



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021

Page 1 of 8

## Product designation

**Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator panel**

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

## Agent/distributor

Simplex Fire Products  
47 Gilby Road, MOUNT WAVERLEY, VIC, AUSTRALIA, 3149

## Registrant

Johnson Controls  
17 Mary Muller Drive, HILLSBOROUGH, CHRISTCHURCH, NEW ZEALAND, 8022

### Producer

SimplexGrinnell  
50 Technology Drive, WESTMINSTER, MA, UNITED STATES, 01441

## Conformance criteria and evaluation

The Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator 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'.

## 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.

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



# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version		Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021	Page 2 of 8

## Producer's description

As a microprocessor based fire alarm system, the Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator panel can be used as a standalone system with one cabinet, or as a wide ranging system with one or more cabinets acting as a host panel to a number of remote cabinets.

The Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator panel is an analogue addressable system that, depending upon its configuration, accommodates up to 2,000 points. It has a 9A PSU with an option of two charging currents for batteries, a number of switched power outputs and relays, plus one integral addressable loop.

The Model 4100U-S1/4100ES-S1 is a particular configuration of a standard 4100U system packaged and documented to be suitable for applications requiring only one or two addressable loops, with a limited number of ancillary connections.

The system card bay has a back-plane designated Power Distribution Interface (PDI) which accepts a range of specific cards. This includes the IDNET and IDNET+ addressable loop interface cards which communicate with the existing MAPNET detectors and devices, and also with new devices, with a maximum of 250 (IDNET) or 246 (IDNET+) devices on the loop. The IDNET2 and IDNET2+2 provide addressable loop interfaces for up to 250 devices spread across two or four loops, respectively. Other PDI cards include 4-relay and 8-relay output cards, and a version of the IDNET card compatible with older Simplex QuickConnect detectors. The communications path between the 4100ES's controller and the interface cards can be extended to remote cabinets via the Remote Unit Interface (RUI) which can be arranged in a fault-tolerant ring configuration.

Existing 4100 series cards can be used, including the Simplex 8A power supply with a 4A battery charger.

A number of Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator panels can be networked by adding the 4100-6014 Network Interface Card (NIC) to each CIE. Two smaller media interface cards plug on to each NIC. The communication media can be either wired RS485 or fibre-optic. Long span networking over single-mode optical fibre can be done using the 4100-6072/4100-6073 Fibre-optic modems. These modems can also be used for long span RUI communications.

## Technical specification

The following details are a representative extract of the technical specification for the Simplex, Model 4100U/4100U-S1/4100ES/4100ES-S1, fire indicator panel and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

<b>System capacity:</b>	2000 addressable points, plus 2000 point of annunciation (500 addressable points on 4100U-S1/4100ES-S1) Up to 119 addressable cards
<b>Cabinet size:</b>	Dependent upon system configuration
<b>Cabinet material:</b>	1.6 mm Zintex
<b>Cabinet finish:</b>	Powder coated
<b>Cabinet colour:</b>	Cream Wrinkle
<b>Mounting:</b>	Wall mount
<b>Mains input:</b>	240 Vac, +6%, -10%, 50Hz
<b>Internal power supply:</b>	24 Vdc @ 9A
<b>Standby battery:</b>	24 V sealed lead acid up to 110 Ah (40 Ah max on 4100U-S1)
<b>Battery charger:</b>	27.3 Vdc (nominal)
<b>PSU supervision:</b>	Charger high/low, Battery low/fail
<b>Temperature:</b>	5°C to 45°C
<b>Humidity:</b>	10% to 90% RH non-condensing

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021
				Page 3 of 8

## Voltage and current ratings of modules and assemblies:

Module	Name	Quiescent	Alarm
n/a	Master Controller Assembly (includes SPS, CPU, CPU Motherboard with RUI I/F, Operator Interface with LCD)	373 mA	470 mA
4100-6035	Alarm Relay Card	15 mA	37 mA
4100-3101	IDNet Module without Devices - per device add - with 250 devices add	75 mA 0.8 mA 200 mA	115 mA 1 mA 250 mA
4100-1289	64/64 Controller plus Switch LED Modules - no LED on - per LED on add - with 64 LED's on add	20 mA 3 mA 210 mA	3 mA 210 mA
4100-0620	Transponder Interface, Basic Unit	87 mA	87 mA
4100-0625	Transponder Interface, Local Mode	112 mA	112 mA
4100-6014	Network Interface Card	28 mA	28 mA
4100-6056	Wired Media Module	55 mA	55 mA
4100-6057	Fibre Optic Media Module	25 mA	25 mA
4100-6038	Dual RS232 Interface	132 mA	132 mA
4100-3107	IDNet Module without Devices plus per Device	75 mA 0.8 mA	115 mA 1 mA
4100-3204	4 Relay Point Module	15 mA	60 mA
4100-3206	8 Relay Point Module	25 mA	180 mA
4100-6072	Left Port Fibre Modem	190 mA	190 mA
4100-6073	Right Port Fibre Modem	190 mA	190 mA
4100-7155	InfoAlarm Flexible User Interface	100 mA	127 mA
4100-9441	InfoAlarm Remote Display	186 mA	214 mA
4100-6014	Network Interface Card	46 mA	46 mA
566-719	MXP Master CPU	198 mA	245 mA
4100-3109	IDNET2 Loop Interface - per device add	100 mA 0.8 mA	100 mA 0.8 mA
4100-3110	IDNET2+2 Loop Interface - per device add	100 mA 0.8 mA	100 mA 0.8 mA

## Device loads

Device Type	Min – Max (Volts)	I <sub>Q</sub> Signal average (mA)	I <sub>A</sub> Average (mA)
Tyco MX, 814RB Relay Base	20-40	0.05	0.10
Tyco MX, 814SB Full Volume Sounder Base	20-40	0.4	15
Tyco MX, 814SB Mid Volume Sounder Base	20-40	0.4	12
Tyco MX, 814SB Low Volume Sounder Base	20-40	0.4	9
Tyco MX, 814IB Isolator Base	20-40	0.08	0.08
MIM800 Mini Input Module	20-40	0.275	0.275 - 2.8 Note 1
CIM800 Input Module	20-40	0.275	0.275 - 2.8 Note 1
SNM800 Sounder Notification Module	20-40	0.45	0.45 - 3.0 Note 1
RIM800 Relay Interface Module	20-40	0.285	0.29 - 2.8 Note 1
Tyco, CP820, Addressable Manual Call Point	20-40	0.275	0.275 - 2.8 Note 1
Tyco MX, 814CH, Multi-Sensor, Carbon monoxide / Heat Type A/B	20-40	0.27	3 Note 1
Tyco MX, 814H, Heat Type A, B, C, or D	20-40	0.25	3 Note 1
Tyco MX, 814I, Smoke Ionisation	20-40	0.33	3 Note 1

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021
				Page 4 of 8

Device Type	Min – Max (Volts)	I <sub>q</sub> Signal average (mA)	I <sub>A</sub> Average (mA)
Tyco MX, 814PH, Multi-Sensor, Photoelectric Smoke / Heat Type A/B	20-40	0.275	3 Note 1
Tyco MX, 814P, Photoelectric Smoke	20-40	0.275	3 Note 1
DIM800, Detector Interface Module	20-40	0.1	0.1

Note 1: With LED on.

## Supplementary information

### Evaluated modules

Product ID	Module description	Identification	Version
4100-7150	Master CPU Controller (4100U)	566-149	D
4100-7150	U31,32 Master CPU Controller Firmware Rev.	-	11.10
	CPU Mother Board	566-227	D
4100-3101	IDNET Module	566-044	E
4100-9848AU	SPS Power Supply/IDNET Board	566-071	H
4100-0620	Transponder Interface Card	566-094	C
4100-1282	8-Switch/16 LED Display R/Y	566-091	A
4100-1287	24-Switch/24-LED Display R	566-236	A
4100-1288	LED Switch Controller Board	566-060	A
4100-1284	8-LED/16 Switch Display R/G	566-092	A
4100-1281	8-LED/8-Switch Display Y	566-123	B
4090-9120	6-Point ( I/O)	565-984	A
4090-9116	Addressable Isolator (IDNET)	565-976	D
4090-9117	Addressable Power Isolator	565-978	C
4090-9118	Addressable Relay IAM with T-Sense	565-980	D
4090-9119	Addressable Relay IAM	565-981	C
-	Operator Interface	566-284	B
4100-6033	Alarm Relay Card	566-058	D
4100-6079	Internet Interface	566-355	B
4100-7155	InfoAlarm	566-536	B
4100-6072	Left Port FO Modem	566-571	C
4100-6073	Right Port FO Modem	566-571	C
4100-7158	Master NXP CPU (4100ES)	566-719	E
4100-7158	Master NXP CPU Firmware Rev.	-	14.01 Released as 1.02.04
4100-6014	Network Interface Card	566-793	A
4100-3107	IDNet + 250 Points	566-675	A
4100-3204	4 Relay Point	566-401	A
4100-3206	8 Relay Point	566-403	A
4100-3106	IDNet Quick Connect	566-044	G
4100-9441	Remote InfoAlarm	566-536	B
4090-9007	Signal IAM	566-550	C
4100-3109	IDNET2	566-1019	B
4100-3110	IDNET2+2	566-1019 and 566-1071	B  A

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021

Page 5 of 8

**Compatible battery:** AUSCELL model LA12-17, 17 Ah (6-50 Ah)

**Linear power supply & switch mode charger (combined):**

**Trade brand:** Simplex

**Model:** SPS

**Rated power** 214 W

**Rated frequency (Hz)** 50

**Rated supply voltage (range)** 240 Vac

**Rated output (VA) and/or rated secondary amps:** 10A RMS

**Battery charger limits as specified for indicator settings (@40 C°, 92% R.H.**

Charger high:  $\geq 28.4$  V

Charger low:  $\leq 26.2$  V

Battery low:  $\leq 24.3$  V

Nominal: 27.35 V

System Fail  $\leq 19.3$  V

**Power supply/battery charger:**

Nominal output voltage: @ 40°C, 92% R.H.	24 V
Max. rated output current: (3 NACs and 1 Auxilliary)	(8.97 A - I <sub>BAT</sub> ) A
Battery charge voltage setting:	
Maximum rated output: 1.4 A for 6-18 Ahr & 3.3.A for 28-50 A hr	27.35 V

**Actuating devices:**

Device	AZF module: 4100-3101 IDNET		Reference
	Max. number of addressable points on an analogue Loop	Max. number of addressable points on an analogue line	
4098-9714E analogue photoelectric smoke detector	250	40*	XF2003/R1, August 2004, AS 4428.1-1998
4098-9717E analogue ionisation smoke detector	250	40*	
4098-9733E analogue heat type A & B detector	250	40*	
4098-9754E analogue multi (heat/photo) detector	250	40*	
The above with 9714E, 9717E and 9733E use a (4098-) 9789E addressable base or 9794E addressable sounder base, or 9793 addressable isolator base (refer reference XF1506/R2). The 9754E uses a 9796E addressable base or 9795E sounder base			
4090-9116 IDNET comms isolator	250	40*	
4090-9118 Relay IAM with T-sense	250	40*	
4090-9117 addressable power isolator	250	40*	
4090-9119 Relay IAM with unsupervised input	250	40*	
4090-9120 6-Point - 4 inputs, 2 outputs	250	40*	
4090-9101 monitor ZAM	250	40*	XF2606/R1
4090-9032 manual call point	250	40*	
4090-9001/4090-9051 supervised IAM	250	40*	
4090-9007 Signal IAM	250	40*	

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021
				Page 6 of 8

Device	AZF module: 4100-3107 IDNET +		Reference
	Max. number of addressable points on an analogue Loop	Max. number of addressable points on an analogue line	
4098-9714E analogue photoelectric smoke detector	246	40*	XF2606/R1
4098-9717E analogue ionisation smoke detector	246	40*	
4098-9733E analogue heat type A & B detector	246	40*	
4098-9754E analogue multi (heat/photo) detector	246	40*	
The above detectors with 9714E, 9717E and 9733E use a (4098-) 9789E addressable base or 9794E addressable sounder base, or 9793 addressable isolator base (refer reference XF1506/R2). The 9754E uses a 9796E addressable base or 9795E sounder base			
4090-9116 IDNET comms isolator	246	40*	
4090-9118 Relay IAM with T-sense	246	40*	
4090-9117 addressable power isolator	246	40*	
4090-9119 Relay IAM with unsupervised input	246	40*	
4090-9120 6-Point - 4 inputs, 2 outputs	246	40*	
4090-9001/4090-9051 supervised IAM	246	40*	
4090-9101 monitor ZAM	246	40*	
4090-9032 manual call point	246	40*	
4090-9007 Signal IAM	246	40*	

Device	AZF module: 4100-3106 IDNET QC		Reference
	Max. number of addressable points on an analogue Loop	Max. number of addressable points on an analogue line	
	As for 4100-3101 IDNet, but including these QuickConnect detectors		XF2606/R1
4098-9713 analogue photoelectric smoke detector with integral base	250	40*	
4098-9757 QuickConnect2 TrueAlarm Sensor, with 4098-9788 Mounting base	250	40*	

Device	AZF module: 4100-3109/3110 IDNET2/2+2		Reference
	Max. number of addressable points on an analogue Loop	Max. number of addressable points on an analogue line	
4090-9120 Multipoint I/O	250	40*	XF2978/R1, September 2016 AS 4428.1-1998
4090-9119 Relay Individual Addressable Module (IAM)	250	40*	
4090-9116 Addressable Line Isolator (2 off)	250	40*	
4090-9118 Relay IAM	250	40*	
4090-9101 (Conventional) Zone Adaptor Module	250	40*	
4090-9032 Manual Call Point	250	40*	
4090-9051 Supervised IAM	250	40*	
4090-9008 Dual Contact Relay IAM	250	40*	
4098-9714EA Photoelectric smoke detector	250	40*	
4098-9733E analogue heat type A & B detector	250	40*	
4098-9754EA Combination Photoelectric Smoke/Heat detector	250	40*	
The above detectors with 9714E, 9717E and 9733E use a (4098-) 9789E addressable base or 9794E addressable sounder base, or 9793 addressable isolator base (refer reference XF1506/R2). The 9754E uses a 9796E addressable base or 9795E sounder base			

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

## Notes:

- The maximum specified loop/line resistance is 40  $\Omega$ .
- Maximum quiescent current required by 250 detectors is 125 mA. The maximum allowable current measured in non-alarm state at 25 V for a loop resistance of 40  $\Omega$  was 182 mA (using resistive load). This would increase with reduced loop resistance.
- The maximum number of LEDs switched on by an IDNET in alarm is 20. The 182 mA in non-alarm with a 40  $\Omega$  loop exceeds that requirement. In alarm the loop supply voltage increases by 5 V providing greater current than 182 mA. The Producer specifies 250 mA in alarm state.

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021
				Page 7 of 8

Device	Maximum number of devices allowed per 4100-5004 8 Zone Monitor Card (EOL=3k9)	Reference
Simplex, 4098-9618EA, Heat Type A	30	XF1727/R1, Jun 2001 AS 4428.1-1998
Simplex, 4098-9619EA, Heat Type B	30	
Simplex, 4098-9621EA, Heat Type C	30	
<i>The above detectors with Simplex 4098-9788EA base</i>		
Simplex 4098-9601EA Smoke	30	
Simplex 4098-9603EA Smoke	30	
<i>The above detectors with Simplex 4098-9788EA base</i>		
Tyco, T614A, Heat Type A	30	XF1910/R1, July 2002 AS 4428.1-1998
Tyco, T614B, Heat Type B	30	
Tyco, T614C, Heat Type C	30	
Tyco, T614D, Heat Type D	30	
Tyco, 614CH, CO and Heat	37	PHG0055 XF2125 Tyco compatibility review, AS 4428.0-1997
Tyco, 614I, Ionisation Smoke	40	
Tyco, 614P, Photoelectric Smoke	28	
Tyco, 614TA, Heat Type A	30	PHG0063 AS 4428.0-1997
Tyco, 614TB, Heat Type B	30	
Tyco, 614TC, Heat Type C	30	
Tyco, 614TD, Heat Type D	30	
<i>The above detectors with models Tyco 5B or Tyco/Minerva MUB/M614 base</i>		

Device	Maximum number of devices allowed per 2190-9156 Mapnet Monitor Zam (EOL=3k3)	Reference
Tyco, T614A, Heat Type A	20	XF1910/R1, July 2002 AS 4428.1-1998
Tyco, T614B, Heat Type B	20	
Tyco, T614C, Heat Type C	20	
Tyco, T614D, Heat Type D	20	
Tyco, 614CH, CO and Heat	25	PHG0055 XF2125 Tyco compatibility review, AS 4428.0-1997
Tyco, 614I, Ionisation Smoke	29	
Tyco, 614P, Photoelectric Smoke	19	
Tyco, 614TA, Heat Type A	20	PHG0063, AS 4428.0-1997
Tyco, 614TB, Heat Type B	20	
Tyco, 614TC, Heat Type C	20	
Tyco, 614TD, Heat Type D	20	
<i>The above detectors with models Tyco 5B or Tyco/Minerva MUB/M614 base</i>		

Device	Maximum number of devices allowed per 4090-9101 IDNET Monitor Zam (EOL=3k3)	Reference
Tyco, T614A, Heat Type A	20	XF1910/R1, July 2002 AS 4428.1-1998
Tyco, T614B, Heat Type B	20	
Tyco, T614C, Heat Type C	20	
Tyco, T614D, Heat Type D	20	
Tyco, 614CH, CO and Heat	25	PHG0055 XF2125 Tyco compatibility review, AS 4428.0-1997
Tyco, 614I, Ionisation Smoke	29	
Tyco, 614P, Photoelectric Smoke	19	
Tyco, 614TA, Heat Type A	20	PHG0063, AS 4428.0-1997
Tyco, 614TB, Heat Type B	20	
Tyco, 614TC, Heat Type C	20	
Tyco, 614TD, Heat Type D	20	
<i>The above detectors with models Tyco 5B or Tyco/Minerva MUB/M614 base</i>		

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1682</b>	10-Aug-2004	Number 18	Issue date 1-May-2020	30-Apr-2021
				Page <b>8</b> of <b>8</b>

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

**4100MXP**

Actuating/interface device type	Maximum addressable points on analogue loop	Maximum addressable points on analogue line	Reference
Tyco MX, 814CH, Multi-Sensor, Carbon monoxide / Heat Type A/B	250	40*	XF1924/R1, October 2002, AS 4428.1-1998
Tyco MX, 814H, Heat Type A, B, C, or D	250	40*	
Tyco MX, 814I, Smoke Ionisation	250	40*	
Tyco MX, 814PH, Multi-Sensor, Photoelectric smoke / Heat Type A/B	250	40*	
Tyco MX, 814P, Photoelectric	200	40*	XF1659/R4, AS 4428.1-1998
<i>The above detectors with models Tyco 5B / 5BI or Tyco/Minerva MUB/M614 base or Tyco MX 814RB, 814SB, 802SB and 814IB bases</i>			
Tyco, CP820, Manual Call Point	250	40*	XF1924/R1, October 2002, AS 4428.1-1998
Tyco MX, 814RB, Relay Base	250	40*	
Tyco MX, 814SB, Sounder Base (full volume)	60	40*	
Tyco MX, 814SB, Sounder Base (mid volume)	80	40*	
Tyco MX, 814SB, Sounder Base (low volume)	104	40*	
Tyco MX, 814IB, Isolator Base	128	40*	
MIM800, Mini Input Module	250	40*	
CIM800, Contact Input Module	250	40*	
SNM800, Sounder Notification Module	250	40*	
RIM800, Relay Interface Module	250	40*	
DIM800, Detector Interface Module	250	40*	

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