TÜVRheinland®

Certificate of Conformity No.: 28716258

Manufacturer: **Sitecna S.r.l. a socio unico**
Via G. Di Vittorio, 22
I-20068 Peschiera Borromeo (MI)

Specifications: IEC 61508-1÷7:2010

Product: Quick exhaust valve

Type: Series VSR

RESULT:

As per the TÜV Rheinland Italia Report No. FS 28716258 Rev. 0, we declare that the product meets the below requirements:

IEC 61508: 2010, part 1 to 7
Functional Safety of electrical/electronic/programmable electronic safety related systems; Type A, Low Demand Mode, HFT=0

Safety Action	λ_D [1/h]	$\lambda_{DD(PS)}$ [1/h]	Systematic Capability
De-Energise-To-Trip	5,00E-09	4,95E-09	3

The above values are compatible with SIL 3.

The requirements of minimum hardware fault tolerance (HFT) according to par. 11.4.3 of IEC 61511-1 have to be observed.

For further details, see what written in the Safety Manual.

Expiry date: **2019-09-30**

--- End page

Location **Milan**
Date **2016-09-19**

Diego Sirtori
Business Stream Manager

TÜVRheinland® Industrial Services TÜVRheinland® Italia

TÜVRheinland®

Manufacturer: **Sitecna S.r.l. a socio unico**
Via G. Di Vittorio, 22
I-20068 Peschiera Borromeo (MI)

Specifications: IEC 61508-1÷7:2010

Product: Quick exhaust valve

Type: Series VSR

Partial Stroke frequency (months)	Test Interval Frequency (months)				
	6	12	24	36	48
1	2,04E-06	2,15E-06	2,36E-06	2,58E-06	2,80E-06
2	3,84E-06	3,95E-06	4,17E-06	4,39E-06	4,61E-06
3	5,65E-06	5,76E-06	5,98E-06	6,20E-06	6,42E-06
6		1,12E-05	1,14E-05	1,16E-05	1,18E-05
9				1,70E-05	
12			2,22E-05	2,25E-05	2,27E-05

PFD_{AVG} values according to IEC 61508 for different values of TI and TI_{PS}

Test Interval Frequency (months)				
6	12	24	36	48
1,11E-05	2,20E-05	4,39E-05	6,58E-05	8,77E-05

PFD_{AVG} values according to IEC 61508 for different values of TI (no Partial Stroke Test)

NOTES:

- The above values of PFD_{AVG} are calculated for MRT=24 h and Proof Test Coverage=100%. For other values of MRT, TI, TI_{PS} and/or non-perfect Proof Test, the PFD_{AVG} values must be re-calculated.
- The PFD_{AVG} values including Partial Stroke Test are calculated considering the use of a commercial automatic Partial Stroking Test System: for further details, see the Safety Manual.

--- End Certificate

TÜVRheinland® Industrial Services TÜVRheinland Italia