

Position sensors SRBS

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Festo quality at an attractive price

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More than 2200 products



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Up to 6 x 10¹² variants per product series

Look for the star!

Position sensors SRBS

Key features, product range overview

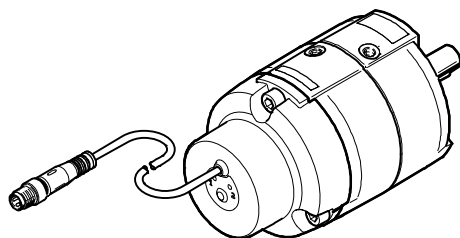
General

The SRBS-Q1/Q12 is used to detect rotation of the shaft for rotary drives DRVS and DSM. Sensing is performed magnetically and without contact. Two binary switching points are output.

- The sensor can be quickly assembled without having to manually search for switching points
- Simple and reliable operation using just one pushbutton directly on the device
- No need for a connecting cable as there are 2 switching points in a device
- PNP/NPN and NO/NC freely programmable, reducing warehousing
- Sturdy, non-contacting and enclosed position detection with long service life

Switching output

DRVS-25- ... with SRBS-Q12-25- ...



- 2 switching outputs 24 V
- Electronic teach-in of switching points at the push of a button
- PNP/NPN programmable
- NO/NC programmable
- Sensing range: > 270°

Repetition accuracy ≤ 0.1 mm

Note
Sensors that detect magnetic fields, such as position sensors SRBS, must not be secured onto the drive using mountings made from ferrous materials, as this can lead to malfunction.

Product range overview

| Version | Type | Suitable for rotary drives | Special characteristics | Sensing range [deg] | Switching output | → Page/Internet |
|-----------------|----------------------------|----------------------------|-------------------------|---------------------|-----------------------------------|-----------------|
| Position sensor | SRBS-Q12-6-E270-EP-1-S-M8 | DSM 6, DRVS 6 | Oil-resistant | > 270 | 2x PNP or 2x NPN Switchable | 4 |
| | SRBS-Q12-8-E270-EP-1-S-M8 | DSM 8, DRVS 8 | | | | |
| | SRBS-Q1-10-E270-EP-1-S-M8 | DSM 10 | | | | |
| | SRBS-Q12-12-E270-EP-1-S-M8 | DRVS 12 | | | | |
| | SRBS-Q12-16-E270-EP-1-S-M8 | DRVS 16 | | | | |
| | SRBS-Q12-25-E270-EP-1-S-M8 | DRVS 25 | | | | |
| | SRBS-Q12-32-E270-EP-1-S-M8 | DRVS-32 | | | | |
| | SRBS-Q12-40-E270-EP-1-S-M8 | DRVS 40 | | | | |

Position sensors SRBS

Type codes

SRBS - Q12 - [] - E - 270 - EP - 1 - S - M8

Type

| | |
|------|-----------------|
| SRBS | Position sensor |
|------|-----------------|

Designation

| | |
|-----|-------------|
| Q1 | Version Q1 |
| Q12 | Version Q12 |

Size

| | |
|----|----|
| 6 | 6 |
| 8 | 8 |
| 10 | 10 |
| 12 | 12 |
| 16 | 16 |
| 25 | 25 |
| 32 | 32 |
| 40 | 40 |
| 63 | 63 |

Display type

| | |
|---|-----|
| E | LED |
|---|-----|

Measuring range

| | |
|-----|-----------|
| 270 | 0 ... 270 |
|-----|-----------|

Sensor principle

| | |
|----|---|
| EP | Non-contacting, programmable switching function |
|----|---|

Nominal operating voltage

| | |
|---|---------|
| 1 | 24 V DC |
|---|---------|

Electrical output

| | |
|---|------------|
| S | PNP or NPN |
|---|------------|

Electrical connection

| | |
|----|-------------------|
| M8 | M8 plug connector |
|----|-------------------|

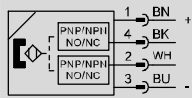
Position sensors SRBS

Technical data

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Function

Normal operation



| General technical data | |
|--|--|
| Design | Round |
| Type of mounting | Screw-clamped |
| Mounting position | Any |
| Certification | RCM trademark c UL us - listed (OL) |
| KC marking | KC-EMC |
| Special characteristics | Oil resistant |
| Degree of protection | IP65 IP68 |
| Protection class | III |
| Based on standard | EN 60947-5-2 |
| CE marking (see declaration of conformity) | To EU EMC Directive |
| Note on materials | Halogen-free, RoHS-compliant |
| Corrosion resistance class CRC ¹⁾ | 2 |

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Internal applications in which condensation may occur. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment.

| Input signal/measuring element | |
|---|----------------|
| Measuring principle | Magnetic Hall |
| Measured variable | Rotation angle |
| Sensing range [deg] | > 270 |
| Ambient temperature [°C] | -20 ... 70 |
| Ambient temperature with flexible cable installation [°C] | -20 ... 70 |

| Signal processing | |
|--------------------------------|---|
| Typical sampling interval [ms] | 3 |

| Output, additional data | |
|----------------------------------|-----|
| Protection against short circuit | Yes |
| Overload protection | Yes |

Position sensors SRBS

Technical data

| Electronics | | |
|---------------------------------------|--------|--------------------------------|
| Operating voltage range | [V DC] | 10 ... 30 |
| Rated operating voltage | [V DC] | 24 |
| Protection against incorrect polarity | | For all electrical connections |
| Switching output | | 2 x PNP or 2 x NPN, switchable |
| Switching element function | | N/C or N/O contact, switchable |
| Switching point reproducibility | [°] | ≤ 1 |
| Residual ripple | [%] | 10 |
| Switch-on time | [ms] | < 4 |
| Switch-off time | [ms] | < 4 |
| Max. switching frequency | [Hz] | 125 |
| Max. output current | [mA] | 50 |
| Max. switching capacity DC | [W] | 1.5 |
| Voltage drop | [V] | < 1 |

| Electromechanical components | | |
|------------------------------|-----|---|
| Electrical connection | | 4-pin, cable with plug connector, rotatable thread M8 |
| Connection outlet direction | | In-line |
| Cable properties | | Energy chain + robot |
| Cable test conditions | | Bending strength: according to Festo standard |
| | | Energy chain: 5 million cycles, bending radius 28 mm |
| | | Torsional strength: > 300,000 cycles, ±270°/0.1 m |
| Cable length | [m] | 0.3 |

| Display/operation | |
|--------------------------|------------|
| Setting options | Pushbutton |
| Switching status display | Yellow LED |

| Materials | |
|--------------------|--------------------------|
| Housing | Nickel-plated brass |
| | Reinforced PA |
| | Polyester |
| Union nut | Nickel-plated brass |
| Cable sheath, grey | TPE-U(PUR) |
| Foil | Polyester |
| Pin contacts | Gold-plated copper alloy |

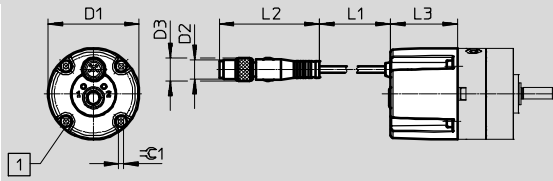
Position sensors SRBS

Technical data

Dimensions

Download CAD data → www.festo.com

SRBS-Q12- ... -E270-EP-1-S-M8 (DRVS-6/8)



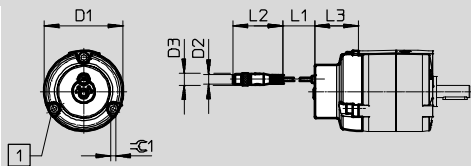
- 1 Screw:
 Size 6 – M2x6 (4x)
 Size 8 – M2.5x5 (4x)

| Type | D1 Ø | D2 | D3 Ø | L1 | L2 | L3 | ±C 1 |
|-----------------|---------|------|---------|-----|------|------|------|
| SRBS-Q12-6- ... | 29.4 | M8x1 | 9.6 | 300 | 41.1 | 25.4 | 1.5 |
| SRBS-Q12-8- ... | 32 | | | | | 27.4 | 2 |

Dimensions

Download CAD data → www.festo.com

SRBS-Q12- ... -E270-EP-1-S-M8 (DRVS-12/16/25)



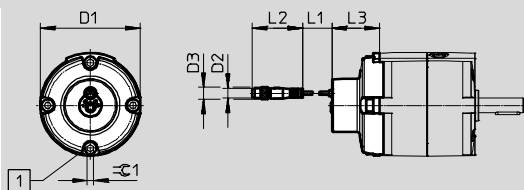
- 1 Screw:
 Size 12 – M4x10 (3x)
 Size 16 – M5x12 (3x)
 Size 25 – M5x12 (3x)

| Type | D1 Ø | D2 | D3 Ø | L1 | L2 | L3 | ±C 1 |
|------------------|---------|------|---------|-----|------|------|------|
| SRBS-Q12-12- ... | 44.6 | M8x1 | 9.6 | 300 | 41.1 | 29.4 | 3 |
| SRBS-Q12-16- ... | 51.6 | | | | | 33.9 | 4 |
| SRBS-Q12-25- ... | 64.5 | | | | | 36 | 4 |

Dimensions

Download CAD data → www.festo.com

SRBS-Q12- ... -E270-EP-1-S-M8 (DRVS-32/40)



- 1 Screw:
 Size 32 – M6x12 (4x)
 Size 40 – M8x16 (4x)

| Type | D1 Ø | D2 | D3 Ø | L1 | L2 | L3 | ±C 1 |
|------------------|---------|------|---------|-----|------|------|------|
| SRBS-Q12-32- ... | 81.3 | M8x1 | 9.6 | 300 | 41.1 | 38.9 | 5 |
| SRBS-Q12-40- ... | 98.3 | | | | | 40.4 | 6 |

Position sensors SRBS

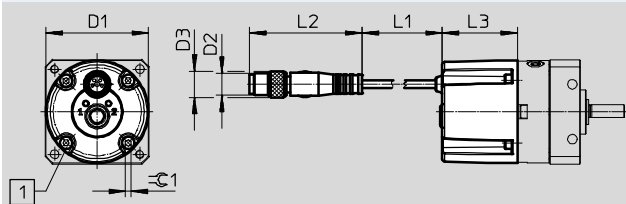
Technical data

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Dimensions

Download CAD data → www.festo.com

SRBS-Q...-E270-EP-1-S-M8 (DSM-6/8/10)



- 1 Screw:
Size 6 – M2x6
Size 8 – M2.5x5
Size 10 – M3x6

| Type | D1 Ø | D2 | D3 Ø | L1 | L2 | L3 | ±C 1 |
|-----------------|---------|------|---------|-----|------|------|------|
| SRBS-Q12-6- ... | 29.4 | M8x1 | 9.6 | 300 | 41.1 | 25.4 | 1.5 |
| SRBS-Q12-8- ... | 32 | | | | | 27.4 | 2 |
| SRBS-Q1-10- ... | 46.4 | | | | | 29.8 | 2.5 |

★ Core product range

Ordering data

| | For rotary drives | Weight [g] | Part No. | Type |
|--|-------------------|------------|-----------|----------------------------|
| | DSM 6, DRVS 6 | 25 | ★ 2619969 | SRBS-Q12-6-E270-EP-1-S-M8 |
| | DSM 8, DRVS 8 | 30 | ★ 2619972 | SRBS-Q12-8-E270-EP-1-S-M8 |
| | DSM 10 | 35 | ★ 2412001 | SRBS-Q1-10-E270-EP-1-S-M8 |
| | DRVS 12 | 42 | ★ 2393546 | SRBS-Q12-12-E270-EP-1-S-M8 |
| | DRVS 16 | 55 | ★ 2393547 | SRBS-Q12-16-E270-EP-1-S-M8 |
| | DRVS 25 | 60 | ★ 2393548 | SRBS-Q12-25-E270-EP-1-S-M8 |
| | DRVS 32 | 81 | ★ 2393549 | SRBS-Q12-32-E270-EP-1-S-M8 |
| | DRVS 40 | 120 | ★ 2393550 | SRBS-Q12-40-E270-EP-1-S-M8 |

Accessories – Connecting cables

| | | Cable length [m] | Part No. | Type |
|--|-------------------------------------|------------------|----------|----------------------|
| | Socket, 4-pin, M8 – open cable end | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 |
| | | 5 | 541343 | NEBU-M8G4-K-5-LE4 |
| | Socket, 4-pin, M8 – plug, 4-pin, M8 | 2.5 | 554035 | NEBU-M8G4-K-2.5-M8G4 |

Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days

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