

Solenoid valve VSNC-FC-M52-MD-G14-F8

Part number: 577257

FESTO



 [General operating condition](#)

Datasheet product reliability

The information in this "Product reliability data sheet" is based on products being used as intended. This includes complying with all specifications in data sheets, catalogues, user documentation and the general operating conditions. The user alone is responsible for determining whether a product is suitable for a particular application.

Feature	Value
Certified for safety function to ISO 13849 and IEC 61508 (SIL) ¹⁾	Up to Safety Integrity Level 2 low demand mode Up to Safety Integrity Level 2 high demand mode
Certificate issuing authority	DNVGL-TAA000011J
Probability of Failure per Hour (PFH) ²⁾	$5.7 \cdot 10^{-8}$
Probability of Failure on Demand (PFD) ³⁾	$2.5 \cdot 10^{-3}$
Relevant basic safety principles ⁴⁾	Yes
Service-life value B ₁₀ ⁵⁾	7 Mio cycles
Mean time to failure (MTTF) ⁶⁾	2000 Year
Relevant well-tried safety principles ⁷⁾	Yes
Fault exclusion	Automatic change of the normal position of the switching element of the main stage without a control signal. The control signal for pilot-controlled solenoid valves consists of the electrical control signal for the valve coil and the pneumatic signal (pilot air supply) of the pilot valve. Bursting of the valve housing: externally directed failure of the material structure with a sudden release of the medium and associated pressure drop (according to ISO 5598, 3.2.85).
Design characteristics	Mechanical spring return
Lap	Overlap
Vibration resistance	Transport application test with severity level 2 in accordance with FN942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27

- 1) Further measures can be necessary to fulfil the stated Safety Integrity Level (SIL). For these measures refer to the relevant documentation.
- 2) For components affected by wear this value will be reached, if for the precise application the mean number of annual operations (nop) is equal or lower than the assumed annual operations of this product. The assumed mean number of annual operations is stated in this datasheet.
- 3) For components affected by wear this value will be reached, if for the precise application the mean number of annual operations (nop) is equal or lower than the assumed annual operations of this product. The assumed mean number of annual operations is stated in this datasheet.
- 4) The product-relevant basic safety principles are fulfilled according to the ISO 13849-2.
- 5) The ascertainment of characteristic service life values is generally based on the ISO 19973 "Pneumatic fluid power - Assessment of component reliability by testing".
- 6) The ascertainment of the MTTF value is generally based on the IEC 61709 "Electric components - Reliability - Reference conditions for failure rates and stress models for conversion" respectively on the SN 29500.
- 7) The product-relevant well-tried safety principles are fulfilled according to the ISO 13849-2.