

[1]

EU-TYPE EXAMINATION CERTIFICATE



[2]

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU – Annex III

[3]

Certificate Number: **EUT 14 ATEX 1161 X** **issue 3**

[4]

Equipment: **Limit Switch Box**
ASB

[5]

Manufacturer: **DVG AUTOMATION S.P.A.**

[6]

Address: **Via Rossetti, n. 2 - 29016 Cortemaggiore (PC)**

[7]

This equipment and its accepted variations are specified in the annex to this Certificate.

[8]

Eurofins Product Testing Italy S.r.l., Notified Body n. 0477 in accordance with Article 21 of the Directive 2014/34/EU of the European Parliament and of the Council of 26th February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment 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°EPT.18.REL.01/55667.

[9]

Compliance with the essential health and safety is assured through the verification of them and by compliance with the standard:

EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-11:2012, EN 60079-31:2014

[10]

If the sign "X" is placed after the Certificate number, it indicates that the equipment is subject to the special conditions for safe use specified in the annex to this Certificate.

[11]

This EU -TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the specified equipment.

Further requirements of the Directive 2014/34/EU apply to the manufacture and supply of this equipment. These requirements are not object of this Certificate.

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The equipment shall include the sign  and the following strings:

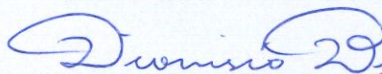
II 2G Ex db IIC TX Gb
 II 2D Ex tb IIIC TX°C Db
 II 1G Ex ia IIC T4 Ga
 II 1D Ex ia IIIC T135°C Da
 II 2G Ex ib IIC T4 Gb
 II 2D Ex ib IIIC T135°C Db

Ambient temperature ranges are reported in the equipment description.



Place and date of issue:

Torino, 2019-02-22



Dionisio Bucchieri
 Directive Responsible



Paolo Trisoglio
 Managing Director



PRD N° 119B

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This Certificate has 5 pages and it is reproducible only in its entirety. Conditions of validity are reported below.



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ANNEX

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EU-TYPE EXAMINATION CERTIFICATE N. EUT 14 ATEX 1161 X issue 3
[15] Equipment description

ASB Series Limit Switch Box provides limit switch facility, along with 4÷20mA / position transmitter 4÷20mA / HART position transmitter and/or Partial Stroke Test capability.

The version with position transmitter is called "ASBE4AV0001".

The equipment can be made of aluminium or stainless steel (the paint used has a maximum thickness of 100 µm).

The equipment is suitable for group IIC and IIIC; the types of protection are "Ex db", "Ex tb", "Ex ia" or "Ex ib".

For types of protection "Ex i", each switch needs to be connected to an already ATEX certified intrinsically safe barrier.

The equipment can be equipped with:

- maximum 6 separated mechanical SPDT limit switches manufactured by ITW or;
- maximum 3 separated DPDT model 22-304 limit switches manufactured by ITW or;
- maximum 6 separated magnetic limit switches manufactured by BDC or;
- maximum 3 separated inductive limit switches (Nimur) model NJ2-12GK-SN manufactured by PEPPERL+FUCHS or;
- maximum 3 separated inductive limit switches (Nimur) manufactured by BDC or;
- maximum 3 separated magnetic limit switches manufactured by SOLDI model Nova V3 or;
- maximum 3 separated limit go switches model 11, 21, 31 or 81 manufactured by Emerson;

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

The protection degree of the enclosure is IP66 / IP68 (2h submerged at a depth of 1m) according to EN 60079-0 and EN 60529.

Temperature Class and Maximum surface temperature for types of protection "Ex db" and "Ex tb":

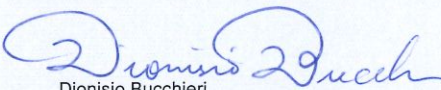
Tamb	Temperature Class and Maximum surface temperature	Version	Gaskets
-20°C + 85°C	T5 and T85°C	Standard	NBR
-20°C + 80°C	T6 and T80°C	Standard	NBR
-60°C + 85°C	T5 and T85°C	Standard	Fluorosilicone
-60°C + 80°C	T6 and T80°C	Standard	Fluorosilicone
-20°C + 65°C	T5 and T85°C	ASBE4AV0001	NBR
-20°C + 60°C	T6 and T80°C	ASBE4AV0001	NBR
-25°C + 65°C	T5 and T85°C	ASBE4AV0001	Fluorosilicone
-25°C + 60°C	T6 and T80°C	ASBE4AV0001	Fluorosilicone

For the type of protection "Ex i", the ranges of ambient temperature can be -20°C ≤ Tamb ≤ +85°C or -60°C ≤ Tamb ≤ +85°C.

The used screws comply with quality A4-70.


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Electrical parameters
In case of equipment with types of protection "Ex db" and "Ex tb"

Maximum voltage: 250 Vac/Vdc

Maximum Limit Switch current: 16 A

Maximum power dissipation: 720 mW

In case of equipment with type of protection "Ex i"

When the equipment contains only mechanical switches the input safety parameters are the following ones:

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

When the equipment contains Ex certified devices the input safety parameters are detailed in the instruction manual.

Warning label

WARNING – Do not open in presence of explosive atmosphere.

WARNING – Do not open while energized.

WARNING – Potential electrostatic charging hazard - clean with dump cloth or antistatic products.

WARNING – Flameproof joints cannot be repaired.

WARNING – Use screws quality A4-70.

Routine tests

None

[16] Assessment Report n° EPT.18.REL.01/55667

This EU-Type Examination Certificate is released after the positive result of the conformity assessment of the Council Directive 2014/34/EU and to harmonized technical standards listed in this certificate performed by the Notified Body Eurofins Product Testing Italy S.r.l., and reported in the Assessment Report above cited.

[17] Special condition for a safe use

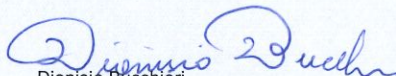
- Each switch have to be supplied from an already ATEX certified intrinsically safe barrier with suitable output parameters.
- Aluminum equipment having EPL Ga and Da, have to be installed in such way that it is eliminated the danger of ignition due to impact or friction.
- Flameproof joints are not intended to be repaired.
- Potential electrostatic charging hazard - clean with dump cloth or antistatic products.

[18] Essential Health and Safety Requirements

Assured by compliance with harmonized standards.


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[19] Descriptive documents

The equipment objects of this Certificate are described by the following documents.

Scheduled documents are indicated with the symbol "✓". They cannot be modified without the explicit authorization of the Notified Body.

Type of document	Document identification	Rev.	Date	Scheduled
LSB ALLUMINIO 6 JR (6 SPDT) - 4 3/4" NPT - R-V	ASBE0AXJD60	0	2018/05/07	✓
CORPO LSB LAVORATO 6 3/4" NPT	DSBE0A01110	0	2013/03/20	✓
COPERCHIO LAVORATO LSB	DSBE0A02010	2	2013/09/04	✓
BOCCOLA STELO	DSBE0B00010	0	2013/03/06	✓
STELO CASSETTA MICRO	DSBE0X03011	3	2018/05/17	✓
VTC UNI5931(ISO 4762)-M8X30 A4-70 0	DVTC008030A0S0	0	2013/09/03	✓
Marking label	DTRG00000505	2	2018/07/27	✓
Marking label	DTRG00000615	1	2018/07/27	✓
Warning label	DTRG00000506	0	2014/04/07	✓
ANELLO DI PROTEZIONE	DANEX10180100	0	2018/05/07	✓
Drawing of pcb	LSB2	0	2015/11/01	✓
Drawing of pcb	LSB4	0	2015/11/01	✓
Drawing of pcb	LSB5	0	2015/11/01	✓
Drawing of pcb	LSB6	0	2015/11/01	✓
Drawing of pcb	ITW22PCB	0	2015/11/01	✓
Drawing of pcb	SDCU-JR-3A	0	2018/06/30	✓
Instruction manual	IOM-ASBseries	0	2018/11/28	✓


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[20] Terms and conditions

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:

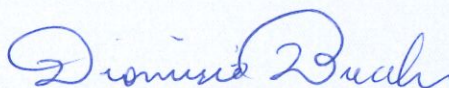
- changes in the design or construction of the product;
- changes or amendments to the Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.

[21] History

Issue	Description	Date
0	- First Emission.	2014-04-24
1	- The equipment description has been implemented.	2015-06-23
2	- The assessment has been extended including equipment protection by intrinsic safety "i".	2015-12-11
3	- The assessment has been reviewed to verify the compliance with the requirements of standard edition harmonized. - The protection degree has been extended including IP66 rating. - Equipment description has been updated. - Manufacturer documents have been updated.	2019-02-22



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End of Certificate