

## Position sensors SRBS

**FESTO**



Festo core product range  
Covers 80% of your automation tasks

Worldwide:

Always in stock

Superb:

Festo quality at an attractive price

Easy:

Simplified procurement and warehousing

★ Generally ready for dispatch from the factory within 24 hours

In stock at 13 Service Centres worldwide

More than 2200 products

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Up to  $6 \times 10^{12}$  variants per product family

Just look  
for the  
star!

## Key features, product range overview

### General information

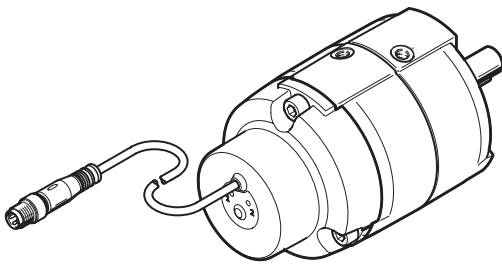
The SRBS-Q1/Q12 is used to detect rotation of the shaft for rotary drives DRVS and DSM.

Sensing is magnetic and contactless. The sensor outputs two binary switching points.

- The sensor can be quickly mounted 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
- Freely programmable PNP/NPN and NO/NC reduces warehousing
- Robust, contactless and encapsulated 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
- Programmable PNP/NPN
- Programmable NO/NC
- Sensing range > 270°

Repetition accuracy ≤ 1°

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

### Product range overview

Design	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	2 x PNP or	4
	SRBS-Q12-8-E270-EP-1-S-M8	DSM 8, DRVS 8			2 x NPN	
	SRBS-Q1-10-E270-EP-1-S-M8	DSM 10			Switchable	
	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				

## Type codes

001	Series	
<b>SRBS</b>	Position sensor	

002	Allocation	
<b>Q1</b>	Version Q1	
<b>Q12</b>	Version Q12	

003	Size	
<b>6</b>	6	
<b>8</b>	8	
<b>10</b>	10	
<b>12</b>	12	
<b>16</b>	16	
<b>25</b>	25	
<b>32</b>	32	
<b>40</b>	40	

004	Display type	
<b>E</b>	LED	

005	Measuring range	
<b>270</b>	0 ... 270°	

006	Sensor principle	
<b>EP</b>	Contactless, programmable switching function	

007	Nominal operating voltage	
<b>1</b>	24 V DC	

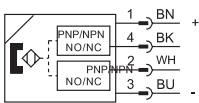
008	Electrical output 1	
<b>S</b>	PNP or NPN	

009	Electrical connection	
<b>M8</b>	Plug M8	

## Data sheet

### Function

#### Normal operation



### General technical data

Design	Round
Type of mounting	Screwed on
Mounting position	Any
Certification	RCM compliance mark c UL us Listed (OL)
KC mark	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 <sup>1)</sup>	2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal 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 scanning interval [ms]	3
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### Output, additional data

Short circuit protection	Yes
Overload protection	Present

## Data sheet

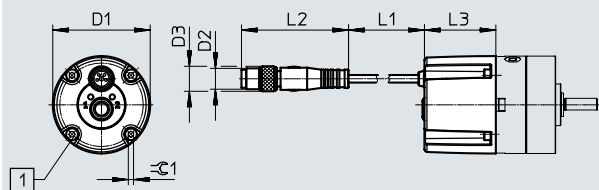
Electronics		
Operating voltage range	[V DC]	10 ... 30
Rated operating voltage	[V DC]	24
Reverse polarity protection		For all electrical connections
Switching output		2 x PNP or 2 x NPN, switchable
Switching element function		N/C or N/O contact, switchable
Switching point repeatability	[°]	≤ 1
Residual 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, rotatable thread M8
Outlet direction of connection		In-line
Cable characteristic		Cable chain + robot
Cable test conditions		Bending strength: to Festo standard
		Energy chain: 5 million cycles, bending radius 28 mm
		Torsional resistance: > 300,000 cycles, ±270°/0.1 m
Cable length	[m]	0.3
Display/operation		
Setting options		Pushbutton
Switching status indication		Yellow LED
Materials		
Housing		Nickel-plated brass
		Reinforced PA
		Polyester
Union nut		Nickel-plated brass
Cable sheath, grey		TPE-U(PUR)
Film		Polyester
Pin contacts		Gold-plated copper alloy

Data sheet

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

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



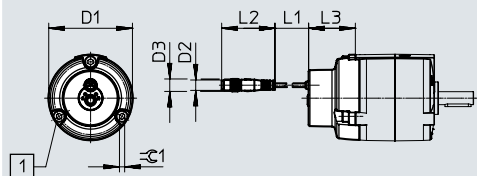
- [1] Screw:
- Size 6 – M2x6 (4x)
- Size 8 – M2.5x5 (4x)

Type	D1 ∅	D2	D3 ∅	L1	L2	L3	±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](http://www.festo.com)

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



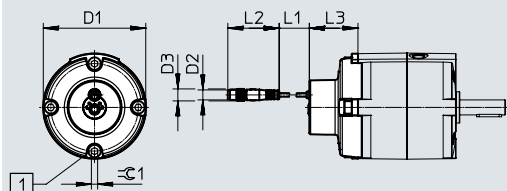
- [1] Screw:
- Size 12 – M4x10 (3x)
- Size 16 – M5x12 (3x)
- Size 25 – M5x12 (3x)

Type	D1 ∅	D2	D3 ∅	L1	L2	L3	±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](http://www.festo.com)

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



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

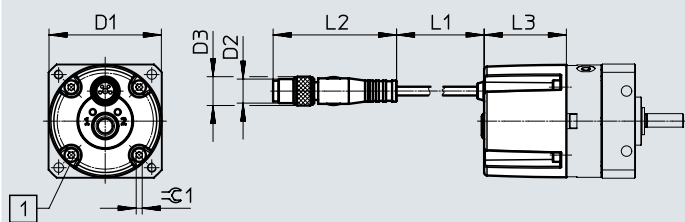
Type	D1 ∅	D2	D3 ∅	L1	L2	L3	±1
SRBS-Q12-32- ...	81.3	M8x1	9.6	300	41.1	38.9	5
SRBS-Q12-40- ...	98.3					40.4	6

## Data sheet

## Dimensions

Download CAD data → [www.festo.com](http://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 ∅	D2	D3 ∅	L1	L2	L3	⌀ 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 dispatch from the factory within 24 hours



Generally ready for dispatch from the factory within 5 days

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