

1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM10ATEX0003X

4 Equipment or protective system: Electronic Timer Module ETM-IS**-***
(Type Reference and Name)

5 Name of Applicant: Expo Technologies Ltd

6 Address of Applicant: Unit 2, The Summit
Hanworth Road
Sunbury on Thames
TW16 5DB
United Kingdom

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

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3036907EC dated 12th November 2010

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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



II 1 G Ex ia IIC T* Ga
II 1 D Ex ia IIIC T* Da
* See Description

Martin Crowe
Certification Manager, FM Approvals Europe Ltd.

Issue Date: 18th January 2023

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F ATEX 020 (Dec/2020)



SCHEDULE

to EU-Type Examination Certificate No. FM10ATEX0003X

13 Description of Equipment or Protective System:

The ETM-IS is a powered electronic timer module. The Timer module is designed to be supplied from either a self contained battery pack or an IS certified Power Supply. The battery pack contains a non-rechargeable battery together with current limiting resistors. The timer settings are controlled by two BCD switches located on the main part of the timer. Connections from the timer to a solenoid valve and switch are also provided. The solenoid is supplied as part of the timer circuit. Four LED's are used to indicate the status of the timer circuit.

The Timer module and Solenoid Valve are designed to be installed within another enclosure.

Electronic Timer Module ETM-ISab-cde

- a = sub module 1 = Timer Module powered by Electronic Timer Battery pack, E.P.P.S or IS-certified Power Supply
 3 = Electronic Timer IS Battery Pack
 4 = Electronic Timer IS remote Battery Pack
- b = Mounting Style 1 = Plate mounted
 2 = Panel mounted
- c = LED's connection 1 = LED's on Timer surface
 2 = LED's on flying leads
- de = Maximum Time d = Reference Value 1 to 9
 e = Multiplying digit: 1 = x 1 min, 2 = x 10 min, 3 = x 100 min, 4 = x 1000min

The input parameters for the power supply option are;

Ui = 11.1V Ii = 340 mA Pi = 2.613 W (non linear) Ci = 363 nF Li = 0

The input parameters for the E.P.P.S. option are;

Ui = 10.8V Ii = 3.28 A Pi = 1.46 W Ci = 363 nF Li = 0

The temperature class is dependent on the ambient temperature;

Ambient Tamb =	Temperature Class	
	Group II	Group III
-20°C to +60°C	T4	T142°C
-20°C to +59°C	T5	T141°C
-20°C to +44°C	T6	T126°C

14 Specific Conditions of Use:

1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.
2. The Electronic Timer shall be installed within an enclosure which provides protection against impact.
3. The Enclosure shall be metallic providing a minimum IP20.
4. For light alloy enclosures, materials shall not contain, by mass, more than 7.5% in total of magnesium, titanium and zirconium. Where more than 10% in total of aluminium, magnesium, titanium and zirconium the user shall take special precautions to avoid ignition hazard due to impact or friction.

15 Essential Health and Safety Requirements:

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The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
12 th November 2010	Original Issue.
30 th January 2013	<u>Supplement 1:</u> Report Reference: 3036906rev130109 dated 25 th January 2013. Description of the Change: 1. Change of address 2. Addition of IS power Supply option.
22 nd October 2013	<u>Supplement 2:</u> Report Reference: 3049400 dated 18 th October 2013. Description of the Change: Addition of ETM-IS31-001 battery pack module. (This corresponds to a =3. No change to the model code.)
08 th December 2014	<u>Supplement 3:</u> Report Reference: 3036907rev141016 dated 04 th December 2014. Description of the Change: Change to Valve part number and update of Valve certificate number (DEKRA 11ATEX0273X).
20 th July 2015	<u>Supplement 4:</u> Report Reference: 3055146 dated 15 th July 2015. Description of the Change: Update to the standards used.
25 th November 2016	<u>Supplement 5:</u> Report Reference: RR206511 dated 23 rd November 2016. Description of the Change: Change of T-Class due to solenoid. Updated certificate to EU format.
24 th July 2017	<u>Supplement 6:</u> Report Reference: RR209962 dated 22 nd June 2017. Description of the Change: Addition of EPPS pneumatically powered generator (this corresponds to a =5 in model number).

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to EU-Type Examination Certificate No. FM10ATEX0003X

13 th March 2019	<u>Supplement 7:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
18 th January 2023	<u>Supplement 8:</u> Report Reference: PR461501 dated 2 nd December 2022. Description of the Change: (1) Minor design change not affecting compliance. (2) The standard EN 60079-0:2012 +A1:2013 is updated to EN IEC 60079-0:2018. (3) The Group III Temperature Class ratings are changed.

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F ATEX 020 (Dec/2020)

Page 4 of 4

Blueprint Report

Expo Technologies Ltd (1000002806)

Class No 3610

Original Project I.D. 3036907

Certificate I.D. FM10ATEX0003X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
EPC-B000-114	2	Electronic Timer Timer Main PCB Layout	PR461501
EPC-B000-115	1	Electronic Timer Battery Main PCB Layout	3036907
EPC-B000-116	1	Electronic Timer Battery Connector PCB Layout	3036907
EPC-B000-117	1	Electronic Timer BCD PCB Layout	3049400
EPC-B000-147	1	Electronic Timer Battery Pack PCB	3049400
EPC-BBM0-010	4	Timer Module Parts List	PR461501
EPC-BBM0-011	1	Battery pack Parts List	3049400
EPC-BBM0-015	1	ETM-IS31-001 Battery Pack Parts List.doc	3049400
SD7607	4	Electronic Timer Schematic	PR461501
SD7608	4	Electronic Timer Module - Design Document.doc	PR461501
SD7610	2	Timer Module Schematic	PR461501
SD7611	5	Electronic Timer ELECTRONIC TIMER - BLOCK DIAGRAM	RR209962
SD7616	6	Electronic Timer ATEX / IEC EX CERTIFICATION LABEL	PR461501
SD7620	4	Electronic Timer - FM (USA, Canada) Label	RR206511
SD7621	6	Electronic Timer - Manual Extracts	PR461501
SD7622	3	Electronic Timer – Model Number designation	PR461501
SD7642	5	Electronic Timer Installation	RR209962
SD7835	1	Electronic Timer Assembly	3036907
SD7841	4	Electronic Timer Interconnection	RR209962
SD7842	4	Electronic Timer - Encapsulation	PR461501
SD7848	3	Electronic Timer	3049400
SD7898	1	Electronic Timer System Certification Label.doc	3049400
SD8085	1	Electronic Timer Assembly.pdf	3049400
SD8222	2	Description of proposal changes for E-timer	RR209962
SD8255	1	Electronic Timer with EPPS Assembly	RR209962
SD8256	1	EPPS – IS Barrier Schematic	RR209962
Timer Module	1	Gerber files of Timer PWB	3036907