



**Certificate no. TAI-FS-C-24-0084**

WE HEREBY CERTIFY THAT

**Product description** Quarter turn rotary vane operator

**Models** Shafer™ series RV

**Manufacturer** EMERSON AUTOMATION SOLUTIONS  
Valve Automation, Inc.  
19200 Northwest Freeway  
Houston, Texas 77065  
USA

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

**Assessment report no.** TAI-FS-R-24-0155

**Expiry date** 10.11.2027

**Issue date** 11.11.2024

TUV AUSTRIA ITALIA  
11.11.2024, Monte Roberto (AN)

Ing. Crescenzo Di Fratta

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C.F./P. IVA IT01055750333 - Cap. Soc. i.v. € 400.000,00 - REA AN n. 211030  
Società a socio unico, soggetta a controllo e coordinamento di:  
TÜV AUSTRIA HOLDING AG Deutschstrasse 10, A-1230, Vienna, Austria  
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**Annex to certificate no. TAI-FS-C-24-0084**

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	1. Delivery of a full stroke (90° ± tolerance) driven by the piston of cylinder, powered by the specified medium working pressure
<b>Mode of operation</b>	Low Demand Mode

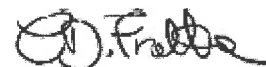
Random failure rates				
Configuration	Safety function	$\lambda_{DU}$ [1/h]	$\lambda_{DD}$ [1/h]	$\lambda_S$ [1/h]
Shafer™ series RV - No PST	1	2,29E-08	0,00E+00	0,00E+00
Shafer™ series RV - With PST	1	2,06E-09	2,09E-08	0,00E+00

<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 VA001-SMA-13

END OF CERTIFICATE

TUV AUSTRIA ITALIA  
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