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EC TYPE EXAMINATION CERTIFICATE[2] **Equipment or protective systems or components intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] Number of EC Type examination certificate:

EUT 14 ATEX 1232[4] Equipment: **Electro-hydraulic actuator controller**
Series: **HPU**[5] Manufacturer: **DVG Automation S.p.A.**[6] Address: **Via Rossetti, n. 2 - 29016 Cortemaggiore (PC)**

[7] This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documents reported in it.


[8] EUROFINS TECH S.r.l., notified body n. 0477 in accordance with Article 9 of the Council Directive 94/9/CE of 23th March 1994, certifies that this component have been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in the confidential report n. EUT.14.REL.01/52150

[9] Compliance with the essential health and safety is assured by compliance with:

EN 60079-0:2012; EN 60079-1:2007; EN 60079-31:2009

[10] The sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the equipment specified, in accordance with the Directive 94/9/CE.
Further requirements of this Directive apply to the manufacture and supply of this equipment.
These requirements are not object of this certificate.[12] The equipment shall include the sign  and at least one of the following strings:**II 2G Ex d IIB T5 Gb** $-20^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$ (or $-45^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$ or $-60^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$)**II 2D Ex tb IIIC T86°C Db** $-20^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$ (or $-45^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$ or $-60^{\circ}\text{C} \leq Ta \leq +85^{\circ}\text{C}$)

Turin, 30 June 2014

Dionisio Bucchieri
Directive ResponsiblePaolo Dentis
Notified Body ManagerPRD N° 119B
ISP N° 030EMembro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This Certificate has 4 pages and it is reproducible only in its entirety. Conditions of validity are reported below.

[13] **ANNEX**
[14] **EC TYPE EXAMINATION CERTIFICATE N. EUT 14 ATEX 1232**

[15] **Equipment description**

The electro-hydraulic actuator controller can command four types of electric motors:

- Three phase motor (standard 400 Vac, other voltages available), the power of the motor is determined by the characteristics of the associated HPU; this type of controller checks the phase sequence, missing phase and motor power consumption.
- Single phase motor (standard 230 Vac, other voltages available), the power of the motor is determined by the characteristics of the associated HPU, this type of controller checks missing phase and motor power consumption.
- Three phase motor controlled by an inverter. This technical solution is adopted when the supply voltage is 24 Vdc.
- Direct current electric motor (standard 24Vdc)

The electro-hydraulic actuator controller can receive and transmit many signal types, by means of internally installed discrete components.

The electro-hydraulic actuator controller can be made of aluminium or stainless steel (the paint used has a maximum thickness of 1050 µm).

The equipment of group IIB and group IIIC has respectively the type of protection "Ex d" and "Ex t".

Electrical characteristics

Maximum rated voltage: 460 Vac

Maximum rated current: 55 A

Maximum power dissipation: 10 W

Degree of protection: IP 68 (1 m 2 hour)

Ambient temperature: -20 ÷ +85 °C (or -45 ÷ +85 °C or -60 ÷ +85 °C)

Cable entries

The cable entry devices used on the enclosures must be suitably ATEX certified.

Screws

The used screws comply with quality A4-70, or superior (i.e. A4-80).

Warning label

"Do not open when energized"

"Do not open in presence of explosive atmosphere"

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

[16] **Special condition for a safe use**
None

[17] **Assessment report n° EUT.14.REL.01/52150**

This EC Type certificate is released after the positive result of the conformity assessment of the Council Directive 94/9/CE and to harmonized technical standard EN 60079-0:2012; EN 60079-1:2007; EN 60079-31:2009; performed by the notified body Eurofins TECH S.r.l. and reported in the assessment report above cited.

Routine test

In compliance with IEC 60079-1, the manufacturer must perform the individual pressure test on each enclosure with a minimum pressure of:

15 bar for at least 10s in case of range of ambient temperature between -45°C and +85°C;

16.8 bar for at least 10s in case of range of ambient temperature between -60°C and +85°C;

[13] **ANNEX**

[14] **EC TYPE EXAMINATION CERTIFICATE N. EUT 14 ATEX 1232**

[18] **Descriptive Documents**

The equipment object of this certificate are described by the following documents.
Scheduled documents are indicated with the symbol "Y" and can not be modified without the explicit authorization of the notified body.

| Document | Name | Date | Rev. | Scheduled |
|--|---------------------|------------|------|-----------|
| Procedure for joint realization | PP-00000001 | 2014/06/25 | 00 | Y |
| General marking HPU | DITVCTRG0003 | 2014/06/26 | 0 | Y |
| Marking Do not open when energized | DITVCTRG0002 | 2012/10/11 | 1 | Y |
| Cleaning marking HPU | DITVCTRG0004 | 2014/06/26 | / | Y |
| Cover HPU | DITVCCPIN00 | 2014/06/26 | 4 | Y |
| Cover inverter | DITVCCPIN10 | 2013/10/14 | 1 | Y |
| HPU outer plate | DITVCPIIN00 | 2014/06/26 | 3 | Y |
| Joint assembly EX M32x1.5 | AITVCGEX000 | 2014/04/29 | 0 | Y |
| Selector lid | DEDINT03022 | 2014/06/10 | / | Y |
| Driver selector | DEDINT04022 | 2014/06/10 | / | Y |
| Bushing EX ITVC M32x1.5 | DITVCGEX000 | 2013/04/17 | 2 | Y |
| Resin datasheet | 044UR5041 | 2006/08 | 1 | - |
| | ELUB-UR5041-TD | 1996/02 | / | - |
| Gasket datasheet | MESCOLE O-RING ATEX | 2014/04/08 | 1 | - |
| Painting instruction | CPS-ITVC-01 | 2012/10/22 | 00 | - |
| | CPS-ITVC-02 | 2014/04/22 | 00 | - |
| Assembly HPU Board | AITVCIN00001 | 2013/10/15 | / | - |
| Assembly HPU 24 VDC | AITVCIN00002 | 2013/10/15 | 1 | - |
| Bushing disk DE23.2 | DDISC02300000 | 2013/12/23 | / | - |
| Washer EX ITVC M32x1.5 | DITVCGEX010 | 2014/04/17 | / | - |
| Gasket internal | DITVCGCIN00 | 2013/12/11 | 2 | - |
| Gasket cover inverter | DITVCCPING0 | 2013/12/11 | 2 | - |
| Switch datasheet | ED/C501 | 2014/06/26 | 0 | - |
| Mounting bracket selector | DEDINT05022 | 2014/06/10 | / | - |
| Washer DI21 DE26 | DROS021A000N1 | 2014/06/13 | / | - |
| Switch joint | ST-ITVC-02-09-14 | 2014/06/26 | 0 | - |
| Enclosure materials | ST-ITVC-03-09-14 | 2014/06/26 | 0 | - |
| Fasteners specification | ST-ITVC-01-09-14 | 2014/06/26 | 0 | - |
| Installation set-up operating & service manual | SM-ITVC-ENG-01 | 2014/06/26 | 00 | - |

[13]

ANNEX

[14]

EC TYPE EXAMINATION CERTIFICATE N. EUT 14 ATEX 1232**[19] Essential Health and Safety Requirements**

Assured by compliance with harmonized standards; the evaluations of "protections against other hazards" in paragraph 1.2.7 of the annex n. II of the directive 94/9/CE is not covered by this certificate. Requirement 1.5 is not applicable because there are not ATEX protective system installed on the equipment covered by this EC type examination certificate.

[20] Certificate History

This Certificate is at its first issue.

[21] Terms and conditions

This certificate do not replace anyway the declaration of conformity nor exonerate the manufacturer from product liability. The technical documentation do not refers to others directives applicable to the equipment.

The product liability rests with the manufacturer, his representative or, in the absence of a representative, with the importer, in accordance with the General Product Safety Directive 2001/95/EC.

The following conditions may render this certificate invalid:

- Changes in the design or construction of the product;
- Changes or amendments to the Directive;
- Changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 94/9/EC Directive.

This document is the English translation (made by the notified body) of the original document drawn in Italian; only the Italian text is legally valid.