

1 EC-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 94/9/EC

3 EC-Type Examination Certificate No: FM15ATEX0011X

4 Equipment or protective system: EK-EP Electronic Weighing Balances
(Type Reference and Name)

5 Name of Applicant: A&D Company, Limited

6 Address of Applicant: 1-243, Asahi,
Kitamoto-shi, Saitama 364-8585, Japan

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, notified body number 1725 in accordance with Article 9 of 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 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:

3054278 dated 1st September 2015

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 60079-0: 2012, 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 EC-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. 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:



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Mick Gower
Certification Manager, FM Approvals Ltd.

Issue date: 08th September 2015

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE

to EC-Type Examination Certificate No. FM15ATEX0011X

13 Description of Equipment or Protective System:

The EK-EP Electronic Weighing Balances are portable bench top battery powered weigh-scales. Model code variations account for differences in the load cell spring material and the performance of the scale such as resolution and range. The addition on a "-K" at the end of the model code indicates that model is a Japanese legal-for-trade weighing device (this performance was not evaluated by FM Approvals). The enclosures are constructed of plastic with a stainless steel weighing tray and plate.

The Model EK-EP Electronic Weighing Balances are intrinsically safe apparatus with level of protection "ia" for use in gas groups IIB. Each Model EK-EP Electronic Weighing Balance contains a single PCB, load cell, LCD display, four internal AA 1.5 Volt alkaline batteries, and a current limiting protective resistor in the battery compartment area. The enclosures are constructed of plastic with a stainless steel weighing tray and plate. Approximate dimensions are 7½ inches wide by 8½ inches deep and about 2 ½ inches high, but vary depending which on tray and model is selected. The temperature range is from -20°C to 40°C.

Electronic Weighing Balances Models: EK300EP, EK300EP-K, EK3000EP, EK12KEP, EK3000EP-K, EK12KEP-K

14 Specific Conditions of Use:

1. The Electronic Weighing Balances shall only be used with four Energizer AA E91 alkaline LR6 AM3, or Duracell AA alkaline MN1500 LR6, or Panasonic AA alkaline LR6(XJ) 1.5V batteries.
2. The apparatus enclosure contains accessible metal parts and could be susceptible to electrostatic charges that could be a source of ignition. The user must consider a 170pF capacitance when considering suitability for use. Refer to IEC TS60079.32-1 for guidance.
3. Part of the enclosure is constructed of plastic. To prevent the risk of electrostatic sparking the non-metallic surface should only be cleaned with a damp cloth.

15 Essential Health and Safety Requirements:

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 EC-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 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 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.

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SCHEDULE



Member of the FM Global Group

to EC-Type Examination Certificate No. FM15ATEX0011X

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
08 th September 2015	Original Issue.



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Blueprint Report

A&D Company, Limited (151048)

Class No 3610

Original Project I.D. 3054278

Certificate I.D. FM15ATEX0011X

<u>Drawing No.</u>	<u>Revision</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
1WMPD4003076	2015.05.11	Instruction Manual EK-EP Series Explosion-Proof Compact Balance	3054278	Yes (pdf)
EKEP1001_00	00	System configuration	3054278	Yes (pdf)
EKEP1002_00	00	Outline of safety features	3054278	Yes (pdf)
EKEP1003_00	01	Outline drawing	3054278	Yes (pdf)
EKEP1004_00	00	Detailed diagram of the structure of the load cell	3054278	Yes (pdf)
EKEP1005_00	00	Detailed diagram of the structure of the strain gauge	3054278	Yes (pdf)
EKEP1006_00	00	Detailed diagram of the PCB (1)	3054278	Yes (pdf)
EKEP1007_00	00	Detailed diagram of the PCB (2)	3054278	Yes (pdf)
EKEP1008_00	00	Parts layout diagram	3054278	Yes (pdf)
EKEP1009_00	00	Assembly drawing (1)	3054278	Yes (pdf)
EKEP1010_00	00	Assembly drawing (2)	3054278	Yes (pdf)
EKEP1011_00	00	Circuit diagram	3054278	Yes (pdf)
EKEP1012_00	00	Parts list for the circuit (1)	3054278	Yes (pdf)
EKEP1013_00	00	Parts list for the circuit (2)	3054278	Yes (pdf)
EKEP1014_00	00	Parts list for the circuit (3)	3054278	Yes (pdf)
EKEP1015_00	00	Parts list for the circuit (4)	3054278	Yes (pdf)
EKEP1016_00	00	Parts list for the circuit (5)	3054278	Yes (pdf)
EKEP1017_00	00	Details of safety parts	3054278	Yes (pdf)
EKEP1018_00	01	Hazardous location label drawing	3054278	Yes (pdf)
EKEP2003_00	01	Outline drawing	3054278	Yes (pdf)
EKEP2004_00	00	Detailed diagram of the structure of the load cell	3054278	Yes (pdf)
EKEP2005_00	00	Detailed diagram of the structure of the strain gauge	3054278	Yes (pdf)
EKEP2009_00	00	Assembly drawing (1)	3054278	Yes (pdf)
EKEP2016_00	00	Parts list for the circuit (5)	3054278	Yes (pdf)
EKEP2018_00	01	Hazardous location label drawing	3054278	Yes (pdf)