



1 **EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or protective system intended for use in potentially explosive atmospheres –
Directive 94/9/EC – Annex III

3 EC Type Examination **TRAC13ATEX0054X**
Certificate No.:

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

5 Manufacturer: **JCE (Europe) Ltd.,**

6 Address: **East Way, Lee Mill Ind. Estate, Ivybridge, Devon, PL21 9LL, United Kingdom**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report **TRA-012091-33-00A**.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

EN 60079-0:2012

EN 60079-1:2007

EN 60079-31:2009

10 If the sign “X” is placed after the certificate number then this indicates that the equipment or protective system is subject to special conditions of safe use specified in the schedule to this certificate.

11 This EC-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

 **Ex d IIC T5 Gb, Ex tb IIIC T80°C Db Tamb. See section 15**

Ex d IIC T6 Gb , Ex tb IIIC T95°C Db

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the TRaC Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Officer

Issue date: 2014-02-12

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13 **SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE**

14 **TRAC13ATEX0054X**

15 **General description of equipment or protective system included within the scope of this certificate**

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 IIIC within a temperature range of -20° or -40°C to +40°C or -20°C or -40° to +60 °C.

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

A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.

16 **Test report No.:** TRA-012091-33-00A.

17 **“Special Conditions of Safe Use” for Ex Equipment:**

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 may be used.
8. No sources of ultrasonic radiation may be fitted without assessment.

18 **Essential health and safety requirements**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 **Additional information**

“Routine tests”, if any:

None (These are addressed by the component certificate TRAC13ATEX0058U).

“Special conditions for manufacture”:

1. Sources of RF, optical or ultrasonic radiation may not be fitted.
2. All fitted equipment must have a power dissipation not exceeding 30W for any enclosure type listed in Table 1.
3. 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 12.5mm.
4. 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”
5. The EMH29 series equipment shall include a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors.
6. Earth wiring shall have a cross sectional area in accordance with EN 60079-0 Table 10.

Other information, if any:

None.

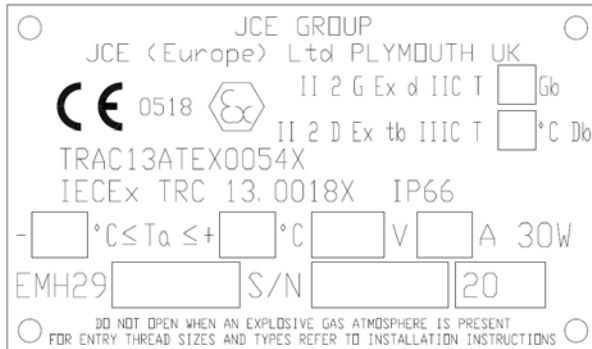
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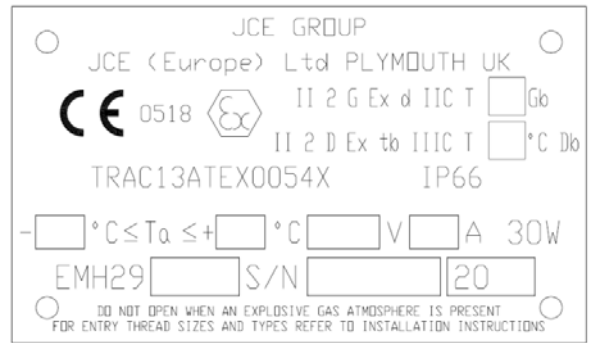
CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC13ATEX0054X

Details of markings

IECEX Registered Companies.



Non IECEX Registered Companies.



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

- JCE (Europe) Ltd, Plymouth United Kingdom.
- JCE GROUP (UK) Ltd, Aberdeen, United Kingdom.
- JCE (Asia Pacific) Ltd, Singapore. (not IECEX).
- JCE Group USA Inc., Houston TX, USA (not IECEX).

For the purposes of ATEX it is the manufacturer's responsibility to ensure that each factory location has a valid quality assurance assessment.

Details of variations to this certificate

- None.

Notes to CE marking

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

Notes to this certificate

TRaC certification reference: **TRA-012091-32-00**.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawing EMH29 Series Enclosures to Ex d IIC (4 sheets)	A3C-3010	1	2014-02-05
EMH29 Series Control and Instrument Enclosures. Installation, Operation and Maintenance Manual	DN-134	1	2014-02-05

*no information provided.

