



Certificate no. TAI-FS-C-24-0067

WE HEREBY CERTIFY THAT

Product description HYDRAULIC SCOTCH-YOKE SPRING RETURN AND DOUBLE ACTING ACTUATOR

Models SERIES GH/S, GH/S-FA, GH/D

Manufacturer ROTORK ACTUATION (SHANGHAI) CO., LTD.
Building G, No. 260 Liancao Road
Minhang District, Shanghai 201108
People's Republic of China

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-24-0133

Expiry date 13.06.2027

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TUV AUSTRIA ITALIA
10.07.2024, Monte Roberto (AN)

Ing. Crescenzo Di Fratta

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TUV AUSTRIA HOLDING AG Deutschstrasse 10, A-1230, Vienna, Austria
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Annex to certificate no. TAI-FS-C-24-0067

Type	A
HFT	0
Safety functions	<u>Spring return actuators:</u> 1. Delivery of a full stroke ($90^\circ \pm$ tolerance) driven by the spring, with power fluid exhausted from the cylinder through the control system <u>Double acting actuators:</u> 1. Delivery of a full stroke ($90^\circ \pm$ tolerance) driven by the piston of cylinder, powered by the specified medium working pressure
Mode of operation	Low Demand Mode

Random failure rates				
Configuration	Safety function	λ_{DU} [1/h]	λ_{DD} [1/h]	λ_S [1/h]
Series GH/S - No PST	1	8,59E-09	0,00E+00	0,00E+00
Series GH/S - With PST	1	7,73E-10	7,81E-09	0,00E+00
Series GH/S-FA - No PST	1	9,59E-09	0,00E+00	0,00E+00
Series GH/S-FA - With PST	1	8,63E-10	8,72E-09	0,00E+00
Series GH/D - No PST	1	1,41E-08	0,00E+00	0,00E+00
Series GH/D - With PST	1	1,27E-09	1,28E-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 SM-GH-A-02-E

END OF CERTIFICATE

TUV AUSTRIA ITALIA
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