



**Certificate no. TAI-FS-C-23-0007**

WE HEREBY CERTIFY THAT

**Product description** **SOLDO™ BOLT MICRO SWITCH BOX**

**Models** **Series BM, TB, BJ, BX**

**Manufacturer** **ROTORK INSTRUMENTS ITALY S.r.l.**  
**Via Portico 17**  
**I-24050 Orio al Serio (BG)**

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-23-0016**

**Expiry date** **19.03.2026**

**Issue date** **20.03.2023**

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
20.03.2023, 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-23-0007

|                          |   |
|--------------------------|---|
| <b>Type</b>              | A   |
| <b>HFT</b>               | 0   |
| <b>Safety functions</b>  | <ol style="list-style-type: none"> <li>1. Give an output signal to indicate that the actuator has moved from the "normal position"</li> <li>2. Give an output signal to indicate that the actuator has reached the "safe position"</li> </ol> |
| <b>Mode of operation</b> | Low Demand Mode   |

| Random failure rates   |                 |                   |                   |                              |
|--|-----------------|-------------------|-------------------|------------------------------|
| Configuration  | Safety function | $\lambda_D$ [1/h] | $\lambda_S$ [1/h] | SFF [%]                      |
| BM, TB and BJ with reed or micromechanical switch  | 1 / 2           | 4,8E-10           | <1,0E-09          | > 60%<br>> 99% including PST |
| BX with Pepperl+Fuchs NAMUR sensors, standard NAMUR amplifier<br>With Werner Turck NAMUR sensors | 1 / 2           | 9,6E-09           | 1,6E-08           | > 60%<br>> 99% including PST |
| BX with Pepperl+Fuchs NAMUR sensors, fail-safe interface   | 1 / 2           | 7,0E-11           | 2,5E-08           | > 99%                        |


|                                  |  |         |                             |         |
|----------------------------------|--|---------|-----------------------------|---------|
| <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 switch 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 (only for safety function 1)</li> </ul> </li> <li>• redundant switch 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 IOM00069\_ENG

END OF CERTIFICATE

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
20.03.2023, Monte Roberto (AN)



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