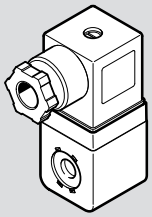
VACN-N-A1-1-EX4-A

Solenoid coil



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Operating instruction

8186821
2023-12c
[8186823]

8186821

Translation of the original instructions

1 Identification EX

Marking		Certificate
IECEx	Ex ia IIC/IIB T6/T4 Gb Ex tb IIIC T80°C/T130°C Db	IECEx PTB 15.0013
CE Ex	II 2G II 2G Ex ia IIC T6,T4 Gb II 2D II 2D Ex tb IIIC T80°C,T130°C Db	PTB 09 ATEX 2043
UKCA Ex	II 2G II 2G Ex ia IIC T6,T4 Gb II 2D II 2D Ex tb IIIC T80°C,T130°C Db	PTB 09 ATEX 2043
Segurança DNV INMETRO	Ex ia IIC/IIB T6/T4 Gb Ex tb IIIC T80°C/T130°C Db	DNV 15.0188
EAC	Ex ia IIC/IIB T6/T4 Gb Ex tb IIIC T80°C/T130°C Db	GYJ21.1326

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 technical data in this document always have priority.

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

3 Safety

3.1 General safety instructions

- The device can be used under the stated operating conditions in zones 1 and 2, explosive gas atmospheres, and in zones 21 and 22, explosive dust atmospheres.
- The device may only be used in the delivered configuration in a potentially explosive atmosphere.
- Use the device in its original status without any unauthorised modifications.
- All work must be carried out outside of potentially explosive areas.
- The device must be connected to a certified Ex ia IIC or Ex ib IIC intrinsically safe circuit.

3.2 Intended use

The solenoid coil is an actuator for Festo valves.

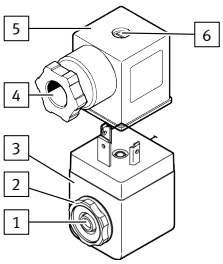
4 Function

When switching on the voltage, the solenoid is energised, and the valve is actuated.

5 Assembly

NOTICE

Installation and commissioning may only be performed in accordance with the operating instructions and by qualified personnel.



1 Exhaust port for pilot control
2 Knurled nut
3 Magnet body
4 Connection for plug socket with cable
5 Device socket
6 Retaining screw

Fig. 1: Assembly

1. Connect the plug socket with cable. Mount the cable connector with sealing ring and washer on the housing.
2. Plug the bushing into the housing.
3. Place the seal on the plug.
4. Attach the device socket and tighten the retaining screw.

Avoid kinking the connecting cables to prevent short circuits or interruptions.

6 Commissioning

⚠ WARNING

The discharge of electrostatically charged parts can lead to ignitable sparks.
- Include the device in the system's potential equalisation.
- Include the valve and coil separately in the equipotential bonding of the system.

- Observe the product labelling.
- Do not commission the solenoid coil until after mounting.

7 Maintenance and care

⚠ WARNING

The discharge of electrostatically charged parts can lead to ignitable sparks.
If used in group IIC:
- Only clean the device with a damp cloth.

- Repairs to the solenoid coil are not permitted.
- The device is maintenance-free.

8 Technical data

Technical data		
Max. input voltage U_i		
– Group IIC	[V DC]	28
– Group IIB	[V DC]	32
Max. input current I_i		
– Group IIC	[mA]	115
– Group IIB	[mA]	195
Effective inner inductance L_i	[µH]	≈ 0
Effective inner capacitance C_i	[nF]	≈ 0
Resistance R_{20}	[Ω]	400 +8 %
Minimum switching current	[mA]	27
Duty cycle	[%]	100 (continuous operation)
Degree of protection		IP65 in accordance with IEC 60529
Ambient temperature T_a at T6, T80 °C	[°C]	–40 °C ... +50 °C
Ambient temperature T_a at T4, T130 °C	[°C]	–40 °C ... +85 °C
Storage temperature	[°C]	–20 ... +80
Mounting position		any
Tightening torque		
Plug socket retaining screw	[Nm]	max. 0.4 ± 0.1 Nm
Cable fitting	[Nm]	max. 1.8 ± 0.2 Nm

Tab. 2: Technical data