



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 TRC 13.0018X

Issue No: 1

Certificate history:

[Issue No. 1 \(2017-10-30\)](#)

[Issue No. 0 \(2014-02-12\)](#)

Status: **Current**

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Date of Issue: **2017-10-30**

Applicant: **JCE (Europe) Ltd.,**
East Way,
Lee Mill Ind. Estate,
Ivybridge,
Devon,
PL21 9LL
United Kingdom

Equipment: **Flameproof Enclosures, EMH29 Series Models EMH29, EMH29E, EMH29SS,
EMH29ESS, EMH29P, EMH29PE, EMH29PSS, EMH29PESS**

Optional accessory:

Type of Protection: **Flameproof, Enclosure, Optical Radiation**

Marking:

Ex d IIC T5 / T6 Gb

Ex d op is IIC T5 / T6 Gb

Ex tb IIIC T95 °C / T80 °C Db

Ex tb op is IIIC T95 °C / T80 °C Db

Tamb. -20 °C or -40 °C to +40 °C or +60 °C.

Maximum power input 30W

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

Stephen Winsor

Position:

Certification Manager

*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](#).

Certificate issued by:



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Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire
WN8 9PN





IECEX Certificate of Conformity

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Manufacturer: **JCE (Europe) Ltd.**,
East Way,
Lee Mill Ind. Estate,
Ivybridge,
Devon,
PL21 9LL
United Kingdom

Additional Manufacturing location(s):

JCE Group (UK) Ltd.,
Blackburn Business Park,
Aberdeen,
AB21 0PS

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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-28 : 2015 Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*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/TRC/ExTR13.0019/00](#) [GB/TRC/ExTR13.0019/01](#)

Quality Assessment Report:

[GB/ITS/QAR11.0014/02](#) [GB/SIR/QAR10.0001/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The EMH29 equipment is a flameproof enclosure, designed to be fitted with a variety of internal equipment as detailed in the scheduled drawings.

The equipment model designations are detailed in Table 1. The EMH29 comprises a lower threaded body section base casting and an upper threaded cast cover with a windowed aperture. A threaded body extension is available that increases the volume of the enclosure through insertion between the lower base and the upper cover to accommodate a range of equipment.

The lower body section and extension are fabricated from either LM25 Aluminium or Stainless steel. The upper windowed covers and guards can also be made from LM25 Aluminium or Stainless steel.

In addition the aluminium covers may be painted.

The enclosure cover is available with either an 80mm or 86mm diameter aperture forming a cemented viewing window that can be provided with two glazing options comprising plain soda lime glass or Patol® glass which additionally includes a mechanical cover with viewing apertures provided for observation purposes when equipment such as cameras are fitted within the enclosure.

The base casting can be supplied with either 1 x M25 or a 1 x 3/4" NPT entry located in the top face and either 2 x M20 entries or 2 x 1/2" NPT entries located in the bottom face positioned at 45mm centres. The guard for the Patol is supplied with a 1/4" BSP parallel thread for connection of the air curtain supply, this connection is not critical to the protection concept.

The enclosure cover and base are secured with stainless steel locking screws to the body extension. The enclosure base is also supplied with an M4 stainless steel internal and M6 stainless steel external earth stud as standard.

No additional entries are permitted into the enclosure other than those already permitted by the enclosure manufacturer.

The equipment was evaluated for use with gas group IIC, and dust group III C within a temperature range of -20° or -40°C to +40°C or -20°C or -40° to +60 °C.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Where painted or powder coated, the enclosures could present an electrostatic hazard. Clean only with a damp or anti-static cloth.
2. Cables must be suitable for use at temperatures of 85°C for a +40°C ambient and 105°C for a +60°C ambient.
3. Only suitably ATEX / IECEx (as applicable) certified cable glands and blanking elements shall be used.
4. As part of the routine maintenance schedule, the condition of the window cement shall be periodically inspected for any degradation or discolouration of the cement that may compromise the explosion protection.
5. The enclosure is also to be earthed externally using the earth point provided.
6. The flameproof enclosure containing secondary cells / batteries is to be marked clearly with the following "WARNING – DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT".
7. Only low power indicating light emitting diodes, or Vishay TSHA650 Infra-red light emitting diodes may be used.
8. No sources of ultrasonic radiation may be fitted without assessment.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Enclosures fitted with IR-LEDs are marked 'op is'.

Annex:

[Annex to IECEx TRC 13.0018X issue 1.pdf](#)



Element Materials Technology,
 Unit 1, Pendle Place,
 Skelmersdale,
 West Lancashire, WN8 9PN,
 United Kingdom

Annex to IECEx Certificate of Conformity

IECEx TRC 13.0018X issue No.:1

Table 1 Model Designations

Model Designation	Assembly & Dimensions	Material	Lid Style
EMH29	Standard enclosure 146mm Diameter x 129mm high	Aluminium LM25	Window
EMH29E	Enclosure fitted with extension 146mm Diameter x 299 mm high	Aluminium LM25	
EMH29SS	Standard enclosure (stainless steel) 146mm Diameter x 129mm high	Stainless steel	
EMH29ESS	Enclosure & extension (stainless steel) 146mm Diameter x 299 mm high	Stainless steel	
EMH29P	Enclosure fitted with Patol Glass & guard. 146mm Diameter x 129mm high	Aluminium LM25	
EMH29PE	Enclosure fitted with extension, Patol glass & guard 146mm Diameter x 299 mm high	Aluminium LM25	
EMH29PSS	Enclosure (stainless steel) fitted with Patol Glass & guard. 146mm Diameter x 129mm high	Stainless steel	
EMH29PESS	Enclosure & extension (stainless steel) fitted with Patol Glass & guard. 146mm Diameter x 299 mm high	Stainless steel	



Table 2 Thermal Data

Enclosure Type		Power Dissipation (W)	Temperature Class	
			Ambient Temperature	
			+40°C	+60°C
Standard size				
EMH29	Standard enclosure.	30W maximum power dissipation. (This applies to all equipment model numbers listed)	T6/T80°C	T5/T95°C
EMH29SS	Standard enclosure (stainless steel)		T6/T80°C	T5/T95°C
EMH29P	Enclosure fitted with Patol Glass & guard.		T6/T80°C	T5/T95°C
EMH29PSS	Enclosure (stainless steel) fitted with Patol Glass & guard.		T6/T80°C	T5/T95°C
Standard size with added body extension				
EMH29E	Enclosure fitted with extension.	30W maximum power dissipation. (This applies to all equipment model numbers listed)	T6/T80°C	T5/T95°C
EMH29ESS	Enclosure & extension (stainless steel).		T6/T80°C	T5/T95°C
EMH29PE	Enclosure fitted with extension, Patol glass & guard		T6/T80°C	T5/T95°C
EMH29PESS	Enclosure & extension (stainless steel) fitted with Patol Glass & guard.		T6/T80°C	T5/T95°C

Routine Tests

None (These are addressed by the enclosure component certificate IECEx TRC 13.0020U).



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Special conditions for manufacture
<ol style="list-style-type: none"> Sources of RF or ultrasonic radiation may not be fitted. All fitted equipment must have a power dissipation not exceeding 30 W for any enclosure type listed in Table 1. The content of the Ex component enclosure may be placed in any arrangement providing that an area of at least 40% of each cross-sectional area remains free to permit unimpeded gas flow and unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm. Where fuses are fitted, the enclosure shall be marked with the warning “DO NOT OPEN WHEN ENERGISED”. The cover lids state “ KEEP COVER TIGHT WHEN CIRCUITS ALIVE” The EMH29 series equipment shall include a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors. Earth wiring shall have a cross sectional area in accordance with IEC 60079-0 Table 10.

Details of markings	
Enclosures fitted without IR-LEDs	Enclosures fitted with IR-LEDs marked 'op is'
<p>JCE GROUP JCE (Europe) Ltd PLYMOUTH UK CE 0518 Ex II 2 G Ex d IIC T Gb II 2 D Ex tb IIIC T *C Db TRAC13ATEX0054X IECEX TRC 13.0018X IP66 - *C ≤ Ta ≤ + *C V A 30W EMH29 S/N 20 DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT FOR ENTRY THREAD SIZES AND TYPES REFER TO INSTALLATION INSTRUCTIONS</p>	<p>JCE GROUP JCE (Europe) Ltd PLYMOUTH UK CE 0518 Ex II 2 G Ex d op is IIC T Gb II 2 D Ex tb op is IIIC T *C Db TRAC13ATEX0054X IECEX TRC 13.0018X IP66 - *C ≤ Ta ≤ + *C V A 30W EMH29 S/N 20 DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT FOR ENTRY THREAD SIZES AND TYPES REFER TO INSTALLATION INSTRUCTIONS</p>



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The manufacturer's address marked above (JCE (Europe) Ltd.), may be replaced by the following in accordance with the manufacturer's IECEx accreditations:

- JCE (Europe) Ltd, Plymouth UK.
- JCE Group (UK) Ltd, Aberdeen, UK.



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Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawing EMH29 Series Enclosures to Ex d IIC (4 sheets)	A3C-3010	2	2017-08-23
EMH29 Series Control and Instrument Enclosures. Installation, Operation and Maintenance Manual	DN-134	2	2017-08-18