



Certificate no. TAI-FS-C-21-0074

WE HEREBY CERTIFY THAT

Product description SHAFER™ QUARTER TURN ROTARY VANE OPERATOR

Models SERIES RV

Manufacturer EMERSON AUTOMATION SOLUTIONS
Actuation Technologies
2500 Park Avenue West
Mansfield, Ohio 44906
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

Summary Report no. TAI-FS-R-21-0153

Expiry date 27.07.2024

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TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.
28.07.2021, Monte Roberto (AN)

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Cod. Id. CEE IT02217380423 REA AN n. 170070
A socio unico, soggetta a controllo e coordinamento di:
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Annex to certificate no. TAI-FS-C-21-0074

Type	A
HFT	0
Safety functions	1. Delivery of a full stroke ($90^\circ \pm$ tolerance), by depressurizing one vane and pressurising the other vane of the actuator
Mode of operation	Low Demand Mode

Random failure rates				
Configuration	Safety function	λ_{DU} [1/h]	λ_{DD} [1/h]	λ_S [1/h]
RV - No PST	1	3,94E-08	0,00E+00	0,00E+00
RV - With PST	1	3,54E-09	3,58E-08	0,00E+00

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

- 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

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.
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