 6 mm solid shaft, circumference 200 mm</li> </ul>  | BEF-MR06200APG | 4084748  |

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Type          | part no. |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| Mounting systems                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Bearing block for servo and face mount flange encoder. The heavy-duty bearing block is used to absorb very large radial and axial shaft loads. Particularly when using belt pulleys, chain sprockets, friction wheels. Operating speed max. 4,000 rpm<sup>-1</sup>, axial shaft load 150 N, radial shaft load 250 N, bearing service life 3.6 x 10<sup>9</sup> revolutions</li> </ul>                                                              | BEF-FA-LB1210 | 2044591  |
|                                                                                   | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit for servo flange encoder on the bearing block, 1 bar coupling SKPS 1520 06/06 1 hexagon socket wrench SW1.5 DIN 911, 3 mounting eccentric BEMN 1242 49 3 screws M4 x 10 DIN 912, 1 hexagon socket wrench SW3 DIN 911</li> <li><b>Items supplied:</b> 1 bar coupling SKPS 1520 06/06 1 hexagon socket wrench SW1.5 DIN 911, 3 mounting eccentric BEMN 1242 49 3 screws M4 x 10 DIN 912, 1 hexagon socket wrench SW3 DIN 911</li> </ul> | BEF-MK-LB     | 5320872  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Servo clamps, large, for servo flange (clamps, eccentric fastener), 3 pcs, without mounting material</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>                                                                                                                                                                                                                                                                          | BEF-WK-SF     | 2029166  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bell for encoder with servo flange, 50 mm spigot</li> <li><b>Items supplied:</b> Mounting kit included</li> </ul>                                                                                                                                                                                                                                                                                                                         | BEF-MG-50     | 5312987  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                | Type             | part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                                  |                  |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 8-pin, straight, A-coded</li> <li><b>Signal type:</b> Incremental</li> <li><b>Cable:</b> CAT5, CAT5e</li> <li><b>Description:</b> Incremental, shielded</li> <li><b>Connection systems:</b> IDC quick connection</li> <li><b>Permitted cross-section:</b> 0.14 mm² ... 0.34 mm²</li> </ul>            | STE-1208-GA01    | 6044892  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> SSI, Incremental</li> <li><b>Items supplied:</b> JST including sealing</li> <li><b>Cable:</b> 3 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> SSI, shielded, Incremental</li> </ul>   | DOL-0J08-G3M0AA6 | 2048591  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> SSI, Incremental</li> <li><b>Items supplied:</b> JST including sealing</li> <li><b>Cable:</b> 1.5 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> SSI, shielded, Incremental</li> </ul> | DOL-0J08-G1M5AA6 | 2048590  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Incremental, SSI</li> <li><b>Items supplied:</b> JST including sealing</li> <li><b>Cable:</b> 0.5 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded, SSI</li> </ul> | DOL-0J08-G0M5AA3 | 2046873  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Incremental, SSI</li> <li><b>Items supplied:</b> JST including sealing</li> <li><b>Cable:</b> 5 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded, SSI</li> </ul>   | DOL-0J08-G05MAA3 | 2046876  |
|   | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Incremental, SSI</li> <li><b>Items supplied:</b> JST including sealing</li> <li><b>Cable:</b> 10 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded, SSI</li> </ul>  | DOL-0J08-G10MAA3 | 2046877  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M23, 12-pin, straight, A-coded</li> <li><b>Signal type:</b> HIPERFACE<sup>®</sup>, SSI, Incremental</li> <li><b>Description:</b> HIPERFACE<sup>®</sup>, shieldedSSIIncremental</li> <li><b>Connection systems:</b> Solder connection</li> </ul>                                                            | STE-2312-GX      | 6028548  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M23, 12-pin, straight, A-coded</li> <li><b>Signal type:</b> HIPERFACE<sup>®</sup>, SSI, Incremental</li> <li><b>Description:</b> HIPERFACE<sup>®</sup>, shieldedSSIIncremental</li> <li><b>Connection systems:</b> Solder connection</li> </ul>                                                            | STE-2312-G01     | 2077273  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Male connector, M23, 12-pin, straight</li> <li><b>Signal type:</b> Incremental</li> <li><b>Cable:</b> 0.35 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded</li> </ul>                                       | STL-2312-GM35AA3 | 2061621  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Male connector, M23, 12-pin, straight</li> <li><b>Signal type:</b> Incremental</li> <li><b>Cable:</b> 1 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded</li> </ul>                                          | STL-2312-G01MAA3 | 2061622  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li><b>Connection type head B:</b> Male connector, M23, 12-pin, straight</li> <li><b>Signal type:</b> Incremental</li> <li><b>Cable:</b> 2 m, 8-wire, PUR, halogen-free</li> <li><b>Description:</b> Incremental, shielded</li> </ul>                                          | STL-2312-G02MAA3 | 2061504  |

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