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 BVS 14.0056**	Page 1 of 4	Certificate history: Issue 0 (2014-07-01)
Status:	**Current**	Issue No: 1	
Date of Issue:	2022-02-04		
Applicant:	**Federal Signal Corporation** 2645 Federal Signal Drive University Park Illinois 60484-3167 **United States of America**		
Equipment:	**Ex-Telephone Type FT400BX and Ex-Emergency Phone Type FT401BX**		
Optional accessory:			
Type of Protection:	**Equipment protection by intrinsic safety "i", Equipment protection by encapsulation "m", Equipment dust ignition protection by enclosure ”t”, Equipment protection by increased safety "e"**		
Marking:	Ex eb mb [ib] IIC T6/T5 Gb Ex tb [ib] IIIC T80°C/T100°C Db		

Approved for issue on behalf of the IECEx Certification Body:	**Jörg Koch**
Position:	**Head of Certification Body**
Signature: (for printed version)	
Date:	

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 www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Certificate No.: **IECEx BVS 14.0056**

Date of issue: 2022-02-04

Issue No: 1

Manufacturer: **Federal Signal Corporation**
2645 Federal Signal Drive University Park
Illinois 60484-3167
United States of America

Additional manufacturing locations:

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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

DE/BVS/ExTR14.0064/01

Quality Assessment Report:

US/UL/QAR06.0012/11

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Subject and type

Ex-Telephone Type FT400BX and Ex-Emergency Phone Type FT401BX

Description

See Annex

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Updating to the current version of standards, therefore the marking of the devices will be modified.

Technical changes.

Annex:

BVS_14_0056_FederalSignal_Annex.pdf

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Certificate No.: **IECEx BVS 14.0056**
Annex

Description

The Ex-Telephone Type FT400BX and Ex-Emergency Phone Type FT401BX is suitable for use in areas endangered by an explosive atmosphere. The vertical mounting is permitted.

The handset, the keyboard and the display are designed in type of protection intrinsic safety “i”.

The electrical connection of the telephone is realised by terminals in type of protection increased safety “e”.

The ambient temperature range is -25 °C up to +40 °C respectively +60 °C. Depending on the upper ambient temperature, the temperature class and the surface temperature will change.

A breathing and draining device is part of the telephone.

An interface for interconnection of external loudspeaker is no longer provided.

Cable glands made of metal can also be used as an option.

Optionally, the cabinet can be provided with an antistatic varnish, whereby the surface resistance $R \leq 10^9$ Ohm is guaranteed.

Parameters:

Non-intrinsically safe circuits

Phone line (Terminal La / Lb No.: 13 – 14)

Maximum voltage (calling)	U_m	(calling)	AC 90	V
Permitted frequency range			16 up to 54	Hz
or				
Maximum voltage (calling)	U_m	(calling)	AC 150	V
Permitted frequency range			15 up to 68	Hz
or				
Maximum rated voltage	U_m	(supply voltage)	DC 66	V
Maximum rated current			100	mA
or				
Maximum rated voltage	U_m	(supply voltage)	DC 56.5	V
Maximum rated current			110	mA
Maximum short circuit current I_K			35	A

Additional external alarm: only for connection to passive load (Terminal W1 / W No.: 15 – 16)

Maximum voltage (calling)	U_m	(calling)	AC 90	V
Permitted frequency range			16 up to 54	Hz
or				
Maximum voltage (calling)	U_m	(calling)	AC 150	V
Permitted frequency range			15 up to 68	Hz
or				
Maximum rated voltage	U_m	(supply voltage)	DC 66	V
or				
Maximum rated voltage	U_m	(supply voltage)	DC 56.5	V

Intrinsically safe circuits

Headset (Microphone) (Terminal KGM No.: 5 – 6)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	90	mA
Maximum output power	P_o	80	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	1.2	mH

Headset (Speaker) (Terminal KGH No.: 7 – 8)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	110	mA
Maximum output power	P_o	190	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	1.2	mH

Headset (Signaling) (Terminal KGS No.: 9 – 10)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	8	mA
Maximum output power	P_o	33	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	100	mH

Ambient temperature range

Temperature class T6	-25 °C up to +40 °C
Temperature class T5	-25 °C up to +60 °C

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Cable glands and plugs (Bimed Company) Type HIBM-X2S, -X02S Type HITP-X1S, -X02S Type BPT-X4	IECEx IMQ 13.0003X, Issue 5	IEC 60079-0:2011, Ed.:6.0 [2)] IEC 60079-7:2015, Ed.:5.0 IEC 60079-31:2013, Ed.:2
Terminal block (Phoenix Contact Company) Type MK3DSH 3/ 3-5,08-Ex	IECEx KEM 07.0019U, Issue 2	IEC 60079-0:2011, Ed.:6.0 [2)] IEC 60079-7:2006, Ed.:4 [2)]
Connecting terminal (Bartec Company) Type 07-9702-0220/1	IECEX PTB 07.0007U	IEC 60079-0:2011, Ed.:6.0 [2)] IEC 60079-7:2015, Ed.:5.0

1 No applicable technical differences
2 Technical differences evaluated and found satisfactory