



**Certificate no. TAI-FS-C-22-0023**

WE HEREBY CERTIFY THAT

**Product description** ELECTRIC SPRING RETURN ACTUATOR

**Models** SERIES EFS2000v4

**Manufacturer** **BIFFI ITALIA S.r.l.**  
Strada Biffi 165  
I-29017 Fiorenzuola d'Arda (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-22-0047

**Expiry date** 16.05.2025

**Issue date** 17.05.2022

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
17.05.2022, Monte Roberto (AN)

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## Annex to certificate no. TAI-FS-C-22-0023

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	1. Delivery of a full stroke ( $\pm$ tolerance) driven by the spring, moving the valve to the safe position (cutting the electric supply to the electromagnetic clutch)
<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]
EFS2000v4 - No PST	1	4,73E-08	0,00E+00	0,00E+00
EFS2000v4 - With PST	1	4,26E-09	4,31E-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 SM 020.

END OF CERTIFICATE

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