



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1690	22-Jun-2004	Number 19	Issue date 23-Mar-2023	30-Apr-2024

Product designation

Ampac, ZoneSense PLUS, fire alarm control panel

(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, ZoneSense PLUS, fire alarm control panel has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4428.1-1998, 'Fire detection, warning, control and intercom systems - Control and indicating equipment - Fire'.
2. Australian Standard AS 4214-2002, 'Gaseous fire extinguishing systems'.
3. Australian/New Zealand Standard AS/NZS 1668.1:1998, 'The use of ventilation and airconditioning in buildings - Fire and smoke control in multi-compartment buildings' incl. Amdt 1 (22 November 2002).

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. Compatibility of this equipment with new or existing actuating devices should be verified prior to installation.

Issued by

Kai 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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Producer's description

The Ampac, ZoneSense PLUS, fire alarm control panel is a microprocessor based grade 1 system. Configured as a conventional 2, 4 or 8 Alarm Zone Facilities (AZF), it incorporates AZF programmable for resistive End of Line unit (E.O.L) or capacitive E.O.L. which provides individual zone alarm and fault/isolate indicators. It has two monitored and one unmonitored inputs. The system allows for fault monitored outputs for bell, warning system, ancillary control, ASE, alarm and fault. Additional outputs provided are for Aux. power which is a re-settable DC output for beam detector reset, unmonitored change over contact relay outputs for alarm and fault.

An agent termination board is included with the FIP which incorporates a number of input/output circuits.

The Ampac, ZoneSense PLUS, fire alarm control panel provides for a standard Firefighter Facility (FF) membrane push button switches and indicators with a back-lit liquid crystal display (LCD).

The Ampac, ZoneSense PLUS, fire alarm control panel incorporates two RS485 outputs, one to drive a selection of optional internal boards and/or modules and/or cards, which include:

- Fire fan module
- Agent release module
- Switch and indicator card
- Relay board
- Input board
- Sounder board
- Brigade interface board
- Zone mimic (repeater) indicator card
- General indicator card

The second RS485 multi-drop output to drive remote optional boards and/or cards, which include:

- Remote relay board
- Remote Zone Mimic (Repeater) Indicator Card

A combination of up to 18 boards, modules and/or cards can be driven from both RS485 outputs.

Technical specification

The following details are a representative extract of the technical specification for the Ampac, ZoneSense PLUS, fire alarm control panel and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Enclosure:		
Dimensions Metal Cabinet (mm)		500 H x 400 W x 140 D
Dimensions ABS Plastic Cabinet (mm)		300 H x 360 W x 100 D
Note: A Battery Box of the same dimension is available should the FACP be optioned to capacity.		
Temperature		-5°C to + 55°C
Humidity		25% to 75%
Maximum number of devices per conventional zone:		40
Cabling Requirements:		2 core 1.5 to 2.5mm ²
Power supply		
Input voltage		180 - 264 Vac
Output voltage		27.8 V (Set to 27.2 V)
Ripple voltage		100 mV
Regulation		2%
Fault Indication (at room temperature)	Volts high	28.8 Vdc
	Volts low	26.5 Vdc
Main board (302 — 7690)		
Quiescent current (QI)		40.5 mA
QI plus zone i in alarm		90 mA
Maximum current draw per output		500 mA
Output current		2 A
Current limiting		4 A
Maximum Charger Current		400 mA
Panel Minimum Operating Voltage / Battery Discharged		21 V

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Cut-off Voltage	
Battery Type: Sealed Lead Acid	2 x 12 V

Supplementary information

Evaluated modules

Module description	Assembly number	Rev	PCB number	Rev	Technical drawing number	Rev.
Fire Fan Module (Card)	BRD25FCB3-A	3.00	PCB0785-03	3.00	0129 1007	3.00
Fire Fan Module (Termination Board)	BRD25FTB3-A	3.00	PCB0780-03	3.00	0129 1010	3.00
Zone Mimic Indicator Card	BRD25GIB3-C	3.00	PCB0781-03	3.00	0129 1005	3.00
General Indicator Card	BRD25GIB3-A	3.00	PCB0781-03	3.00	0129 1005	3.00
Agent Release Module (Card)	BRD25ARB3-A	3.00	PCB0783-03	3.00	0129 1006	3.00
Agent Release Module (Termination Board)	BRD25ATB3-A	3.00	PCB0787-03	3.00	0129 1009	3.00
Switch / Indicator Module	BRD25GIB3-A	3.00	PCB0781-03	3.00	0129 1005	3.00
Relay Board	BRD25EWRB3-A	3.00	PCB0770-03	3.00	0129 1003	3.00
Input Board	BRD25SIPB3-A	3.00	PCB0778-03	3.00	0129 1004	3.00
Sounder Board	BRD25SOPB3-A	3.00	PCB0772-03	3.00	0129 1002	3.00
Brigade Interface Board	BRD25BBA3-A	3.00	PCB0779-03	3.00	0129 1001	3.00
ZoneSense PLUS Main Board	BRD25MCB4-A	4.00	PCB0769-04	4.00	0129 1008	4.00
Power Supply Unit	PSU 1887	3.00	PCB0813-03	3.00	0129 1011	3.00

Actuating devices

Device	Maximum number of devices per AZF module BRD25MCB4-A, 24 V	Reference	
Apollo Series 60, 55000-100AMP heat	40*	XF1966/R2, June 2004 AS 4428.1-1998	
Apollo Series 60, 55000-101AMP heat	40*		
Apollo Series 60, 55000-102AMP heat	40*		
Apollo Series 60, 55000-103AMP heat	17		
Apollo Series 60, 55000-104AMP heat	17		
Apollo Series 60, 55000-105AUS type A heat	40*		
Apollo Series 60, 55000-106AUS type B heat	40*		
Apollo Series 60, 55000-107AUS type C heat	17		
Apollo Series 60, 55000-108AUS type D heat	17		
Apollo Series 60, 55000-200AMP ionisation smoke	40*		
Apollo Series 60, 55000-210AMP integrating ionisation smoke	40*		
Apollo Series 60, 55000-300AMP photoelectric smoke	40*		
Apollo Series 60, 55000-240AUS ionisation smoke	40*		
Apollo Series 60, 55000-310AUS photoelectric smoke	40*		
Apollo Series 60, Part No. 53546-014 duct sampling unit (with 55000-310AUS) photoelectric smoke).	40*		
<i>The above Apollo detectors with 45681-205 base.</i>			
Ampac Fireray 2000 beam	40*		
Ampac FP/2 Manual Call Point	40*		
Demco D-101 Manual Call Point	40*		
Demco D-108 Manual Call Point	40*		
Hochiki DCA-B-60R Mk V type A heat	40*		
Hochiki DCC-A type A heat	40*		
Hochiki DFE-60B type B heat	40*		
Hochiki DCA-B-90R Mk I type C heat	40*		
Hochiki DCC-C type C heat	40		
Hochiki DFE-90D type D heat	40*		
Hochiki SIH-AM ionisation smoke	40*		

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Device	Maximum number of devices per AZF module BRD25MCB4-A, 24 V	Reference
Hochiki SIH-AMB ionisation smoke	40*	XF2307/R1, December 2006, Compatibility Assessment to AS 4428.0 Appendix E
Hochiki SLK-A photoelectric smoke	40*	
Hochiki HF24A Mk I Flame	6	
<i>The above Hochiki detectors with YBF-RL/4AH4M base.</i>		
Hochiki DCD-A type A heat	40*	
Hochiki DFJ-60B type B heat	40*	
Hochiki DCD-C type C heat	40*	
Hochiki DFJ-90 D type D heat	40*	
Hochiki SIJ-AS ionisation smoke	40*	
Hochiki SIJ-ASN ionisation smoke	40*	
Hochiki SLR-AS photoelectric smoke	40*	
Hochiki A100 Duct Probe with SLR-AS photoelectric smoke	40*	
Hochiki DH-98AS Duct Probe with SLR-AS photoelectric smoke	40*	
<i>The above Hochiki detectors with YBN-R/4A and YBO-R/4A bases</i>		
Ampac Orbis™, o/c 201-0500, class BR, heat detector	40*	
Ampac Orbis™, o/c 201-0504, class A2S, heat detector	40*	
Ampac Orbis™, o/c 201-0508, class CR, heat detector	40*	
Ampac Orbis™, o/c 201-0510, class CS, heat detector	40*	
Ampac Orbis™, o/c 201-0512, photoelectric type smoke detector	40*	
Ampac Orbis™, o/c 201-0514, multi-sensor type smoke detector	40*	
<i>The above detectors with Ampac Orbis™, o/c 201-0540 Timesaver base or o/c 201-0541 Timesaver LX base or o/c 201-0542 Timesaver relay base</i>		

* Maximum number of detectors per AZF/AZC allowed by code.

Surge current

Software

Device	Part Number	Version	Reference
Fire Fan Module (Card)	BRD25FCB3-A	A0785IA1	V1.2
Fire Fan Module (Termination Board)	BRD25FTB3-A	A0780IA1	V1.2
Zone Mimic Indicator Card	BRD25GIB3-C	A07811IA1	V1.2
General Indicator Card	BRD25GIB3-A	A07810IA1	V1.2
Agent Release Module (Card)	BRD25ARB3-A	A0783IA1	V1.2
Agent Release Module (Termination Board)	BRD25ATB3-A	A0787IA1	V1.2
Switch / Indicator Module	BRD25GIB3-A	A07812IA1	V1.2
Relay Board	BRD25EWRB3-A	A0770IA1	V1.2
Input Board	BRD25SIPB3-A	A0778IA1	V1.2
Sounder Board	BRD25SOPB3-A	A0772IA1	V1.2
Brigade Interface Board	BRD25BBA3-A	A0779IA1	V1.2
ZoneSense PLUS Main Board	BRD25MCB4-A	A0769IA1	V1.2

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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
Ident. type	Ident.			
Report No.	XF1966/R2	Assessment of Ampac ZoneSense Plus Fire Indicator Panel to AS 4428.1	17-Jun-2004	Scientific Services Laboratory, AU
Report number	XF2109/R2	Compliance assessment report: Ampac model Zonesense PLUS FIP in ABS/BLEND Cabinet to AS 4421.1-1998	25-Jun-2005	CSIRO, Manufacturing and Infrastructure Technology, AU
	XF2307/R1	Evaluation for Conformity Ampac Orbis Heat, Smoke and Multisensor detectors with Ampac ZoneSense PLUS FACP and Ampac FireFinder FIP Compatibility assessment to AS 4428.0 Appendix E	7-Dec-2006	