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Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until
afp - 3852	18-Oct-2023	7	26-Mar-2026	30-Apr-2027

Product designation

Ampac, EvacU Elite with Bosch PRAESENSA, Emergency Warning Control and Indicating Equipment (EWCIE) fitted with Public Address and Voice Alarm (PAVA) system

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Keenfinity Pty Ltd
Suite 1, Level 2, 21 Solent Circuit, BAULKHAM HILLS, NSW, AUSTRALIA, 2153

Registrant

Keenfinity Pty Ltd
Suite 1, Level 2, 21 Solent Circuit, BAULKHAM HILLS, NSW, AUSTRALIA, 2153

Producer

Ampac Pty Limited
7 Ledgar Road, BALCATTA, WA, AUSTRALIA, 6021

Conformance criteria and evaluation

The Ampac, EvacU Elite with Bosch PRAESENSA, Emergency Warning Control and Indicating Equipment (EWCIE) fitted with Public Address and Voice Alarm (PAVA) system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4428.16:2020, 'Fire detection, warning, control and intercom systems - Control and indicating equipment Part 16: Emergency warning control and indicating equipment'.
2. Australian Standard AS 4428.4:2016, 'Fire detection, warning, control and intercom systems - Control and indicating equipment Part 4: Emergency intercom control and indicating equipment'.
3. Australian Standard AS 7240.4:2018, 'Fire detection and alarm systems - Part 4: Power supply equipment (ISO 7240-4:2017, MOD)'.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices .and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

Kai Loh
Executive Officer – ActivFire Scheme

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Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

i. All parts of the EWCIE/EICIE are mounted in a single enclosure or adjacent enclosures.

ii. All parts of the PAVA system are mounted within a licked enclosure or cabinet, using a method/lock other than the 003 keylock.

iii. The EWCIE/EICIE enclosure is fitted with the labels as described in this report to meet the Marking requirements of Section 17.

iv. The EWCIE/EICIE and PAVA system are installed and maintained as recommended by the manufacturer.

v. The EWCIE/EICIE and PAVA system are used with a power supply that conforms with AS 7240.4.

vi. The ASS63HPA, 150 W high power amplifier module was only evaluated and verified as conforming to AS 4428.16:2020.

vii. The EWCIE/EICIE and PAVA system were not evaluated for operating temperatures exceeding 40 °C.

viii. The PAVA system microphones supplied by the PRA-CSL and PRA-CSLW are not to be used for emergency purposes.

Producer's description

Ampac EvacU Elite EWCIE:

The Ampac EvacU Elite is an Emergency Warning Control and Indicating Equipment (EWCIE) with an integrated Emergency Intercom System (EICIE).

The system is designed to receive input signals from a fire detection system then broadcast and facilitate the orderly evacuation of a building in the event of a fire or emergency situation.

The Ampac EvacU Elite supports a high-level interface to an Ampac FireFinderPlus in a combination or individual cabinets. Low level interface is available for third party fire detection systems via hardwired inputs.

Each cabinet size supports a number of universal rack frame assemblies, touch screen graphical user interfaces, power supplies and module cards.

The cabinet is available in two cabinet sizes: 13U and 24U. The 24U cabinet can accommodate 5 universal racks and the 13U cabinet can accommodate 2 universal racks.

The primary (GUI) graphical touchscreen user interface incorporates the menu system, common and individual controls and indicators for emergency zones. Secondary graphical user interfaces support additional individual controls and indicators for emergency zones as required. The 13U cabinet supports 3 GUIs and the 24U cabinet supports 7 GUIs.

Bosch PRESENSA PAVA system:

The Bosch PRESENSA is a Public Address and Voice Alarm (PAVA) system that provides audio for music or messaging to every area of the building and is controlled via graphical user interface on the call station touchscreen, or via personalized software on a tablet or PC.

The Bosch PRESENSA uses IP-connectivity and a smart power concept with integrated redundancies to provide a PAVA system that is suited for centralized of decentralized topologies.

Ampac, EvacU Elite with Bosch PRAESENSA:

The Bosch PRAESENSA PAVA system components are provided as additional Ampac EvacU Elite EWCIE components which allows the combined EWCIE to be distributed in multiple geographic locations. Redundant transmission paths are required between Ampac EvacU and distributed Bosch PRAESENSA PAVA system components.

At each location where Bosch PRAESENSA PAVA system amplifiers (PRA-AD604 and/or PRA-AD608) are to provide connection for emergency zones, a Praesensa System Controller (Large System controller PRA-SCL and/or a Small System controller PRA-SCS) and Power Supply (PRA-MPS3) is required, along with appropriate Praesensa networking equipment. Praesensa Emergency call stations (PRA-CSLx) provide analogue audio input to the Praesensa system from the EvacU Elite for the purposes of transmission live speech and test tones. The PRA-CSLx does not provide mandatory controls or indicators for the EWCIE.

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Technical specification

The following details are a representative extract of the technical specification for the Ampac, EvacU Elite with Bosch PRAESENSA, Emergency Warning Control and Indicating Equipment (EWCIE) fitted with Public Address and Voice Alarm (PAVA) system and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Schedule of components and/or assemblies

Ampac EvacU Elite:

The following is a schedule of validated components and/or assemblies of the certified/listed equipment for the Ampac EvacU Elite.

Variant		Description	Mandatory / optional	Hardware version / issue	Software version
Type	**Ident**				
Board	BRD63LPA1-A	Dual 25 W amplifier	Optional	5	1.0.35.0
	BRD63LPA1-B	Single 50 W amplifier	Optional	5	1.0.35.0
	ASS63HPA* (BRD63HDC1-A, BRD63HPA1-A)	150 W high power amplifier* (HPA DC-DC converter; High powered amplifier board)	Optional	3	1.0.9.0
	BRD63ABB1-A	Amplifier backplane	Mandatory	1	N/A
	BRD63PDB1-A	Power distribution	Mandatory	1	N/A
	BRD63CPU1-A	Distribution CPU	Mandatory	7	1.4.4.25
	BRD63CPUx-B	Distribution CPU for use with PAIC	Mandatory	1	1.04.12
	BRD63GUI1-A	Graphical user interface card - primary	Mandatory	4	1.2.2.6
	BRD63NIC1-A	Network interface card	Optional	5	1.0.6.1
	BRD63GUI-B	Graphical user interface card - secondary	Optional	4	1.0.8.14
	BRD63MIC1-A	Multi-Purpose input card	Optional	4	1.1.0.5
	BRD63MOC1-A	Multi-Purpose output card	Optional	4	1.1.0.4
	BRD63ILC1-A	Quad radial line card	Optional	5	1.0.15.0
	BRD63LILC1-A	Dual loop line card	Optional	4	1.0.9.0
	BRD63NICxB	Public Address Interface Card – HLI Bosch PRAESENSA	Mandatory	11.004	1.00.07
PSU	BRD63PCC1-A	Power control card - primary	Mandatory	10	1.1.1.3
	RCB-1600-24	Power supply module - 27V 1600 W	Mandatory	N/A	N/A
	BRD63PCC1-B	Power control card - secondary	Optional	10	1.1.1.3
WIP	ASS63WIPM	Primary WIP Handset	Optional	1	N/A

Note: "*" indicates that the module was only evaluated and verified to conform to AS 4428.16:2020.

Bosch PRAESENSA PAVA system:

The following is a schedule of validated components and/or assemblies of the certified/listed equipment for the Bosch PRAESENSA PAVA system.

Variant		Description	Mandatory / optional	Hardware version / issue	Software version
Type	**Ident**				
Part num.	PRA-CSLx	PRAESENSA Emergency call station	Mandatory	01/0	1.5
	PRA-SCL	PRAESENSA System Controller (Large)	Optional	01/00	2.20
	PRA-MPS3	PRAESENSA Multi-function power supply	Mandatory	01/05	2.20
	PRA-AD604	PRAESENSA 4 Channel 600 W amplifier	Optional	01/04	2.20
	PRA-AD608	PRAESENSA 8 Channel 600 W amplifier	Optional	01/04	2.20
	PRA-EOL	PRAESENSA End of line device	Mandatory	01/00	2.20
	PRA-SFPLX	PRAESENSA Fibre Transceiver Single-mode	Optional	-	-
	PRA-SFPSX	PRAESENSA Fibre Transceiver Multi-mode	Optional	-	-
	PRA-ES8P2S	PRAESENSA Network Switch	Mandatory	01/00	1.0
	PRA-SCS	PRAESENSA System Controller (Small)	Optional	01/00	1.81
	PRA-IM16C8	PRAESENSA I/O Interface Module	Optional	C1-10	2.20
	PRA-IM2A2	PRASENSA 2x2 Audio Interface Module	Optional	01/00	2.20

Schedule of optional functions with requirements

AS 4428.16:2020:

The following schedule of AS 4428.16:2020 optional (or optional required) functions with requirements have been validated for the appropriate EWCIE grade as nominated.

Option		Grade 1
1.	Indications:	
a.	Alarm signals (Cl 7.2)	Provided
b.	Alert signal (Cl 7.3)	Provided
c.	Indication of the emergency warning condition (CL 7.5)	Provided
d.	Audible signal of alarm signal reception (Cl 7.6)	Provided
2.	Controls:	
a.	Delay before emergency warning condition (Cl 7.7)	Provided
b.	Phased evacuation for multi-zoned systems (Cl 7.8)	Provided
c.	Silencing the emergency warning condition from the emergency detection system (Cl 7.9.1)	Not provided
d.	Silencing the emergency warning condition with a manual control (Cl 7.9.2)	Provided
e.	Reset of the emergency warning condition from the emergency detection system (Cl 7.10.1)	Not Provided
f.	Reset of the emergency warning condition with a manual control (Cl 7.10.2)	Provided
3.	Outputs:	
a.	Output to fire alarm devices (Cl 7.11)	Provided
b.	Emergency warning condition output signal (Cl 7.12)	Provided
4.	Disabled condition (Cl 9)	Provided
5.	Test condition and indication (Cl 10)	Provided
a.	Automatic/manual mode control (Cl 11.1)	Provided
b.	Manual control to networked EWCIE (Cl 11.2)	Provided
c.	Individual emergency zone controls (Cl 12.1)	Provided
d.	All emergency zone control (Cl 12.2)	Provided
6.	Interface to external device(s) (Cl 13)	Not provided
7.	Emergency microphone (Cl 14)	Provided
a.	Ready-to-talk indicator	Provided
8.	Redundant power amplifiers (Cl 15.15)	Not Provided
a.	Dry heat, steady state test (operational) (Cl 18.9)	40 °C*

Note: "*" indicates that due to the Bosch PRASENSA not being evaluated to clause 18.9, the Ampac, EvacU Elite with Bosch PRAESENSA was not evaluated for operating temperatures exceeding 40 °C.

AS 4428.4:2016:

The following schedule of AS 4428.4:2016 optional (or optional required) functions with requirements have been validated.

Option		
1.	Fault warning condition:	
a.	External silencing of the EICIE fault condition (Cl 8.8)	Provided
2.	Zone cleared condition (Cl 9)	Provided
3.	Controls:	
a.	Manual control for networked EICIE (Cl 10)	Provided
b.	Manual controls of EICIE (Cl 11)	Provided
c.	WIP group call control (Cl 11.2)	Provided
d.	Interface to external control device(s) (Cl 12)	Not provided
4.	Integrity of transmission paths:	
a.	Paths to remote power supplies (Cl 13.5.4)	Provided
5.	Operational	
a.	Dry heat, steady state test (operational) (Cl 16.6)	40 °C*

Note: "*" indicates that due to the Bosch PRASENSA not being evaluated to clause 18.9, the Ampac, EvacU Elite with Bosch PRAESENSA was not evaluated for operating temperatures exceeding 40 °C.

AS 7240.4:2018:

The following schedule of AS 7240.4:2018 optional (or optional required) functions with requirements have been validated.

Option		
1.	Impact (operational) (Cl. 6.8)	Provided
2.	Vibration, sinusoidal (operational) (Cl. 6.9)	Provided
3.	Vibration, sinusoidal (endurance) (Cl. 6.12)	Provided
4.	Dry heat steady state (operational) (Cl 6.13)	Provided

Schedule of properties/characteristics

The following schedule is an extract of physical and operational properties/characteristics of the certified/listed equipment.

Ampac EvacU Elite general:

Parameter	24U Floor Mount Enclosure	13U Wall / Floor Mount Enclosure
Dimensions	1800 mm (H) × 650 mm (W) × 380 mm (D)	900 mm (H) × 650 mm (W) × 380 mm (D)
External operating voltage	230 Vac (operating range 195 to 253 Vac)	
Max No. of emergency zones	512	
Max No. of WIP handsets	1024	
Max No. of nodes	64	
Max No. of alarm inputs	512	
Max No. of RPCs per node	8 (100 m CAT5/6 daisy chain)	
Amplifier sizes	Dual 25 W	
	50 W	
	150 Watt with integrated 4-way splitter	
Graphical user interfaces	7	3
Universal Rack Frame	5	2
Temperature	-5 °C to +50 °C	
Humidity	5% to 95% non-condensing	

Ampac EvacU Elite graphical user interface:

Parameter	Detail
Display screen	9-inch TFT LCD 800 × 480 with LED backlight and resistive touch screen
Microphone	600 Ω with capsule monitoring
Emergency intercom headset	Electret capsule with 150 Ω speaker
USB support	Host (USB memory stick) and Device (mini-USB) connection
SD Card support	Yes
HLI (to 3rd party FDCIE/Graphics)	1 × RJ45 connector with isolated RS 485
Ethernet support	2 × RJ45 with proprietary power and transformer isolation (not for general use)
Current consumption	0.185 amps (quiescent) and 0.207 amps (active)

Ampac EvacU Elite amplifier card:

Parameter	Dual 25 Watt	50 Watt	150 Watt
Amplifier	Class D amplifier with 2 × 25 W independent audio outputs	Class D amplifier with 1 × 50 W independent audio outputs	Class D amplifier with 150 W audio power and 4 audio outputs
Audio output 1	N/A	N/A	150 Watt (max)
Audio output 2 to 4	N/A	N/A	75 Watt (max) – total of 150 W per card
Distortion	<= 0.1% @ 25 W × 2	<= 0.1% @ 50 W × 1	<=0.3% @ 150 W × 1
Frequency response	400 Hz to 10 kHz ± 1 dB w.r.t 1 kHZ 200 Hz to 12 kHz ± 3 dB w.r.t 1 kHZ		300 Hz to 10 kHz ± 1 dB w.r.t 1 kHZ 150 Hz to 12 kHz ± 3 dB w.r.t 1 kHZ
SNR	>=70%		
Speaker circuit monitoring	DC, nominal 47 kΩ		
Max drive voltage	100 V_{RMS} @ full load		
Max output current	2 × 0.250 A	0.500 A	1.500 A
Max cable size	2.55 mm^2 Note 1		
Input	2 × Audio streams @ 32 kHz 16-bit audio	Audio streams @ 32 kHz 16-bit audio	
No. of rack slots	2		
Current consumption	0.102 A (quiescent) and 2.47 A (full audio load)	0.097 A (quiescent) and 2.33 A (full audio load)	0.100 A (quiescent) and 7.500 A (full audio load)

Ampac EvacU Elite power supply equipment:

Parameter	13U-RCB-1600	24U-RCB-1600
Nominal mains operating voltage	230 V 16 A 50/60 Hz	230 V 16 A 50/60 Hz
Output voltage	21.0 Vdc to 29.0 Vdc	21.0 Vdc to 29.0 Vdc
Cabinet output power rating, Pa, max	1800 W (2 PSU modules)	2700 W (3 PSU modules)
Cabinet output power rating, Pb, max	2400 W (2 PSU modules)	3600 W (3 PSU modules)
Ripple and noise voltage	<1%	<1%
Maximum battery circuit resistance, Rmax	30 milliohms (2 PSU modules)	20 milliohms (3 PSU modules)
Minimum battery capacity	2 x 12 V, 24 Ah	2 x 12 V, 24 Ah

Bosch PRAESENSA general:

Parameter	Value
Operating Temperature	-5 to 50 °C
Storage and transport temperature	-30 to 70 °C
Humidity (non-condensing)	5 - 95%
Case Material	Steel
Case Colour	RAL9017
Ingress protection	IP30
Network interface – Ethernet	100BASE-TX, 1000BASE-T
Network interface - Protocol	TCP/IP, RSTP

Bosch PRAESENSA amplifiers:

Parameter	Value
Output Voltage, max	100 V
Power Output	600W/150W
Minimum resistive load	16.7 ohm
Maximum capacitive load	2 uF
Frequency response – full to no load regulation, 20 Hz to 20 kHz	< 0.2 dB
Total Harmonic distortion + Noise (THD+N), 20 Hz to 20 kHz	< 0.5% (rated power) < 0.1% (6dB below rated power)
Minimum signal-to-noise ratio (100 V mode, 20 Hz to 20 kHz)	110 dB(A)

Bosch PRAESENSA power supply equipment:

Parameter	Value
Nominal mains operating voltage	102 -264 Vac
Output voltage	
48 Vdc outputs (1-3)	46 Vdc to 50 Vdc
24 Vdc output	23 Vdc to 25 Vdc
PoE output (1-2)	44 Vdc to 57 Vdc
Lifeline DC outputs (1-3)	9 Vdc to 18 Vdc
Cabinet output power rating	(Pa max/ Pb max/ Pmin)
48 Vdc outputs (1-3)	264 W/ 264 W / 0 W
24 Vdc output	16.8 W/16.8 W/ 0 W
PoE output (1-2)	15.4 W / 15.4 W / 0 W
Lifeline DC outputs (1-3)	12.6 W / 12.6 W / 0W
Maximum battery circuit resistance, Rmax	
230 Ah battery	7.1 milliohms
180 Ah battery	8.6 milliohms
140 Ah battery	9.8 milliohms
100 Ah battery	11 milliohms
Minimum supply voltage (Mains off, battery discharging)	9 V
Maximum battery capacity	230 Ah

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Supplementary information

Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Type	**Ident.**			
Report	XF3515/NR2a	Evaluation and Verification of Conformity of the AMPAC EvacU Elite Emergency Warning Control and Indicating Equipment fitted with Bosch Praesensa Series Public Address and Voice Alarm Equipment	01-Sep-2025	CSIRO Fire Systems Laboratory, AU.
	CSBA0060/R1	Verification of conformity of the AMPAC, EvacU Elite Emergency Warning Control and Indicating Equipment to the requirements of AS 4428.4:2016 and AS 7240.4:2018	11-Jul-2023	
	XF3544/R2	Evaluation for Conformity of the AMPAC, EvacU Elite Emergency Warning Control and Indicating Equipment, combined with 150 Watt High Powered Amplifier to the requirements of AS 4428.16:2020	6-Feb-2023	
Certificate	966d Issue:01	LPCB Certificate of Product Approval Ampac Pty Ltd Products: Control and Indicating Equipment 13U EvacU Elite Cabinet 24U EvacU Elite Cabinet Standards: AS 4428.16:2020 AS 7240.4:2018 AS 4428.4:2016	26-Apr:2022	Loss Prevention Certification Board, UK
Manual	MAN3137-6	AMPAC EvacU Elite Emergency Warning & Intercom System (EWIS) Install, Commission and User Manual MAN3137-6 (MAN3137-6-EvacU-Elite-Install-Commission-and-User-Manual-.pdf)	14-Jun-2024	Ampac Pty Ltd WA, AU
Product data sheet	PDS 6350-0001-7	AMPAC Adavanced Warning Systems EvacU Elite (PDS6350-0001-7 EvacU Elite.pdf)	17-Mar-2022	
	PDS 6350-HPA150W	AMPAC Adavanced Warning Systems 150 Watt Amplifier Card (PDS6350-HPA150W EvacU Elite 150 Watt Amplifier Card.pdf)	2-May-2022	
Configuration manual	PRAESENSA_2.30_Configuration_Manual_enUS_100857072779.pdf	BOSCH PRAESENSA Public Address and Voice Alarm System Configuration manual 2025-03 | V2.30 | F.01U.432.516 (PRAESENSA_2.30_Configuration_Manual_enUS_100857072779.pdf)	21-Mar-2025	Bosch Security Systems B.V., NL
Installation manual	PRAESENSA_2.20_Installation_Manual_enUS_74793894027.pdf	BOSCH PRAESENSA Public Address and Voice Alarm System Installation manual 2024-11| V2.20 (PRAESENSA_2.20_Installation_Manual_enUS_74793894027.pdf)	11-Nov-2024	
Data sheet	PRA_MPS3_Data_sheet_enUS_76035367307.pdf	BOSCH PRA-MPS3 Multifunction power supply, large PRAESENSA 202311151228 | V16 | November 15, 2023 (PRA_MPS3_Data_sheet_enUS_76035367307.pdf)	15-Nov-2023	
	PRA_SCS_Data_sheet_enUS_104855388043.pdf	BOSCH PRA-SCS System controller, small PRAESENS 202311151115 | V3 | November 15, 2023 (PRA_SCS_Data_sheet_enUS_104855388043.pdf)		

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Reference		Title / description	Date issued (or date validated)	Source
Type	**Ident.**			
	PRA_IM16C8_Data_sheet_enUS_104886589195.pdf	BOSCH PRA-IM16C8 Control interface module, 16x8 PRAESENSA 202307261600 | V3 | November 15, 2023 (PRA_IM16C8_Data_sheet_enUS_104886589195.pdf)		
	PRA-IM2A2_Datasheet_EN.pdf	BOSCH PRA-IM2A2 Audio interface module, 2x2 PRAESENSA 202409100810 | V2 | September 10, 2024 (PRA-IM2A2_Datasheet_EN.pdf)	10-Sep-2024	