



## (1) EC-TYPE EXAMINATION CERTIFICATE

(2) Equipment or protective system intended for use in potentially explosive atmospheres  
Directive 94/9/EC

(3) EC-Type Examination Certificate nr **LOM 09ATEX2087 X**

(4) Equipment or protection system Flow and level meters  
Types SC250 \*, SC250H \*, SM250 \*, DP65 \*, DP500 \* y LP80 \*

(5) Applicant TECFLUID, S.A.

(6) Address Narcís Monturiol 33  
08980- Sant Just Desvern (BARCELONA)  
SPAIN

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.  
The examination and test results are recorded in confidential report nr. **LOM 09.331 XP**

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

Standards **EN 60079-0:2006** **EN60079- 11:2007**

(10) If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:



II 1 GD Ex ia IIC T\*

OFICIAL



J.M. MADARIAGA

Madrid, 2009-12-03

Carlos Fernández Ramón  
DIRECTOR OF THE LABORATORY

Angel Vega Remesal  
Head of the ATEX

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# LABORATORIO OFICIAL J. M. MADARIAGA

## (A1) SCHEDULE

(A2) EC-Type Examination Certificate: **LOM 09ATEX2087 X**

(A3) Description of equipment or protective system

Series of flow meters and level indicator based on a section of pipe through pass a fluid, in some cases by moving a float and other moving a disk. On the tube there is an enclosure containing the flow reading system where the displacement is measured by magnetic coupling which moves a measurement dial. The movement of the needle can act on limit switch elements or to be associated to Hall effect sensor in the variants with transmitter. The limit switch elements can be either NAMUR inductive sensors type SJ3,5-N of Pepperl+Fuchs which are intrinsically safe according 94/9/CE directive, or free voltage switches which are single apparatus.

### Types and variants

SC250	Flow meter with conical float
SC250H	Flow meter with conical float and spring
SM250	Flow meter with cylindrical float
DP65	Impact disc flow meter
DP500	Impact disc flow meter
LP80	Float level meter

The equipment that with two wire signal transmitter includes and electronic circuit called HALLTEC V with four variants:

TH5	4-20 mA transmitter
TH5H	4-20 mA transmitter
TH5T	4-20 mA transmitter with LCD display
TH5TH	4-20 mA transmitter HART protocol compatible and totaliser

Equipment with limit switch detectors include one or two detectors:

AMD1	One NAMUR inductive detector
AMD2	Two NAMUR inductive detectors
AMM1	One micro-switch
AMM2	One micro-switch

### Type codification: \*\*\* \*\*\* \*\*

Type: SC250, SC250H, SM250, DP 65, DP500 o LP80

Transmitter variant: without transmitter, TH5, TH5H, TH5T or TH5TH

Limit switch variant: without limit switch, AMD1, AMD2, AMM1 or AMM2

Specific parameters of the type of protection and marking:

	Variants with transmitter TH5* Without encapsulation	Variants with transmitter TH5* With encapsulation	Variants only including inductive detectors	Variants only including micro-switches
Marking	Ex ia IIC T4	Ex ia IIC T6	Ex ia IIC T6	Ex ia IIC T6
Specific parameters	Ui: 30 V Ci: 57,3 nF Pi: 1,3 W	Ui: 30 V Ci: 57,3 nF Pi: 1,3 W	Ui: 16 V Ii: 25 mA Pi: 64 mW Ci: 50 nF Li: 250 uH	Ui: 16 V Ii: 76 mA Pi: 242 mW Ci: 50 nF Li: 250 uH Without parameters

When combined variants with transmitter and inductive sensors, the connection of the respective circuits should be kept separate by independent cables.

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# LABORATORIO OFICIAL J. M. MADARIAGA

## (A1) SCHEDULE

(A2) **EC-Type Examination Certificate: LOM 09ATEX2087 X**

(A4) Test report nr. **LOM 09.331 XP**

(A5) Special conditions for safe use

- There is electrostatic hazard due to the plastic part of the enclosure. It shall follow the manufacturer instructions.
- The wiring of the variants containing transmitter and inductive sensor must be kept separated

(A6) Individual tests

None

(A7) Essential Health and Safety Requirements

Explosion safe requirements are covered by application of the standards indicated in page 1/3 of this certificate.

(A8) Descriptive Documents

	Rev.	Date
- Description:	R-ET-AVIATEX	0 2009-10-06
- Drawings nr.:	268910103	0 2009-12-01
	239520061	0 2008-10-02
	239520062	0 2009-02-11
	239520063	0 2009-02-11
	239540007	0 2009-06-12
	239560022	0 2009-07-07
	228220100	0 2009-10-06
	228220101	0 2009-10-06
	228220102	0 2009-10-06
	228220103	0 2009-10-06
	228220104	0 2009-10-06
	228220105	0 2009-10-06



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RCPCR 07.3/2  
Rev. 0

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## SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres.  
Directive 2014/34/EU

Supplementary EU-Type Examination Certificate Number **LOM 09ATEX2087 X/1** issue **0**

Product Flow and level meters  
Types SC250 \*, SC250H \*, SM250 \*, DP65 \*, DP500 \* y LP80 \*

Manufacturer TECFLUID, S.A.

Address C/ Narcís Monturiol 33  
08960 Sant Just Desvern (Barcelona)  
SPAIN

This supplementary certificate extends EC – Type Examination Certificate No. LOM 09ATEX2087 X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.


Laboratorio Oficial J.M. Madariaga (LOM), Notified Body number 0163 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in confidential Report No. **LOM 16.136 QP**

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

Standards **EN 60079-0:2012/A11:2013** **EN 60079-11:2012** **EN 60079-26:2015**

The marking of the product shall include the following:

 II 1G Ex ia IIC T\* Ga (see annex)  
II 1D Ex ia IIIC T\* °C Da

Getafe,

FERNANDEZ RAMON,  
CARLOS (FIRMA)  
2016.11.08 17:04:20 +01'00'

Head of Certification Committee

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# LABORATORIO OFICIAL J. M. MADARIAGA

## 13 SCHEDULE

14 Supplementary EU-Type Examination Certificate Number **LOM 09ATEX2087 X/1**

### 15 Description of the variation to the product

15.1 Variants integrating transmitter are modified. This transmitter is now called HALLTEC VII and replaces HALLTEC V. There are changes in components and the programming system is now based on USB only usable in safe area.

#### Type codification

\*\*\* \*\*

Type: SC250, SC250H, SM250, DP 65, DP500 or LP80

Transmitter variant: without, TH7, TH7H, TH7T o TH7TH

Limit switch variant: without, AMD1, AMD2, AMM1 o AMM2

### 15.2 Specific parameter of the type of protection

Variant	With transmitter TH7*	With transmitter TH7*	Only incorporating inductive sensors Type AMD from Pepperl + Fuchs GmbH	Only incorporating microswitches
	Not encapsulated	Encapsulated		
Gases	Ex ia IIC T4 Ga	Ex ia IIC T6 Ga	Ex ia IIC T6 Ga	Ex ia IIC T6 Ga
Dusts	Ex ia IIC T85 °C Da	Ex ia IIC T85 °C Da	Ex ia IIC T* °C Da	Ex ia IIC T85 °C Da
Ui: 30 V Ci: 57,3 nF Pi: 1,3 W	Ui: 30 V Ci: 57,3 nF Pi: 1,3 W	Ui: 30 V Ci: 57,3 nF Pi: 1,3 W	The parameters indicated by the manufacturer of inductive sensors, and depending on the ambient temperature	Without parameters

### 15.3 Standards and marking are updated

16 Report Number **LOM 16.230 GP**, **LOM 16.136 QP**

### 17 Specific conditions of use

17.1 The plastic part of the enclosure presents electrostatic hazards. It should be followed the manufacturer's instructions

17.2 The wiring of the variants containing transmitter and inductive sensor must be kept separated

17.3 Programming via USB interface can only be done in safe area following the manufacturer's instructions

### 18 Essential Health and Safety Requirements

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 10

### 19 Documents and drawings

Number	Sheets	Issue	Edition	Description
239520083	1	0	2013-11-13	Halltec VII schematics
239520083-02	1	0	2014-01-20	PCB Halltec VII
R-ET-AV1ATEX	10	1	2016-10	Technical dossier
R-MI-SC25 0	1	1	2016-10	User's manual