



**Certificate no. TAI-FS-C-20-0010**

WE HEREBY CERTIFY THAT

**Product description** SPRING RETURN PNEUMATIC VALVE

**Models** SERIES APD

**Manufacturer** DVG AUTOMATION S.p.A.  
Via Giacomo Rossetti 2  
I-29016 Cortemaggiore (PC)

IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE STANDARDS

**IEC 61508 Parts 1–7:2010**

AS RESULT OF THE ASSESSMENT ACCORDING TO THE PROVISION  
SET OUT IN THE ABOVE-MENTIONED STANDARDS

**Summary Report no.** TAI-FS-R-20-0021

**Expiry date** 28.04.2023

**Issue date** 29.04.2020

29.04.2020, Monte Roberto (AN)

Ing. Crescenzo Di Fratta

Page 1 of 2

## Annex to certificate no. TAI-FS-C-20-0010

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	1. De-energize-to-trip operation: to discharge a chamber of a single acting pneumatic actuator
<b>Mode of operation</b>	Low Demand Mode

Random failure rates				
Configuration	Safety function	$\lambda_{DU}$ [1/h]	$\lambda_{DD}$ [1/h]	$\lambda_S$ [1/h]
APD - No PST	1	2,38E-08	0,00E+00	3,67E-08
APD - With PST	1	2,38E-10	2,35E-08	3,67E-08

<b>Systematic capability</b>	3 (Route 1s applied)			
<b>Architectural constraints</b>	<b>Route 1<sub>H</sub>:</b>	Applied	<b>Route 2<sub>H</sub>:</b>	Applied
	The product can be used in: <ul style="list-style-type: none"> <li>• single channel configuration:                             <ul style="list-style-type: none"> <li>○ up to SIL 2 without external diagnostic tests</li> <li>○ up to SIL 3 considering external diagnostic tests</li> </ul> </li> <li>• double channel configuration: up to SIL 3</li> </ul>			

- Remarks:**
- For further details, including environmental conditions, limitations of use, lifetime, failure rates traceability, mean repair times, common cause factors and systematic capability constraints, make reference to Safety Manual SCTD-SM-APD-01.

END OF CERTIFICATE

