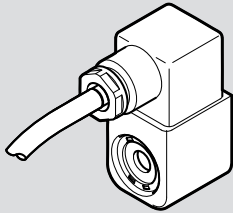


VACN-...-EX4-M

Solenoid coil



FESTO

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8241464

Operating instruction

8241464
2025-07e
[8241466]

Original instructions

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1 Identification EX

Marking		Certificate
	Ex mb IIC T6 Ex mb IIIC T80 °C Db Ex mb tb IIIC T80 °C Db	IECEx PTB 15.0016 X
 	II 2G Ex mb IIC T6 Gb II 2D II 2D Ex mb IIIC T80 °C Db II 2D Ex mb tb IIIC T80 °C Db	PTB 14 ATEX 2027 X
 	II 2G Ex mb IIC T6 Gb II 2D II 2D Ex mb IIIC T80 °C Db II 2D Ex mb tb IIIC T80 °C Db	PTB 14 ATEX 2027 X
 	Ex mb IIC T6 Gb Ex mb tb IIIC T80°C Db	DNV 15.0189X
	Ex mb IIC T6 Gb Ex mb IIIC T80°C Db	GYJ21.1327X 2021322307003994

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 solenoid coils

Voltage	Cable length	Type	T. no.
24 V DC	3 m	VACN-N-K1-1-EX4-M	8029143
24 V DC	10 m	VACN-N-K1-1-10-EX4-M	8141606
110 V AC	3 m	VACN-N-K1-16B-EX4-M	8029142
230 V AC	3 m	VACN-N-K1-3A-EX4-M	8029141

Tab. 2: Certified solenoid coils

4 Safety

4.1 General safety instructions

- The device can be used under the stated operating conditions in zones 1 and 2 of explosive gas atmospheres and in zones 21 and 22 of explosive dust atmospheres.
- The device may only be used in the delivered configuration in an explosive atmosphere.
- Use the device in its original status, without any unauthorised modifications.
- All work must be carried out outside of explosive areas.

4.2 Intended use

The solenoid coil is an actuator for Festo valves.

4.3 Identification X: special conditions

- Install a fuse or a motor protection switch appropriate for the rated current upstream of the solenoid coil as short-circuit protection.
 - Short circuit protection for max. 3 times the rated current in accordance with IEC 60127-1.
 - The fuse with the lowest current value in accordance with IEC 60127-1 is sufficient for very low rated currents of the solenoid coil.
 - Select the fuse rated voltage equal to or greater than the nominal voltage of the solenoid coil.
 - Motor protection switch with short circuit triggering and thermal quick triggering, adjustment to rated current.
- Install the fuse in the supply unit or wire it separately upstream.
- The interruption rating of the fuse unit must be greater than or equal to the maximum expected short-circuit current at the installation location, normally 1500 A.
- Max. permissible ripple with solenoid coils in direct current: 20%.

5 Function

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

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 equipotential bonding.

NOTICE

Installation and commissioning should only be carried out in accordance with operating instructions and by qualified personnel.

- Prevent short circuit or interruption resulting from bending the connecting cable too tightly.
- 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		
Ambient temperature Ta		
Individual mounting	[°C]	-20 ≤ Ta ≤ +50
Block mounting	[°C]	-20 ≤ Ta ≤ +40
Nominal voltage U _N		
VACN-N-K1-1-EX4-M	[V DC]	24
VACN-N-K1-1-10-EX4-M	[V DC]	
VACN-N-K1-16B-EX4-M	[V AC]	110 (50 ... 60 Hz) 120 (60 Hz)
VACN-N-K1-3A-EX4-M	[V AC]	230 (50 ... 60 Hz)
Rated current I _N		
VACN-N-K1-1-EX4-M	[mA]	109
VACN-N-K1-1-10-EX4-M	[mA]	
VACN-N-K1-16B-EX4-M	[mA]	22
VACN-N-K1-3A-EX4-M	[mA]	9
Duty cycle	[%]	100 (continuous operation)
Degree of protection		IP65
Relative humidity	[%]	95 (non-condensing)
Assembly		Individual mounting/block mounting
Block mounting, minimum distance		
VACN-N-K1-1-EX4-M	[mm]	2
VACN-N-K1-1-10-EX4-M	[mm]	
VACN-N-K1-16B-EX4-M	[mm]	1
VACN-N-K1-3A-EX4-M	[mm]	1
Mounting position		any

Tab. 3: Technical data