



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 3690</b>	28-Jul-2022	Number 1	Issue date 28-Jul-2022	30-Apr-2024

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## Product designation

**Ampac, 4210-015x series, input output interfaces**

(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, 4210-015x series, input output interfaces has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS ISO 7240.18:2018, 'Fire detection and alarm systems - Part 18: Input/output devices'.
2. Australian Standard AS ISO 7240.17:2021, 'Fire detection and fire alarm systems Part 17: Transmission path isolators'.

## 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.

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

David Whittaker  
Executive Officer – ActivFire Scheme



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## Producer's description

The Ampac, 4210-015x series, input output interfaces provide a monitored inputs for supervision of one normally open contact connected to a single pair of cables, and relay output contacts for control of plant equipment.

All inputs are monitored for both short- and open-circuit conditions. The outputs, where fitted, incorporate a single pole, voltage free clean contact changeover relay with common, normally open and normally closed terminals provided for field cabling. Each input output interface is loop-powered and incorporates bi-directional isolation circuitry to provide protection against detection loop short-circuits. An on-board LED provides status indication of the transmission path isolator.

Each device is fitted with 3 mm screw fixings (supplied) or provision for 35 mm DIN rail mount fixings. A 10-way DIP switch is provided to set the device address, loop protocol and LED control.

## Technical specification

The following details are a representative extract of the technical specification for the Ampac, 4210-015x series, short-circuit isolator, input/output modules 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

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

Variant		Description
Type	Ident	
Item No	4210-0151	Single input output device
	4210-0152	Dual input output device
	4210-0153	Triple input output device
	4210-0154	Quad input output device
	4210-0155	Single input interface device
	4210-0156	Dual input interface device
	4210-0157	Triple input interface device
	4210-0158	Quad input interface device

### Schedule of properties/characteristics

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

Item No.	4210-0151 / 4210-0155	4210-0152 / 4210-0156	4210-0154 / 4210-0158	4210-0153 / 4210-0157
Operating voltage	17 to 28 Vdc (nominal voltage 27 Vdc)			
Quiescent current	0.42 mA	0.58 mA	0.72 mA	0.66 mA
Power-up surge current	5.34 mA	5.61 mA	6.21 mA	5.97 mA
Maximum current LEDs On	3.00 mA	4.42 mA	7.98 mA	6.10 mA
Maximum current LEDs disabled	1.61 mA	2.42 mA	3.10 mA	3.07 mA
Relay output contact rating	1 A at 30 Vdc or Vac			
Operating Temperature	-40°C to 70°C			
Humidity	0 to 95% RH (non-condensing or icing)			
Weight	40 g	55 g	82 g	76 g

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## Schedule of transmission path isolator characteristics

The following is schedule of transmission path isolator characteristics of the certified/listed equipment.

Parameter	Description	Value
$V_{\max}$	Maximum line voltage	28 Vdc
$V_{\text{nom}}$	Nominal line voltage	27 Vdc
$V_{\min}$	Minimum line voltage	17 Vdc
$V_{\text{SO max}}$	Maximum voltage device isolates	16 Vdc
$V_{\text{SO min}}$	Minimum voltage device isolates	12 Vdc
$V_{\text{SC max}}$	Maximum voltage device reconnects	17 Vdc
$V_{\text{SC min}}$	Minimum voltage device reconnects	12 Vdc
$I_{\text{C max}}$	Maximum rated current	1 A
$I_{\text{S max}}$	Maximum rated switch current	3.3 A
$I_{\text{L max}}$	Maximum leakage current (test pulse)	32 mA
$Z_{\text{C max}}$	Maximum series impedance switch closed	60 mΩ

## 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	XF3359/R1	Evaluation for Conformity of the AMPAC 4210-015x series to the requirements of AS ISO 7240.18:2018 and AS ISO 7240.17:2021	27-Jul-2022	CSIRO Fire Systems Laboratory, AU.
Document	PDS4210-0151	AMPAC Advanced Warning Systems Ampac Input Output Interfaces	30-Jun-2022	Ampac Pty Limited, AU
	MAN3053-2	AMPAC Advanced Warning Systems, Input Output Device Range – Installation Guide Item Numbers – 4210-0050 to 4210-0057	17-Sep-2013	
	4210-0151-0154 INSTRUCTION REFERENCE.pdf	Instruction Reference AMPAC 4210-0151-0154	18-Jan-2022	