



[1]

UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

[2]

**Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

[3] UK-Type Examination Certificate No.: **UL22UKEX2630X Rev. 0**

[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 (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), 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 the confidential report **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

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the Schedule to this certificate.

[11] This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. 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 product shall include the following:

 **II 2 G Ex db ib IIB T4 Gb**

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

Certification Officer
Andrew Moffat

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 UKEx 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 Regulations. 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: 2022-11-25

Approved Body UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
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[14]

Schedule UK-TYPE EXAMINATION CERTIFICATE No. UL22UKEX2630X Rev. 0

[15] Description of Product

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

Temperature range

The ambient temperature range is $-40\text{ }^{\circ}\text{C} \leq T_a \leq +65\text{ }^{\circ}\text{C}$.

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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Schedule

UK-TYPE EXAMINATION CERTIFICATE No.

UL22UKEX2630X Rev. 0

Routine tests

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

[16]

Test Report No. (associated with this certificate issue)

The test report no. is provided under item no. [8] on page 1 of this UK-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]

Conditions of certification:

Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.

[19]

Essential Health and Safety Requirements (Regulations Schedule 1)

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

Additional information

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

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Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Nameplate (All models except E1-JS-EX)	850000152A (Sheet 1)	A3	2022-07-06
Nameplate (model E1-JS-EX)	850000152A (Sheet 2)	A3	2022-07-06
Installation Instructions (12 sheets)	25500090	A3	July 2022 "0722"
Final Assembly Microphone Model	850000154A	A1	2022-09-16
Final Assembly Handset Model	850000153A	A1	2022-09-16
Final Assembly Jack Stand Model	850000204A	A1	2022-09-16
Microphone	850000143A	A1	2018-09-25
Handset	850000142A	A0	2013-08-23
Handset Holder	8601103B	B1	2010-01-26
Jack Station	1461277A	A4	2001-10-27
Jack Station Connector	139397A	A2	2006-04-11
Jack Stand Holder	8601109A	A1	2007-10-31
Jack Station Control Drawing	850000218A	A0	2013-11-05
Barrier Board Schematic	850000150A	A0	2013-05-31
Barrier Board Component Placement	850000149A	A2	2013-08-23
Barrier Board Layout	850000176A	A1	2013-11-08
Barrier Board Potting	850000151A	A1	2013-05-31
Faceplate Assembly	8601102A-01	A	2001-08-10
IS Barrier Panel	8601105A	A2	2010-04-26
Keypad Dimensions	122367A	A1	2003-06-17