



# C E R T I F I C A T E

**Certificate no. 17-SIL-0010009-10-TIC**

WE HEREBY CERTIFY THAT

**Product description** LIMIT SWITCH BOXES  
**Models** Series ASB  
Series SDCU-20 with limit switches kit SDCU-20-LS  
**Manufacturer** DVG AUTOMATION S.p.A.  
Via G. Rossetti 2 - 29016 Cortemaggiore 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. RC-0518-SIL-TIC-PC-0010009-17-12**

**Expiry date 17.05.2021**

**Note**

This certificate is issued upon the request of the manufacturer as voluntary certification; it does not include the production surveillance.  
This certificate does not allow the manufacturer to use the safety mark of TÜV INTERCERT.



Reggio Emilia, 18.05.2018

Dipl. Ing. Feridoon Sergizzarea

TÜV INTERCERT Certification Body

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# C E R T I F I C A T E

## ANNEX to Certificate no. 17-SIL-0010009-10-TIC

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	<ol style="list-style-type: none"> <li>1. De-energize-to-trip operation: when the actuator, on which the device is mounted, starts to drive the emergency valve to its safe position</li> <li>2. De-energize-to-trip operation: when the actuator, on which the device is mounted, reaches the "safe position"</li> </ol>
<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]
ASB; SDCU-20 with SDCU-20-LS - No PST - Single switch	1 / 2	1,00E-08	0,00E+00	1,80E-08
ASB; SDCU-20 with SDCU-20-LS - With PST - Single switch	1	1,00E-10	9,90E-09	1,80E-08
ASB; SDCU-20 with SDCU-20-LS - No PST - Redundant switch	1 / 2	1,00E-09	0,00E+00	3,60E-08
ASB; SDCU-20 with SDCU-20-LS - With PST - Redundant switch	1	1,00E-11	9,90E-10	3,60E-08

<b>Systematic capability</b>	3 (Route 1 <sub>S</sub> 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>○ Series ASB:                   <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>○ Series SDCU-20 with SDCU-20-LS: up to SIL 3</li> </ul> </li> <li>• redundant switch configuration: up to SIL 3</li> </ul>			

**Remarks:**

- In case of series SDCU-20 with SDCU-20-LS, the diagnostic test can be performed by the electronic board of the SDCU-20 itself.
- 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-Isb-safetyman.

END OF CERTIFICATE

Dipl. Ing. Feridoon Sergizzarea

Reggio Emilia, 18.05.2018

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