



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx ITS 09.0016U Issue No: 0 Certificate history:
Issue No. 0 (2009-11-20)

Status: **Current** Page 1 of 4

Date of Issue: **2009-11-20**

Applicant: **Barel AS**
Kaiveien 2
N-9917
Kirkenes
Norway

Electrical Apparatus: **T5 Electronic Ballast model HFXE**
Optional accessory:

Type of Protection: **Encapsulation with Increased Safety terminals**

Marking: Ex mb eb IIC

*Approved for issue on behalf of the IECEx
Certification Body:*

A T Austin

Position:

Certification Officer

*Signature:
(for printed version)*

Date:

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom





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Manufacturer: **Barel AS**
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Additional Manufacturing
location(s):

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 electrical apparatus 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 : 2007-10 Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-18 : 2004 Edition:2.0	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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

[GB/ITS/ExTR09.0027/00](#)

Quality Assessment Report:

[NO/NEM/QAR08.0001/00](#)

[NO/NEM/QAR08.0001/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The HFXE T5 series are high frequency electronic ballasts for installation into Ex e luminaries. They are encapsulated with polyurethane resin and enclosed with a plastic case with the upper top side encapsulate being exposed. They are only certified to be installed inside Ex e approved enclosures. The HFXE model uses a fully protected 600V ballast control IC to drive the florescent lamps and have an inverter IC, which drives an emergency fluorescent lamp from an emergency back up battery pack; charged during normal operation. The battery pack is not covered by this certification. The HFXE also can be supplied with optional Error Relay and DALI controller.

CONDITIONS OF CERTIFICATION: NO



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EQUIPMENT (continued):

Models Covered

Model	Voltage	R a t e Current	dLamps (w)	Emergency Inverter			
				Battery	Capacity	Duration	Discharge Current
HFXE 214	220-250	0.13-0.15	2x14	4.8/8.4 V	4	1-3	1.7
HFXE 314	220-250	0.20-0.22	3x14	4.8/8.4V	4	1-3	1.7
HFXE 228	220-250	0.26-0.29	2x28	8.4/8.4V	4	1-3	1.8

Maximum surface temperaure at Tc = 87°C

Ambinet temperature T_{amb} -25°C to +60°C

Schedule of Limitations

- Only to be installed in a suitably approved EX e enclosure
- Must be protected from light when mounted in final installation
- Surface temperature not to be exceeded in final installation (marked as Tc point).
- Installed conductor temperatures to be tested in final installation according to Clause 4.7.2 of EN60079-7:2007 to ensure no adverse heating effects from neighbouring components.
- B attery packs for Emergency HFXE models are to be assessed with final certification of luminaire.
- terminals must be Factory wired. Not for field use.

Routine Tests

- Inspections according to EN60079-7 clause 9.1
- Dielectric strength tests according to EN60079-7 clause 7.1 (also covers requirements for EN60079-18)