



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 16.0023X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 [Issue 1 \(2022-06-29\)](#)
[Issue 0 \(2016-07-15\)](#)
Date of Issue: 2023-01-13
Applicant: **ABB Inc.**
3400 Rue Pierre-Ardouin
Québec, Québec
Canada G1P 0B2
Canada
Equipment: **LLT100 Laser Level Transmitter**
Optional accessory:
Type of Protection: **Ex db; Ex tb; Ex op is**
Marking: **Cemented Window Version - Imperial and Metric Version**
Ex db [op is T6 Ga] IIC T6...T5 Gb -50°C ≤ Ta ≤ +75°C...+85°C
Ex tb [op is Da] III C T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C
IP66/IP67
Fused Glass Version - Imperial and Metric Version
Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb -50°C ≤ Ta ≤ +75°C...+85°C
Ex tb [op is Da] III C T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C
IP66/IP67

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)

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.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

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





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Manufacturer: **ABB Inc.**
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Québec, Québec
Canada G1P 0B2
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Manufacturing locations: **ABB Inc.**
3400 Rue Pierre-Ardouin
Québec, Québec
Canada G1P 0B2
Canada

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

[IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

[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:

[US/FMG/ExTR16.0031/02](#)

Quality Assessment Report:

[NL/DEK/QAR12.0049/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

See Attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1. The LLT100 includes flamepath joints, consult ABB if repair of the flamepath joints is necessary.*
- 2. The LLT100 enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.*
- 3. Under certain extreme circumstances, exposed plastic (including powder coating) and unearthed metal parts of the enclosure may store an ignition-capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the buildup of electrostatic charge, e.g. clean with a damp cloth."*
- 4. The process temperature range shall not exceed the respective maximum ambient temperature of the LLT100 (75°C for T6 or 85°C for T5).*
- 5. For equipment rated Ga/Gb, please refer to section 9.1 and 9.2 of the manual for detailed information on the marking. Note that all versions of the LLT can emit light into the Ga area, however, only version LLT100.xx.C to G, the process interface of the LLT100 can form a barrier to Ga.*



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Documentation update

Annex:

[IECEX FMG 16.0023X Attachment.pdf](#)

LLT100.aa.b.c.dd.ee, Laser Level Transmitter (Cemented Window Version – Imperial)

II 2 (1) G Ex db [op is T6 Ga] IIC T6...T5 Gb -50°C ≤ Ta ≤ +75°C...+85°C

II 2 (1) D Ex tb [op is Da] IIIC T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C

IP66/IP67

aa	Body: Al - Aluminum body (imperial) SI - Stainless Steel body (imperial)
b	Process flange: A - ASME 2" class 150 / DIN 50mm PN16 bolt pattern, flat face, aluminum, cemented window * B - ASME 2" class 150 / DIN 50mm PN16 bolt pattern, flat face, stainless steel, cemented window * * Note: limited to 7.6 bar process pressure.
c	Heated lens: N - No heated lens H - With heated lens * * Note: Requires 24 volt input to operate the heater.
dd	Communication protocol: 10 - 4-20 mA HART
ee	Display: L0 - None L5 - Digital LCD integral display with TTG (Through-The-Glass) activated keypad

LLT100.aa.b.c.dd.ee, Laser Level Transmitter (Fused Glass Version – Imperial)

II 1/2(1) G Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb -50°C ≤ Ta ≤ +75°C...+85°C

II 2 (1) D Ex tb [op is Da] IIIC T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C

IP66/IP67

aa	Body: Al - Aluminum body (imperial) SI - Stainless Steel body (imperial)
b	Process flange: C - ASME 2" class 150, stainless steel, raised face, fused window D - ASME 2" class 300, stainless steel, raised face, fused window F - DIN 50mm PN16, stainless steel, raised face, fused window G - DIN 50mm PN40, stainless steel, raised face, fused window
c	Heated lens: N - No heated lens H - With heated lens * * Note: Requires 24 volt input to operate the heater.
dd	Communication protocol: 10 - 4-20 mA HART
ee	Display: L0 - None L5 - Digital LCD integral display with TTG (Through-The-Glass) activated keypad

LLT100.aa.b.c.dd.ee, Laser Level Transmitter (Cemented Window Version – Metric)

II 2 (1) G Ex db [op is T6 Ga] IIC T6...T5 Gb -50°C ≤ Ta ≤ +75°C...+85°C

II 2 (1) D Ex tb [op is Da] IIIC T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C

IP66/IP67

aa	Body: AM - Aluminum body (metric) SM - Stainless Steel body (metric)
b	Process flange: A - ASME 2" class 150 / DIN 50mm PN16 bolt pattern, flat face, aluminum, cemented window * B - ASME 2" class 150 / DIN 50mm PN16 bolt pattern, flat face, stainless steel, cemented window * * Note: limited to 7.6 bar process pressure.
c	Heated lens: N - No heated lens H - With heated lens * * Note: Requires 24 volt input to operate the heater
dd	Communication protocol: 10 - 4-20 mA HART
ee	Display: L0 - None L5 - Digital LCD integral display with TTG (Through-The-Glass) activated keypad

LLT100.aa.b.c.dd.ee, Laser Level Transmitter (Fused Glass Version – Metric)

II 1/2(1) G Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb -50°C ≤ Ta ≤ +75°C...+85°C

II 2 (1) D Ex tb [op is Da] IIIC T85°C...T100°C Db -50°C ≤ Ta ≤ +75°C...+85°C

IP66/IP67

aa	Body: AM - Aluminum body (metric) SM - Stainless Steel body (metric)
b	Process flange: C - ASME 2" class 150, stainless steel, raised face, fused window D - ASME 2" class 300, stainless steel, raised face, fused window F - DIN 50mm PN16, stainless steel, raised face, fused window G - DIN 50mm PN40, stainless steel, raised face, fused window
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ee	Display: L0 - None L5 - Digital LCD integral display with TTG (Through-The-Glass) activated keypad