



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX UL 13.0028X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 4 [Issue 3 \(2018-10-31\)](#)
Date of Issue: 2022-11-22 [Issue 2 \(2014-05-14\)](#)
[Issue 1 \(2013-11-16\)](#)
[Issue 0 \(2013-06-07\)](#)
Applicant: **Federal Signal Corporation**
2645 Federal Signal Drive
University Park, IL 60484
United States of America
Equipment: **Industrial intercom, E1 Series intercom: E1-SM-EX, E1-GM1-EX, E1-GM2-EX, E1-GM3-EX, E1-HND-EX and E1-JS-EX**
Optional accessory:
Type of Protection: **Intrinsic Safety "ib"; Flameproof "db"**
Marking: Ex db ib IIB T4 Gb (All models except E1-JS-EX)
Ex db [ib Gb] IIB T4 Gb (Model E1-JS-EX only)
-40C ≤ Ta ≤ +65C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





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Manufacturer: **Federal Signal Corporation**
2645 Federal Signal Drive
University Park, IL 60484
United States of America

Manufacturing locations: **Federal Signal Corporation**
2645 Federal Signal Drive
University Park, IL 60484
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[US/UL/ExTR13.0026/00](#)
[US/UL/ExTR13.0026/03](#)

[US/UL/ExTR13.0026/01](#)
[US/UL/ExTR13.0026/04](#)

[US/UL/ExTR13.0026/02](#)

Quality Assessment Report:

[US/UL/QAR06.0012/11](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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 and must be installed in accordance with Control Drawing 850000218A.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Flamepath joint differs from Table 2 of IEC 60079-1. The 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 IEC 60079-1.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Addition of models E1-HND and E1-JS. Modifications to barrier board layout. Please refer to Annex for additional details on entity parameters for Model E1-JS.

Issue 2: Revised models to have M20 entries, added -EX to model numbers and revision drawings.

Issue 3: Revised min. resistance for microphone. Updated to latest edition of IEC 60079-0 (7th Edition) and IEC 60079-1 (7th Edition).

Issue 4: Updated markings and corrected Ex marking strings.

Annex:

[Annex to IECEx UL 13.0028X Issue 4.pdf](#)



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TYPE DESIGNATION

Nomenclature:

E1-SM-EX	Echo Industrial Intercom with Short Microphone
E1-GM1-EX	Echo Industrial Intercom with 150mm Gooseneck Microphone
E1-GM2-EX	Echo Industrial Intercom with 330mm Gooseneck Microphone
E1-GM3-EX	Echo Industrial Intercom with 480mm Gooseneck Microphone
E1-HND-EX	Echo Industrial Intercom with Handset
E1-JS-EX	Echo Industrial Intercom with Jack Station Connection

PARAMETERS RELATING TO THE SAFETY

ISDN Input/Output – 24 Vdc, 0.1 A; Audio Output – 2.7Vrms into 1 kΩ load; Relay – 240Vac/dc, 3 A max; U_m – 250V

MARKING

Marking has to be readable and indelible; it has to include the following indications:

All models except E1-JS-EX:

		Industrial Intercom for Use in Hazardous Locations		
Ex db ib IIB T4 Gb (-40°C < Ta < +65°C)	ATEX CERT. NO.: DEMKO 13 ATEX 1213079X	CERT NO.: UL22UKEX2630X		
CE 0539	IECEX CERT NO.: IECEX UL 13.0028X	0843		
Model Number	<input type="text" value="E1-HND-EX"/>			
Serial Number	<input type="text"/>			
M20 Entries See Installation Instruction: All conduit runs must have a properly certified sealing fitting connected within 51mm. All cable entry devices and blanking elements shall be certified in type of explosion protection flameproof enclosure "d" suitable for the conditions of use and correctly installed.				
Electrical Ratings: ISDN Input/Output 24VDC, 0.1A; Audio Output 2.7V rms into 1KΩ load; Relay 240VAC/DC, 3A max.				
I.S. Ratings: U_m + 250V				
WARNING: Do not open when an explosive atmosphere may be present.				
WARNING: Do not open when energized.				
	Federal Signal, University Park, IL 60484 U.S.A.			Date <input type="text"/>



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Model E1-JS-EX:

Industrial Intercom for Use in Hazardous Locations	
	 II 2G Ex db [ib Gb] IIB T4 Gb (-40°C < Ta < +65°C)  0539 ATEX CERT. NO.: DEMKO 13 ATEX 1213079X IECEX CERT NO.: IECEX UL 13.0028X
	 CERT NO.: UL22UKEX2630X 0843
Model Number	<input type="text" value="E1-JS-EX"/>
Serial Number	<input type="text"/>
M20 Entries See Installation Instruction: All conduit runs must have a properly certified sealing fitting connected within 51mm. All cable entry devices and blanking elements shall be certified in type of explosion protection flameproof enclosure "d" suitable for the conditions of use and correctly installed. Electrical Ratings: ISDN Input/Output 24VDC, 0.1A; Audio Output 2.7V rms into 1KΩ load; Relay 240VAC/DC, 3A max. I.S. Ratings: Um + 250V - Refer to control drawing 850000218A. WARNING: Do not open when an explosive atmosphere may be present. WARNING: Do not open when energized.	
	Date <input type="text"/> Federal Signal, University Park, IL 60484 U.S.A.

LIST OF CERTIFIED COMPONENTS

Product	Certificate Number	Standards
Adalet XCEX 060804 S6393 Enclosure	IECEX UL 16.0081U Issue 2	IEC 60079-0, Edition: 7.0 IEC 60079-1, Edition: 7.0
Quintex LBSM24216 Line Bushing	IECEX EPS 11.0004X Issue 6	IEC 60079-0, Edition 7.0 IEC 60079-1, Edition 7.0 IEC 60079-31, Edition 2.0 IEC 60079-7, Edition 5.1