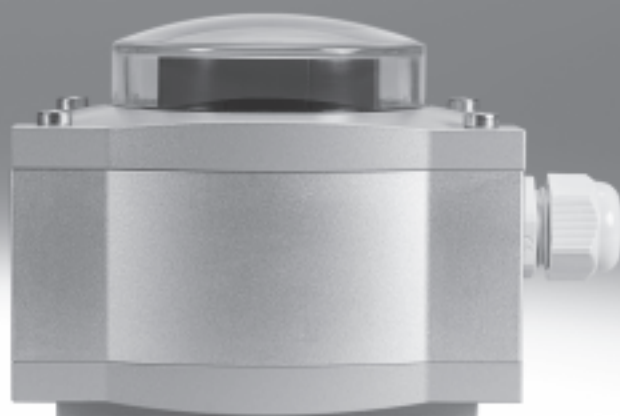


Sensor boxes SRAP, analogue

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Sensor boxes SRAP, analogue

Key features

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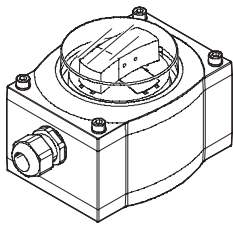
General information

- Analogue sensor box for greater functionality. The analogue sensor box monitors the position of semi-rotary actuators and reports this back to the controller via an analogue 4 ... 20 mA output signal.

Advantages

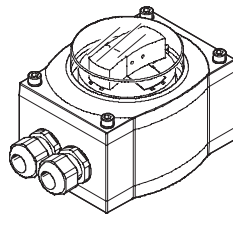
- Simple mounting and commissioning: can be mounted directly on the semi-rotary actuator DFPB without the need for mounting accessories, with teach-in function for flexible adjustment of the zero point within a range from 0 – 270°
- Everything in view, including from a distance: colour-based indication of the current position of the semi-rotary actuator
- Innovative and intelligent: homing to the actual swivel angle makes optimum use of the initial range
- Sturdy and explosion-proof: a match for even harsh, corrosive and potentially explosive environments thanks to corrosion-resistant and waterproof metal housing
- Insensitive to vibration. Always supplies a stable signal as there is no contact between the shaft and sensor
- Quick and easy integration in existing systems thanks to the industrial analogue output signal
- Cost and time savings thanks to the common power supply for the sensor box and solenoid valve
- Cost-efficient regulation in combination with 5/3-way valve compared with positioner solution
- Festo know-how in automation: concept and solution from a single source
- You can find information on the media resistance of the product at www.festo.com

1 cable connector



- Power supply for sensor box only

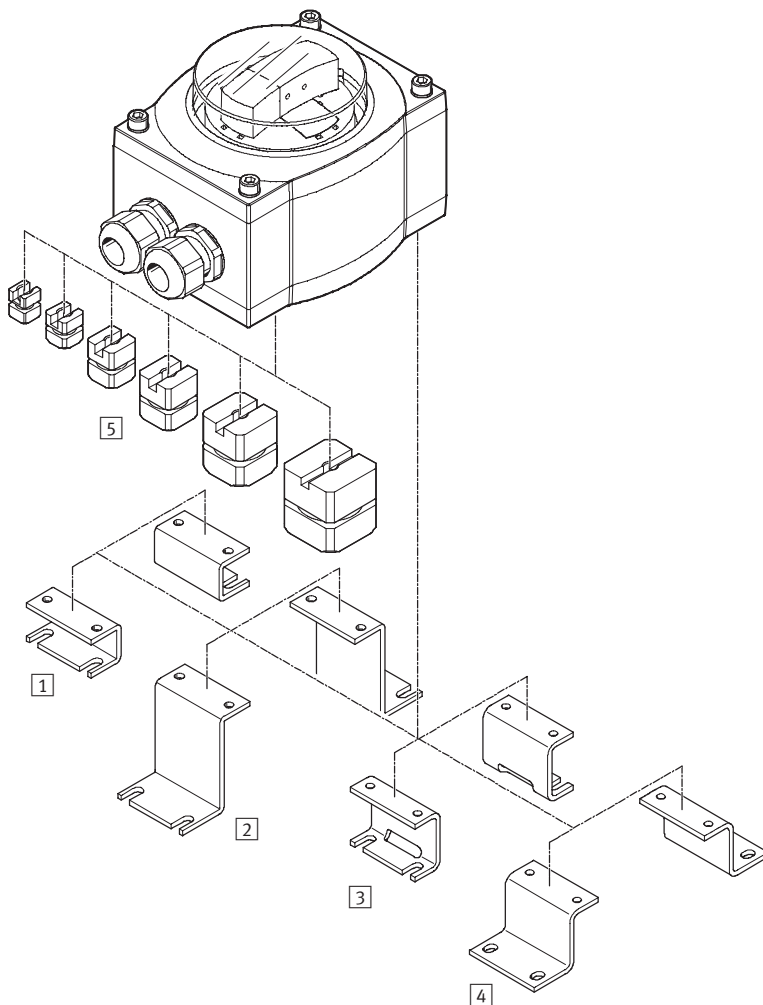
2 cable connectors



- Common power supply for sensor box and solenoid valve

Sensor boxes SRAP, analogue

Peripherals overview



Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Adapter kit DASB-P1-HA-SB ¹⁾	Hole pattern 30x80 mm, height 20 mm dasb
2	Adapter kit DASB-P1-HL-SB	Hole pattern 30x130 mm, height 50 mm dasb
3	Adapter kit DASB-P1-HB-SB	Hole pattern 30x80 mm, height 30 mm dasb
4	Adapter kit DASB-P1-HC-SB	Hole pattern 30x130 mm, height 30 mm dasb
5	Coupling DARQ-C-S9	For direct mounting on semi-rotary actuators DFPB darq
	Coupling DARQ-C-S11	For direct mounting on semi-rotary actuators DFPB darq
	Coupling DARQ-C-S14	For direct mounting on semi-rotary actuators DFPB darq
	Coupling DARQ-C-S17	For direct mounting on semi-rotary actuators DFPB darq
	Coupling DARQ-C-S22	For direct mounting on semi-rotary actuators DFPB darq
	Coupling DARQ-C-S27	For direct mounting on semi-rotary actuators DFPB darq

1) The adapter kit DASB-P1-HA-SB can optionally be used for all DFPB actuators.

Sensor boxes SRAP, analogue

Type codes

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		SRAP	-	M	-	CA1	-	BB270	-	1	-	A	-	T2P20	-		-	EX2
Function																		
SRAP	Analogue sensor box																	
Product version																		
M	Primarily metal																	
Design																		
C	Sensor box																	
Mechanical interface																		
A1	Direct mounting, hole pattern 30x80 mm																	
Indicator type																		
	No indicator																	
BB	Blue/black position indicator																	
GR	Green/red position indicator																	
YB	Yellow/black position indicator																	
Measuring range																		
270	0 ... 270°																	
Nominal operating voltage																		
1	24 V DC																	
Electrical output																		
A	4 ... 20 mA																	
Electrical connection																		
T	Terminal box																	
Valve connection																		
	None																	
2	With valve connection																	
Cable connector																		
M20	M20x1.5, metal																	
P20	M20x1.5, polymer																	
Temperature range																		
	Standard -20 ... +80 °C																	
EU certification																		
	None																	
EX2	II 3GD																	

Sensor boxes SRAP, analogue

Technical data

- The analogue sensor box not only reports the open/closed position of the semi-rotary actuator, but also detects the entire swivel range and reports this back to the controller via an analogue signal
- The integrated sensors are based on proven 2D Hall technology



General technical data		
Adjustment range for angle detection	[°]	0 ... 270
Based on standard		VDI/VDE 3845 (NAMUR)
Design		Angular
Mounting position		Any
Measured variable		Swivel angle
Measuring principle		Magnetic Hall
Adjustment options		Teach-in
		Teach-in via electrical connection
Idle current	[mA]	12 ... 20
Analogue output	[mA]	4 ... 20
Repetition accuracy of analogue output		+/- 1 deg
Operating voltage range	Direct voltage DC	[V] 15 ... 30
Insulation voltage	[V]	50
Surge capacity	[kV]	0.8
Protection against short circuit		Yes
Protection against overloading		Yes
Reverse polarity protection		For all electrical connections
Electrical connection		9-pin
		Screw terminal
		Plug-in
Cable connector		M20x1.5
Max. cable length	[m]	30
Permissible cable diameter	[mm]	5 ... 13
Connectable nominal conductor cross section	[mm ²]	2.5
Product weight	[g]	1,000
Housing material		Wrought aluminium alloy
Note on materials		RoHS-compliant

Operating and environmental conditions	
Certification	C-Tick
Ambient temperature	[°C] -20 ... +80 °C
Protection class	IP65
CE mark (see declaration of conformity)	To EU EMC Directive
Electrical protection class	III
Degree of contamination	3
Corrosion resistance class CRC ¹⁾	3

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Sensor boxes SRAP, analogue

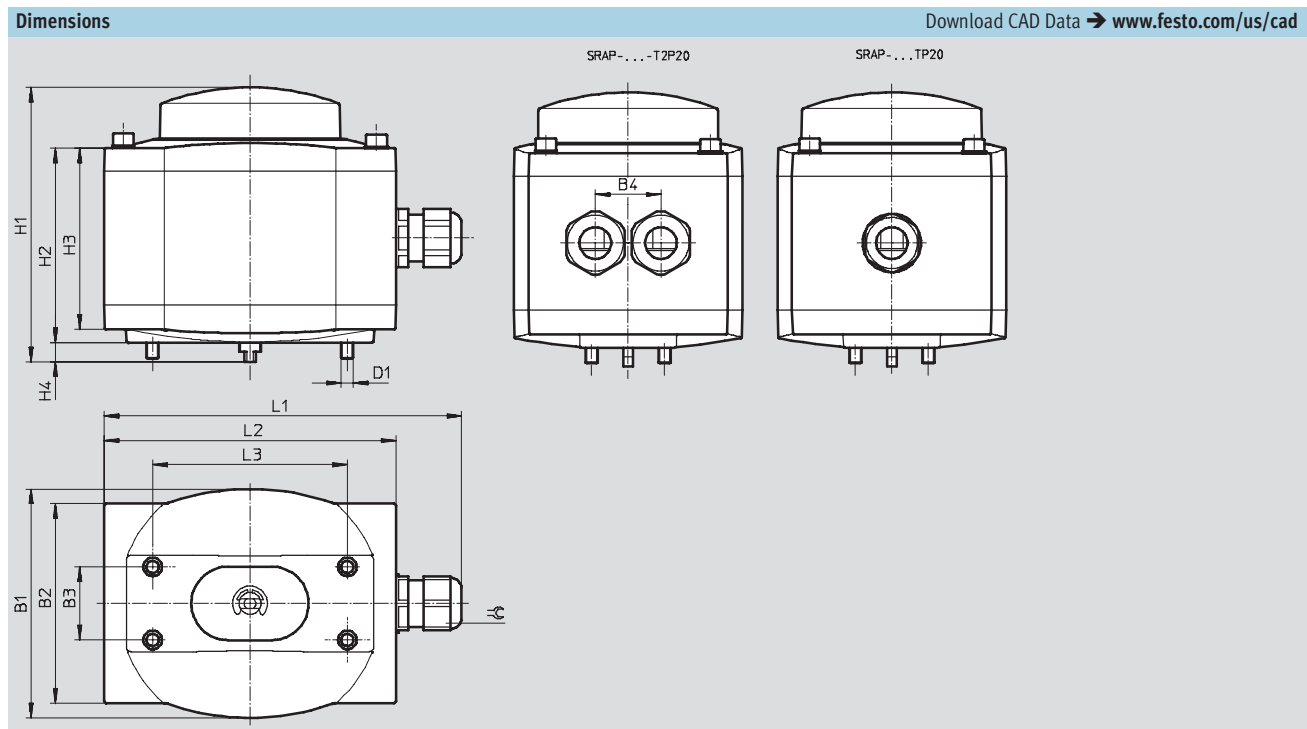
Technical data

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Operating and environmental conditions with explosion protection	
Certification	C-Tick
Ambient temperature [°C]	-20 ... +80 °C
Protection class	IP65
CE mark (see declaration of conformity)	To EU EMC Directive
	To EU Explosion Protection Directive (ATEX)
ATEX category for gas	II 3G
Explosion ignition protection type for gas	Ex nA II T5 X
ATEX category for dust	II 3D
Explosion ignition protection type for dust	Ex tD A22 IP65 T90°C X
Explosion-proof ambient temperature	-20 °C ≤ Ta ≤ +80 °C
Electrical protection class	III
Degree of contamination	3
Corrosion resistance class CRC ¹⁾	3

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.



Type	B1	B2 ±1	B3	B4	D1	H1	H2	H3	H4	L1	L2 ±1	L3	≡						
SRAP-M-CA1-BB270-1-A-TP20	94	82	30	-	M5	112.7	80	74.5	7.8	148	120	80	24						
SRAP-M-CA1-BB270-1-A-TP20-Ex2																			
SRAP-M-CA1-GR270-1-A-TM20										147				22					
SRAP-M-CA1-GR270-1-A-TP20										148				24					
SRAP-M-CA1-GR270-1-A-TP20-Ex2																			
SRAP-M-CA1-YB270-1-A-TM-20										147				22					
SRAP-M-CA1-YB270-1-A-TP-20				148								27							24
SRAP-M-CA1-YB270-1-A-TP-20-Ex2																			
SRAP-M-CA1-GR270-1-A-T2P20																			
SRAP-M-CA1-GR270-1-A-T2P20-Ex2																			
SRAP-M-CA1-270-1-A-T2P20																			
SRAP-M-CA1-270-1-A-T2P20-Ex2																			

Sensor boxes SRAP, analogue

Technical data

FESTO

Ordering data – Sensor boxes SRAP, analogue without explosion protection			
	Position indicator	Part No.	Type
	Blue/black	568 236	SRAP-M-CA1-BB270-1-A-TP20
	Red/green	568 238	SRAP-M-CA1-GR270-1-A-TM20
	Red/green	568 239	SRAP-M-CA1-GR270-1-A-TP20
	Yellow/black	568 242	SRAP-M-CA1-YB270-1-A-TM20
	Yellow/black	568 243	SRAP-M-CA1-YB270-1-A-TP20
	Red/green	568 246	SRAP-M-CA1-GR270-1-A-T2P20
	No indicator	570 527	SRAP-M-CA1-270-1-A-T2P20

Ordering data – Sensor boxes SRAP, analogue with explosion protection			
	Position indicator	Part No.	Type
	Blue/black	568 237	SRAP-M-CA1-BB270-1-A-TP20-Ex2
	Red/green	568 241	SRAP-M-CA1-GR270-1-A-TP20-Ex2
	Yellow/black	568 245	SRAP-M-CA1-YB270-1-A-TP20-Ex2
	Red/green	568 247	SRAP-M-CA1-GR270-1-A-T2P20-Ex2
	No indicator	570 528	SRAP-M-CA1-270-1-A-T2P20-Ex2

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Custom Automation Components
Complete custom engineered solutions



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With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



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Electromechanical actuators, motors, controllers & drives



Pneumatics
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PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

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