

# FIRE SAFETY CERTIFICATION

## PRODUCT APPROVAL

No. **APF-1980**

**LGAI TECHNOLOGICAL CENTER S.A. (APPLUS)**, according to the requirements of the SPC-102 Ed. 8, certifies the performances stated in the technical annex following the reference standard for:

<b>Product range</b>	<b>2X-A LARGE</b> CABINET CONTROL PANELS WITH UP TO 6 A OUTPUT, WITH ARITECH AND APOLLO PROTOCOLS
<b>Company</b>	<b>CARRIER FIRE &amp; SECURITY B.V.</b> KELVINSTRAAT, 7 6003 DH WEERT (THE NETHERLANDS)
<b>Manufactured</b>	<b>CARRIER MANUFACTURING POLAND SPÓŁKA Z O. O.</b> UL. KOLEJOWA, 24 39-100 ROPCZYCE (POLAND)
<b>Standard Reference</b>	EN 54-2:1997, EN 54-2:1997/AC:1999, EN 54-2:1997/A1: 2006: "Fire detection and fire alarm systems. Part 2: control and indicating equipment". EN 54-4: 1997, EN 54-4: 1997/AC:1999, EN 54-4: 1997/A1:2002, EN 54-4:1997/A2:2006: "Fire detection and fire alarm systems. Part 4: power supply equipment". EN 54-21:2006: "Fire detection and fire alarm systems. Part 21: alarm transmission and fault warning routing equipment".
<b>Product Details and Test Report</b>	Please check at the technical annex



**Renovation** of the initial certificate issued on 30<sup>th</sup> September 2022

**Valid until 31<sup>st</sup> July 2025**

Bellaterra, 5<sup>th</sup> July 2024

 LGAI Technological Center, S.A. <b>Xavier Ruiz Peña</b> Product Conformity B. U., Managing Director	
You can check the validity of this certificate on our website: <a href="http://www.appluslaboratories.com/certified_products">www.appluslaboratories.com/certified_products</a>	

This document is not valid without its technical annex, whose number coincides with the number of certificate.



## APF-1980

Annexes according to **EN 54-2:1997, EN 54-2:1997/AC:1999, EN 54-2:1996/A1:2006**

### FIRE DETECTION AND FIRE ALARM SYSTEMS. PART 2: CONTROL AND INDICATING EQUIPMENT

ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)
General requirements	4.	PASS
General requirements for indications	5.	PASS
The quiescent condition	6.	PASS
The fire alarm condition	7.	PASS
Reception and processing of fire signals (see also annex C)	7.1	PASS
Output of the fire alarm condition	7.7	PASS
Output to fire alarm devices (option with requirements)	7.8	PASS <sup>1</sup>
Output to fire alarm routing equipment (option with requirements)	7.9.1	PASS <sup>2</sup>
Alarm confirmation input from fire alarm routing equipment (option with requirements)	7.9.2	PASS <sup>2</sup>
Outputs to fire protection equipment (options with requirements)	7.10	PASS <sup>3</sup>
Outputs to fire protection equipment (options with requirements) - Output type A	7.10.1	PASS <sup>3</sup>
Outputs to fire protection equipment (options with requirements) - Output type B	7.10.2	PASS <sup>3</sup>
Outputs to fire protection equipment (options with requirements) - Output type C	7.10.3	PASS <sup>3</sup>
Fault monitoring of fire protection equipment (option with requirements)	7.10.4	PASS <sup>3</sup>
Delays to outputs (option with requirements)	7.11	PASS <sup>4</sup>
Dependencies on more than one alarm signal. Type A (options with requirement)	7.12.1	PASS <sup>4</sup>
Dependencies on more than one alarm signal. Type B (option with requirements)	7.12.2	PASS <sup>4</sup>
Dependencies on more than one alarm signal. Type C (options with requirement)	7.12.3	PASS <sup>4</sup>
Alarm counter (option with requirements)	7.13	PASS
Fault warning condition (see also annex F)	8.	PASS
Fault signals from points (option with requirements)	8.3	NA
Total loss of the power supply (option with requirements)	8.4	PASS
Output to fault warning routing Equipment (option with requirements)	8.9	PASS
Disabled condition	9.	PASS

<sup>1</sup> Excluding repeaters and control panels operating in EN 54-2 Evacuation mode or NBN mode.

<sup>2</sup> Excluding repeaters, control panels without fire routing, and control panels with fire routing operating in NBN mode.

<sup>3</sup> Excluding repeaters and control panels without fire protection controls.

<sup>4</sup> Excluding repeaters.

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ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)
Disablement of addressable points (option with requirements)	9.5	PASS <sup>4</sup>
Test condition (option with requirements)	10.	PASS <sup>4</sup>
Standardized input/output interface (option with requirements –see also annex G)	11.	NA
Design requirements	12.	PASS
Additional design requirements for software controlled control and indicating equipment	13.	PASS
Marking	14.	PASS
Cold (operational)	15.4	PASS
Damp heat, steady state (operational)	15.5	PASS
Impact (operational)	15.6	PASS
Vibration, sinusoidal (operational)	15.7	PASS
Electromagnetic Compatibility (EMC)	15.8	PASS
Supply voltage variation (operational)	15.13	PASS
Damp heat, steady state (endurance)	15.14	PASS
Vibration, sinusoidal (endurance)	15.15	PASS

PASS; NPD = No Performance Determined, NA = Not Apply

Annex according to **EN 54-4:1997, EN 54-4:1997/AC:1999, EN 54-4:1997/A1:2002, EN 54-4:1997/A2:2006**

### FIRE DETECTION AND FIRE ALARM SYSTEM. PART 4: POWER SUPPLY EQUIPMENT

ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)
General requirements	4.	PASS
Functions	5.	PASS
Materials, design and manufacture	6.	PASS
Documentation	7.	PASS
Marking	8.	PASS
Cold (operational)	9.5	PASS
Damp Heat, steady state (operational)	9.6	PASS
Impact (operational)	9.7	PASS
Vibration, sinusoidal (operational)	9.8	PASS
Electrostatic discharges (operational)	9.9	PASS
Damp heat, steady state (endurance)	9.14	PASS
Vibration, sinusoidal (endurance)	9.15	PASS

PASS; NPD = No Performance Determined, NA = Not Apply

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Annexes according to **EN 54-21:2006**

### FIRE DETECTION AND FIRE ALARM SYSTEMS. PART 21: ALARM TRANSMISSION AND FAULT WARNING ROUTING EQUIPMENT

ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)
General requirements	4.	PASS
Functional requirements	5.	PASS
Design requirements	7.	PASS
Marking	8.	PASS
Power supply	9.	PASS
Cold (operational)	10.4	PASS
Damp heat, steady state (operational)	10.5	PASS
Impact	10.6	PASS
Vibration, sinusoidal (operational)	10.7	PASS
Electromagnetic (EMC) immunity tests (operational)	10.8	PASS
Supply voltage variation	10.9	PASS
Damp heat, steady state (endurance)	10.10	PASS
Vibration, sinusoidal (endurance)	10.11	PASS

PASS; NPD = No Performance Determined, NA = Not Apply

The control and Indicating Equipment 2X-A Large cabinet up to 6 A output series also includes:

Main Board:	2010-2MB-HP (1 Loop) 2010-2MB-HP (2 Loop) 2010-2MB-HP
Loop Board:	2X-A-LB
Communication Boards:	2010-2-NB Network Printed Circuit Board 2010-2-DACT Comm transmitter (applies only when the alarm transmission and fault warning routing equipment is installed)
Zone indicator:	2010-2A-ZI-20 (20 Zone) 2010-2A-ZI-40 (40 Zone)
RS232 Kit:	2010-2-232-KIT
Translucent door:	2010-2A-D-TP.101 Transparent front cover
Fault Supervision Board:	2010FS
Auxiliary boards and modules:	2010-2-PIB-8I8O card 2010-SK Scandinavian key and lock assembly (for -SC variants) 2010-2-PS-C2 UK mains cable 2010-2-PIB Peripheral Interface Board (Germany) 2010-2-PIB-8O Peripheral Interface Board 8 outputs 2010-2-PIB-8I Peripheral Interface Board 8 inputs 2010-2-PIB-8I8O Peripheral Interface Board 8 outputs and 8 inputs ADP-N3E-U IFAM interface card (master) ADP-N3S interface card (slave)
PSU:	ELC-MPSU5-24150 PSU,6.5A,24V,150W, MEANWELL with 12V, 7.2 Ah, 12 V, 12 Ah, 12 V, 18 Ah batteries.

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And the following variants:


2X-AE1	One-loop addressable fire and evacuation alarm control panel
2X-AF1	One-loop addressable fire alarm control panel
2X-AF1-FB	One-loop addressable fire alarm control panel with fire routing and fireprotection controls
2X-AF1-SCFB	One-loop addressable SS 3654 fire alarm control panel with fire routingand fire protection controls [1]
2X-AE2	Two-loop addressable fire and evacuation alarm control panel
2X-AF2	Two-loop addressable fire alarm control panel
2X-AF2-PRT	Two-loop addressable fire alarm control panel with internal printer
2X-AF2-FB	Two-loop addressable fire alarm control panel with fire routing and fireprotection controls
2X-AF2-FB-PRT	Two-loop addressable fire alarm control panel with fire routing and fireprotection controls and internal printer
2X-AF2-SCFB	Two-loop addressable SS 3654 fire alarm control panel with fire routingand fire protection controls [1]
2X-AFR	Addressable fire alarm repeater panel
2X-AFR-FB	Addressable fire alarm repeater panel with fire routing and fireprotection controls

[1] Includes a fireman's key.



Date: 05/07/2024

## CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
<b>TEST REPORT NUMBER</b> 'Assessment Reports' are not acceptable	22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724	22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330	<b>CERTIFICATE NUMBER</b>  APF-1980
<b>DATE OF ISSUE</b>	14/09/2022 15/07/2022 02/09/2022 20/05/2022 17/05/2022 14/09/2022 20/05/2022 02/05/2022 01/09/2022	09/09/2022 03/02/2022 04/07/2022 09/06/2022 14/02/2022 17/08/2022 15/02/2022 26/07/2022 15/07/2022	<b>DATE OF ISSUE</b>  05/07/2024
<b>DATE OF EXPIRY</b>	--		<b>DATE OF EXPIRY</b>  31/07/2025
Manufacturer details			
<b>NAME OF FACTORY / MANUFACTURER</b>	CARRIER FIRE & SECURITY B.V.	<b>NAME OF THE BRAND</b>	ARITECH
<b>FACTORY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)</b>	Carrier Manufacturing Poland Spółka Z o. o. Ul. Kolejowa, 24 39-100 Ropczyce (Poland)	<b>MODEL / NO</b>	2X-A Large cabinet control panels with up to 6 A output
<b>WEBSITE</b>	www.firesecurityproducts.com	<b>LOGO ON THE PRODUCT</b>	
<b>TEL</b>	+32 2 725 11 20	<b>EMAIL</b>	emea@carrier.com





Product Details From Test Report		Reference Test Report page NO
<p><b>DESCRIPTION OF THE PRODUCT</b> (TECHNICAL DETAILS FROM TEST REPORT, SUCH AS ACTUAL FIRE RATINGS/DIMENSIONS/THICKNESS/ SENSITIVITY ETC)</p>	<p>The 2X-A series life safety control systems bring the speed and functionality of high-end intelligent processing to small to mid-sized addressable applications. Based on 2X series learned experience and with complete backwards compatibility, the new 2X-A features an attractive contemporary design that fits with any decor. With improved robustness, manufactured in metal, special plastics and easy electronics removal, it allows painting in any colour. The main controls are easily located using an improved and robust jog dial. With high power loop addressable detection, a full line of easily configured option cards and modules, as well as USB and Ethernet® connectivity, these quick-to configure systems offer versatility that benefits building owners and life safety system installers alike.</p> <p>The fire panels supplied in local language, with integrated Scandinavian Fire Brigade user interface, with 2 High Power Loops that supports up to 256 devices in 512 zones, have standard 4 supervised sounder/fire-routing outputs, which can be used as freely programmable outputs as well. In addition 2 conventional relay outputs and 2 supervised outputs, working in pair and dedicated to common fire and fault conditions, as well as 2 user configurable inputs for monitoring and control are available.</p> <p>The panel supports an extra 2 High Power Loop board that brings the panel to up to 512 devices with 4 additional programmable outputs. Add a network board to create a maximum of 64 nodes / 256 loops network of fire panels and fire panel repeaters (including conventional fire panels and fire repeater panels up to a maximum of 64 conventional zones). Last but not least, in case separate zone indications are required, a 20 or a 40 zone fire/fault LED indicator board can be mounted in the panel or repeater with ample space for custom text.</p> <p>High loop power PAK available to increase the loop power from 500mA to 800mA.</p> <p>Compatible with existing loop devices and network compatible with existing panels, repeaters (existing and new) and conventional panels.</p> <ul style="list-style-type: none"> <li>- 1 or 2 High Power Loop with 500 mA per loop</li> <li>- Fire Brigade user interface</li> <li>- High loop power PAK to increase the loop power from 500 mA to 800 mA</li> <li>- Up to 512 zones with Fire Brigade &amp; Fire Protection controls and 300 output groups</li> <li>- Up to 40 LED Zone indicators for Fire and Fault with ample text space</li> <li>- Auto configuration, setup wizards and default regional setup modes</li> <li>- Ethernet port with TCP/IP for remote diagnostics, maintenance and programming</li> <li>- EN54 compliant graphical LCD with icons and up to 256 zones</li> <li>- Improved Jog Dial with 4 soft buttons for simple and intuitive user control</li> <li>- Aesthetic pleasing design with robust painted steel door</li> <li>- Easy removable door and chassis for quick and clean installation</li> </ul>	<p>22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330</p>





Product Details From Test Report		Reference Test Report page NO
	<ul style="list-style-type: none"> <li>- All pluggable connectors</li> <li>- Auxiliary 24 VDC supply output with reset support 3 USB ports with memory stick support and RS232 for printer support</li> <li>- Communication via UltraSync cloud, using EN 54-21 UC240 UltraSync communicator</li> <li>- Integration in management software ATS8600, allowing integration with security systems and CMS</li> <li>- 3 operator level menu structure (20 usernames and passwords)</li> <li>- Email notification for events directly from the panel (4 user accounts)</li> <li>- History log memory for 9999 events</li> <li>- Backwards compatible, supporting site retrofit/upgrades, expansions, replacement</li>   <li>- Form factor: Large</li> <li>- Physical dimensions: 446 x 536 x 164 mm (W x H x D)</li> <li>- Net weight: 7.4 kg (without battery)</li> <li>- Shipping weight: 10.1 kg</li> <li>- Colour: White (RAL 9003)</li> <li>- Mounting type Surface mount</li> <li>- Cable entries 18 (20 mm) / 2 (20 mm) / 2 removable plates (top / bottom / back)</li> <li>- Material Steel (painted)</li> <li>- ELC-MPSU5-24150 PSU,6.5A,24V,150W, MEANWELL with 12V, 7.2 Ah, 12 V, 12 Ah, 12 V, 18 Ah batteries</li> </ul>	
<b>TEST STANDARD</b> (SUCH AS ASTM/BS EN/ DN ETC)	EN 54-2, "Fire detection and fire alarm systems. Part 2: Control and indicating equipment." EN 54-4, "Fire detection and fire alarm systems. Part 4: Power supply equipment." EN 54-21, "Fire detection and fire alarm systems. Part 21: Alarm transmission and fault warning routing equipment"	22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330







Product Details From Test Report		Reference Test Report page NO
<b>TEST DESCRIPTION</b>	Construction and performance test of an Addressable Fire Panel	22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330
<b>SPECIFICATION OF TEST SPECIMEN</b>	Each of the reports specifies in detail the number of specimens and supplements used to carry out each of the tests.  2X-A Small/Large cabinet control panels ZP2-A Small/Large cabinet control panels	22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330





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<p><b>TEST RESULT</b> (SUCH AS PASSED CRITERIA ___/ COMPLIED TO ___/ DURATION ___/ OBSERVATION ___/ETC)</p>	<table border="1"> <thead> <tr> <th>ESSENTIAL CHARACTERISTICS</th> <th>CLAUSES IN THIS EUROPEAN STANDARD</th> <th>MANDATED LEVEL(S) OR CLASS(ES)</th> </tr> </thead> <tbody> <tr><td>General requirements</td><td>4.</td><td>PASS</td></tr> <tr><td>General requirements for indications</td><td>5.</td><td>PASS</td></tr> <tr><td>The quiescent condition</td><td>6.</td><td>PASS</td></tr> <tr><td>The fire alarm condition</td><td>7.</td><td>PASS</td></tr> <tr><td>Reception and processing of fire signals (see also annex C)</td><td>7.1</td><td>PASS</td></tr> <tr><td>Output of the fire alarm condition</td><td>7.7</td><td>PASS</td></tr> <tr><td>Output to fire alarm devices (option with requirements)</td><td>7.8</td><td>PASS<sup>5</sup></td></tr> <tr><td>Output to fire alarm routing equipment (option with requirements)</td><td>7.9.1</td><td>PASS<sup>5</sup></td></tr> <tr><td>Alarm confirmation input from fire alarm routing equipment (option with requirements)</td><td>7.9.2</td><td>PASS<sup>2</sup></td></tr> <tr><td>Outputs to fire protection equipment (options with requirements)</td><td>7.10</td><td>PASS<sup>7</sup></td></tr> <tr><td>Outputs to fire protection equipment (options with requirements) - Output type A</td><td>7.10.1</td><td>PASS<sup>3</sup></td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>ESSENTIAL CHARACTERISTICS</th> <th>CLAUSES IN THIS EUROPEAN STANDARD</th> <th>MANDATED LEVEL(S) OR CLASS(ES)</th> </tr> </thead> <tbody> <tr><td>Outputs to fire protection equipment (options with requirements) - Output type B</td><td>7.10.2</td><td>PASS<sup>3</sup></td></tr> <tr><td>Outputs to fire protection equipment (options with requirements) - Output type C</td><td>7.10.3</td><td>PASS<sup>3</sup></td></tr> <tr><td>Fault monitoring of fire protection equipment (option with requirements)</td><td>7.10.4</td><td>PASS<sup>3</sup></td></tr> <tr><td>Delays to outputs (option with requirements)</td><td>7.11</td><td>PASS<sup>3</sup></td></tr> <tr><td>Dependencies on more than one alarm signal. Type A (options with requirement)</td><td>7.12.1</td><td>PASS<sup>4</sup></td></tr> <tr><td>Dependencies on more than one alarm signal. Type B (option with requirements)</td><td>7.12.2</td><td>PASS<sup>4</sup></td></tr> <tr><td>Dependencies on more than one alarm signal. Type C (options with requirement)</td><td>7.12.3</td><td>PASS<sup>4</sup></td></tr> <tr><td>Alarm counter (option with requirements)</td><td>7.13</td><td>PASS</td></tr> <tr><td>Fault warning condition (see also annex F)</td><td>8.</td><td>PASS</td></tr> <tr><td>Fault signals from points (option with requirements)</td><td>8.3</td><td>NA</td></tr> <tr><td>Total loss of the power supply (option with requirements)</td><td>8.4</td><td>PASS</td></tr> <tr><td>Output to fault warning routing Equipment (option with requirements)</td><td>8.9</td><td>PASS</td></tr> <tr><td>Disabled condition</td><td>9.</td><td>PASS</td></tr> <tr><td>Disabling of addressable points (option with requirements)</td><td>9.5</td><td>PASS<sup>4</sup></td></tr> <tr><td>Test condition (option with requirements)</td><td>10.</td><td>PASS<sup>4</sup></td></tr> <tr><td>Standardized input/output interface (option with requirements --see also annex G)</td><td>11.</td><td>NA</td></tr> <tr><td>Design requirements</td><td>12.</td><td>PASS</td></tr> <tr><td>Additional design requirements for software-controlled control and indicating equipment</td><td>13.</td><td>PASS</td></tr> <tr><td>Marking</td><td>14.</td><td>PASS</td></tr> <tr><td>Cold (operational)</td><td>15.4</td><td>PASS</td></tr> <tr><td>Damp heat, steady state (operational)</td><td>15.5</td><td>PASS</td></tr> <tr><td>Impact (operational)</td><td>15.6</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (operational)</td><td>15.7</td><td>PASS</td></tr> <tr><td>Electromagnetic Compatibility (EMC)</td><td>15.8</td><td>PASS</td></tr> <tr><td>Supply voltage variation (operational)</td><td>15.13</td><td>PASS</td></tr> <tr><td>Damp heat, steady state (endurance)</td><td>15.14</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (endurance)</td><td>15.15</td><td>PASS</td></tr> </tbody> </table>	ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)	General requirements	4.	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Type A (options with requirement)	7.12.1	PASS <sup>4</sup>	Dependencies on more than one alarm signal. Type B (option with requirements)	7.12.2	PASS <sup>4</sup>	Dependencies on more than one alarm signal. Type C (options with requirement)	7.12.3	PASS <sup>4</sup>	Alarm counter (option with requirements)	7.13	PASS	Fault warning condition (see also annex F)	8.	PASS	Fault signals from points (option with requirements)	8.3	NA	Total loss of the power supply (option with requirements)	8.4	PASS	Output to fault warning routing Equipment (option with requirements)	8.9	PASS	Disabled condition	9.	PASS	Disabling of addressable points (option with requirements)	9.5	PASS <sup>4</sup>	Test condition (option with requirements)	10.	PASS <sup>4</sup>	Standardized input/output interface (option with requirements --see also annex G)	11.	NA	Design requirements	12.	PASS	Additional design requirements for software-controlled control and indicating equipment	13.	PASS	Marking	14.	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Outputs to fire protection equipment (options with requirements) - Output type C	7.10.3	PASS <sup>3</sup>																																																																																																																								
Fault monitoring of fire protection equipment (option with requirements)	7.10.4	PASS <sup>3</sup>																																																																																																																								
Delays to outputs (option with requirements)	7.11	PASS <sup>3</sup>																																																																																																																								
Dependencies on more than one alarm signal. Type A (options with requirement)	7.12.1	PASS <sup>4</sup>																																																																																																																								
Dependencies on more than one alarm signal. Type B (option with requirements)	7.12.2	PASS <sup>4</sup>																																																																																																																								
Dependencies on more than one alarm signal. Type C (options with requirement)	7.12.3	PASS <sup>4</sup>																																																																																																																								
Alarm counter (option with requirements)	7.13	PASS																																																																																																																								
Fault warning condition (see also annex F)	8.	PASS																																																																																																																								
Fault signals from points (option with requirements)	8.3	NA																																																																																																																								
Total loss of the power supply (option with requirements)	8.4	PASS																																																																																																																								
Output to fault warning routing Equipment (option with requirements)	8.9	PASS																																																																																																																								
Disabled condition	9.	PASS																																																																																																																								
Disabling of addressable points (option with requirements)	9.5	PASS <sup>4</sup>																																																																																																																								
Test condition (option with requirements)	10.	PASS <sup>4</sup>																																																																																																																								
Standardized input/output interface (option with requirements --see also annex G)	11.	NA																																																																																																																								
Design requirements	12.	PASS																																																																																																																								
Additional design requirements for software-controlled control and indicating equipment	13.	PASS																																																																																																																								
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Vibration, sinusoidal (operational)	15.7	PASS																																																																																																																								
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<p><b>TEST RESULT</b> (SUCH AS PASSED CRITERIA ___/ COMPLIED TO ___/ DURATION ___/ OBSERVATION ___/ETC)</p>	<p><sup>1</sup> Excluding repeaters and control panels operating in EN 54-2 Evacuation mode or NBN mode. <sup>2</sup> Excluding repeaters, control panels without fire routing, and control panels with fire routing operating in NBN mode. <sup>3</sup> Excluding repeaters and control panels without fire protection controls. <sup>3</sup> Excluding repeaters. PASS; NPD = No Performance Determined, NA = Not Apply</p> <p>EN 54-4:1997, EN54-4/AC:1999, EN54-4/A1:2002, EN54-4/A2:2006</p> <table border="1"> <thead> <tr> <th>ESSENTIAL CHARACTERISTICS</th> <th>CLAUSES IN THIS EUROPEAN STANDARD</th> <th>MANDATED LEVEL(S) OR CLASS(ES)</th> </tr> </thead> <tbody> <tr><td>General requirements</td><td>4.</td><td>PASS</td></tr> <tr><td>Functions</td><td>5.</td><td>PASS</td></tr> <tr><td>Materials, design and manufacture</td><td>6.</td><td>PASS</td></tr> <tr><td>Documentation</td><td>7.</td><td>PASS</td></tr> <tr><td>Marking</td><td>8.</td><td>PASS</td></tr> <tr><td>Cold (operational)</td><td>9.5</td><td>PASS</td></tr> <tr><td>Damp Heat, steady state (operational)</td><td>9.6</td><td>PASS</td></tr> <tr><td>Impact (operational)</td><td>9.7</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (operational)</td><td>9.8</td><td>PASS</td></tr> <tr><td>Electrostatic discharges (operational)</td><td>9.9</td><td>PASS</td></tr> <tr><td>Damp heat, steady state (endurance)</td><td>9.14</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (endurance)</td><td>9.15</td><td>PASS</td></tr> </tbody> </table> <p>PASS; NPD = No Performance Determined, NA = Not Apply</p> <p>EN 54-21:2006</p> <table border="1"> <thead> <tr> <th>ESSENTIAL CHARACTERISTICS</th> <th>CLAUSES IN THIS EUROPEAN STANDARD</th> <th>MANDATED LEVEL(S) OR CLASS(ES)</th> </tr> </thead> <tbody> <tr><td>General requirements</td><td>4.</td><td>PASS</td></tr> <tr><td>Functional requirements</td><td>5.</td><td>PASS</td></tr> <tr><td>Design requirements</td><td>7.</td><td>PASS</td></tr> <tr><td>Marking</td><td>8.</td><td>PASS</td></tr> <tr><td>Power supply</td><td>9.</td><td>PASS</td></tr> <tr><td>Cold (operational)</td><td>10.4</td><td>PASS</td></tr> <tr><td>Damp heat, steady state (operational)</td><td>10.5</td><td>PASS</td></tr> <tr><td>Impact</td><td>10.6</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (operational)</td><td>10.7</td><td>PASS</td></tr> <tr><td>Electromagnetic (EMC) immunity tests (operational)</td><td>10.8</td><td>PASS</td></tr> <tr><td>Supply voltage variation</td><td>10.9</td><td>PASS</td></tr> <tr><td>Damp heat, steady state (endurance)</td><td>10.10</td><td>PASS</td></tr> <tr><td>Vibration, sinusoidal (endurance)</td><td>10.11</td><td>PASS</td></tr> </tbody> </table> <p>PASS; NPD = No Performance Determined, NA = Not Apply</p>	ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)	General requirements	4.	PASS	Functions	5.	PASS	Materials, design and manufacture	6.	PASS	Documentation	7.	PASS	Marking	8.	PASS	Cold (operational)	9.5	PASS	Damp Heat, steady state (operational)	9.6	PASS	Impact (operational)	9.7	PASS	Vibration, sinusoidal (operational)	9.8	PASS	Electrostatic discharges (operational)	9.9	PASS	Damp heat, steady state (endurance)	9.14	PASS	Vibration, sinusoidal (endurance)	9.15	PASS	ESSENTIAL CHARACTERISTICS	CLAUSES IN THIS EUROPEAN STANDARD	MANDATED LEVEL(S) OR CLASS(ES)	General requirements	4.	PASS	Functional requirements	5.	PASS	Design requirements	7.	PASS	Marking	8.	PASS	Power supply	9.	PASS	Cold (operational)	10.4	PASS	Damp heat, steady state (operational)	10.5	PASS	Impact	10.6	PASS	Vibration, sinusoidal (operational)	10.7	PASS	Electromagnetic (EMC) immunity tests (operational)	10.8	PASS	Supply voltage variation	10.9	PASS	Damp heat, steady state (endurance)	10.10	PASS	Vibration, sinusoidal (endurance)	10.11	PASS	<p>22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330</p>
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<p><b>PRODUCT APPLICATION GUIDELINE (END USE)</b> (CLEARLY STATE THE END USE WITH SPECIFIC APPLICATION, SUCH AS EXACT FIRE RATING/TO BE INSTALLED IN ___/TO BE INSTALLED AT ___/TO BE CONNECTED WITH ___/TO BE INSTALLED WITH ___ ETC ALONG WITH ANY WARNINGS SUCH AS NOT TO BE USED IN ___/NOT TO BE INSTALLED AT ___/ NOT TO BE INSTALLED WITH ___ ETC.</p>	<p>This product must be installed and maintained by qualified personnel adhering to the CEN/TS 54-14 standard (or the corresponding national standard) and any other applicable regulations.</p> <p>Electrocution hazard. To avoid personal injury or death from electrocution, remove all sources of power and allow stored energy to discharge before installing or removing equipment.</p> <p>Install the control panel in a location that is free from construction dust and debris, and immune to extreme temperature ranges and humidity.</p> <p>Provide enough floor and wall space to allow the control panel to be installed and serviced without any obstructions. The cabinet should be mounted so that the user interface is at eye level.</p> <p>This product has been certified to EN 54-2 using the standard wall mounting installation method described below. If other mounting options are used, take care to install the panel in an area that is not subject to excessive vibration or shock. Fix the cabinet to the wall using five M4 × 30 screws and five Ø 6 mm wall plugs.</p> <p>Products compatible with these control panels are listed in the product compatibility list. Only those products specified in the compatibility list are guaranteed to be compatible. To download the latest product compatibility list, visit <a href="http://firesecurityproducts.com">firesecurityproducts.com</a>.</p>	<p>22/36401068M1 22/36403324 22/36403963 22/36401378 22/36402352 22/36401069M1 22/36402019 22/36401387 22/36403724 22/36400397M1 22/36400332 22/36400396 22/34602744 22/36400333 22/36403156 22/36400394 22/36402016 22/36403330</p>





Laboratory and Certification body details			
<b>NAME OF CERTIFICATION BODY</b>	Applus - LGAI Technological Center S.A.	<b>NAME OF TEST FACILITY</b>	Applus - LGAI Technological Center S.A.
<b>CERTIFICATION BODY ADDRESS / REGION</b> <small>(STREET / TOWN / CITY / COUNTRY)</small>	Campus UAB- Ronda de la Font del Carme s/n E-08193 Bellaterra, Barcelona, SPAIN	<b>TEST FACILITY ADDRESS / REGION</b> <small>(STREET / TOWN / CITY / COUNTRY)</small>	Campus UAB- Ronda de la Font del Carme s/n E-08193 Bellaterra, Barcelona, SPAIN
<b>WEBSITE</b>	www.applus.com	<b>WEBSITE</b>	www.applus.com
<b>TEL</b>	+34 93 567 20 00	<b>TEL</b>	+34 93 567 20 00
<b>EMAIL</b>	info@appluslaboratories.com	<b>EMAIL</b>	info@appluslaboratories.com
<b>ACCREDITED BY</b> <small>(NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE CERTIFICATION BODY, ALONG WITH WEBSITE)</small>	ENAC	<b>ACCREDITED BY</b> <small>(NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE LABORATORY, ALONG WITH WEBSITE)</small>	ENAC
<b>AS PER</b> <small>(STANDARD TO WHICH THE CERTIFICATION BODY IS ACCREDITED TO)</small>	EN ISO/IEC 17065	<b>AS PER</b> <small>(STANDARD TO WHICH YOUR ORGANIZATION IS ACCREDITED TO)</small>	EN ISO/IEC 17025
<b>VALIDITY</b> <small>(EXPIRY DATE OF CERTIFICATION BODY ACCREDITATION)</small>	UNLIMITED	<b>VALIDITY</b> <small>(EXPIRY DATE OF LABORATORY ACCREDITATION)</small>	UNLIMITED
<b>REFERENCE NUMBER:</b> <small>(CERTIFICATION BODY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)</small>	12/C-PR054	<b>REFERENCE NUMBER:</b> <small>(THE LABORATORY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)</small>	Nº 9/LE894
<b>CERTIFICATION MARK</b>			





**(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER**

<b>NAME OF MANUFACTURER'S SIGNATORY</b>	Joanna Wyrwich	<b>SIGNATURE</b>	
<b>EMAIL / TEL</b>	joanna.wyrwich@carrier.com	<b>FACTORY OFFICIAL SEAL</b>	Carrier Manufacturing Poland Sp. z o.o.  <b>Joanna Wyrwich</b> Product Safety, Supplier Quality Development, Quality System Manager
<b>NOTES:</b> I Undertake that all data and information provided are genuine and accurate			

**(ENDORSEMENT) TO BE SIGNED BY CERTIFICATION BODY**

<b>NAME OF CERTIFICATION BODY SIGNATORY</b>	Xavier Ruiz Peña	<b>SIGNATURE</b>	
<b>EMAIL / TEL</b>	<a href="mailto:xavier.ruiz@applus.com">xavier.ruiz@applus.com</a> +34 93 567 20 00	<b>CERTIFICATION BODY OFFICIAL SEAL</b>	LGAI Technological Center, S.A.
<b>NOTES:</b> I Undertake that all data and information provided are genuine and accurate			

**ATTACHMENTS:**

- COPY OF 'CERTIFICATE OF COMPLIANCE' ISSUED BY CERTIFICATION BODY (OLD OR NEW)

The control and Indicating Equipment 2X-A Large cabinet up to 6 A output series also includes:

Main Board:	2010-2MB-HP (1 Loop) 2010-2MB-HP (2 Loop) 2010-2MB-HP
Loop Board:	2X-A-LB
Communication Boards:	2010-2-NB Network Printed Circuit Board 2010-2-DACT Comm transmitter (applies only when the alarm transmission and fault warning routing equipment is installed)
Zone indicator:	2010-2A-ZI-20 (20 Zone) 2010-2A-ZI-40 (40 Zone)
RS232 Kit:	2010-2-232-KIT
Translucent door:	2010-2A-D-TP.101 Transparent front cover
Fault Supervision Board:	2010FS
Auxiliary boards and modules:	2010-2-PIB-8I8O card 2010-SK Scandinavian key and lock assembly (for -SC variants) 2010-2-PS-C2 UK mains cable 2010-2-PIB Peripheral Interface Board (Germany) 2010-2-PIB-8O Peripheral Interface Board 8 outputs 2010-2-PIB-8I Peripheral Interface Board 8 inputs 2010-2-PIB-8I8O Peripheral Interface Board 8 outputs and 8 inputs ADP-N3E-U IFAM interface card (master) ADP-N3S interface card (slave)
PSU:	ELC-MPSU5-24150 PSU,6.5A,24V,150W, MEANWELL with 12V, 7.2 Ah, 12 V, 12 Ah, 12 V, 18 Ah batteries.





And the following variants:

2X-AE1	One-loop addressable fire and evacuation alarm control panel
2X-AF1	One-loop addressable fire alarm control panel
2X-AF1-FB	One-loop addressable fire alarm control panel with fire routing and fire protection controls
2X-AF1-SCFB	One-loop addressable SS 3654 fire alarm control panel with fire routing and fire protection controls [1]
2X-AE2	Two-loop addressable fire and evacuation alarm control panel
2X-AF2	Two-loop addressable fire alarm control panel
2X-AF2-PRT	Two-loop addressable fire alarm control panel with internal printer
2X-AF2-FB	Two-loop addressable fire alarm control panel with fire routing and fire protection controls
2X-AF2-FB-PRT	Two-loop addressable fire alarm control panel with fire routing and fire protection controls and internal printer
2X-AF2-SCFB	Two-loop addressable SS 3654 fire alarm control panel with fire routing and fire protection controls [1]
2X-AFR	Addressable fire alarm repeater panel
2X-AFR-FB	Addressable fire alarm repeater panel with fire routing and fire protection controls

[1] Includes a fireman's key.

