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## EU-TYPE EXAMINATION CERTIFICATE

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

 [3] Certificate Number: **EPT 20 ATEX 4055 X issue 1**

 [4] Equipment: **Pressure Switch and Vacuum switch  
30; 31; 387; 48; 49; 80; 81**

 [5] Manufacturer: **EUROSWITCH S.p.A.**

 [6] Address: **Via Provinciale, 15 – 25057 Sale Marasino (BS) - Italy**

[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.21.REL.02/2113120


[9] Compliance with the essential health and safety requirements is assured through the verification of them and by compliance with the following harmonized standards:

**EN IEC 60079-0:2018, EN 60079-11:2012, EN 50303:2000**

[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.

 [12] The equipment shall include the sign  and the following strings:

**I M1**
**Ex ia I Ma**
**II 1 GD**
**Ex ia IIC TX\* Ga**
**Ex ia IIIC TX\*°C Da**
**-20°C ≤ Tamb ≤ +40°C**

*\*The relationship between limit temperatures and process temperature ranges are reported in the equipment description and in the specific condition of use*

Place and date of issue:

(DD-MM-YYYY)

**Torino, 07-09-2021**




Dionisio Bucchieri  
Directive Responsible

Paolo Trisoglio  
Managing Director

Notified Body N. 0477


 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  
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**[15] Equipment description**

The vacuum/pressure switch is a device that allows the signalling of the reaching of a threshold pressure/depression of the fluid of a generic process.

The devices are electro-mechanical with two states (over or under a threshold corresponding to opened or closed state of an internal switch); the diaphragm (which is immersed in the fluid) actuates the switch through a spring.

The equipment consists of a metallic body (made of brass or stainless steel) and a plastic connector with its connection cable.

The equipment is suitable for Group I, Group IIC and Group IIIC and has respectively the type of protection "Ex i". The equipment must be connected to an already ATEX certified intrinsically safe barrier.

The equipment is intended to be used in environment having ambient temperature included in the range  $-20^{\circ}\text{C} \div +40^{\circ}\text{C}$  and can be interfaced to process having maximum temperature of  $+120^{\circ}\text{C}$ , the relationships between the temperature class/maximum surface temperature and process temperatures are reported in the "Electrical and mechanical characteristics" section.

The process connection is different for each model, it can be: 1/8" conical gas, 1/8" gas cylindrical, 1/8" NPT, 1/4" conical gas, 1/4" gas cylindrical, M10x1 conical, M10x1 cylindrical; M12x1.5 cylindrical, 1/2" gas cylindrical, M20x1.5 cylindrical, 3/4" 16 UNF.

**Electrical and mechanical characteristics**

- Degree of protection IP65 (declared by the manufacturer according to EN 60529)
- The equipment must be connected to an already ATEX certified intrinsically safe barrier with suitable output parameters according to the marked EPL and gas/dust group.

The safe input parameters of the apparatus are:

Ui	Ii	Pi	Li	Ci
20 V	0.2 A	1 W	$\approx 0 \mu\text{H}$	$\approx 0 \mu\text{F}$

- Temperature class and Maximum surface temperature values are defined according to the maximum ambient and process temperatures as indicated below:

Condition	Temperature classification
$T_{\text{Process}} \text{ and } T_{\text{amb}} \leq 40^{\circ}\text{C}$	T6 and $80^{\circ}\text{C}$
$40^{\circ}\text{C} < T_{\text{Process}} \leq 55^{\circ}\text{C}$	T5 and $95^{\circ}\text{C}$
$55^{\circ}\text{C} < T_{\text{Process}} \leq 90^{\circ}\text{C}$	T4 and $130^{\circ}\text{C}$
$90^{\circ}\text{C} < T_{\text{Process}} \leq 120^{\circ}\text{C}$	T3 and $160^{\circ}\text{C}$

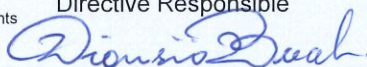
When used in mine and where coal dust can form a layer, the process temperature must not exceed  $100^{\circ}\text{C}$ ; where coal dust cannot form a layer, the process temperature must not exceed  $120^{\circ}\text{C}$ .



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**Warning label**

Not present: the device is a small equipment.

The certificate number contains the symbol "X" in order to specify the special conditions for a safe use.

**Routine tests**

None.

**[16] Assessment Report n° EPT.21.REL.02/2113120**

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**

- Potential electrostatic charge hazard - The user must periodically clean the equipment with a damp cloth or antistatic products.
- The equipment must be connected to an already ATEX certified intrinsically safe barrier with suitable output parameters according to the marked EPL and gas/dust group. Refers to the instruction manual for details related to the parameters.
- Temperature class and Maximum surface temperature values are defined according to the maximum ambient and process temperatures as indicated below:

Condition	Temperature classification
$T_{Process} \text{ and } T_{amb} \leq 40^{\circ}\text{C}$	T6 and 80°C
$40^{\circ}\text{C} < T_{Process} \leq 55^{\circ}\text{C}$	T5 and 95°C
$55^{\circ}\text{C} < T_{Process} \leq 90^{\circ}\text{C}$	T4 and 130°C
$90^{\circ}\text{C} < T_{Process} \leq 120^{\circ}\text{C}$	T3 and 160°C

When used in mine and where coal dust can form a layer, the process temperature must not exceed 100°C; where coal dust cannot form a layer, the process temperature must not exceed 120°C.

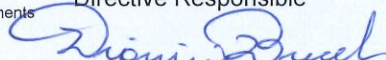
- The equipment has to be powered only by a single channel of certified intrinsic safety barrier. Where changeover contacts are included, only one contact at time can be used and then no common electrical connection of two intrinsic safety barrier can be achieved.



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**[18] Essential Health and Safety Requirements**

Assured by compliance with harmonized standards.

**[19] Descriptive documents**

The equipment object of this Certificate are described by the following documents that are scheduled documents and therefore they cannot be modified without the explicit authorization of the Notified Body.

Type of document	Document identification	Rev.	Date
*Safety instructions	STC-PREW001	0	30-08-2021
Drawing - model 30	30Ex	0	22-09-2020
Drawing - model 31	31Ex	0	01-09-2015
Drawing - model 48	48Ex	0	01-09-2015
Drawing - model 49	49Ex	0	01-09-2015
Drawing - model 80	80Ex	0	01-09-2015
Drawing - model 81	81Ex	0	01-09-2015
Drawing - model 387	387Ex	0	22-09-2020
*Ex Label templates	IO-25-180	5	03-08-2021

Note: An \* is included before the title of documents that are new or revised.

**[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:

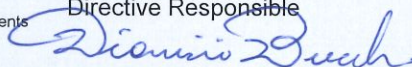
- changes in the design or construction of the product;
- changes or amendments to the Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.



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[21] **History**

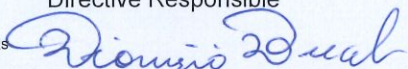
Issue	Description	Date
0	First Emission of the certificate EUM1 12 ATEX 0795 X. Certificate published by EUROFINS-MODULO UNO S.p.A. (Notified Body 0477) according to the ATEX Directive 94/9/CE.	22-11-2012
1	First Supplement of the certificate EUM1 12 ATEX 0795 X. Certificate published by EUROFINS-MODULO UNO S.p.A. (Notified Body 0477) according to the ATEX Directive 94/9/CE for the inclusion of model 49.	18-03-2014
2	Second Supplement of the certificate EUM1 12 ATEX 0795 X. Certificate published by Eurofins Product Testing Italy S.r.l. (Notified Body 0477) according to the ATEX Directive 94/9/CE. Standards have been updated and model 80 has been included	19-06-2015
0	First Emission of the certificate EPT 20 ATEX 4055 X. The certificate has been published in reference to the last ATEX Directive 2014/34/EU - Reference standards have been updated. - Manufacturer drawings have been updated with the material nomenclature and switch type details. - Instruction manual and declaration have been updated according to the latest applicable standards. - Marking plates have been updated including the EPLs. - Model 38 has been removed, models 30 and 387 have been included.	16-03-2021
1	- The company changed name from EUROSITCH S.r.l. to EUROSITCH S.p.A. - Previous instruction manuals and declarations prepared for each model have been merged into a single document; this document has been updated according to the new company name as well. - Marking labels have been updated according to the new company name.	07-09-2021



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End of Certificate