

[1] EC-TYPE EXAMINATION CERTIFICATE

**[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

- [3] EC-Type Examination Certificate Number:** Nemko 03ATEX085X Issue 2
- [4] Equipment or Protective System:** Intrinsically Safe Access Panel
- [5] Applicant:** Federal Signal Corporation
[6] Address: 2645 Federal Signal Drive, University Park
IL 60466-3195, United States of America
- [5] Manufacturer:** Federal Signal Corporation
[6] Address: 2645 Federal Signal Drive, University Park
IL 60466-3195, United States of America
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.**
- [8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems 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. 235107
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:**
- CENELEC EN 60079-0: 2009 and CENELEC EN 60079-11: 2007
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.**
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.**
- [12] The marking of the equipment or protective system shall include the following :**

**II 2 G****Ex ib IIB T4 Gb****Oslo, 2013-12-10**

Bjørn Spongsveen
Certification Manager, Ex

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 03ATEX085X Issue 2

[15] Description of Equipment or Protective System

The intrinsically safe access panels AP5 and AP6 providing remote audio and alarm initiation, when connected to a main communication and alarm system. Both types of units use a metal enclosure which can be a desk mounting console or a wall mounting box. The pushbuttons, indicators and microphone are fitted to the front panel or lid and connected to the PCBs and output terminals are fitted inside the housing.

Type Designations

AP5 and AP6

The function of the AP5 and the AP6 is similar. The AP6 has additional PCB with multiplexing function.

Data for the Intrinsically Safe Connections

Ref. installation drawings no. 921058 and 921060-3 for AP5 and 921055-2, 921056, 921057-3. Drawing, 921051-3 for multi pin connection.

AP6

Terminal ident. no.	Connector ident. no.	U _i [V]	I _i [mA]	P _i [W]
1-2-3 (TB211, TB212)	A-C	10	203	0.5
4-5 (TB221, TB222)	AY-BD	12	24	0.072
6-7 (TB219, TB220)	AK-AW	12	24	0.072
8-9 (TB214, TB217)	S-AE	15	150	0.56
10-11 (TB215, TB216)	U-W	12	24	0.072
12 (TB213)	E	12	12	0.03
(TB223, TB224)	BF-BT	7	300	0,04

AP 5 Microphone Connections

Pre.-amp. Board Terminals	U _i [V]	I _i [mA]	P _i [W]
TB2	15	150	0.56
J1 3-4	10	203	0.5

Internal inductance - L_i - and capacitance – C_i - of access panel external connections are negligible.

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Supply Cables

Permissible cable parameters.

Maximum cable capacitance: $C=0,173 \mu\text{F}$

Maximum cable inductance: $L=1,2\text{mH}$

Maximum ratio L/R: $82 \mu\text{H}/\Omega$

Cable shall be in accordance with the requirements of a multicore cable type A or B as specified in IEC 60079-25

[16] **Report No.** 235107 and the listed descriptive documents

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2003-04-09	200306178	Prime Certificate released.
1	2010-07-01	152705	Upgrade to CENELEC standards EN 60079-0: 2009 and EN 60079-11: 2007
2	2013-10-0	235107	Update to new barriers

Descriptive Documents

Title:	Drawing No.:	Rev. Level:	Date:
EEx i Access Panel Optional Multipin Wiring Diagram Type AP6	921051	3	2013-02-05
Access Panel AP6 Mounting Details	921052	2	2003-03-05
Typical Access Panel Indicator Wiring Diagram Type AP6	921053	1	2003-02-05
Typical Access Panel Switch Audio& Connector Wiring Typ AP6	921054	2	2003-03-05
EEx i Access Panel to Rack Wiring Diagram Type AP6	921055	2	2013-02-05
EEx i Access Panel Block Diagram Type AP6	921056	1	2003-02-05
EEx i Access Panel Block Schematic Type AP6	921057	3	2013-02-05
EExi Access Panel 19" Rackmount Chassis typical Layout	921058	2	2003-03-05
EExi Access Panel Block Diagram AP5	921059	1	2003-02-05
EExi Access Panel Block Schematic Type AP5	921060	3	2013-02-05

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NO 974404532

Title:	Drawing No.:	Rev. Level:	Date:
Akusta I.S. Microphone Wiring AP5	921062	4	2013-02-05
Akusta I.S. IP65 Microphone Without Neck GA	921065	1	2003-02-05
Akusta I.S. IP65 Microphone GA	921066	1	2003-02-05
Access Panel AP5	921070	2	2003-03-05
Label Type AP6	259351A	B	2013-10-07
Label Type AP5	259352A	B	2013-10-07
I.S. Access Panel Type AP5 and AP6	921073	1	2003-03-20
Single Access Panel Keyboard & LED Driver Type Spec 1	5173105C	1	2003-02-18
Single Access Panel Keyboard & LED Drivers	5173105B	1	2003-02-18
Single Access Panel Mic Pre-Amp +20kHz Gen	5173106B	1	2003-02-18
Single Access Panel Mic Pre-Amp +20kHz Gen Type Spec 1	5173106C	1	2003-03-04
Parts List, Single Access panel Mic Preamp	5173106B	1	2003-03-06
Single access panel Keypad and LED Driver	5173105B	1	2003-03-06
Board Assembly, MIC Preamp Single access panel	2001962A	A5	2013-10-01
Single Access Panel Keypad/LED Driver	2001963A	A3	2012-08-17

[17] Special Conditions for Safe Use

1. Safety barriers according the installation drawings and with values stated in this certificate shall supply the intrinsically safe circuits of the access board. Ref. installation drawings no. 921058 and 921060 for AP5 and 921055, 921056, 921057. Drawing, 921051 for multi pin connection.
2. The requirements for the supply cable shall be taken into consideration as specified in the installation drawings and this certificate.
3. Access panel AP5 and AP6 is intended for rack mounting or on desktop and necessary connection (bonding) to earth is assumed to be established when readily mounted.

[18] Essential Health and Safety Requirements

Covered by item 9

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