

# EC-TYPE EXAMINATION CERTIFICATE



[1]

[2]

## Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

[3]

EC-Type Examination Certificate Number: **DEMKO 14 ATEX 1208667X Rev. 0**

[4]

Equipment or Protective System: **EF1A-1 Series of Luminaires**

[5]

Manufacturer: **IDEC Corporation**

[6]

Address: **6-64 Nishimiyahara, 2-ChomeYodogawa-Ku, Osaka 532-0004 Japan**

[7]

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

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **12CA08667**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012+A11:2013**

**EN 60079-1:2007**

**EN 60079-31:2009**

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe 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 the certificate.

[12]

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



**II 2 G Ex d IIB T4 Gb**



**II 2 D Ex tb IIIC T130°C Db**

### Certification Manager

Jan-Erik Storgaard

This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the equipment sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2014-07-18

### Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)



[13]

## Schedule

[14]

# EC-TYPE EXAMINATION CERTIFICATE No.

DEMKO 14 ATEX 1208667X Rev. 0

Report: 12CA08667

[15]

### Description of Equipment or protective system

The EF1A series of luminaires are composed of a flameproof enclosure containing an LED module and driver module, with various end cover options and various lenses. The luminaire is provided with a single LED type. The end covers for the enclosure have four types of entry options and the option to include a push button. The end covers are secured to the body of the enclosure using four fasteners. The luminaire is mounted using either a fixed angle mount or an adjustable angle mount.

### Nomenclature:

EF1A-1	2	1	W	1	P	S	A	N2	A2	*****
I	II	III	IV	V	VI	VII	VIII	IX	X	XI

**I. Basic Model Designation**

EF1A-1

**II. Rated Voltage**

1 – DC 24V  
2 – 100 to 240VAC

**III. Glass Optical Specifications**

Blank – Tempered Glass  
1 – Translucent Reinforced Glass

**IV. Illumination Color**

W - White

**V. Light Distribution Characteristics**

Blank – Standard  
1 – Without Lens

**VI. Lead-in fittings**

Blank – Cable gland on one end / without operate switch  
T – Cable glands on both ends / without operate switch  
P – Cable glands on one end / with operate switch

**VII. Terminal**

Blank – Spring-clamp terminal block  
S – Screw Terminal Block  
C – Lead Wire

**VIII. Mounting Bracket**

Blank – None  
A – Fixed  
B – Angle adjustable

**IX. Conduit**

N1 – NPT1/2  
N2 – NPT 3/4  
M25 – M25  
M32 – M32

**X. Operate Switch**

Blank – None  
A1 – Flush Pushbutton (alternate)  
A2 – Extended Pushbutton (alternate)

**XI. Manufacturer Control number**

\*\*\*\*\* - Additional Letters and/or numbers



[13]

[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 14 ATEX 1208667X Rev. 0**  
**Report: 12CA08667**

**Accessory:**

EF9Z-      A  
          I        II

**I. Basic Model Designation**

EF9Z

**II. Mounting Bracket Type**

A- Fixed

B- Angle adjustable

Temperature range

The ambient temperature range is -20 °C to +50 °C.

Electrical data

Model	Voltage	Frequency (Hz)	Rated Power
EF1A-11	24VDC	-	17W
EF1A-12	100-240 VAC	50/60	19W

Installation instructions:

Before opening the enclosure in a flammable atmosphere the circuits must be interrupted.

The certification applies to equipment without cable glands and cables. All cable entry devices and blanking elements shall be ATEX certified in type of explosion protection flameproof "d", dust protection "tb", suitable for the conditions of use, suitable for the applicable IP rating, and correctly installed.

Unused apertures shall be closed with ATEX certified suitable blanking elements.

For ambient temperatures below -10 °C use field wiring suitable for both minimum and maximum ambient temperature.

EF1A series luminaires not provided with Operate Switch may be marked IP67. All series of EF1A luminaires may be marked IP65.

Mounting instructions

Refer to "Instructions".

Routine tests:

Routine overpressure tests in accordance with EN60079-1:2007 shall be conducted on all units in accordance with clause 16.1, at a pressure of 12.6 bar (183 PSI) for a duration of not less than 10 seconds. There shall be no sign of damage, deformation or rupture that will invalidate the concept of protection.

[16]

Report No.

Project Report No.: 12CA08667 (Hazardous Location Testing)



[13]

[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 14 ATEX 1208667X Rev. 0**  
**Report: 12CA08667**

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
AC Nameplate	A49478	C	2014-04-03
AC Nameplate locations	A49475	A	2012-01-10
EF1A Material List	13-339-053	B	2014-03-07
PCB-5986 PATTERN	A49476	A	2012-01-17
END COVER	A49471	C	2014-04-03
CIRCUIT	A49472	A	2012-01-10
DC NAMEPLATE	A49474	C	2014-04-03
DC Nameplate location	A49473	A	2012-01-10
PCB-5986 SILK	A49477	A	2012-01-17
PCB-6147 SILK	A49470	A	2013-01-17
EF1A PARTS	A39998	B	2014-02-13
END COVER	A39997	C	2014-04-03
EF1A BODY	A39995	C	2014-03-25
EF1A CONSTRUCTION	A39994	H	2014-04-03
EF1A CONSTRUCTION	A39993	D	2013-12-02
EF1A CONSTRUCTION	A39994-1	A	2012-07-04
EF1A END COVER	A39996	B	2014-04-03
EF1A OUTLINE	A39992	B	2013-12-02
PCB-6147 CIRCUIT	A39977	A	2013-01-17
EF1A OUTLINE	A39991	C	2013-12-02
EF1A OUTLINE	A39990	B	2013-12-02
PCB-6147 PATTERN	A49469	A	2013-01-17
PCB-5986 CIRCUIT	A39988	A	2012-01-17
OPERATE SWITCH	A39989	E	2014-02-05
PCB-6001 CIRCUIT	A37244	A	2012-01-30
PCB-6001 PATTERN	A37246	A	2012-01-30
PCB-6001 SILK	A37245	A	2012-01-30
EF1A-11* ELECTRICAL COMPONENT LIST	12-339-071	A	2013-12-02
PCB-5986 PATTERN LINE	11-339-040	A	2012-01-17
PCB-5986 CIRCUIT LINE	11-339-039	A	2012-01-17
EF1A-12* ELECTRICAL Component LIST	11-339-038	C	2013-12-02
EF1A Transformer Configuration	11-339-038-1	D	2013-12-02
EF1A LED Illumination Instruction Manual	B-1442	C	2014-04-03



[13]

## Schedule

[14]

### EC-TYPE EXAMINATION CERTIFICATE No.

DEMKO 14 ATEX 1208667X Rev. 0

Report: 12CA08667

[17]

Specific conditions of use:

Remove dust of the plastic button with such as a wet cloth to prevent the button from being charged with static electricity, when using the EF1A with ON/OFF switch as an equipment for Group III (explosive dust atmospheres)."

When disassembling or assembling the EF1A to perform maintenance or repairing, contact IDEC.

[18]

Essential Health and Safety Requirements

Concerning ESRs this Schedule verifies compliance with the Annex III of ATEX directive only. By placing the product on the market, the manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II of this Directive.

Additional information

The EF1A series of luminaires has in addition passed the tests for Ingress Protection to IP 65 and IP 67 in accordance with EN60529: 1991/A1 2001.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

