CSIRO Verification Services
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Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until
afp - 3332	18-Mar-2019	7	4-Apr-2024	30-Apr-2025

Product designation

Ampac, EvacU, emergency warning control and indicating equipment

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

Agent/distributor

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

Registrant

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

Producer

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

Conformance criteria and evaluation

The Ampac, EvacU, 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 4428.16:2015, 'Fire detection and alarm systems - Emergency warning control and indicating equipment'.

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 are mounted in a single enclosure.

ii. The EWCIE is used with a power supply that conforms with AS 7240.4.

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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Producer's description

The Ampac, EvacU, emergency warning control and indicating equipment is assembled as Grade 2 or 3 depending on the functional requirements of the system and is intended to broadcast information (voice announcements for emergency purposes, alert signals, evacuate signals, visual and tactile warning devices) to provide warning to the occupants within one or more specified areas in an emergency, to effect a rapid and orderly mobilisation of occupants in an indoor or outdoor area.

Whether combined in Ampac's Fire Control Panels (FACP) or as a fully self-contained Standalone System the EWCIE consists of the Amplifier/s, a Front Panel Switch and Indicator Module and optional Zone Indicating Module, Line Monitoring Units and Remote Paging Console (RPC).

When combined in the FACP the EWCIE communicates with the Fire panel range by either RS485 communication (FireFinder Plus, LoopSense) or by hardwired inputs (ZoneSense Plus, FireFinder).

Alternatively, when the EWCIE is in the Standalone Cabinet or installed with Non-Ampac Fire panels the communication is by hardwired inputs only.

The Amplifier, Front control, Zone Indicator, Line Monitor and RPC communicate with each other via a CAN bus.

Up to 8 Amplifiers can be daisy chained via the CAN bus. Each amplifier supports:

- 100 Vac speaker circuit (which supports up to 3 branches)
- Strobe output
- 4 digital inputs
- 3 relay outputs
- RPC/BGM interface

The Front Control Switch and Indicator Module is an "ALL CALL" card and will control all amplifiers.

When individual Emergency Zone speech is required the Zone Indicator Module is required and the Amplifiers must be associated to an Emergency Zones from 1-8 using the EvacUwiz programming tool.

The Line Monitoring Unit allows a single amplifier 100V line to be split into 4 Paging Zones. Up to to 8 Paging zones can be programmed using the EvacUwiz programming tool.

Technical specification

The following details are a representative extract of the technical specification for the Ampac, EvacU, 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 variant designations

Ampac, EvacU, emergency warning control and indicating equipment modules are assembled in a variety of combinations to make Grade 2 or 3 systems of varying capacity and complexity (Refer Schedule of module designations).

The following is a schedule of validated variant designations of the certified/listed equipment as available for standalone options.

Standalone options		Hardware Included					
Item num.	**Description**	6010-0001 50W	6010-0002 25W	6010-0012 ZONE	6010-0013 Splitter	6010-0018 CTRL	PSE Size
6050-0010-0800	EVACU EWCIE 4 X 50W (200W) 10A	4	-	optional	optional	1	10 A
6050-0010-1100	EVACU EWCIE 25W 3A	-	1	n/a	optional	1	3 A
6050-0010-1200	EVACU EWCIE 50W 3A	1	-	n/a	optional	1	3 A
6050-0010-1400	EVACU EWCIE 2 X 50W (100W) 5A	2	-	optional	optional	1	5 A
6050-0010-1500	EVACU EWCIE 3 X 50W (150W) 10A	3	-	optional	optional	1	10 A

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Schedule of module designations

The following is a schedule of validated modules of the certified/listed equipment.

Item	Description	PCB Assembly Name
6010-0001	OWS 50W amplifier	BRD60AMP3-A
6010-0002	OWS 25W amplifier	BRD60AMP3-B
6010-0010	OWS external microphone	n/a
6010-0012	OWS 8 Zone indicator module	BRD60GIC1-A
6010-0013	OWS 4 way line splitter	BRD60LMU3-A
6010-0014	OWS 8 zone paging console	BRD60RPC3-A
6010-0018	OWS indicator & controls	BRD60CIC4-A

Schedule of optional functions with requirements

The following schedule of AS 4428.16:2015 optional (or optional-required) functions with requirements have been validated for the appropriate EWCIE grade as nominated.

Option		Grade 2	Grade 3
1.	Indications		
a.	Alarm signals (Cl 7.2)	Provided	Provided
b.	Alert signal (Cl 7.3)	Provided	Provided
c.	Audible signal of alarm signal reception (Cl 7.6)	Provided	Provided
2.	Controls		
a.	Delay before emergency warning condition (Cl 7.7)	Not permitted	Not permitted
b.	Phased evacuation for multi-zoned systems (Cl 7.8)	Provided	Not permitted
c.	Silencing the emergency warning condition from the emergency detection system (Cl 7.9.1)	Provided	Provided
d.	Silencing the emergency warning condition with a manual control (Cl 7.9.2)	Not provided	Not provided
e.	Reset of the emergency warning condition from the emergency detection system (Cl 7.10.1)	Provided	Provided
f.	Reset of the emergency warning condition with a manual control (Cl 7.10.2)	Provided	Provided
3.	Outputs		
a.	Output to warning devices (Cl 7.11)	Provided	Provided
b.	Emergency warning condition output signal (Cl 7.12)	Provided	Provided
4.	Disabled condition (Cl 9)	Not provided	Not provided
5.	Test condition and indication (Cl 10)	Provided	Provided
6.	Controls (continuation)		
a.	Automatic/manual mode control (Cl 11.1)	Provided	Provided
b.	Manual control to distributed EWCIE (Cl 11.2)	Not provided	Not provided
c.	Individual emergency zone controls (Cl 12.1)	Not provided	Not Provided
d.	All alert control (Cl 12.2.2)	Provided	Provided
e.	All live speech control (Cl 12.2.3)	Provided	Provided
f.	All evacuate control (Cl 12.2.4)	Provided	Provided
7.	Interface to external device(s) (Cl 13)	Not provided	Not provided
8.	Emergency microphone (Cl 14)	Provided	Provided
9.	Redundant power amplifiers (Cl 15.15)	Not Provided	Not Provided
10.	Operations		
a.	Dry heat, steady state test (operational) (Cl 18.9)	Not Claimed	Not Claimed

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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.

Property/characteristic	25 W OWS Amplifier		50 W OWS Amplifier	
Supply voltage	27 Vdc (nominal)			
Max Audio Load	25 W		50 W	
Quiescent current (no audio or strobe load)	20 mA		20 mA	
Max current (full audio load, no strobe load)	1.19 A		2.39 A	
THD	0.12%		0.89%	
Signal to noise Ratio	80.5 dB		82.1 dB	
Dimensions (mm)	100(L) x 77(W) x 35(H)		170(L) x 210(W) x 85(H)	
Strobe output	Monitored 1 A max, EOL 10 kΩ 5% 1/3 Watt 8 Xenon sets (208-0011) or 40 LED sts (4107-10005) Cable recommendation: Ampac TPS FLAT 2C 1.5 mm, WH STRIPE or similar			
100 V Audio Output	100 Vac, Monitored EOL 10 kΩ 5% 1/3 watt (2 branches use 100 kΩ 5% ¼ watt) Cable recommendation: Ampac TPS FLAT 2C 1.5mm, WH STRIPE or similar			
Alert / Evac Changeover time (secs)	Alert only, Evacuate only, 60, 90, 120, 180, 300 or under manual control via inputs			
Alert signal	To AS 1670.1 and NZS4512 including voice message			
Evac Signal	To AS 1670.1 and NZS4512 including voice message			
	Front controls	**Zone indicator**	**Audio Line Splitter**	**RPC**
Quiescent current	10.5 mA	10.5 mA	10.5 mA	10.5 mA
Max per system	1	1	4 (2 max per amp)	1
Emergency Zones	Up to 8 Emergency Zones can be configured and programmed.			
Paging Zones	Up to 8 Paging Zones can be configured and programmed.			
Standalone Cabinet	PSU Options: 3 A, 5 A and 10 A Colour: Surfmist Dimension: 500mm (H) x 405mm (W) x 150mm(D)			
Temp	-20°C to 70°C			
Humidity	0-95% non-condensing			

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	XF2929/R1	Evaluation for Conformity of the Ampac, EvacU Series, Emergency Warning Control and Indicating Equipment to the requirements of AS 4428.16-2015	20-Dec-2018	CSIRO Fire Systems Laboratory, AU.
Manual	MAN3072-9	Emergency Warning Control and Indicating Equipment (Occupant Warning Systems) Technical Manual MAN3072-9	23-May-2018	Ampac Technologies Pty Ltd WA, AU