



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX FIDI 24.0004X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2024-09-09

Applicant: **Officine Orobiche S.r.l.**
Via Giorgio Paglia, 22
I - 24050, Zanica (BG)
Italy

Equipment: **Level Switches Series: 1020, 20, 30, 40, 50, 60, 70, 80, 6000, 7000, 3060, 3070, 4060, 4070, 5060, 5070, ULC/ULS;
Flow Switches Series: PL, CV, TGO, PLD**

Optional accessory:

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia'; Protection by enclosure 'tb'**

Marking: **Ex db IIC T6...T5 Ga/Gb**
Ex db/ib IIC T6...T5 Ga/Gb
Ex db IIC T6...T5 Gb
Ex tb IIIC T85°C...T100°C Db
or
Ex ia IIC T6...T4 Ga
Ex ia IIIC T85°C Da

Approved for issue on behalf of the IECEx
Certification Body:

Marino Kelava

Position:

Certification Signatory

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
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Croatia



Fiditas
explosion safety solutions



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Manufacturer: **Officine Orobiche S.r.l.**
Via Giorgio Paglia, 22
I - 24050, Zanica (BG)
Italy

Manufacturing
locations:

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-26:2014](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with 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:

[HR/FIDI/ExTR24.0006/00](#)

Quality Assessment Report:

[IT/CES/QAR16.0002/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Level Switches series 1020, 20, 30, 40, 50, 60, 70, 80, 6000, 7000, 3060, 3070, 4060, 4070, 5060, 5070, UC/UJS and the Flow Switches series PL, CV, TGO, PLD are equipment's for installation in hazardous area available in Ex d, Ex t or Ex i types of protection depending on the configuration of the model.

The level switches are available for external or internal mounting on tanks and depending upon their working requirements, are equipped with floats and displacers and have flanged or threaded connections. Flow switches are used to indicate whether or not a fluid or gas is flowing in a pipeline. Flow switches are manufactured in various models such as valve body, bladed and flow indication, suitable for the most diverse industrial applications. Level and flow switches contain simple electrical parts such as mechanical or magnetic micro-switches or ultrasonic switches with their electronic control board.

The models with type of protection 'Ex d' and 'Ex t' have an explosion proof metal housing, suitable for Group II (G) and Group III (D) and identified as type "EP" (explosion proof). The models with type of protection 'Ex ' are available with metal housing identified as type "WP" (waterproof) and are suitable for Group II (G) and Group III (D). Housings type "EP" and "WP" consist of a common base and three covers of different size identified as Low "C", Medium "S" and High "D". The housing can be supplied in fixed or rotatable version and different materials. Models ULC and ULS are available with explosion proof housing "EP" only and size low "C" or Medium "S" in fixed version only.

See Annex for further information.

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SPECIFIC CONDITIONS OF USE: YES as shown below:

- Equipment with Marking (B) (Ex db/ib for EPL Ga/Gb) shall be connected with intrinsically safe associated apparatuses suitable for level of protection 'Ex ib' and considering input electrical parameters here below indicated

$U_i = 30 \text{ V}$, $I_i = 100 \text{ mA}$, $P_i = 0.75 \text{ W}$, $C_i = 50 \text{ pF}$, $L_i = 10 \text{ }\mu\text{H}$

- For all models that are suitable for EPL Ga, the equipment with enclosures made of aluminum alloy shall be installed in such a way that ignition hazards due to impact or friction are avoided. For reference see Instruction manual.
- The flameproof joints are not intended to be repaired.

Annex:

[IECEXFIDI24.0004X Officine Annex1.pdf](#)

Product description (Continued from main certificate)

Explosion Proof Enclosure (EP) Level Switches Type Key:

Series	Drive	Available Markings			Housing	Cover Size Fixed	Cover Size Rotable
		A	C	D			
1020	Horizontal float	A	C	D	EP	C/S/D	CG/SG/DG
20	Float	B	C	D			
30	Float	B	C	D			
40	Displacer	B	C	D			
50	Float	B	C	D			
60	Float	B	C	D			
70	Float	B	C	D			
80	Float	B	C	D			
6000	Displacer	B	C	D			
7000	Displacer	B	C	D			
3060	Float	B	C	D			
3070	Float	B	C	D			
4060	Displacer	B	C	D			
4070	Displacer	B	C	D			
5060	Float	B	C	D			
5070	Float	B	C	D			
ULC	Ultrasonic	B	-	-		C	-
ULS	Ultrasonic	B	-	-		S	-

Explosion Proof Enclosure (EP) Flow Switches Type Key:

Series	Drive	Available Markings			Housing	Cover Size Fixed	Cover Size Rotable
		B	C	D			
PL	Mobile flap	B	C	D	EP	C/S/D	CG/SG/DG
CV	Float	B	C	D			
TGO	Mobile flap	B	C	D			
PLD	Mobile flap	B	C	D			

Marking:

- (A) Ex db IIC T6...T5 Ga/Gb
- (B) Ex db/ib IIC T6...T5 Ga/Gb
- (C) Ex db IIC T6...T5 Gb
- (D) Ex tb IIIC T85°C...T100°C Db

Electrical characteristics:

Maximum supply voltage: 250/115 VAC (50/60 Hz) or 24 V DC/AC

Maximum current: 15 A

Equipment with Marking **(B)** (Ex db/ib for EPL Ga/Gb) shall be connected with intrinsically safe associated apparatuses suitable type of protection 'Ex ib' (EPL Gb) and considering following input electrical parameters for equipment:

$$U_i = 30 \text{ V}, I_i = 100 \text{ mA}, P_i = 0.75 \text{ W}, C_i = 50 \text{ pF}, L_i = 10 \text{ }\mu\text{H}$$

Ambient Temperature:

For all model except ULC and ULS:

Tamb. max = + 60°C for temperature Class T6 or T85°C

Tamb. max = + 70°C for temperature Class T5 or T100°C

The minimum ambient temperature is a function of the characteristics of micro switches used, summarized in following table:

Microswitch code	Ambient T Min.
M4, M12	-15 °C
M2, M3, M6, M19, M20, M22	-20 °C
M6, M20	-23 °C
M2, M3	-25 °C
M9, M10, M11, M14, M21, M23, VD, N1	-50 °C

For level switches model ULC and ULS ambient temperature range:

Tamb. -40°C ÷ +40°C for temperature Class T6 or T85°C

Tamb. -40°C ÷ +55°C for temperature Class T5 or T100°C

Warning label:

“WARNING – DO NOT OPEN WHEN ENERGIZED”

“FOR PROPER INSTALLATION SEE INSTRUCTION MANUAL”

Intrinsic Safety Level Switches Type Key:

Series	Subseries	Drive	Housing	Cover Size Fixed	Cover Size Rotable
1020	/	Horizontal float	WP	C/S/D	CG/SG/DG
20	Series 20 D	Float			
30		Float			
40	Series 41A+Series 41B Series 41C+Series 41D Series 41E	Displacer			
50	/	Float			
60	Series 60 D	Float			
70	Series 70 D	Float			
80	Series 81+Series 82 Series 83+Series 84	Float			
6000	/	Displacer			
7000	/	Displacer			
3060	/	Float			
3070	/	Float			
4060	/	Displacer			
4070	/	Displacer			
5060	/	Float			
5070	/	Float			

Marking:

Ex ia IIC T6...T4 Ga
Ex ia IIIC T85°C Da

Intrinsic Safety Flow switches Type Key:

Series	Subseries	Drive	Housing	Cover Size Fixed	Cover Size Rotable
PL	+ Series PL 1 + Series PL 2 + Series PL 3 + Series PL 4	Moveable paddle	WP	C/S/D	CG/SG/DG
CV	+ Series CV 15 - CVM 15 + Series CV 20 - CVM 20 + Series CV 25 - CVM 25 + Series CV 32 - CVM 32 + Series CV 40 - CVM 40 + Series CV 50 - CVM 50 + Series CV0 15 + Series CV0 20 + Series CV0 25 + Series CV0 40 + Series CV0 50	Float			
TGO	+ Series TGO 50 + Series TGO 65 + Series TGO 80 + Series TGO 100	Moveable paddle			
PLD	+ Series PLD 40 + Series PLD 50 + Series PLD 65 + Series PLD 100 + Series PLD 125 + Series PLD 150	Moveable paddle			

Marking:

Ex ia IIC T6...T4 Ga
Ex ia IIIC T85°C Da

Ambient Temperature:

For Gas:

Tamb max=+40°C for temperature Class T6
Tamb max=+70°C for temperature Class T4

For Dust:

Tamb max= 70°C for T85°C

The minimum ambient temperature is a function of the characteristics of micro switches used, summarized in following table:

Microswitch code	Ambient T Min.
M4, M12	-15 °C
M2, M3, M6, M19, M20, M22	-20 °C
M6, M20	-23 °C
M2, M3	-25 °C
M9, M10, M11, M14, M21, M23, VD, N1	-50 °C

Electrical parameters:

Ui= 30 V, Ii= 100 mA, Pi= 0.75 W, Ci= 50 pF, Li= 10 µH

Warning label:

“WARNING – DO NOT OPEN WHEN ENERGIZED”

“WARNING – FOR PROPER INSTALLATION SEE INSTRUCTION MANUAL”

Example of Identification Type Code referred to the 60 Series:

