



**Certificate no. TAI-FS-C-21-0071**

WE HEREBY CERTIFY THAT

**Product description** PNEUMATIC SCOTCH-YOKE SPRING RETURN AND  
DOUBLE ACTING ACTUATOR

**Models** SERIES GP/S, GP/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-21-0147**

**Expiry date** 04.07.2024

**Issue date** 05.07.2021

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
05.07.2021, Monte Roberto (AN)

Page 1 of 2

Ing. Crescenzo Di Fratta

## Annex to certificate no. TAI-FS-C-21-0071

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	<p><u>Spring return actuators:</u></p> <p>1. Delivery of a full stroke (<math>90^\circ \pm</math> tolerance) driven by the spring, with power fluid exhausted from the cylinder through the control system</p> <p><u>Double acting actuators:</u></p> <p>1. Delivery of a full stroke (<math>90^\circ \pm</math> tolerance) driven by the piston of cylinder, powered by the specified medium working pressure</p>
<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]
GP/S - No PST	1	2,58E-08	0,00E+00	0,00E+00
GP/S - With PST	1	2,32E-09	2,35E-08	0,00E+00
GP/D - No PST	1	2,78E-08	0,00E+00	0,00E+00
GP/D - With PST	1	2,50E-09	2,53E-08	0,00E+00

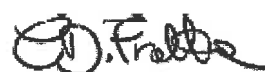
<b>Systematic capability</b>	3 (Route 1s applied)			
<b>Architectural constraints</b>	<b>Route 1<sub>H</sub>:</b>	Applied	<b>Route 2<sub>H</sub>:</b>	Applied
	<p>The product can be used in:</p> <ul style="list-style-type: none"> <li>• single channel configuration: <ul style="list-style-type: none"> <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 SM-GP-A-02-E.

END OF CERTIFICATE

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
05.07.2021, Monte Roberto (AN)



Ing. Crescenzo Di Fratta