



Certificate of Conformity

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Product designation

Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment
(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

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

Registrant

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

Producer

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

Conformance criteria and evaluation

The Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment 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)'.

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 and EICIE are mounted in a single enclosure or adjacent enclosures.
- ii. The EWCIE/EICIE enclosure is fitted with the labels as described in this report to meet the Marking requirements of Section 17,

Issued by

Kaj Loh
Executive Officer – ActivFire Scheme



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.

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- iii. The EWCIE/EICIE is installed and maintained as recommended by the manufacturer.
- iv. The EWCIE/EICIE is used with a power supply that conforms with AS 7240.4.
- v. The ASS63HPA, 150 W high power amplifier module was only evaluated and verified as conforming to AS 4428.16:2020

Producer's description

The EvacUElite is Emergency Warning Control and Indicating Equipment (EWCIE) with a 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 EvacUElite 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.

Technical specification

The following details are a representative extract of the technical specification for the Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment 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

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

Type	Variant Ident	Description	Mandatory / optional	Hardware version / issue	Software version	
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	150 W high power amplifier*	Optional	3	1.0.9.0
		BRD63HPA1-A				
	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	
	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		
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

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Schedule of optional functions with requirements

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 (CI 7.2)	Provided
b. Alert signal (CI 7.3)	Provided
c. Indication of the emergency warning condition (CL 7.5)	Provided
d. Audible signal of alarm signal reception (CI 7.6)	Provided
2. Controls:	
a. Delay before emergency warning condition (CI 7.7)	Provided
b. Phased evacuation for multi-zoned systems (CI 7.8)	Provided
c. Silencing the emergency warning condition from the emergency detection system (CI 7.9.1)	Not provided
d. Silencing the emergency warning condition with a manual control (CI 7.9.2)	Provided
e. Reset of the emergency warning condition from the emergency detection system (CI 7.10.1)	Not Provided
f. Reset of the emergency warning condition with a manual control (CI 7.10.2)	Provided
3. Outputs:	
a. Output to fire alarm devices (CI 7.11)	Provided
b. Emergency warning condition output signal (CI 7.12)	Provided
4. Disabled condition (CI 9)	Provided
5. Test condition and indication (CI 10)	Provided
a. Automatic/manual mode control (CI 11.1)	Provided
b. Manual control to networked EWCIE (CI 11.2)	Provided
c. Individual emergency zone controls (CI 12.1)	Provided
d. All emergency zone control (CI 12.2)	Provided
6. Interface to external device(s) (CI 13)	Not provided
7. Emergency microphone (CI 14)	Provided
a. Ready-to-talk indicator	Provided
8. Redundant power amplifiers (CI 15.15)	Not Provided
a. Dry heat, steady state test (operational) (CI 18.9)	50 °C

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 (CI 8.8)	Provided
2. Zone cleared condition (CI 9)	Provided
3. Controls:	
a. Manual control for networked EICIE (CI 10)	Provided
b. Manual controls of EICIE (CI 11)	Provided
c. WIP group call control (CI 11.2)	Provided
d. Interface to external control device(s) (CI 12)	Not provided
4. Integrity of transmission paths:	
a. Paths to remote power supplies (CI 13.5.4)	Provided
5. Operational	
a. Dry heat, steady state test (operational) (CI 16.6)	50 °C

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

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

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Schedule of properties/characteristics

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

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 Watt 50 Watt 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	

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 3 rd 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)

Amplifier card:

Parameter	Dual 25 Watt	50 Watt	150 Watt
Amplifier	Class D amplifier with 2 × 25 Watt independent audio outputs	Class D amplifier with 1 × 50 Watt independent audio outputs	Class D amplifier with 150 Watt 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 Watt per card
Distortion	≤ 0.1% @ 25 Watt × 2	≤ 0.1% @ 50 Watt × 1	≤ 0.3% @ 150 Watt × 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 Amps	0.500 Amps	1.500 Amps
Max cable size	2.55 mm ² <small>Note 1</small>		
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 Amps (quiescent) and 2.47 amps (full audio load)	0.097 Amps (quiescent) and 2.33 amps (full audio load)	0.100 Amps (quiescent) and 7.500 Amps (full audio load)

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

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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 <small>(or date validated)</small>	Source
Type	Ident.			
Report	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	CSIRO Fire Systems Laboratory, AU.
	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	
	TE-P114712-1001 Issue 1	BRE Global Test Report Technical evaluation of the Ampac 13U EvacU ^{Elite} and 24U EvacU ^{Elite} emergency warning control and indicating equipment, emergency intercom control and indicating equipment and power supply equipment to the requirements of AS 4428.16:2015, AS 4428.4:2016, AS 7240.4:2018 and selected clauses from AS 4428.16:2020 and EN 50130-4:2011+A1:2014	11-May-2022	BRE Global Ltd, UK
	SW-P114712-1001 Issue:1	BRE Global Test Report Software Evaluation of the AMPAC 13U & 24U EvacU Elite Emergency Warning CIE with Emergency Intercom CIE and Power Supply Equipment to the requirements of Clause 16 in AS 4428.16:2020, Clause 14 in AS 4428.4:2016 and Clauses 5.8 & 9.2 in AS 7240.4:2018	8-Apr-2022	
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	MAN3137-1	AMPAC Advanced Warning Systems EvacU ^{Elite} Emergency Warning & Intercom System (EWIS) Install, Commission and User Manual <small>(MAN3137-1 EvacU Elite Install Commission and User Manual .pdf)</small>	10-Mar-2022	Ampac Pty Ltd WA, AU
Product data sheet	PDS 6350-0001-7	AMPAC Advanced Warning Systems EvacU ^{Elite} <small>(PDS6350-0001-7 EvacU Elite.pdf)</small>	17-Mar-2022	
	PDS 6350-HPA150W	AMPAC Advanced Warning Systems 150 Watt Amplifier Card <small>(PDS6350-HPA150W EvacU Elite 150 Watt Amplifier Card.pdf)</small>	2-May-2022	