



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 FMG 16.0033X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 8	Issue 7 (2022-04-01)
Date of Issue:	2022-12-05		Issue 6 (2021-09-02)
Applicant:	Temposonics LLC 3001 Sheldon Drive Cary NC 27513 United States of America		Issue 5 (2021-04-16)
Equipment:	LPT Tank SLAYER®, LPR RefineME®, LPC CHAMBERED, LPS SoClean®, LPL LevelLimit®, Level Plus Transmitters		Issue 4 (2020-04-15)
Optional accessory:			Issue 3 (2020-03-10)
Type of Protection:	Flameproof "db"		Issue 2 (2019-10-16)
Marking:	IECEx FMG 16.0033X		Issue 1 (2018-10-24)
	Ex db IIB+H2 T6...T3 Ga/Gb Ta = -40°C to +71°C		Issue 0 (2018-03-09)
	IP65		

Approved for issue on behalf of the IECEx
Certification Body:

J. E. Marquedant

Position:

VP, Manager - Electrical Systems

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America





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Manufacturer: **Temposonics LLC**
3001 Sheldon Drive
Cary NC 27513
United States of America

Manufacturing locations: **Douglas Electrical Components**
5 Middlebury Blvd
Randolph, NJ 07869
United States of America

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 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-26:2014-10](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

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 Reports:

[US/FMG/ExTR16.0036/00](#)
[US/FMG/ExTR16.0036/03](#)
[US/FMG/ExTR16.0036/06](#)

[US/FMG/ExTR16.0036/01](#)
[US/FMG/ExTR16.0036/04](#)
[US/FMG/ExTR16.0036/07](#)

[US/FMG/ExTR16.0036/02](#)
[US/FMG/ExTR16.0036/05](#)
[US/FMG/ExTR16.0036/08](#)

Quality Assessment Report:

[GB/FME/QAR14.0005/08](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Refer to Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Revised drawings to accommodate UKEX markings.

Annex:

[Annex to IECEx_FMG_ExTR16.0033_supplement 08.pdf](#)

ANNEX to certificate #IECEX FMG 16.0033X

EQUIPMENT AND SYSTEMS COVERED BY THIS CERTIFICATE

LPTbdefghijklmnop, Tank SLAYER Level Plus Transmitters

b = Output: 1, 2, 5, 7, M, D, U

c = Housing Type: D, E, L

d = Electronics Mounting: 1

e = Sensor Pipe: M, N, P, S

f = Materials of Construction (Wetted Parts): 1

g = Process Connection Type: 1, 2, 6, 7, 8, A, B, C, D, E, X

h = Process Connection Size: B, C, D, E, F, G, H, J, X

i = Number of DT's (Digital Thermometer): 0, 1, 5, K, M, P, X

j = DT Placement: F, C, B, X

k = Notified Body: I

l = Protection Method: F

m = Gas Group: 4

n = Unit of Measure: F, M, U

o = Length: (XXX.XX in), (XXX.XX ft), (XXXXX mm), Flexible sensor pipe (62 to 999 in), (5 to 98.5 ft), (1575 to 30000 mm).

p = Special: S (Standard Product), E (Engineering Special (not affecting agency controlled parts or features)), R (Reverse Measurement), F (Flexible Sensing Element with Rigid Pipe)

LPRbdefghijklmnop, RefineME Level Plus Transmitters

b = Output: 1, 2, 5, 7, M, D, U

c = Housing Type: D, E, L

d = Electronics Mounting: 1

e = Sensor Pipe: B, R, Y

f = Materials of Construction (Wetted Parts): 1, 3, A

g = Process Connection Type: 1, 2, 6, 7, 8, A, B, C, D, X, Z

h = Process Connection Size: A, C, D, E, F, G, H, J, X

i = Number of DT's (Digital Thermometer): 0, 1, 5, K, M, P, X

j = DT Placement: F, C, B, X

k = Notified Body: I

l = Protection Method: F

m = Gas Group: 4

n = Unit of Measure: F, M, U

o = Length: (XXX.XX in), (XXX.XX ft), (XXXXX mm), Rigid sensor pipe (12 to 300 in), (1 to 25 ft), (305 to 7620 mm)

p = Special: S (Standard Product), E (Engineering Special (not affecting agency controlled parts or features)), R (Reverse Measurement), F (Flexible Sensing Element with Rigid Pipe)

LPSbdefghijklmnop, SoCLEAN Level Plus Transmitters

b = Output: 1, 2, 5, 7, M, D, U

c = Housing Type: D, E, L

d = Electronics Mounting: 1

e = Sensor Pipe: C, D, E, F

f = Materials of Construction (Wetted Parts): 1, 2, 3, 9

g = Process Connection Type: 1, 2, 4, 5, 6, 7, 8, A, B, C, D, X, Z

h = Process Connection Size: A, C, D, E, F, G, J, X

i = Number of DT's (Digital Thermometer): 0, 1, 5, K, M, P, X

j = DT Placement: F, C, B, X

k = Notified Body: I

l = Protection Method: F
m = Gas Group: 4
n = Unit of Measure: F, M, U
o = Length: (XXX.XX in), (XXX.XX ft), (XXXXX mm), Rigid sensor pipe (12 to 300 in), (1 to 25 ft), (305 to 7620 mm)
p = Special: S (Standard Product), E (Engineering Special (not affecting agency controlled parts or features), R (Reverse Measurement), F (Flexible Sensing Element with Rigid Pipe)

LPCbdefghijklmnop, CHAMBERED Level Plus Transmitters

b = Output: 3, 4, 6, D, M, U
c = Housing Type: D, E, L
d = Electronics Mounting: 3, 4, 5, 6, 7, 8
e = Sensor Pipe: B, R, Y
f = Materials of Construction (Wetted Parts): 1, 3
g = Process Connection Type: X (None)
h = Process Connection Size: X (None)
i = Number of DT's (Digital Thermometer): 0, 1, 5, K, M, P, X
j = DT Placement: F, C, B, X
k = Notified Body: I
l = Protection Method: F
m = Gas Group: 4
n = Unit of Measure: F, M, U
o = Length: (XXX.XX in), (XXX.XX ft), (XXXXX mm), Rigid sensor pipe (12 to 300 in), (1 to 25 ft), (305 to 7620 mm)
p = Special: S (Standard Product), E (Engineering Special (not affecting agency controlled parts or features), R (Reverse Measurement), F (Flexible Sensing Element with Rigid Pipe)

LPLbdefghijklmn, LevelLimit Level Plus Transmitters

a = Unit; E, D, P, L, H, Z
b = Output; 1, 2, 5, 7, M
c = Sensor Pipe; B, M, N, P or S
d = Process Connection Type; 1, 6, 7, 8, A, B, C, D, Z, X
e = Process Connection Size; A, B, D, E, F, G, H, J or X
f = Number of Digital Thermometers; 0, 1, 5, K, M, P or X
g = DT Placement; C, F or X
h = Notified Body; I
i = Protection Method; F
j = Gas Group; 4
k = Unit of Measure; F, M or U
l = Length; any 5 numerical digits
m = Special; E, F, R or S
n = HI Switch Position; any 5 numerical digits

SPECIFIC CONDITIONS OF USE

For LPT Transmitters –

1. Warning: The equipment contains non-metallic enclosure and process parts. To prevent the risk of electrostatic sparking, the non-metallic surface should only be cleaned with a damp cloth. Painted surface of the equipment may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust or oil. Cleaning of the painted surface should only be done with a damp cloth.
2. Cables shall be rated > 5 °C above maximum ambient temperature.
3. To maintain the ingress protection rating of IP65, Teflon tape (3 wraps) or pipe dope shall be used. Refer to Installation Instructions.
4. Equipment can be installed in a boundary wall configuration where the process connection is installed as Category 1G equipment while the transmitter housing is installed as Category 2G equipment. Refer to installation instructions.
5. Flexible gauges have a minimum bend diameter of 381mm (15 inches).
6. Flamepaths not for repair.
7. The applicable temperature class, process temperature range and ambient temperature range of the equipment is as follows;
 - T3 with Process Temperature Range of -40 °C to 150 °C
 - T4 with Process Temperature Range of -40 °C to 135 °C
 - T5 with Process Temperature Range of -40 °C to 100 °C
 - T6 with Process Temperature Range of -40 °C to 85 °C
 - 40 °C ≤ Ta ≤ 71 °C
8. When mounting on a MLG (magnetic level gauge) make sure the electronic head and pressure barrier have a minimum spacing of 5 inches. See Installation Manual for detail.
9. When EPL Ga is required, parts of the equipment containing light metals (Aluminum or Titanium) shall be protected from impact so that impact or friction sparks cannot occur, taking into account rare malfunction. Measures to prevent impact or friction sparks when using the equipment containing light metals include but are not limited to
 - Mounting the probe vertically
 - No mechanical agitation shall be used
 - Use of stilling wells to mitigate effect of agitation.
 - Limit rate of change of level to values such that friction sparks cannot occur

For LPL Transmitters –

1. Warning: The equipment contains non-metallic enclosure and process parts. To prevent the risk of electrostatic sparking, the non-metallic surface should only be cleaned with a damp cloth. Painted surface of the equipment may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust or oil. Cleaning of the painted surface should only be done with a damp cloth.
2. Cables shall be rated > 5°C above maximum ambient temperature.
3. To maintain the ingress protection rating of IP65, Teflon tape (3 wraps) or pipe dope shall be used. Refer to

Installation Instructions.

4. The equipment can be installed in the boundary wall between an EPL Ga area and the less hazardous area, EPL Gb. In this configuration, the process connection is installed in EPL Ga, while the transmitter housing is installed in EPL Gb. Refer to installation instructions.
5. Flexible gauges have a minimum bend radius of 381 mm (15 in.)
6. Flamepaths not for repair.
7. The applicable temperature class, process temperature range and ambient temperature range of the equipment is as follows;
T3 with Process Temperature Range of -40°C to 150°C
T4 with Process Temperature Range of -40°C to 135°C
T5 with Process Temperature Range of -40°C to 100°C
T6 with Process Temperature Range of -40°C to 85°C
 $-40^{\circ}\text{C} \leq T_a \leq 71^{\circ}\text{C}$

For LPR, LPS, and LPC Transmitters –

1. Warning: The equipment contains non-metallic enclosure and process parts. To prevent the risk of electrostatic sparking, the non-metallic surface should only be cleaned with a damp cloth. Painted surface of the equipment may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust or oil. Cleaning of the painted surface should only be done with a damp cloth.
2. Cables shall be rated $> 5^{\circ}\text{C}$ above maximum ambient temperature.
3. To maintain the ingress protection rating of IP65, Teflon tape (3 wraps) or pipe dope shall be used. Refer to Installation Instructions.
4. Equipment can be installed in a boundary wall configuration where the process connection is installed as Category 1G equipment while the transmitter housing is installed as Category 2G equipment. Refer to installation instructions.
5. Flamepaths not for repair.
6. The applicable temperature class, process temperature range and ambient temperature range of the equipment is as follows;
T3 with Process Temperature Range of -40 °C to 150 °C
T4 with Process Temperature Range of -40 °C to 135 °C
T5 with Process Temperature Range of -40 °C to 100 °C
T6 with Process Temperature Range of -40 °C to 85 °C
 $-40^{\circ}\text{C} \leq T_a \leq 71^{\circ}\text{C}$
7. When mounting on a MLG (magnetic level gauge) make sure the electronic head and pressure barrier have a minimum spacing of 5 inches. See Installation Manual for detail.
8. When EPL Ga is required, parts of the equipment containing light metals (Aluminum or Titanium) shall be protected from impact so that impact or friction sparks cannot occur, taking into account rare malfunction. Measures to prevent impact or friction sparks when using the equipment containing light metals include but are not limited to
 - Mounting the probe vertically
 - No mechanical agitation shall be used
 - Use of stilling wells to mitigate effect of agitation.
- Limit rate of change of level to values such that friction sparks cannot occur