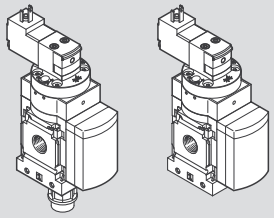
MS(B)4/MS(B)6-...-EX2

Service unit component/Service unit combination



FESTO

Festo SE & Co. KG
Ruiter Straße 82
73734 Esslingen
Germany
+49 711 347-0

www.festo.com

Addendum document | Operating conditions EX

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Original instructions

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1 Identification EX

Marking	
Ex	II 3G Ex ec IIC T4 Gc X II 3D Ex tc IIIC T105°C IP65 Dc X

Tab. 1: Identification EX

2 Applicable documents

NOTICE

Technical data for the product can have different values in other documents. For operation in an explosive atmosphere, the information in this document always have priority.

All available documents for the product ➔ www.festo.com/sp.

3 Certified products

Type	Designation	Part number
MS4-DE-...-EX2	Soft-start valve	527713
MS6-DE-...-EX2	Soft-start valve	527686
MS4-EE-...-EX2	On/off valve	527709
MS6-EE-...-EX2	On/off valve	527682
MSB4-...-EX2	Service unit	531029
MSB6-...-EX2	Service unit	531030

Tab. 2: Certified products

4 Safety

4.1 Safety instructions

- The device can be used under the stated operating conditions in zone 2, explosive gas atmospheres, and in zone 22, explosive dust atmospheres.
- The device with the lowest category determines the category of the entire product for the operation of service unit combinations.
- All work must be carried out outside of explosive areas.
- Only operate the device with a suitable operating medium ➔ Technical data
- The device is not intended for use with other fluids.
- Continuous switching operation is not considered intended use.
- Use the device in its original status, without any unauthorised modifications.
- The device may only be used in the delivered configuration in an explosive atmosphere.

4.2 Intended use

The on-off valve and the soft-start valve pressurise and exhaust pneumatic systems. The service unit combination prepares compressed air.

4.3 Specific conditions of use

- Danger of electrostatic discharge.
- When using devices with a condensate drain, make sure that the operating medium has a pressure dew point ≤ –10 °C.
- Do not disconnect when powered.
- Use an additional strain relief for cables upstream of the plug.
- Use only the MSSD-EB-M12-24VDC-SD-EX plug socket to prevent overvoltage.
- Protect the MSSD-EB-M12-24VDC-SD-EX plug socket from any mechanical impact. Install the MSSD-EB-M12-24VDC-SD-EX plug socket in accordance with EN IEC 60079-0.
- Do not use armoured or braided cables for the plug socket cable fitting.
- Disconnect the plug socket from the solenoid coil only in a clean and dry environment.
- Protect the device from UV radiation.
- The device must be operated only in an environment with a minimum of pollution degree 2, as defined in IEC 60664-1.

5 Function

On/off valve

Switching on the solenoid valve supplies the pneumatic system with compressed air. The system is exhausted when the solenoid valve is switched off.

Soft-start valve

Switching on the solenoid valve slowly supplies the pneumatic system with compressed air. The time for the pressurisation is adjusted with the flow control valve attached to the valve cap. When the solenoid valve is switched off, only the flow rate of the flow control valve is available.

6 Commissioning

⚠ WARNING

The discharge of electrostatically charged parts can lead to ignitable sparks.

- Prevent electrostatic charging by taking appropriate installation and cleaning measures.
- Include the device in the system's potential equalisation.
- Closed-loop controller: do not remove the rotary knob during operation in a potentially explosive atmosphere.
- Closed-loop controller: use the knurled nut only for installation with an earthed mounting bracket. When using other mounting components, remove the knurled nut.

NOTICE

Draw in compressed air outside of the explosive atmosphere.

NOTICE

Strong charge-generating processes can charge non-conductive layers and coatings on metal surfaces.

NOTICE

Escaping exhaust air can swirl up dust and create an explosive dust atmosphere.

NOTICE

Particulate matter in the compressed air can cause electrostatic charges.

- Observe the product labelling.
- Make sure that the contact between the service unit components and the sub-bases is electrically conductive.
- Include the mounting components separately in the equipotential bonding of the system.
- Earth all service unit components and their combinations on the left or right sub-base with the earthing screw.
- Prevent draw-in of ambient air by preventing negative pressure in the devices.

7 Maintenance

- Check the products regularly for correct functioning and service every 6 months.

8 Fault clearance

Malfunction	Remedy
Switching failures	Check the switching function of the valve with reference to current fluctuations, signal errors or signal delays. Replace the valve.
Slower switching times	
Audible leakage at the connections	Check fittings of the connections.
Incomplete pressurisation of an output	Ensure constant pressure in the system.

Tab. 3: Malfunction

The replacement of wearing parts and spare parts is possible in individual cases. Repairs of this type must only be carried out by trained and authorised personnel.

- Please contact your Festo technical consultant.
- After assembly, check the electrical resistivity between the earthing screws on the left-hand and right-hand sub-base ➔ Technical data.

Operating conditions		
Max. operating pressure		➔ product labelling of the individual devices
Ambient temperature T_a		
Temperature of medium		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Information on the operating medium		Lubricated operation not possible
Nominal voltage	[V DC]	24 –25% / +10%
Nominal power	[W]	1.5
Max. power consumption at T_a = 20 °C winding temperature	[W]	2.0
Degree of protection in accordance with EN 60529		IP65
Protection class in accordance with EN 61140		III (PELV)
Assembly		Individual mounting or block mounting
Mounting position		
LF, LFM, LFR with condensate drain M, H, V		Vertical ±5°
All others		Any
Plug socket		
Tightening torque	[Nm]	0.3 ... 0.5
Cable fitting	[Nm]	1.5 ±20 %
Cable diameter	[mm]	4 ... 6
Materials		
Housing		Die-cast aluminium
Seals		Nitrile rubber
All aluminium alloys used contain less than 7.5% magnesium (Mg).		

Tab. 4: Technical data