Product Approvals (EU)

Directives

The Advanced ranges of products are subject to and conform to the requirements of one or more of the following European Directives:

- 2006/95/EC (Low Voltage Directive)
- 2004/108/EC (Electromagnetic Compatibility Directive)
- 89/106/EC (Construction Products Directive)
- 1999/5/EC (R&TTE Directive)

Product Ranges

This document covers the following product ranges:

- MX-4000
- MX-5000
- EX-3000
- PX-100

Quality System

Advanced Electronics Ltd operates an internal quality system to control the design and manufacture of safety critical systems. Compliance with ISO9001 is ensured by regular audits from both BSI (FM56301) and BRE/LPCB (544).

EMC Directive

Emissions:

The panels and power supplies have been tested to, and have found to be in compliance with, the general emissions standards of EN61000-6-3 by:

- York EMC Services (UKAS Accredited #1574)
- TRAC Global (UKAS Accredited #0971)

Immunity:

The immunity requirements for Fire Alarm Equipment are covered by the product family standard EN50130-4 and this supersedes the generic immunity standards.

LV Directive

The panels and power supplies have been tested to, and have found to be in compliance with, the product safety requirements of EN60950-1 by:

- BSI Product Services (UKAS Accredited #0135)
- TRAC Global (UKAS Accredited #0971)

CPD Directive

The panels and power supplies have been tested to the applicable harmonized product standard(s). A Certificate of Conformity to the CPD Directive has been issued by the Notified Body and the products are subject to Factory Production Control (FPC) audits.

- BSI Product Services (EC Notified Certification Body No. 0086, UKAS No. 003).
- VdS Schadenverhütung GmbH (EC Notified Certification Body No. 0786)

The BSI Kitemark Licence scheme exceeds the factory production control requirements (Attestation Level 1) defined in Annex ZA of the harmonised product standards and includes annual audit testing of samples by the notified body.

Regulation (EU) No 205/2011: In accordance with the transitional provisions outlined in Article 66 of Regulation (EU) No 205/2011 the construction products, as outlined in this document and placed onto the market in accordance with the CPD Directive 89/106/EC before 1st July 2013, are deemed to comply with the requirements of the regulation.

R&TTE Directive

The panels and power supplies have been tested to the applicable harmonized product standard(s) by:

- TRAC Global (UKAS Accredited #0971).

Fire Detection and Alarm Systems

The harmonized standards to which these products shall conform are the EN54 suite of standards.

Control and Indicating Equipment

The Advanced fire alarm panels are CE marked in accordance with the requirements of the CPD, EMC and LV Directives. The harmonized product standards to which these products shall conform are EN54-2 and EN54-4.

Description		MX-4000	MX-5000	EX-3000
EC Certificate of Conformity		0086-CPD-549125	0786-CDP-20952	0086-CPD-541661
Notified Body Approval		BSI KM69695	VdS G210022	BSI KM541651
EN54-2:1997 +A1:2006		Certified with the following options with requirements		
7.8	Outputs to fire alarm devices	✓	✓	✓
7.9	Control of fire alarm routing equipment	✓	✓	×
7.9.1	Output to fire alarm routing equipment	✓	✓	×
7.9.2	Alarm confirmation input	×	✓	×
7.10	Outputs to fire protection equipment	×	✓	×
7.10.1	Output Type A	×	✓	×
7.10.2	Output Type B	×	✓	×
7.10.3	Output Type C	×	✓	×
7.10.4	Fault monitoring of fire protection equipment	×	✓	×
7.11	Delays to outputs	✓	✓	✓
7.12	Dependencies on more than one alarm signal	✓	✓	×
7.12.1	Type A dependency	×	✓	×
7.12.2	Type B dependency	✓	✓	×
7.12.3	Type C dependency	✓	✓	×
7.13	Alarm Counter	✓	✓	✓
8.3	Fault signals from points	✓	✓	×
8.4	Total loss of the power supply	×	×	✓
8.9	Outputs to fault routing equipment	✓	✓	×
10	Test condition	✓	✓	✓
11	Standardised I/O	✓	✓	×
EN54-4:1997 +A1:2002 +A2:2006		✓ Integral	✓ Integral	✓ Integral
EN54-13:2005[1]		×	✓	✓

[1] Refer to separate EN54-13 Declarations of Conformity for the lists of compatible components.

Power Supply Equipment

The Advanced power supplies are CE marked in accordance with the requirements of the CPD, EMC and LV Directives. The harmonized product standard to which these products shall conform is EN54-4.

Description	MXP-049	MXP-050	MXP-051
EC Certificate of Conformity	0086-CPD- 536903	0086-CPD- 536903	0086-CPD- 536903
Notified Body Approval	BSI KM69695	BSI KM69695	BSI KM69695
EN54-4:1997 +A1:2002 +A2:2006	✓	✓	✓

Gas Extinguishing Systems

The Advanced gas extinguishing systems – electrical control and delay devices are CE marked in accordance with the requirements of the CPD, EMC and LV Directives. The harmonized product standard to which these products shall conform is EN12094-1.

A Certificate of Conformity to the CPD Directive has been issued by the Notified Body and the products are subject to Factory Production Control (FPC) audits.

Description		EX-3000		
EC Certificate of Conformity		0086-CPD-541661		
Notified Body Approval		BSI KM541651		
EN12094-1:2003		Certified with the following options with requirements		
4.17	Delay of extinguishing signal	✓		
4.18	Signal representing the flow of extinguishing agent	✓		
4.19	Monitoring of the status of components	✓		
4.20	Emergency hold device	✓		
4.21	Control of flooding time	✓ (1800s)		
4.22	Initiation of secondary flooding	×		
4.23	Manual only mode	✓		
4.24	Triggering signals to equipment within the system	✓		
4.25	Extinguishing signals to spare cylinders	×		
4.26	Triggering of equipment outside the system	✓		
4.27	Emergency abort device	✓		
4.28	Control of extended discharge	×		
4.29	Release of the extinguishing media for selected flooding zones	×		
4.30	Activation of alarm devices with different signals	✓		

Paging Systems

The Advanced PX-100 paging system is CE marked in accordance with the requirements of the R&TTE, EMC and LV Directives. The harmonized product standards to which these products shall conform are ETSI EN 300 224-2 and EN 301 489-2.

In addition to the EMC immunity requirements specified in EN 301-489-2, the PX-100 has been tested to and meets the increased immunity protection as specified in EN50130-4.

CE ①	On-site paging
EN 300 224-2 ERM On-Site Paging EN 301 489-2 ERM EMC Radio Paging Equipment	
Px-100	

Test Schedules

The panels and power supplies have been tested to the following test schedules.

The column FAP refers to the Fire Alarm Control Panel and Extinguishing Control Panel comprising CIE (Control and Indicating Equipment) and integral PSE (Power Supply Equipment). The column PSE refers to the separate Power Supply Equipment. The column LL refers to the LifeLine Paging Equipment with integral PSE (Power Supply Equipment).

Emissions

Standard	Description	Test Severity Levels
EN61000-6-3	Emissions: Generic standard	Conducted emissions EN55022: 2006 Class B Radiated emissions EN55022: 2006 Class B
EN61000-3-2	Harmonic Current	
EN61000-3-3	Flicker and voltage fluctuations	

Product Safety

Standard	Description
EN60950-1	Information technology equipment – Safety – Part 1: General Requirements

Fire Alarm

FAP	PSE	LL	Standard	Description
Y	N/A	N/A	EN54-2	Fire detection and fire alarm systems – Part 2: Control and indicating equipment
Y	Y	Y	EN54-4	Fire detection and fire alarm systems – Part 4: Power supply equipment

Environmental and Immunity

FAP	PSE	LL	Standard	Description	Test Severity Levels
Y	Y	Y	EN61000-4-2	Immunity to Electrostatic Discharges	+/- 8KV Air, +/- 6KV Contact
Y	Y	Y	EN61000-4-3	Immunity to RF Electromagnetic Fields	80 to 2000 MHz: Field Strength10V/m
Y	Y	Y	EN61000-4-4	Immunity to Fast Transient bursts	+/- 2KV on AC input power ports +/- 1KV on all other signal I/O ports
Y	Y	Y	EN61000-4-5	Immunity to surges	+/- 2KV Common mode Live-Earth & Neutral-Earth. +/- 1KV Differential mode Live-Neutral. +/- 1KV on all other signal I/O ports
Y	Y	Y	EN61000-4-6	Immunity to injected currents	0.15 to 100MHz @ a level of 10Vrms
Y	Y	Y	EN61000-4-11	Immunity to voltage dips & Interruptions	0% to 40% duration 5 cycles maximum (100mS) to 10 cycles maximum (200mS) respectively
Y	Y		EN60068-2-1	Test Ab/Ad (Cold)	-5C for 16 hours
Y	Y		EN60068-2-5	Test Cb (Damp Heat)	+40 C @ 93% Relative Humidity for 4 days
Y	Y		EN60068-2-6	Test Fc (Sinusoidal Vibration)	10Hz to 150Hz @ 0.5g

FAP	PSE	LL	Standard	Description	Test Severity Levels
*	N	N	EN50121-4	Railway Applications, Electromagnetic Compatibility	
*	N	N	ENV50204	Immunity to RF Electromagnetic Fields	50% 200Hz PM: Field Strength 30V/m Dwell Time = 3s at the following frequencies: 380-420MHz, 900-901MHz, 1.89GHz-1.891GHz, 1.885-2.025GHz, 2.110-2.200GHz
*	N	N	EN61000-4-3	Immunity to RF Electromagnetic Fields	80 to 1000 MHz: Field Strength 10V/m, 80% 1kHz AM 800 to 1000 MHz: Field Strength 20V/m, 80% 1kHz AM 1400 to 2100 MHz: Field Strength 10V/m, 80% 1kHz AM 2100 to 2500 MHz: Field Strength 5V/m, 80% 1kHz AM
*	N	N	EN61000-4-8	Immunity to Power Frequency Magnetic Fields	DC & 50Hz, 100A/m and 200A/m for 3s
*	N	N	EN61000-4-9	Immunity to Pulse Magnetic Fields	300A/m and 600A/m
*	N	N	EN61000-4-16	Immunity to Common Mode Disturbances	15Hz to 150kHz, 10Vrms to AC power, signal and communication lines.

* These tests are in addition to, or are at increased severity levels to, the required immunity tests as specified for fire alarm systems in EN54 and EN50130-4. The tests were undertaken at York EMC Services (UKAS Accredited #1574) and apply to the following models:

Mx-4200, Mx-4400, Mx-4800 and Mx-4020

Radio

FAP	PSE	LL	Standard	Description
N/A	N/A	Y	EN 300 224-2	Electromagnetic compatibility and radio spectrum matters – On-Site Paging
N/A	N/A	Y	EN 301 489-2	Electromagnetic compatibility and radio spectrum matters – Electromagnetic Compatibility – On-Site Paging

List of Models

The Kitemark Licence (KM69695) covers the following equipment:

Series	Model:
MX-4000	MX-4100, /L
	MX-4200, MX-4201 – MX-4202, /D, /LE
	MX-4400, MX-4401 – MX-4404, /D, /LE
	MX-4800, MX-4802 – MX-4808
MX-4000V	MX-4200V, MX-4201V – MX-4202V, /D, /LE
	MX-4400V, MX-4401V – MX-4404V, /D, /LE
	MX-4800V, MX-4802V – MX-4808V
MX-4000N	MX-4200N, MX-4201N – MX-4202N, /D, /LE
	MX-4400N, MX-4401N – MX-4404N, /D, /LE
	MX-4800N, MX-4802N – MX-4808N
Option Modules	MXP-002, MXP-003, MXP-009, MXP-024, MXP-025, MXP-013-100, MXP-013-200, MXP-027, MXP-031, MXP-032, MXP-067, MXP-069

Series	Model:
PSE	MXP-049
	MXP-050-001, MXP-050-002
	MXP-051, MXP-051/D

The Kitemark Licence (KM541651) covers the following equipment:

Series	Model:
EX-3000	EX-3001

The VdS Certificate G210022 covers the following equipment:

Series	Model:
MX-5000	MX-5100, MX-5100M, MX-5100L, MX-5100D, MX-5100R, /P, /50, /100
	MX-5200, MX-5200L, MX-5200D, MX-5200R, /P, /50, /100
	MX-5400, MX-5400D, MX-5400E, MX-5400R, /P, /50, /100, /200
	MX-5800, /P, /50, /100, /200
MX-5000V	Mx-5100V, Mx-5100VM, Mx-5100VL, Mx-5100ND, MX-5100VR, /P, /50, /100
	Mx-5200V, Mx-5200VL, Mx-5200VD, MX-5200VR /P, /50, /100
	Mx-5400V, Mx-5400VD, MX-5400VE, MX-5400VR /P, /50, /100, /200
	MX-5800V, /P, /50, /100, /200
MX-5000N	Mx-5100N, Mx-5100NM, Mx-5100NL, Mx-5100ND, MX-5100NR, /P, /50, /100

	Mx-5200N, Mx-5200NL, Mx-5200ND, MX-5200NR, /P, /50, /100
	Mx-5400N, Mx-5400ND, MX-5400NR, /P, /50, /100, /200
	MX-5800N, /P, /50, /100, /200
MX-5030	MX-5030, MX-5030/FT
MXP-510	MXP-510, MXP-510/FT
MXP-554	MXP-554, MXP-554/FT
MXP-045	MXP-045, MXP-045/FT
MX-4015	MX-4015, MX-4015/FT
Option Modules	MXP-501, MXP-502, MXP-503, MXP-504 (+MXP-508), MXP-505, MXP-506, MXP-507, MXP-509, MXP-512, MXP-513-XXX, MXP-514, MXP-532, MXP-536, MXP-537, MXP-538, MXP-539, MXP-547, MXP-567