1 UNITED KINGDOM CONFORMITY ASSESSMENT

UK-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially Explosive Atmosph**

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 **UK-Type Examination Certificate No:** **FM22UKEX0080X**

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

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 Ltd, Approved Body number 1725, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
The examination and test results are recorded in confidential report number:

PR461501 dated 2nd December 2022

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, 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 UK-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this product. 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

Digitally signed by Victor Aluko-Oginni
DN: O=FM Approvals Limited, CN=Victor Aluko-Oginni, E=victor.aluko-oginni@fmapprovals.com
Foxit PhantomPDF Version: 10.1.5

Victor Aluko-Oginni
Certification Manager, FM Approvals Ltd.

Issue date: 18th January 2023

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UKAS PRODUCT CERTIFICATION 0259

SCHEDULE

to UK-Type Examination Certificate No. FM22UKEX0080X

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 an external 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 = x1 min, 2 = x10 min, 3 = x100 min, 4 = x1000min

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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In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This UK-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 UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's UKCA 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 Approved Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
18th January 2023	Original Issue.

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Blueprint Report

Expo Technologies Ltd (1000002806)

Class No 3610

Original Project I.D. 3036907

Certificate I.D. FM22UKEX0080X

Drawing No.	Revision Level	Drawing Title	Last Report	Electronic Drawing
EPC-B000-114	2	Electronic Timer Timer Main PCB Layout	PR461501	Yes (pdf)
EPC-B000-115	1	Electronic Timer Battery Main PCB Layout	3036907	Yes (pdf)
EPC-B000-116	1	Electronic Timer Battery Connector PCB Layout	3036907	Yes (pdf)
EPC-B000-117	1	Electronic Timer BCD PCB Layout	3049400	Yes (msw8)
EPC-B000-147	1	Electronic Timer Battery Pack PCB	3049400	Yes (zip_html)
EPC-BBM0-010	4	Timer Module Parts List	PR461501	Yes (pdf)
EPC-BBM0-011	1	Battery pack Parts List	3049400	Yes (msw8)
EPC-BBM0-015	1	ETM-IS31-001 Battery Pack Parts List.doc	3049400	Yes (msw8)
SD7607	4	Electronic Timer Schematic	PR461501	Yes (pdf)
SD7608	4	Electronic Timer Module - Design Document.doc	PR461501	Yes (pdf)
SD7610	2	Timer Module Schematic	PR461501	Yes (pdf)
SD7611	5	Electronic Timer ELECTRONIC TIMER - BLOCK DIAGRAM	RR209962	Yes (pdf)
SD7616	6	Electronic Timer ATEX / IECEX CERTIFICATION LABEL	PR461501	Yes (pdf)
SD7620	4	Electronic Timer - FM (USA, Canada) Label	RR206511	Yes (pdf)
SD7621	6	Electronic Timer - Manual Extracts	PR461501	Yes (pdf)
SD7622	3	Electronic Timer – Model Number designation	PR461501	Yes (pdf)
SD7642	5	Electronic Timer Installation	RR209962	Yes (pdf)
SD7835	1	Electronic Timer Assembly	3036907	Yes (pdf)
SD7841	4	Electronic Timer Interconnection	RR209962	Yes (pdf)
SD7842	4	Electronic Timer - Encapsulation	PR461501	Yes (pdf)
SD7848	3	Electronic Timer	3049400	Yes (pdf)
SD7898	1	Electronic Timer System Certification Label.doc	3049400	Yes (msw8)
SD8085	1	Electronic Timer Assembly.pdf	3049400	Yes (pdf)
SD8222	2	Description of proposal changes for E-timer	RR209962	Yes (pdf)
SD8255	1	Electronic Timer with EPPS Assembly	RR209962	Yes (pdf)
SD8256	1	EPPS – IS Barrier Schematic	RR209962	Yes (pdf)
Timer Module	1	Gerber files of Timer PWB	3036907	Yes (zip_html)