



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx EUT 17.0009X

Issue No: 0

Certificate history:

Issue No. 0 (2017-04-28)

Status: **Current**

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Date of Issue: **2017-04-28**

Applicant: **DVG Automation S.p.A.**
Via G. Rossetti, 2 – 29016 Cortemaggiore (PC)
Italy

Equipment: **Smart Diagnostic Control Unit, Series SDCU-20**
Optional accessory:

Type of Protection: **Flameproof enclosures "d"**

Marking:
Ex db IIC T5 Gb

*Approved for issue on behalf of the IECEx
Certification Body:*

Dionisio Bucchieri

Position:

Head of IECEx CB

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Eurofins Product Testing Italy S.r.l.
Via Cuornè,
n.21 - 10156 Torino
Italy



Product Testing



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Manufacturer: **DVG Automation S.p.A.**
Via G. Rossetti, 2 – 29016 Cortemaggiore (PC)
Italy

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[IT/EUT/ExTR17.0010/00](#)

Quality Assessment Report:

[IT/EUT/QAR14.0003/02](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The smart diagnostic control unit is an electronic device designed to test and control process valves in oil and gas industry.

The enclosure can be made of aluminium or stainless steel.

The equipment has always the type of protection Ex d and it is suitable for group IIC.

Although the internal components are already protected by a flameproof enclosure, up to six intrinsically safe limit switches can be additionally provided. In this case, each switch has to be connected separately to an already IECEx certified intrinsically safe associated apparatus with suitable safety related parameters.

Electrical characteristics

Maximum voltage: 250 Vac/Vdc

Maximum Limit Switch current: 16 A

Maximum power dissipation: 5 W

For intrinsically safe limit switches, the safe input parameters are:

$U_i=30V$; $I_i=120\text{ mA}$; $P_i=0.9W$; $L_i=0\text{ }\mu\text{H}$; $C_i=0\text{ }\mu\text{F}$;

A more detailed description is given in the annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Use screws quality A4-70

Annex:

[EPT.17.REL.01_54814.pdf](#)



Annex to certificate: **IECEX EUT 17.0009 X Issue N. 0 of 2017-04-28**

General product information:

The smart diagnostic control unit is an electronic device designed to test and control process valves in oil and gas industry.

The enclosure can be made of aluminium or stainless steel.

The equipment has the type of protection Ex d (EPL Gb) and it is suitable for group IIC.

Although the internal components are already protected by a flameproof enclosure, up to six intrinsically safe limit switches can be additionally provided. In this case, each switch has to be connected separately to an already IECEx certified intrinsically safe associated apparatus with suitable safety related parameters.

The equipment can be equipped with up to six separated limit switches.

The accessories used for cable entries and for unused holes have to be subjected of a separate certification according to the applicable standards.

Degree of protection: IP66 / IP 68 (2h submersed at a depth of 1m).

Electrical characteristics

Maximum voltage: 250 Vac/Vdc

Maximum Limit Switch current: 16 A

Maximum power dissipation: 5 W

For intrinsically safe limit switches, the safe input parameters are:

$U_i=30V$; $I_i=120\text{ mA}$; $P_i=0.9W$; $L_i\approx 0\ \mu H$; $C_i\approx 0\ \mu F$;

Cable entries

The equipment can be provided with maximum 6 entries type $\frac{3}{4}$ " NPT or $\frac{1}{2}$ " NPT or M20x1.5.

The cable entry devices used on the enclosures have to be suitably IEC Ex certified. They have to be chosen according to the type of protection, the type of thread and the degree of protection of the equipment.

The accessories used for cable entries and for unused holes have to be subjected to a separate certification according to IEC 60079-1.

Screws

The used screws comply with quality A4-70.

Code	ADC	4	A	2	1	4	0	0	0	1	0	0	x	x	x
4-20 mA I/O + Hart comm. channel: not used 24VDC / 4-20mA position feedback 24VDC / 4-20mA position feedback + Hart comm. 4-20mA input 4-20mA input + Hart comm.					0 1 2 3 4										
Digital input DI1: not used open cmd close cmd PST cmd local PST pushbutton					0 1 2 3 4										
General I/O: not used if configured as 4-20mA out: pressure retransmission position retransmission if configured as digital input DI2: open cmd close cmd PST cmd						0 1 2 3 4 5									
Output relay and pressure transmitter: out relay = not used, pressure transm. = not present out relay = not used, pressure transm. = present out relay = alarm contact, pressure transm. = not present out relay = alarm contact, pressure transm. = present out relay = redundant SIS, pressure transm. = not present out relay = redundant SIS, pressure transm. = present							0 1 3 4 5 6								
Outputs to drive SOV's A and B and motor of pump: without SOV A and SOV B and pump with only SOV A, open / close cmd with only SOV B, open / close cmd with SOV A and SOV B, SOV A opens and SOV B closes with SOV A and SOV B, SOV A closes and SOV B opens with pump command (out SOV A) with pump command (out SOV B)							0 1 2 3 4 5 6								
PST cmd: PST cmd disabled PST cmd operates ESD SOV PST cmd operates SOV A PST cmd operates SOV B PST cmd operates SOV A and SOV B								0 1 2 3 4							
24VDC power: without 24VDC power with 24VDC power with 24VDC power, same of 24VDC Hart with 24VDC power, same of 24VDC SIS with 24VDC power, same of 24VDC Hart and 24VDC SIS								0 1 2 3 4							
Options: without any option with SDCU-20-LOI with NCF adapter with SDCU-20-LOI + NCF adapter compact electro-hydraulic actuator with LCP A with LCP B with LCP A + NCF adapter with LCP B + NCF adapter spare									0 1 2 3 4 5 6 7 8 9						
Wiring diagram:													x	x	x



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Warning label

“Do not open in presence of explosive atmosphere”

“Do not open while energized”

“Potential electrostatic charging hazard - clean with damp cloth or antistatic products”

“Flameproof joints cannot be repaired”

“Use n°6 screws quality A4-70”

Specific Conditions of Use:

Use screws quality A4-70

Routine test:

N/A