CSIRO Verification Services
Clayton, Victoria, Australia
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Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until
afp - 1122	27-Oct-1997	21	11-Apr-2023	30-Apr-2024

Product designation

Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel

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

Agent/distributor

Honeywell Security and Fire
9 Columbia Way, BAULKHAM HILLS, NSW, AUSTRALIA, 2153

Registrant

Johnson Controls Fire Detection
17 Mary Muller Drive, Hillsborough, Christchurch, NEW ZEALAND, 8022

Producer

Johnson Controls Fire Detection
17 Mary Muller Drive, Hillsborough, Christchurch, NEW ZEALAND, 8022

Conformance criteria and evaluation

The Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 2220.1-1989, 'Emergency warning and intercommunication systems in buildings - Equipment design and manufacture'.

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. If the Aiphone TSBE RED WIP handset is installed inside the Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel, the Sound Pressure Level is required to exceed 80 dB(A) at a distance of one metre and be distinguishable from fault / alarm audible indicator operation.

ii. When the Altronics Firephone A2095 WIP handset is used in the Emergency Control Panel (ECP), the distinctive audible call sounder shall be provided by the controlling ECP.

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 Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel is a dual microprocessor based system for the emergency warning and the intercommunication system. Under non-emergency conditions, the emergency warning system can be used for the distribution of background music or public address announcements.

The Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel consists of a master panel containing the control keys and status indicators for system function as well as the first two evacuation zones. To expand the ECP above the initial two zones, additional eight zone display/keyboard expansion modules are added. The theoretical limit to the number of zones is 256 and is dependant on the rating of the power supply and associated power buss.

The EWIS can be configured for 1 WIP per zone or 3 WIP's per zone. The equipment has been arranged through software driven control functions to support up to 16 remote Secondary Emergency Control Panels via a dual path, optically isolated asynchronous communication link.

Technical specification

The following details are a representative extract of the technical specification for the Inertia Fire Systems, Inertia 2000, emergency warning & intercommunication system panel and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Power supply/battery chargers:

Model	Power supply	Battery Charger	Reference
PSU 308	27.28Vdc @ 12 A	27.27 Vdc @ (12.24-Iq) A	F410/R1, Dec. 1991, AS 2220.1-1989 incl. amdt. 1
PSU 2403	27.31 Vdc @ 3 A	27.31 Vdc @ (3.05-Iq) A	"
SEPS 9009	27.23 Vdc @ 2 A	27.23 Vdc @ (2.68-Iq) A	"
PSU 2406	27.1Vdc @ 6 A	27.1 Vdc @ (6-Iq) A	XF1513/R2, Jan. 2000, AS 2220.1-1989 incl. amdt. 1 & 2. "
PSU 2412	27.1Vdc @ 6 A	27.1 Vdc @ (12-Iq) A	

Visible Alert/Evac. EOL:	2k7 Ohms
WIP EOL:	10k Ohms
FIP's/BGA's EOL:	10 V Zener Diode
Speaker EOL:	56k Ohms

Module Power Consumption

Module	(Iq) Quiescent Current	(Io) Operational
Typical System (MECP)	2.45 A	-
Typical System (SECP)	360 mA	-
ECP 9702	220 mA	8 mA per active led
EMSP 8911	10 mA	8 mA per active led
EMUX 9601	110 mA	-
EAMP 9001	60 mA	0.8 A - 10 W Amplifier 1.8 A - 25 W Amplifier
WIPS 9004	200 mA Plus 2 mA per WIP	-
FIB 8910	28 mA Plus 8 mA per input	-
FIPE 9004	8 mA per input	-
STRM 9502	40 mA per input	30 mA per strobe output plus strobe current
Fluorescent Light	-	0.27 A
PSU 2406	10 mA	-
PSU 2412	10 mA	-
ECM 9603	135 mA @ 9.6 Vdc to 85 mA @ 24 Vdc	-
SPIF9709	10 mA	10 - 80 mA
MWIP9903	80 mA	Plus 14 mA per WIP
AMP200	120 mA	12.4 A
HAMP9308	60 mA	3.1 A / 50 W Amp 6.2 A / 100 W Amp
RING9006	20 mA	
STBT9008	5 mA	
STBM9008	45 mA	Plus strobe current

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Supplementary information

External devices	Model/part num.	Reference
Redford extended range loudspeakers with M1109 multi-tapped transformer	C0626 and C2000 *(Note 1)*	F410/R1, Dec. 1991, AS 2220.1-1989, incl. amdt. 1
Audio Telex Extended range loudspeaker with ATC 5006R multi-tapped transformer	ATC 5010	
MERRY Electronic microphone	DM-538	
TELEX microphone	NC450D	.
University sound microphone	US602FL	
Warden intercom hand set	AIPHONE TB-RC	
Emergency alarm break glass:		
KAC of Alcester (England)	KWB901/SW	
Carters of Burnley (England)	P30	
Visible alarm device:		
KOBISHI 24 V/DC 250 mA strobe light	SL-5	
Warden intercom hand set	Altronics A2095 Fire Phone	XF1378/R1, May-98 AS 2220.1-1989, incl. amdt. 1 & 2.
Warden intercom hand set	Aiphone TBSE RED	XF1511/R1, May 1999 AS 2220.1-1989, incl amdt. 1 & 2

Note 1: Needs 5 terminals on speaker to facilitate coupling capacitor

Evaluated modules

Module	Assembly designation (code/rev.)	PCB designation (code/issue/rev.)	Technical drawing designation/ rev.	Reference
Emergency Control Module	PA0661 B/2 PA0663 B/2	ECP 9002 /B	ECP 9002/2 Sht's 1-9	F410/R1, Dec-1991 AS 2220.1- 1989 incl. amdt. 1
8 Zone Expansion Keyboard/ Display Module	PA0653 E/5 PA0659 E/5	EMSP 8911/E	EMSP 8911/5 Sht's 1-2	
Signal Interface Module	PA0857 C/2/2	SE 9004/C	SE 9004/2 Sht 1	
Tone Generator Multiplexer Module	PA0654 C/8	EMUX 9002/C	EMUX 9002/8 Sht's 1-4	
Audio Amplifier Module (4x10 W or 2x25 W (bridged)	PA0650 D/5	EAMP 9001/D	EAMP 9001/5 Sht's 1-3	
Line Transformer (4 x 10 W)	PA0655 2/3	TRAN 8872-1/2	TRAN 8872-1/3 Sht 1	F410/R1, Dec-1991 AS 2220.1- 1989 incl. amdt. 1
Line Transformer Module (2 x 25 W)	PA0664 2/3	TRAN 8872-2/2	TRAN 8872-2/3 Sht 1	
Fire Alarm/BGA Master Module	PA0851 E/7	FIB 8910/E	FIB 8910/7 Sht's 1-3	
Fire Alarm/BGA Expansion Module	PA0852 C/4	FIPE 9004/C	FIPE 9004/4 Sht 1	
Warden Intercommunications Phone Slave Module	PA0662 E/6/2	WIPS 9004/E	WIPS 9004/6 Sht's 1-5	
WIP Termination Module	PA0858 C/3	WTRM 9007/C	WTRM 9007/3 Sht 1	
Strobe Driver Module	PA0667 2/4	STBM 9008/2	STBM 9008/4 sht's 1-3	
Strobe Termination	PA0668 C/3/3	STBT 9008/C	STBT 9008/3 Sht 1	
Backplane Module	PA0660 A/1	BPLN 20000/A	BPLN 2001/3 Sht 1	XF1834/R1, February 2002, AS 2220-1989, incl. amdt. 1 & 2
Power Supply / Battery Charger	699-156 D/2	699-140/D	699-140/2.2 Sht 1	F410/R1, December 1991 AS 2220-1989, incl. amdt. 1

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Module	Assembly designation (code/rev.)	PCB designation (code/issue/rev.)	Technical drawing designation/ rev.	Reference
Siemens Mains Filter (4 Amps)	B84108-K40-A			
SECP Power Supply	PA0669 1/2	SEPS 9009/1	SEPS 9009/2 Sht 1	
SECP Power Supply Monitor	PA0666 1/3	EPSM 9007/1	EPSM 9007/3 Sht 1	
Power Supply / Battery Charger	PSU2403	699-160/B	699-160/1 Sht 1	
Power Supply Indicator	PA0678 A/1	699-159/A	699-159/1 Sht 1	
Murata Mains Filter (5 Amps)	PLF-2V-5RA-501			
WIP Master Phone Ring9006	PA 0656 C/3	RING 9006/C	RING 9006/3 Sht 1	
MECP Signal	PA0677 A/2/1	MEXP 9103/A	MEXP 9103/2 Sht 1	
Transformer Module 2 x 50 W zones	PA0691 A/4/2	HTRN 9308/A	HTRN9308/4	XB1238/R1, May 1994, AS 2220.1-1989, incl. amdt. 1
Transformer Module 1 x 100 W Zone	PA0692 A/4/3	HTRN 9308/A	HTRN9308/4	
High Power Audio Amplifier 2 x 50W / x 100W	PA0690 C/8/2	HAMP 9308/C	HAMP9308/8 Sht's 1-4	
Strobe Relay Module STRM9502	PA0697 D/4/2	STRM 9502/D	STRM 9502/4 Sht's 1-2	XF1135/R1,Feb. 1996, AS 2220-1989, incl. amdt. 1 & 2.
Secondary Panel Interface Module SPIF9506	PA0699 B/4/2	SPIF 9506/B	SPIF 9506/4 Sht's 1-2	
Secondary Panel Interface Module SPIF9709	PA0849 A/1/2	SPIF 9709/A	SPIF 9709/1	XF1466/R1,Aug. 1999, AS 2220-1989, incl. amdt. 1 & 2.
Emergency Control Panel ECP9702	PA0641 B/4	ECP9702/B	ECP9702/4, Sht's 1 to 9	XF1398/R2, AS 2220.1-1989, incl. amdt. 1 & 2
Emergency Control Panel ECP9702	PA0643 B/4	ECP9702/B	ECP9702/4, Sht's 1 to 9	
4 X 25W Line Transformer	PA0791 A/1/2	TRAN 9705-1/A	TRAN 9705-1/1, Sht 1	
4 X 25W Line Transformer with Relays	PA0792 A/1/2	TRAN 9705-2/A	TRAN 9705-2/1, Sht 1	
2 X 25W Line Transformer	PA0793 A/1/2	TRAN 9705-3/A	TRAN 9705-3/1, Sht 1	
2 X 25W Line Transformer with Relays	PA0794 A/1/2	TRAN 9705-4/A	TRAN 9705-4/1, Sht 1	
4 X 10W Line Transformer	PA0795 A/1/2	TRAN 9706-1/A	TRAN 9706-1/1, Sht 1	
4 X 10W Line Transformer with Relays	PA0796 A/1/2	TRAN 9706-2/A	TRAN 9706-2/1, Sht 1	
PSU 2406 'brick (ME0330) Monitor / Mains Termination Board	PA0811 B/3/2	1966-1-1/B	1966-1-1/3 Sht. 1	XF1513/R2, Jan-2000, AS 2220.1-1989, incl. amdt. 1 & 2.
PSU 2406 'rack mounting' (ME0330) Monitor / Mains Termination Board	PA0811 B/3/2	1966-1-1/B	1966-1-1/3 Sht. 1	
PSU 2412 'rack mounting (ME0330) Monitor / Mains Termination Board	PA0813 B/3/2	1966-1-2/B	1966-1-2/3 Sht. 1	
Powerbox Switching PSU	ME0332			

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Module	Assembly designation (code/rev.)	PCB designation (code/issue/rev.)	Technical drawing designation/ rev.	Reference
Evacuation Communications Module ECM9603	PA0698 B/3	ECM 9603/B	ECM 9603/3 Sht's 1 to 4	XF1273/R2, Jul-2000, AS 2220.1-1989, incl. amdt. 1 & 2 XF1669/R2, November 2000, AS 4428.0-1998
Evacuation Multiplexer Module EMUX9601	PA0757 B/5	EMUX 9601/A/1	EMUX 9601/5 Sht's 1 to 4	
200W Audio Amplifier AMP200	PA0647 B/2/2	AMP200/B	AMP200/2 Sht's 1-2	
200W Transformer TRAN200	PA0648 A/2	TRAN200/A	TRAN200/2 Sht 1	
8 Circuit Warden Intercommunication Phone (WIP) MWIP9903	PA0822 B/2	MWIP9903/B	MWIP9903/2 Sht's 1-4	XF1669/R2, Nov-2000 AS 2220.1-1989, incl. amdt. 1 & 2
WIP Slave Card WIPS2000	PA0842 C/4	WIPS2000/C	WIPS2000/4 Sht's 1-4	XF1834/R1, Feb-2002, AS 2220.1-1989, incl. amdt. 1 & 2
WIP Termination Module WTRM2000	PA09922 A/1	WTRM2000/A	WTRM2000/1 Sht 1	

System Eproms:

Module description	Reference
ECP-EVAC (SF0107) V 4.32 ECP-WIP Master Site Specific (SF0177) V 2.09 C$4885 ECP-EVAC with ECM9603 (SF0209) V 3.20 C$45A3	F410/R1, Dec-1991, AS 2220.1-1989, incl. amdt. 1. XL1091/R1, Jan-1996, Compliance Listing Audit XL1145/R1, Mar-1998, Compliance Listing Audit
MECP/SECP ECP WIP MASTER V 2.06 101A (U52) ECP EVAC V 2.24	XF1135/R1, Feb-1996, AS 2220.1-1989 incl. amdt 1 & 2 XL1145/R1, Mar-1998, Compliance Listing Audit
FIP/BGA Mater Module (SF0127) V2.02 C$C82D	XF1135/R1, Feb-1996, AS 2220.1-1989 incl. amdt 1 & 2 XL1145/R1, Mar-1998, Compliance Listing Audit
WIP Slave Module (SF0180) V1.51 C$14D11A	
STROBE DRIVER MODULE QE90 SLAVES (SF0120) V 1.49 C$4BF8	F410/R1, Dec-1991, AS 2220.1-1989, incl. amdt. 1.
EMUX 9601 (SF0130) QE90 EMUX 9601 (U1) V 1.14 C$75DA	
EMUX Speech (U2) 16 sec Standard V 1.01 EVAC/ALERT S 4843	
PSU2406/2412 (SF0189) U1 Ver. 1.4 0002F9BE	XF1513/R2, Jan. 2000, AS 2220.1-1989 incl. amdt. 1 & 2.
MWIP (SF0112) U5 V 1.30 SEG. 6201 C$284F	XF1669/R2, Nov. 2000, AS 2220.1-1989 incl. amdt. 1 & 2.
ECM Module ECM 9603 (SF0136), V5.04 Site Specific	XF1273/R2, Jul-2000, AS 2220.1-1989, incl. amdt. 1 & 2
Power Supplies PSU2406/2412 (U1) , V1.1	XF1513/R2, Jan-2000, AS 2220.1-1989, incl. amdt. 1 & 2
WIP 2000 Card U1, V1.66 $90A5	XF1834/R1, Feb-2002, AS 2220.1-1989, incl. amdt. 1 & 2