



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx UL 13.0028X

Issue No: 3

Certificate history:

Issue No. 3 (2018-10-31)

Issue No. 2 (2014-05-14)

Issue No. 1 (2013-11-16)

Issue No. 0 (2013-06-07)

Status: **Current**

Page 1 of 5

Date of Issue: **2018-10-31**

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

Equipment: **Industrial intercom, E1 Series**

*Optional accessory:*

Type of Protection: **Intrinsic Safety "ib"; Flameproof "d"**

Marking:

Ex d ib IIB T4 Gb (All models except for E1-JS-EX)

Ex d [ib] IIB T4 Gb (Model E1-JS-EX)

-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:*

2018-10-31

1. This certificate and schedule may only be reproduced in full.
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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

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





# IECEX Certificate of Conformity

Certificate No: IECEX UL 13.0028X

Issue No: 3

Date of Issue: 2018-10-31

Page 2 of 5

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

Additional Manufacturing location(s):

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 apparatus 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 electrical 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 Report:

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

Quality Assessment Report:

[US/UL/QAR06.0012/09](#)



# IECEX Certificate of Conformity

Certificate No: IECEx UL 13.0028X

Issue No: 3

Date of Issue: 2018-10-31

Page 3 of 5

## Schedule

### 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 openings. Consists of an Ex certified flameproof 'd' enclosure that is provided with a metric threaded opening in the cover for an Ex certified flameproof 'd' line bushing that provides connection between intrinsically safe circuits and input/output power connections. Model E1-JS, Jack Station, 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.



# IECEX Certificate of Conformity

Certificate No: IECEX UL 13.0028X

Issue No: 3

Date of Issue: 2018-10-31

Page 4 of 5

**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).



# IECEX Certificate of Conformity

Certificate No: IECEX UL 13.0028X

Issue No: 3

Date of Issue: 2018-10-31

Page 5 of 5

**Additional information:**

**Annex:**

[Annex to IECEX UL 13.0028X Issue 3\\_rev2.pdf](#)



# IECEx Certificate of Conformity

Certificate No.: IECEx UL 13.0028X

Issue No.: 3

Page 1 of 2

## 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 d ib IIB T4 Gb (-40°C < Ta < +65°C)	
ATEX CERT. NO.: DEMKO 13 ATEX 1213079X		IECEX CERT NO.: IECEx UL 13.0028X	
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			
<b>WARNING:</b> Do not open when an explosive atmosphere may be present. <b>WARNING:</b> Do not open when energized.			
Federal Signal, University Park, IL 60484 U.S.A.			Date <input type="text"/>



# IECEx Certificate of Conformity

Certificate No.: IECEx UL 13.0028X

Issue No.: 3

Page 2 of 2

Model E1-JS-EX:

		Industrial Intercom for Use in Hazardous Locations
		Ex d [ib] IIB T4 Gb (-40°C < Ta < +65°C)
	0539	ATEX CERT. NO.: DEMKO 13 ATEX 1213079X
		IECEX CERT NO.: IECEx UL 13.0028X
<b>Model Number</b>	E1-JS-EX	
<b>Serial Number</b>		
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.		
<b>WARNING:</b> Do not open when an explosive atmosphere may be present.		
<b>WARNING:</b> Do not open when energized.		
	Federal Signal, University Park, IL 60484 U.S.A.	Date <input type="text"/>

## LIST OF CERTIFIED COMPONENTS

The following additional previous editions of Standards noted under the "Standards" section of this Certificate were applied to integral Components as itemized below. There are no significant safety related changes between these previous editions and the editions noted under the "Standards" section.

Product	Certificate Number	Standards
Adalet XCEX 060804 S6393 Enclosure	IECEx UL 16.0081U	IEC 60079-0 : 2011 Edition: 6.0 IEC 60079-1 : 2014-06 Edition: 7.0
Quintex LBSM24216 Line Bushing	IECEx EPS 11.004X Issue 3	IEC 60079-0:2011 Edition 6.0 IEC 60079-1:2014-06 Edition 7.0