[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **DEMKO 13 ATEX 1213079X Rev. 4**

[4] Product: **Industrial Intercom**

[5] Manufacturer: **Federal Signal Corp.**

[6] Address: **2645 Federal Signal Drive, University Park, IL 60484 USA**

[7] This product 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 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products 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. **US/UL/ExTR13.0026/04.**

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

EN IEC 60079-0:2018 **EN 60079-1:2014** **EN 60079-11:2012**

[10] If the sign "**X**" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following:

All models except E1-JS-EX:

II 2 G Ex db ib IIB T4 Gb

Model E1-JS-EX only:

II 2 G Ex db [ib Gb] IIB T4 Gb

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product 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 product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product 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.

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Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

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Schedule
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[15] Description of Equipment or protective system

E1 Series of Industrial intercom. Available as microphone, handset, or Jack Station model. All models have three M20 x 1.5 cable entries. Consists of an Ex certified flameproof 'db' enclosure that is provided with a metric threaded opening in the cover for an Ex certified flameproof 'db' line bushing that provides connection between intrinsically safe circuits and input/output power connections. The Model E1-JS-EX Jack Station is provided with entity parameters to allow for connection to a suitable intrinsically safe device.

Nomenclature for type:

Model	Description	Marking
E1-SM-EX	Echo Industrial Intercom with Short Microphone	Ⓔx II 2 G Ex db ib IIB T4 Gb
E1-GM1-EX	Echo Industrial Intercom with 150mm Gooseneck Microphone	Ⓔx II 2 G Ex db ib IIB T4 Gb
E1-GM2-EX	Echo Industrial Intercom with 330mm Gooseneck Microphone	Ⓔx II 2 G Ex db ib IIB T4 Gb
E1-GM3-EX	Echo Industrial Intercom with 480mm Gooseneck Microphone	Ⓔx II 2 G Ex db ib IIB T4 Gb
E1-HND-EX	Echo Industrial Intercom with Handset	Ⓔx II 2 G Ex db ib IIB T4 Gb
E1-JS-EX	Echo Industrial Intercom with Jack Station Connection	Ⓔx II 2 G Ex db [ib Gb] IIB T4 Gb

Temperature range
The ambient temperature range is -40 °C ≤ Ta ≤ +65 °C.

Electrical data
ISDN Input/Output – 24 Vdc, 0.1 A
Audio Output – 2.7Vrms into 1 kΩ load
Relay – 240Vac/dc, 3 A max

Intrinsically safe specifications:
U_m : 250 V

For Model E1-JS-EX only:
The following intrinsically safe circuit parameters are applicable when connected to an intrinsically safe device complying with the 500V dielectric requirement:

Channel 10,11	U_o	6.6 V
	I_o	10.53 mA
	C_o	500 µF
	L_o	2.88 mH
	L_o/R_o	8.18 mH/Ω
Channel 12,13	U_o	6.6 V
	I_o	10.53 mA
	C_o	500 µF
	L_o	2.88 mH
	L_o/R_o	8.18 mH/Ω
Channel 10,11,12,13	U_o	6.6 V
	I_o	10.53 mA
	C_o	500 µF
	L_o	2.88 mH
	L_o/R_o	8.18 mH/Ω

The following intrinsically safe circuit parameters are applicable when connected to an intrinsically safe device that does not comply with the 500V dielectric requirement:

Channel 10,11	U_o	6.6 V
	I_o	42.11 mA
	C_o	500 µF
	L_o	0.18 mH
	L_o/R_o	2 mH/Ω
Channel 12,13	U_o	6.6 V
	I_o	97.8 mA
	C_o	500 µF
	L_o	0.033 mH
	L_o/R_o	0.88 mH/Ω
Channel 10,11,12,13	U_o	6.6 V
	I_o	139.9 mA
	C_o	500 µF
	L_o	0.016 mH
	L_o/R_o	0.616 mH/Ω

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Routine tests
Routine tests according to EN 60079-1 cl. 16.1.1 are not required.

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17] Specific conditions of use:

- Flamepath joint differs from Table 2 of EN 60079-1. The Adalet XCEX S6393 060804 enclosure has joint width of 37 mm, maximum allowable gap of 0.038 mm. The distance 'l' of 22.6 mm is measured from the edge of the o-ring groove to the edge of the cover bolt per Figures 3 and 5 of EN 60079-1.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9

Additional information
The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.