



Tasmania Fire Service

Code of Practice

Fire Protection Systems



Version Control and administration information

Document Name	Version	Date Document became Void
CoP May 2015 (Blue Cover)	Version 1.0	C.O.B 31 May 2017
CoP 1 June 2017 (Orange Cover)	Version 2.0	C.O.B 29 December 2017
CoP December 2017 (Orange Cover) Part 8.5 amended	Version 2.1	

DEFINITIONS	5
PREFACE	6
1 GENERAL	7
1.1 Purpose.....	7
1.2 Permit holder responsibilities.....	7
1.3 Compliance with relevant Building Regulations	8
1.4 Local fire protection systems	8
1.5 Privately monitored local fire protection system.....	8
1.6 Alterations or additions to a fire protection system or Emergency Warning and Intercom System	9
1.7 Inspection and initial testing	9
1.8 Additional inspection fees.....	9
1.9 Housing of sprinkler system control valves.....	9
1.10 Securing sprinkler system valves	9
1.11 Notification of completion of work or component of work.....	10
2 TFS APPROVED FORMS	12
(a) Form 6.1 - Installers Start Work Notification	12
(b) Form 6.2 - Application for Alarm Signalling Equipment (ASE)	12
(c) Form 6.3 - System Connection Application (Monitored FPS only)	12
(d) Form 6.4 - Application for Alarm Signalling Equipment Alteration.....	13
(e) Form 6.5 - Transfer of Ownership of a Fire Protection System Notification	13
(f) Form 6.6 - Disconnection of a Monitored Fire Protection System	13
(g) Form 6.7 – Advice from Service Provider	13
(h) Form 6.8 – Notification of Defect	13
3 FDCIE & ASE	14
3.1 Panel documentation.....	14
3.2 FIP storage.....	14
3.3 Networked FDCIE	14
3.4 All system and field controlled devices	14
3.5 Ancillary equipment (not required to call fire brigade).....	15
3.6 Alarm Verification Facility (AVF)	15
3.7 FDCIE cabinet	15
3.8 False alarm notification sticker	15
3.9 Alarm signalling equipment	16
3.10 ASE Status Schedule.....	17
3.11 Connecting Fire Suppression systems to the FDCIE	18
3.12 Networked FDCIE	18
4 CONNECTION & FEES	19
4.1 Alarm connections	19
4.2 Connection medium.....	19
4.3 Alarm connection procedure.....	19
4.4 Alarm on-lining	19

4.5	Alarm monitoring fees.....	19
4.6	False alarm charges	20
5	ISOLATIONS	21
5.1	Isolation due to alteration or additions to FPS's.....	21
5.2	Isolations to prevent false alarms	21
5.3	Disconnection and reconnection of an FDCIE	21
6	TFS FORMS	22
7	BLOCK PLAN & A4 ZONE DIAGRAMS	31
7.1	Block Plans.....	31
7.2	A4 Walkabout folder	32
7.3	Existing systems.....	33
7.4	Technical information	33
7.5	System Diagrams	33
8	MAINTENANCE REQUIREMENTS	35
8.1	After-hours service	35
8.2	Fire protection systems – Routine Servicing.....	35
8.3	Fire protection systems – Defect Reporting.....	35
8.4	ASE Keyed switch	36
8.5	Log book maintenance recording system	36
8.6	Maintenance of wall wetting sprinkler systems and Gaseous Systems	36
8.7	Missing/Illegible documentation.....	36
8.8	Compatibility.....	37
8.9	Previous Multi-drop systems	37
9.	APPENDIX A - ASE INSTALLATION GUIDELINES	38

DEFINITIONS

Abbreviations and terms used within this Code have the meanings listed below unless specifically stated.

003 Key	“Lockwood” 003 key
AS	Australian Standard/s
ASE	Alarm Signalling Equipment
AZ	Alarm Zone
CODE	Code of Practice (this document)
DESIGNER	The company responsible for designing the fire protection system
FBP	Fire Brigade Panel (includes old Mimic Panels)
FDCIE	Fire Detection Control and Indicating Equipment (includes Networked FDCIE’s)
FIRECOMM	The fire alarm monitoring facility of the Tasmania Fire Service
FPS	Fire Protection System/s (also referred to as “the system”)
INSTALLER	The permit holder or the permit holder’s employee/s undertaking the work
LFPS	Local Fire Protection System (not monitored by FireComm)
NCC	<i>National Construction Code - Volume 1 (Building Code of Australia)</i>
ON-LINING	The commencement of monitoring of the system by the TFS
PERMIT HOLDER	The company/person issued with a permit to install, maintain, repair and/or remove a fire protection system
REMOVAL	Removal of a FPS. (This also included Disconnection from the TFS monitoring facility)
RESPONSIBLE PERSON	The person responsible or accountable for the building. This person may be an owner, occupier, building manager, body corporate etc.
EWIS	Emergency Warning and Intercom System
TFS	Tasmania Fire Service
IN WRITING	Letter or email

PREFACE

The Tasmania Fire Service “*Code of Practice – Fire Protection Systems*” underpins the TFS permit system and is the principle guidance document for permit holders to install, maintain, repair and remove FPS.

This version of the Code supersedes all previous editions/versions and any existing copies should be immediately discarded. Version control details are identified in on the inside cover of this Code and the footer of each page.

Compliance with this Code is a key permit condition. It provides permit holders with information on the design, installation, repair, maintenance and removal of FPS’s, the connection and monitoring of the system by the TFS, as well as systems which provide local warning or protection from fire that are not monitored by the TFS. For the purpose of this Code, any system monitored by a monitoring service other than the TFS (e.g. a security company), is deemed to be a local fire protection system.

The NCC defines the relevant version of the AS, which buildings are required to have a FPS and which buildings are required to be monitored.

FPS’s referred to in this Code include those covered in the following Australian Standards:

- AS 1670** Part 1 – Fire
- AS 1670** Part 4 – Emergency Warning and Intercom Systems
- AS 2118** Part 1 - Automatic Fire Sprinkler System – General requirements
- AS 2118** Part 2 - Automatic Fire Sprinkler System – Drencher systems
- AS 2118** Part 3 - Automatic Fire Sprinkler System – Deluge systems
- AS 2118** Part 4 - Automatic Fire Sprinkler System – Sprinkler protection for accommodation buildings not exceeding four storeys in height
- AS 2118** Part 5 - Automatic Fire Sprinkler System – Home fire sprinkler system
- AS 2118** Part 6 - Automatic Fire Sprinkler System – Combined Sprinkler and hydrant system in multistorey buildings
- AS 4214** Gaseous Fire Extinguishing Systems

1 GENERAL

1.1 Purpose

The purpose of installing FPS's in a building is to protect life and property by giving early warning of fire to building occupants or to control the development of fire and where required, simultaneously notify the TFS to enable brigade intervention to commence as soon as possible.

Monitoring of FPS's by the TFS may be required by the NCC through legislation or initiated following a request from a responsible person.

Fires that occur in buildings fitted with FPS's may be investigated to ensure the system operated as intended and was being maintained in accordance with *AS1851*, the *General Fire Regulations*, the *Building Regulations* and this Code.

1.2 Permit holder responsibilities

It is the responsibility of a permit holder to ensure that:

- All works undertaken on FPS's are undertaken in accordance with the 'Approved Design' completed by an Accredited Fire Services Designer.
- A building surveyor is responsible for the works and a valid building permit has been issued.
- The installation, maintenance or repair of FPS's complies with the requirements of the relevant AS.
- Any employee who installs, maintains, repairs or removes a FPS under their permit is competent to undertake that work and are aware of the requirements of the Building Act 2016 for 'prescribed works'.
- They notify fire@fire.tas.gov.au within 14 days of any change in relation to contractual obligations for maintenance of FPS to assist the TFS to keep up to date information for the premise.
- Any works contracted to a third party are only performed by a Sub-Contractor that holds a current TFS permit

In cases where specified Australian Standards or other requirements cannot be fully complied with for any reason, or where the performance of an existing or new system (including occupant warning) is likely to be compromised in any way as a result of any new installation or alteration, TFS must be advised in writing and the problem also clearly stated in completion documentation and in the FPS log book.

Note 1: All requests for dispensation to alter the requirements of any AS referenced by this Code is to be submitted by the permit holder to the relevant building surveyor who will forward it to the Chief Officer for comment.

Note 2: The TFS may recognise relevant International Standards and codes for the installation of FPS components providing the use of them is referred to the relevant Building Surveyor who will forward this to the Chief Officer for comment.

IMPORTANT NOTE:

The Chief Officer may conduct an audit on previous works completed by a Permit Holder at the time of their Re-Application or at the discretion of the Chief Officer.

1.3 Compliance with relevant Building Regulations

Permit holders must be aware that the current *Building Regulations* prescribes the installation or alteration of a FPS or any part of a FPS as building work and therefore requires the involvement of a building surveyor. This requirement may not apply where certain repairs or maintenance work fall within the exemption parameters described in the relevant regulation of the current *Building Regulations*.

It is the responsibility of the permit holder to (either):

- Consult with a building surveyor in order to determine whether a building permit is required for the proposed work;
- Where a Building permit is deemed to be required, ensure it has been issued prior to the commencement of any work and note the permit number along with the building surveyor's name on the Installer's Start Work Notification or where the work is deemed by a building surveyor to consist of minor alterations or minor repairs therefore exempting it from requiring a permit, provide a copy of the building surveyor's written advice of the exemption with the Installer's Start Work Notification.

or

- Determine if the work is exempt under the current Building Regulations from the requirement for a building permit because the repair or maintenance work is undertaken for purpose of maintenance of an existing system or system component using similar materials, equipment, installations and components to those being replaced. In this case, the existing level of safety and health features must not in any way be diminished.

1.4 Local fire protection systems

All requirements detailed in this Code apply to LFPS's with the addition of the following wording to be affixed to the FDCIE.

"LOCAL FIRE ALARM SYSTEM ONLY, TO CALL THE FIRE BRIGADE RING 000"

in lettering 25mm high and in a contrasting colour to the fire indicator panel.

1.5 Privately monitored local fire protection system

The following documentation must be forwarded to TFS upon completion:

- An 'Installer's Statement' and 'Commissioning Test Report'; and
- Confirmation that relevant contact details for the monitoring service provider and the responsible person are readily available on site.

1.6 Alterations or additions to a fire protection system or Emergency Warning and Intercom System

Where a FPS or EWIS is being progressively upgraded or altered in any way, a failure or fault of an existing component/s must not affect the performance of any new component/s. Where this performance standard cannot be achieved or uncertainty exists, the TFS is to be informed so that the potential impact/s can be assessed before a final inspection is undertaken and the building occupied.

1.7 Inspection and initial testing

An inspection of a completed installation will be carried out by a TFS Building Safety Consultant once receipt of a request for inspection is received from the relevant Building Surveyor.

This may include activation of random devices to ensure the relevant information is displayed on the FDCIE and corresponds with the A4 Zone Diagrams provided.

Note: Where a re-inspection of a FPS is required to be undertaken by TFS Building Safety due to the installation not complying fully with the installers statement or completion certificate (as appropriate), or the standard of work for some other reason is unacceptable at the time of the initial inspection, a re-inspection fee may be levied upon the permit holder.

1.8 Additional inspection fees

A fee may be charged where a request has been made by a designer, permit holder or a responsible person to process plans or carrying out inspections of FPS's.

Note: The TFS may also seek to cover the costs of undertaking inspections and providing reports relating to breaches of this Code or AS's by the permit holder.

1.9 Housing of sprinkler system control valves

All manually operated valves, other than gauge cocks, installed in areas accessible to the public or unauthorised persons, are to be housed in a locked, secure enclosure.

Note: The enclosure shall be keyed alike to the main entrance door or the master key system operating throughout the complex, a 30mm padlock accessible with a 003 key or a locking device accessible with a 003 key.

1.10 Securing sprinkler system valves

Locks installed to secure sprinkler system valves are to be a 30mm padlock operable with a 003 key or a "Jacksons" flat brass lock

Note: The same lock type is to be used on all locked valves in the installation.

1.11 Notification of completion of work or component of work

The permit holder is to forward to fire@fire.tas.gov.au the appropriate Installer's Statement and Commissioning Report (found in the Appendix of the relevant AS referenced by the NCC) following the completion of work or component of work (e.g. staged) on any new FPS installation, or alteration or addition to an existing FPS, regardless of whether or not a building permit is required.

Note: Incomplete forms will not be accepted

- Fire detection and alarm systems

A System Designers Statement, Installers Statement and System Commissioning Statement (Appendix E, F and G of AS 1670.1) is to be supplied. If the nominated permit holder is not doing the commissioning, these MUST be completed by the person commissioning the system.

Where the system is incompatible, incomplete or does not fully comply with the current version of AS 1670.1 for whatever reason, the "Installer's Statement" is to clearly detail the extent of work completed and the reason/s for non-compliance.

Note: For works involving six (6) or less devices that have been relocated or added to existing zone/s, Appendix G and a copy of the logbook entry will be accepted. For six (6) or less devices on a new zone, commissioning documents as required by the current AS1670.1 are to be provided.

- Emergency Warning and Intercom System

A copy of the completed Installer's Statement and the Commissioning Test Report (Appendix E and F of AS 1670.4) are to be supplied.

Note: Where the system is incompatible, incomplete or does not fully comply with the current version of AS 1670.4 for whatever reason, the Installer's Statement is to clearly detail the extent of work completed and the reason/s for non-compliance.

- Sprinkler systems & Combined sprinkler and hydrant systems

A copy of the Installers Completion Certificate as required by the relevant AS and a Certifiers Report as appropriate (see note below):

For systems required to comply with AS 2118 part 6, Hydrant test results are to be provided on the approved TFS Hydrant Test Result Sheet which can be found on the TFS Website: <http://www.fire.tas.gov.au>

- Fire Safety and You
- In the Workplace
- Hydrant Test Result Sheets

Note: The addition and / or relocation of less than 20 Sprinkler heads to an existing system utilising the same / similar operating characteristics does not require an Independent Certifiers Report.

However, the Chief Officer will require an Independent Certifiers Report if additions to the system have included 20 or more Sprinkler Heads since the system was originally designed and certified or re-certified due to previous works.

The Chief Officer may also request an independent Certifiers Report at his/her discretion.

- Gaseous fire extinguishing systems

A copy of the Commissioning Checklist is to be provided.
(refer to AS ISO 14520.1-2009 for relevant documentation)

2 TFS APPROVED FORMS

Note: Incomplete forms will be returned to the permit holder for completion or clarification.

(a) Form 6.1 - Installers Start Work Notification

The permit holder is to forward to fire@fire.tas.gov.au a completed installer's Start Work Notification prior to commencing any new installation, alteration, addition or removal of a FPS covered by this Code, including building work that is deemed to be exempt by a building surveyor from requiring a permit. In addition to general information about the proposed work, the permit holder is also to provide specific information about the following:

- New systems - whether or not the system is to be monitored by FireComm;
- Existing systems - whether the system is monitored by FireComm;
- Whether or not the new or altered system is likely to fully comply with the relevant Australian Standard/s;
- Building surveyor details; and either
- The building permit details;

or

- A copy of the building surveyor's written advice declaring the work exempt from the need for a building permit.

(b) Form 6.2 - Application for Alarm Signalling Equipment (ASE)

The permit holder is to forward to fire@fire.tas.gov.au a completed Application for an Alarm Signalling Device, accompanied with a Purchase Order, at least **14 days prior** to the projected date connection is required.

This allows the ASE to be programmed and an alarm shell to be created in Firecomm. This will facilitate live testing and the on-lining of the alarm.

(c) Form 6.3 - System Connection Application (Monitored FPS only)

The permit holder is to forward a completed System Connection Application to fire@fire.tas.gov.au before the connection procedure and alarm on-lining will proceed. The intent of this form is that it is to be sent in with the commissioning documentation which informs the Tasmania Fire Service that the installation is ready for connection.

For partial FPS's (e.g. staged work), a commissioning report is required confirming the area/section to be monitored has been tested and is fit for purpose.

Note 1: To expedite the on-lining of the alarm (which enables monitoring to commence at the earliest opportunity by FireComm), the permit holder may, on behalf of the client, opt to forward to Building Safety, mailing and contact details of the person/s responsible for the payment of TFS monitoring fees and where possible at least two (2) after hours contacts for the building.

Note 2: Keys for the premises to enable afterhours access by the TFS are not to be provided at this time. Keys and other routine information about the building will be collected by the relevant TFS brigade or district staff.

(d) Form 6.4 - Application for Alarm Signalling Equipment Alteration

The Permit holder is to forward to fire@fire.tas.gov.au a completed Application for Alarm Signalling Device Alteration Form at least 7 days prior to the date the new statuses are expected to be live tested. This allows the ASE to be reprogrammed and the shell up dated prior to live testing.

(e) Form 6.5 - Transfer of Ownership of a Fire Protection System Notification

The permit holder is to provide this form to the new building owner to complete and forward to fire@fire.tas.gov.au thus keeping the TFS informed of change of ownership.

Note: It is the intention that Form 6.5 is completed by the new owner not the permit holder.

(f) Form 6.6 - Disconnection of a Monitored Fire Protection System

The permit holder is to provide this form to a building owner where they have been requested to disconnect a fire protection system from the TFS. The permit holder is to inform the building owner that they require, in writing, authorisation to disconnect a FPS from a Building Surveyor.

Note: It is the intention that Form 6.6 is completed by the building owner not the permit holder. This form is to be forwarded to fire@fire.tas.gov.au once completed and MUST be accompanied with a letter from a Building Surveyor authorising the disconnection of the FPS or a building permit for demolition work which includes disconnection/removal of a FPS.

(g) Form 6.7 – Advice from Service Provider

The permit holder is to complete this form to notify TFS that they are no longer the contracted service provider or they are the new contracted service provider for a FPS. Once completed, this form is to be forwarded to fire@fire.tas.gov.au

(h) Form 6.8 – Notification of Defect

The permit holder is to complete this form to notify TFS that they have had several unsuccessful attempts to notify the responsible person of maintenance issues requiring attention. Once completed, this form is to be forwarded to fire@fire.tas.gov.au

3 FDCIE & ASE

3.1 Panel documentation

Documentation, as required by AS1670.1, along with the manufacturer's operating manual is to be provided in or adjacent the FDCIE panel. If applicable, a printed copy of the electronically captured maintenance records are to be in a separate folder.

Note 1: Failure to provide relevant panel documentation could delay approval and building occupancy and under certain circumstances may be considered a breach of permit conditions.

3.2 FIP storage

Where the FDCIE Panel does not adequately store the documentation required by this Code, (i.e. the documentation falls out when the panel door is opened, or has to be folded or is placed behind the panel circuitry), an appropriate document holder must be provided and positioned adjacent to or as close as practical to the FIP.

Document holders, usually in the form of a clear see-through Perspex Cabinet/Enclosure and must be lockable and only accessed by a 003 key.

Note 1: Miscellaneous documentation is not to be kept in the FIP document holder, (e.g. Fire Door Logbooks, Emergency Lighting Logbooks etc.). Premise Evacuation Procedures may be included in the FIP document holder if the system incorporates an EWIS.

Note 2: Log books that have been completed and are older than 2 years may be archived at the premise and are to be available on request.

3.3 Networked FDCIE

Where networked FDCIE's are installed in separate buildings, the activation of the warning devices or ancillary equipment remote to the building of activation is optional.

The FDCIE sounder in these remote buildings must activate and indicate the affected building on the (LED) display on all FDCIE's to notify management of an issue within another building of the complex.

3.4 All system and field controlled devices

The operation of System and Field Controlled Devices must not be affected by, or wired in conjunction with plant or warning system isolate facilities.

Note: Where a separate specific isolate function is provided, controls and indicators are to be clearly visible when the FIP door is closed.

3.5 Ancillary equipment (not required to call fire brigade)

In some instances, ancillary fire detection and alarm system equipment not required to call the fire brigade, may be included on the FIP. However a request in writing to the TFS to include this equipment is required.

Note: It may be acceptable for sprinkler flow switches and pump running alarms and the like to register a separate status with FireComm.

3.6 Alarm Verification Facility (AVF)

The Alarm Verification Facility (AVF) must operate for all compatible devices in accordance with AS1670.1

3.7 FDCIE cabinet

All FDCIE's are to be accessible with a 003 key.

Note: For FDCIE's contained within a cupboard, refer to *AS1670.1*

3.8 False alarm notification sticker

The installer must ensure that the following information is placed in a prominent position on or adjacent to the FIP or the sprinkler system's control valves on new installations. For older installations, if the existing information is illegible, damaged or missing, a new sticker is to be provided as part of the maintenance requirements.

Please refer to next page



Tasmania Fire Service

WARNING YOU COULD BE FINED

The *Fire Service Act 1979* permits the Tasmania Fire Service to levy a charge for all **UNNECESSARY** false alarms

TO AVOID THIS COST YOU SHOULD:

- (a) Ensure all testing and maintenance of the fire alarm system is carried out in accordance with the relevant Australian Standards by a permit holder.
- (b) Monitor everyday work practices to ensure excessive residues that may cause false alarms such as dust, steam etc. are contained.
- (c) Ensure relevant alarm zones are isolated during any building work or renovations.

For more information on isolating the fire alarm system or about how to avoid possible false alarms, contact your fire protection maintenance company.

Note: Printed, self-adhesive copies of this notice are available through fire@fire.tas.gov.au who will in turn, notify a TFS Building Safety Consultant in your region.

3.9 Alarm signalling equipment

Comprehensive ASE Installation Guidelines are included in **APPENDIX A** of this document.

The ASE must be rigidly mounted using either self-tapping screws or metal threads and nuts inside the FDCIE and must be fitted as close to the front of the panel as possible and in a position which makes it impossible to close the FIP door with the test key still in the ASE.

The ASE aerial is not to be installed in a location readily accessible to the general public. Installation in the wall space or ceiling space is recommended.

The terminal strip/resistor board provided is to be installed and wired as per the installation instructions included in Appendix A.

Note: Where there is difficulty in fitting the ASE in a particular type of cabinet, TFS Communication Services must be contacted to provide an alternative method.

Where an alternative method is used, the following points must be complied with:

- The alternative method must be clearly labelled to indicate the respective ASE box/s and the installer must clearly advise the responsible person that the key is to be removed from the ASE for security purposes; and
- The ASE test key must be kept in an approved location;

3.10 ASE Status Schedule

FDCIE signals must be latching for all 'F' functions (F1 to F6) and be relevant to each activity as follows:

- 'F1' – Fire Detection – (smoke, thermal, BGA etc.);
- 'F2' – Sprinkler;
- 'F3' – Gas Discharge (when the gas actually discharges);
- 'F4' – Networked FDCIE;
- 'F5' – Networked FDCIE;
- 'F6' – Networked FDCIE or deluge system (if in addition to a sprinkler system).
-
- 'A' 1, 3, 5 or 6 Functions are to be for any of the following:
-
- 'A1' – Anti-Tamper/Pump run;
- 'A3' – Gas detection;
- 'A5' – Pump Fault (low fuel, low water, crank isolate);
- 'A6' – (future use)

'A' 2 will be FDCIE System Fault

'A' 4 will be FDCIE Zone Isolate

Low Battery is a separate signal.

The intermixing of new fire detection systems with existing systems or components is acceptable providing the new or additional system is fully compatible with the existing system or components and can provide all the required information to FireComm (i.e. Fire, Test, Isolate, Fault and Low Battery).

Note: Additional 'F' and 'A' signals may be available and must be discussed with the TFS Communications Division prior to the ASE application being submitted.

3.11 Connecting Fire Suppression systems to the FDCIE

Where a FDCIE is installed at the same premises as a Fire Suppression System, the system is to be connected to a latching AZ on the FIP with a separate ASE input. When a number of systems are installed, each installation is to be connected to a separate latching AZ group on the FIP.

Where a system is connected to an FIP, the AZ is to be marked accordingly. (i.e. "GASEOUS FIRE EXTINGUISHING SYSTEM" or "SPRINKLER SYSTEM")

Note: Relevant warnings are to be included in the A4 walkabout folder advising people about the procedures to be followed and any hazards associated with a discharge of the gaseous agent.

3.12 Networked FDCIE

All AZ's shall be clearly identified at all FDCIE's either by:

- Sequential AZ numbering for the whole network.

or

- The FDCIE number/location and the AZ number.

Where this occurs, copies of the A4 AZ diagrams for the whole network are to be provided at each individual FDCIE.

Block plans are to be provided at each networked FDCIE and must clearly indicate the location of other FDCIE's associated within the FPS.

Note: The practice of Multi-drop of ASE's is no longer permitted due to the risk of lightning strikes affecting the transmission path.

4 CONNECTION & FEES

4.1 Alarm connections

For a FPS to be monitored by FireComm, the following must occur:

- The FPS or part of the FPS to be monitored has been commissioned and tested and the relevant reports, statements and a System Connection Application have been provided;
- The FPS or part of the FPS has been live tested to FireComm;
- The FPS or part of the FPS has been inspected by a TFS Building Safety Consultant; and
- After hours or emergency contact numbers for the building are provided to the TFS.

Note: The installer is not responsible for all the above, however they may wish to expedite the connection process by arranging for some or all the above to occur.

4.2 Connection medium

The network is run as a virtual private network by the TFS on the Telstra mobile network. The sim and services connecting the ASE are owned by the TFS.

Note: UTAS and/or other sites may be exempt from this connection medium.

4.3 Alarm connection procedure

The connection process begins with the permit holder lodging an Installers Start Work Notification – Form 6.1 with the TFS.

An Application for an Alarm Signalling Device – Form 6.2 is then submitted (accompanied with a purchase order) at least 14 days before the projected connection date. Upon receipt of this application TFS Communication Services will provide an ASE programmed as requested and issue an alarm number while the alarm shell will be created by FireComm. Once the shell is created live testing can then occur.

Once a System Connection Application – Form 6.3 is received detailing the afterhours contacts and billing address details, accompanied by the relevant commissioning documentation and a satisfactory inspection has been conducted by a TFS Building Safety Consultant, the FPS can be on-lined.

4.4 Alarm on-lining

An inspection to approve on-lining of the alarm can be initiated by a Building Surveyor requesting a Certificate of Occupancy Report from the Chief Officer or at the request of the permit holder.

Note: Where an inspection for on-lining of the alarm is specifically requested by the permit holder prior to a Certificate of Occupancy Report being completed, the permit holder is responsible for all TFS costs associated with the inspection.

4.5 Alarm monitoring fees

The responsible person is liable for payment of annual alarm monitoring fees.

Note: Fees and charges are reviewed annually. A detailed list can be obtained by contacting the accounts payable section of the TFS.

4.6 False alarm charges

Section 109A of the Fire Service Act 1979 authorises the TFS to charge for avoidable false alarms generated by FPS's.

A false alarm charge may apply in the following circumstances:

- A false alarm caused by a testing or maintenance practice. This form of false alarm will attract an immediate charge, payable by the permit holder or responsible person conducting the test or maintenance.
- A false alarm resulting from work practices. This form of false alarm will attract an immediate charge, payable by the responsible person.
- For any reason, other than described in dot points 1 and 2 (above), the number of false alarms exceed 2 within a 60 day period. This type of false alarm may attract a charge payable by the responsible person.

Note: Where several FPS's are monitored by the TFS via one wireless network connection, charges for false alarms that occur within the same 60 day period will apply to each separate FPS.

5 ISOLATIONS

5.1 Isolation due to alteration or additions to FPS's

Where the isolation of AZ's are required as a result of alterations and/or additions on an existing (active) system, the affected AZ's are to be isolated for the shortest practical period to enable work to be undertaken. An email must be sent to fire@fire.tas.gov.au when isolations are planned and likely to be over an extended period (a working week or longer). Unplanned short term isolations, the technician may advise FireComm via phone.

Note: FireComm's monitoring equipment automatically records all isolations and de-isolations of systems and is regularly scanned for anomalies such as overnight or extended isolations.

5.2 Isolations to prevent false alarms

Where a permit holder is requested to isolate part or all of a FPS due to work being undertaken that may cause a false alarm, the following is to apply:

Confirmation that the person requesting the isolation is authorised to do so;
All relevant people have been informed of the intended isolation (eg. responsible person/s, receptionist, building contractor, director of nursing etc.);

Only the device/s likely to be affected by the work should be isolated or protected (eg. a single room may only require the installed sprinkler head to be protected from heat or a dust cover placed on the smoke detector);

The occupant warning system, door closers etc. are not effected should an alarm occur elsewhere in the building; and

The affected area is isolated for the shortest practical period .

5.3 Disconnection and reconnection of an FDCIE

Should an FDCIE be disconnected for any reason and then reconnected, upon the reconnection a commissioning test shall be conducted and the results of the test sent to fire@fire.tas.gov.au in the form of the relevant Appendix of *AS1670.1-2015*

If a building remains occupied while this work is carried out, upon completion it is essential that the commissioning test and subsequent report are completed at the time of reconnection. If the building is not occupied when work is completed, the commissioning test and subsequent report shall be completed as soon as practicable.

Note: The commissioning test is to be conducted to ensure that all zones and existing or new auxiliary functions have been correctly installed and connected, and operate as designed.

6 TFS FORMS

Please refer next page

These forms have been designed to be completed electronically.



TASMANIA FIRE SERVICE – FORM 6.1

Installers Start Work Notification

1. Scope of work: New System Extension Minor Alteration/Repair Removal
2. Is the system to be monitored? Yes No Currently (Alarm #
3. Client name:
4. Premise name:
5. Premise address:
6. Designer name:
7. Building surveyor:
8. Building permit details:
Is a permit required for this work? Yes No
If so has a permit been issued? Yes No
If yes, provide permit number:.....
If no, have you attached the Building Surveyor's written advice? Yes No
9. Work is planned to commence on: [Click here to enter a date.](#)
10. Work is due to be completed by: [Click here to enter a date.](#)
11. When completed, is the new or altered system likely to fully comply with the relevant Aust. Standard/s
Yes No If no why?
12. Type of System:
Sprinkler - AS2118.1 AS2118.2 AS2118.3 AS2118.4 AS2118.5 AS2118.6
Detection - Heat Smoke Flame ASDS
Occupant Warning - Sounders Amplified System EWIS
Other.....

Complete this section for extensions or alterations only.

13. Number of alarm zones: Existing Additional New total
14. Number of detector/sprinkler heads: Existing Additional New total
15. Where in the building will the work take place:
- Comments:

16. Name of installer:
17. Permit Holder (Business) name:
18. Permit Holder address:
19. Phone:..... Fax:..... Email:
20. Signature: Date: [Click here to enter a date.](#)

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.2

Alarm Signalling Equipment (ASE) Application

Note: This form must be submitted at least **14 days prior** to the expected connection date and must be accompanied with a Purchase Order.

Name of client:

Name of premises:

Address of premises:

.....

Installing company:

Installer's name:

Installer's address:

.....

From the **Function Schedule** box below, please identify the function/s relevant to each status to be monitored and list that function next to the relevant **Status Symbol/s**.

Status Symbol

F1	A1
F2	A2 System Fault
F3	A3
F4	A4 Zone Isolated
F5	A5
F6	A6

Function Schedule

F1 – Fire Detection (Smoke, Thermal, BGA etc)	A1 – Anti Tamper/Pump run
F2 – Sprinkler	A3 – Gas Detection
F3 – Gas Discharge	A5 – Pump Fault (Crank Isolate, Low Water, Low Fuel etc)
F4 – Networked FDCIE (1)	A6 (Future use)
F5 – Networked FDCIE (2)	
F6 – Networked FDCIE (3) or Deluge System (if additional to F2)	

Installers signature: Date: [Click here to enter a date.](#)

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.3

System Connection Application

Alarm number:

Name of client:

Name of premises:

Address of premises:

.....

Installing company:

Installer's name: (print)

Type of System:

Sprinkler - AS2118.1 AS2118.2 AS2118.3 AS2118.4 AS2118.5 AS2118.6

Detection - Heat Smoke Flame ASDS

Occupant Warning - Sounders Amplified System EWIS

Other -

Building after hours emergency contacts (a minimum of 2 A/H contacts where possible):

Name A/H contact no.

Name A/H contact no.

Day contact no Fax no

Note: The above named persons may be contacted for after hour alarm activation or until keys have been registered with the TFS.

Billing details:

Name/Company

Mailing address

.....

Email Fax no

Note: Billing details are required for accounting purposes and for false alarm or fault notification.

Installers signature: Date: [Click here to enter a date.](#)

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.4

Application for Alarm Signalling Equipment Alteration

Name of Client:

Name of Premises:

Address of Premises:

.....

Installing Company & Name:.....

Installer's Contact:

Existing Status Symbol & Function Schedule

F1	.....	A1	.....
F2	.....	A2	System Fault
F3	.....	A3	.....
F4	.....	A4	Zone Isolated
F5	.....	A5	.....
F6	.....	A6	.....

New Status Symbol & Function Schedule

From the **Function Schedule** box below, please identify the function/s relevant to each status to be monitored and list that function next to the relevant **Status Symbol/s**.

F1	.....	A1	.....
F2	.....	A2	System Fault
F3	.....	A3	.....
F4	.....	A4	Zone Isolated
F5	.....	A5	.....
F6	.....	A6	.....

Function Schedule

F1 – Fire Detection (Smoke, Thermal, BGA etc)	A1 – Anti Tamper/Pump run
F2 – Sprinkler	A3 – Gas Detection
F3 – Gas Discharge	A5 – Pump Fault (Crank Isolate, Low Water, Low Fuel etc)
F4 – Networked FDCIE (1)	A6 – (Future use)
F5 – Networked FDCIE (2)	
F6 – Networked FDCIE (3) or Deluge System (if additional to F2)	

Installers signature: Date: [Click here to enter a date.](#)

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.5

Transfer of Ownership of a Fire Protection System Notification

AUTHORISATION

Current Owner:

Address of Monitored Building:

Alarm Number:

Date of Transfer of Ownership: [Click here to enter a date.](#)

1. Previous Owner/Representative of Premises:

Name:

Signature:

Title:

2. New Owner/Representative of Premises:

Name:

Signature:

Title:

Building After Hours Emergency Contacts: (a minimum of 2 After Hour (A/H) contacts where possible):

Name: A/H Contact No:

Name: A/H Contact No:

Day Contact No: Fax No:

Note: *The above named persons may be contacted for after hour alarm activation or until keys have been registered with the TFS.*

Billing Details:

Name/Company:

Mailing Address:

.....

Email: Fax No:

Note: *Billing details are required for accounting purposes and for false alarm or fault notification.*

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.6

Disconnection of Monitored Fire Protection System

AUTHORISATION

Name and Address:

Alarm Number: Building Safety File Number:

1. Current Owner/Representative of Premises:

Name:

Signature:

Title:

Date: [Click here to enter a date.](#)

2. Building Surveyor Approval Attached: Yes No

Note: Approval cannot be granted unless a Building Surveyor has approved the disconnection.

TFS to complete the following:

3. Building Safety Consultant:

Name:

Signature:

Date:

4. Alarm Off-lined by FireComm Operator:

Name:

Signature:

Date:

Comments:

.....
.....
.....
.....

Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001



TASMANIA FIRE SERVICE – FORM 6.7

Advice from Service Provider

Site Name:

Site Address

.....

.....

.....

Type of system: Sprinkler Detection Other

TFS Alarm Number:

Type of advice: Termination of contract Acquisition of contract

Comments: (e.g. Termination of 12 Month Installation Contract)

Date of Termination/Acquisition of Contract: [Click here to enter a date.](#)

Service Provider:

Permit Number:

Name:

Company:

.....

Address:

.....

Phone: Fax No:

Email:

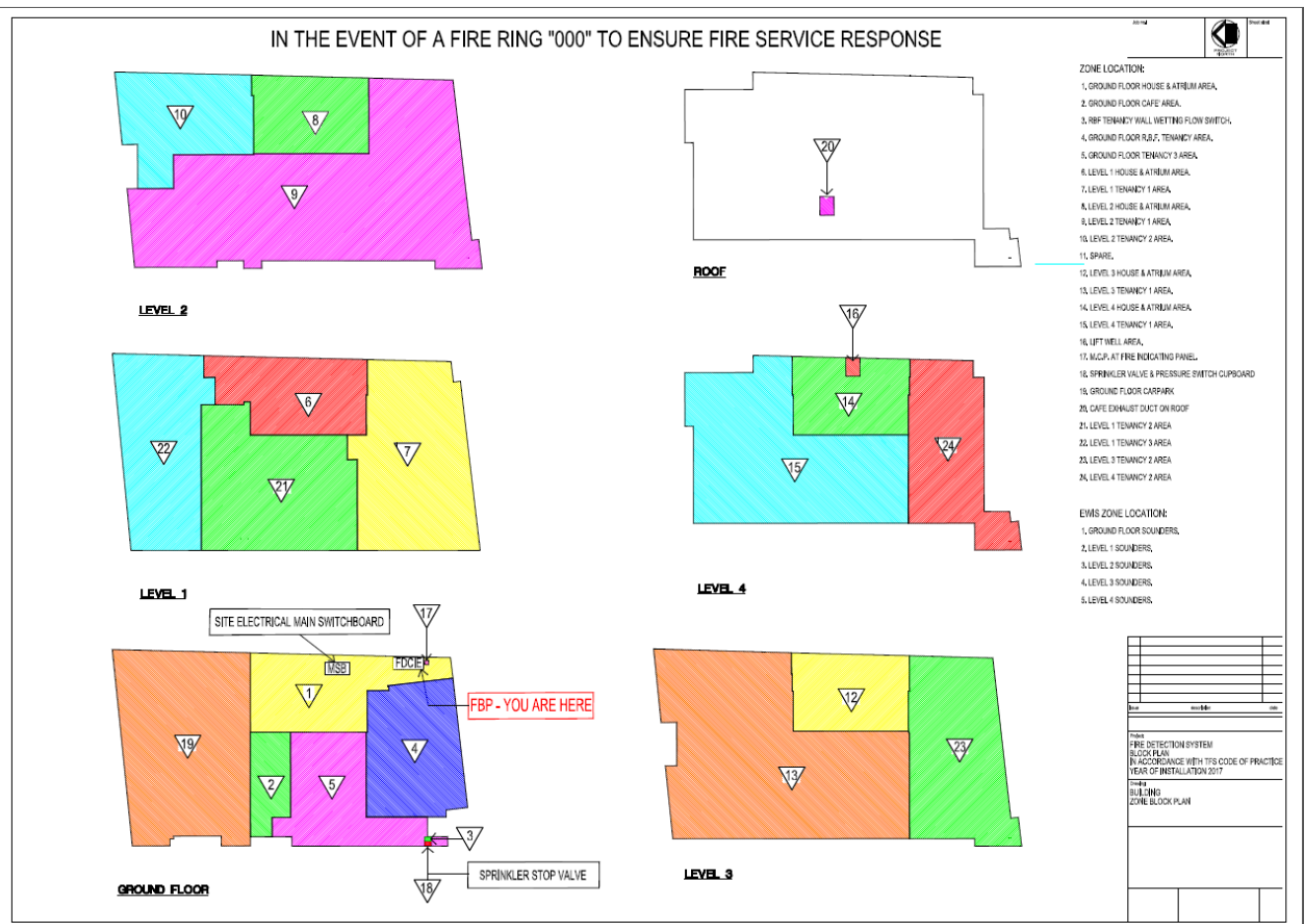
Note: Once completed return to fire@fire.tas.gov.au or Tasmania Fire Service, GPO Box 308, Hobart 7001

7 BLOCK PLAN & A4 ZONE DIAGRAMS

7.1 Block Plans

For new installations, Block Plans are to show colour coded areas covered by the FPS and must include all information required by *AS1670.1 Section 3.10* (example below). For existing installations, refer to section 8.7 of this Code.

Note: Locations of walls may be omitted from Block Plans to reduce the requirement of updating each time the floor plan changes due to minor alterations but must be indicated on each A4 walkabout AZ diagram.



7.2 A4 Walkabout folder

NEW SYSTEMS

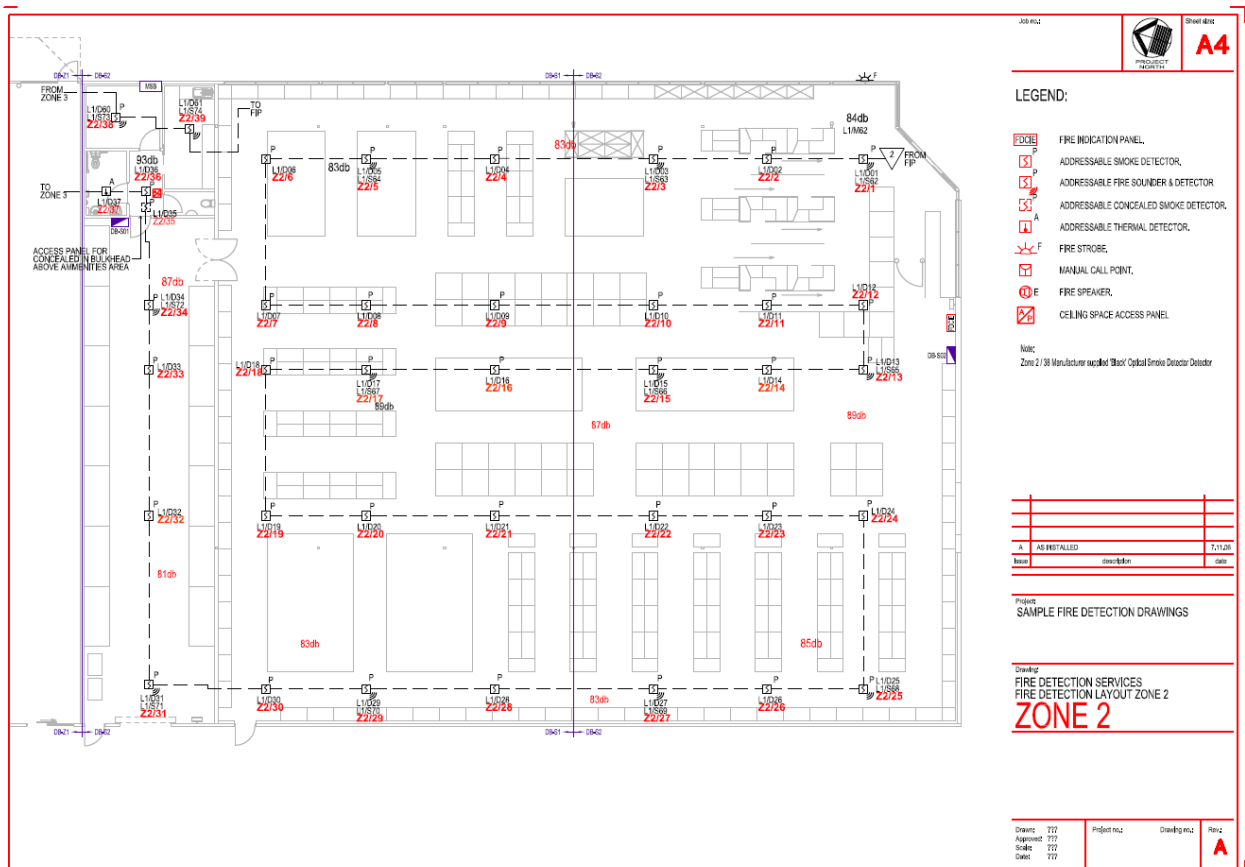
An A4 size folder for fire service use only is to be provided for each FDCIE and if applicable, at each Mimic Panel. This A4 Walkabout folder must contain the following information in order:

- A cover page indicating “A4 WALKABOUT FOLDER FOR FIRE SERVICE USE ONLY”
- An A4 size system block plan. (a smaller block plan may be included on each AZ diagram if room permits)
- AZ diagrams, in numerical order and at a scale that is easily legible with the following information: (example on next page).
 - Each individual device is to be identified as required by *AS1670.1* Appendix D, including type of detector. (e.g. I, P, CO, IR, A, B, C, D or E etc.)
 - Zone numbers and the device numbers must be indicated by the zone number then the detector number (e.g. 4.21, 4/21, Z4/21 or Z4/D21). Loop/detector information may be utilised, providing it reflects the information displayed on the FDCIE LCD. Either is to be clearly legible and a prominent font size.
 - Location of walls and doors (this must accurately reflect the actual end of works floor plan)
 - Location of access points for concealed devices. Indicated by a box with the letters A/P within it.
 - Identify individually, detectors that are factory coloured and their location. (e.g. Smoke Detector 4/21 - Black)
 - An indication of orientation, either by a North symbol, Street name along the diagram or a smaller site plan with the associated zone highlighted
- Location of occupant warning devices and sound pressure levels. (excluding buildings fitted with a EWIS which will require a separate folder/section)
- Manufacturers technical information for all installed devices.

Note: If a zone has been removed from an existing system, a page with the wording “Zone (number) has been removed” in a prominent font size, followed by a brief explanation, is to be inserted in lieu of the AZ diagram.

The overlaying of colour coded circuit diagrams may be accepted for addressable systems, providing any overlay is clearly legible and the AZ’s displayed are limited to no more than four (4), this must be discussed with the Building Safety Consultant in your area prior to implementation.

Failure to provide suitable AZ diagrams could delay approval and building occupancy and under certain circumstances may be considered a breach of permit conditions.



7.3 Existing systems

It is the responsibility of the contracted installer to ensure that the relevant Zone diagram is updated to the requirements of AS1670.1 and section 7.2 of this Code (New Systems). The updated alarm zone diagram **MUST** be included in the A4 Zone Diagram Folder at the conclusion of building works. For access to the relevant Zone Diagram, refer to 7.4 of this Code.

7.4 Technical information

Where the manufacturer’s technical information is not available due to the age of the installed devices, a waiver for this requirement is to be sought from the TFS on a case by case basis and the amount of missing information is to be recorded in this folder.

The location of the ASE aerial must be indicated on the device specification and the Installers working diagrams.

7.5 System Diagrams

As installed diagrams, Block Plans and A4 Zone Diagrams belong to the building owner.

The permit holder who originally installs the system is to:

- Supply electronic drawings to the building owner / owners representative on completion of the works with as installed drawings and a block plan of the building.
- Inform the building owner / owners representative the requirements of AS1851 and this Code to maintain electronic copies of drawings throughout the life of the installation.

Following building works, the permit holder is to:

- Comply with the requirements of AS1670.1-2015 Section 3.5 (incl. Appendix J)
- Request the previous zone diagram and block plan from the building owner / owners representative to:
 - Update the diagram to indicate the finished floor plan of the building.
 - Provide a printed copy in the A4 Zone Diagram Folder and, If required, an updated block plan. (Both A3 adjacent the FDCIE and A4 in the A4 Zone Diagram Folder)
 - Return the electronic versions of the relevant updated diagrams to the building owner / owners representative to ensure all system drawings are current.
 - Ensure updated Zone diagrams are orientated the same way and appear similar to the remainder of the diagrams in the “Fire Service Use” A4 Zone Diagram folder.

8 MAINTENANCE REQUIREMENTS

8.1 After-hours service

A Permit Holder **MUST** provide after-hours service within a reasonable time frame. Normally 4 hours for high life hazard buildings, hospitals hotels and the like, 8 hours for all others. Staff must be able to diagnose faults and have access to sufficient components to re-instate the system.

8.2 Fire protection systems – Routine Servicing

Routine servicing of a FPS can only be carried out by a permit holder. Once contracted, the permit holder must take all reasonable measures to ensure that regular testing and correct maintenance of the FPS/s are carried out in accordance with the relevant AS (refer to the Director's Specified List) and shall employ suitably competent/qualified personnel to perform these works.

8.3 Fire protection systems – Defect Reporting

If the FPS is found to have defects during routine servicing, the permit holder must advise the responsible person in writing stating the classification of the defect (refer AS1851 section 1) and detail the location of the defect.

Where a defect is identified in a FPS which requires rectification, every effort must be made to rectify as soon as possible.

Where action is not taken by the responsible person to rectify any defect, the permit holder is to advise TFS, stating the classification of the defect and provide all relevant details regarding the defect on the TFS Form 6.8, provided in this document, within the period indicated below.

Critical Defect – 5 working days

Non-Critical Defect – 2 logbook entries

Non-Conformance – 3 Logbook entries

If any of the above defects affect the operational response of the TFS, the permit holder is to notify the TFS within 5 working days.

For clarification of items affecting the TFS operational response, contact a Building Safety Consultant in your area.

If a responsible person cannot provide access to their building or part thereof to provide servicing in accordance with the relevant AS for 3 consecutive months, notification must be sent to fire@fire.tas.gov.au who will in turn, notify a TFS Building Safety Consultant in your region.

8.4 ASE Keyed switch

The ASE is fitted with a key operated switch that has three positions; TEST, NORMAL and ISOLATE.

- TEST Position - automatic defaults after 2 hours. Used to isolate devices/zones on the FDCIE or testing procedures.

Note: a person must remain at the FDCIE, if another zone is activated (other than the one being tested) a call to TFS on '000' is to be made to respond the relevant brigade.

- NORMAL Position – Normal operation (no maintenance procedures taking place)
- ISOLATE position – Only to be used where an isolate to the FDCIE is required (e.g. Motherboard replacement, Card replacement). This is NOT to be used for routine testing of installed devices.

Note: The premise remains isolated indefinitely until actioned by TFS communications staff. Any FIRE status from the premise whilst the ASE is in ISOLATE is recorded but not acted on by TFS.

The use of the ISOLATE position for testing purposes will be seen as a breach of your Permit Conditions.

8.5 Log book maintenance recording system

Log books are to be completed in full, clearly identifying the service provider and all log book entries must be clearly legible, including:

- The name of the person servicing the **FPS** (printed) and a signature
- Details of faults and/or non-compliance

NOTE: Capturing of routine service records must be in accordance with AS1851-2012 (refer 1.16). Where electronic capturing of records is permitted, these must be clearly legible and a hard copy must be left in the **relevant FPS** on the day of the routine servicing. Where this information cannot be left at the **relevant FPS** due to possible damage, signage is to be provided at the **relevant FPS** to indicate the location of the routine service records.

8.6 Maintenance of wall wetting sprinkler systems and Gaseous Systems

Where the system is a standalone system (i.e. it is not connected to, or does not form part of a sprinkler system), a log book must be kept in or near the sprinkler cupboard to enable recording of testing and maintenance results. If the system is subject to weather conditions, a weatherproof document holder **MUST** be provided.

8.7 Missing/Illegible documentation

Permit Holders are required to advise building owners of the documentation requirements of AS1851-2012 and this Code. Where a building owner refuses to correct documentation issues the Permit Holder should advise TFS Building Safety. (See 7.1 and 7.2 and 8.3 above)

8.8 Compatibility

Where additional devices are installed on a FPS (dry or wet system), such as in tenancy alterations, the new devices/sprinklers shall have similar operating characteristics to the existing devices/sprinklers. In a new area of protection, the new devices/sprinklers may have different operating characteristics but shall satisfy the requirements of the relevant AS for the particular hazard class.

8.9 Previous Multi-drop systems

Where a multi-drop system no longer works due to damage from lighting strike, poor connections etc.. These will no longer be replaced as multi-drop and require to have a separate ASE connected to the TFS Monitoring facility.

9. APPENDIX A - ASE INSTALLATION GUIDELINES

Please refer to next page



Tasmania Fire Service

The Tasmania Fire Service ASE installation guidelines and procedures for Alarm System installers.

Provided by Communications Services. For further information and technical advice on ASE installation, please contact the Communication Services Manager on 6230 8691

Romteck or ASE (Alarm Signalling Equipment) installation

TFS supply the ASE, antenna and functional terminal strip (FTS) ready for installation into the fire detection control and indicating equipment (FDCIE).

The ASE is designed to fit in the FDCIE without adjustment. The ASE requires a 1amp (minimum) supply at either 24 or 12 Volts.

- The ASE installation requires volt free contacts from the FDCIE.
- The volt free contacts are connected to the FTS; see the last page for connection details.
- The FTS contains a series connected resistive network for every input on the ASE; see page 6.
- As the FDCIE status change, the contact alters the resistance of the FTS network. The ASE interprets the change and an appropriate F1, A2, A4 etc., is forwarded to FireComm (the TFS control room).

ASE pre-delivery programming

The contractor completes the 6.1 and 6.2 forms for TFS Building Safety as well as a purchase order to TFS Communications Services for the ASE. Include in the order an antenna complete with a 3-metre cable and an FTS. The ASE will then be programmed ready for installation. This can be picked up at 16 Brisbane St Hobart or posted (cost of delivery will be included in the invoice).

Antenna location and antenna coaxial cable

If there is a very poor mobile phone signal on site, please contact TFS Communications Services on 6230 8691.

For the premise to be connected reliably with FireComm, the antenna location, hence the reception of the signal will make a marked difference between a good and unsatisfactory reception with the mobile phone network.

For the best reception of the mobile phone signal the vertically oriented antenna mounted outside in free space, away from the roof access and any steel facia, structures, pipes, cable trays and frames is the best location.

If the antenna coaxial cable needs extending TFS can supply a cable of 3 or 5 metres on request, at cost.

The antenna must not

- Be mounted in the ceiling space if the roof is metal or foil insulation is installed.
- Be mounted horizontal or fixed against metalwork.
- Or mounted inside the panel.
- Be cable tied or pushed into the existing cables in the cable duct.
- Be pushed horizontally into the wall cavity hole amongst other cables.
- Be located behind metal cavities surrounding the panel.
- The antenna cannot be mounted upside down outdoors, it will fill with water.

Labelling the antenna is advantages for other service personnel and it is recommended that the antenna location be marked on the FIP information sheet.

If an outdoor mounting is not possible

The indoor antenna location should not be readily accessible to the public if the antenna is out of sight from responsible persons. The antenna though must be still be reasonably accessible to service personnel.

- An indoor antenna location near glass windows may be possible. The antenna can be pointing down vertically.
- Installing the antenna inside a plastic conduit or duct and securing this assembly vertically above the panel, but not next to or against any metal work, and it does not need to go as high as the ceiling.
- If installing it vertically in a wall cavity, the antenna separation from other cables must be considered as future cable installs will interfere with the reception.

In addition, the maintenance access to those locations will be difficult without a door access. See AS/CA S009:2013 Table 2 Page 55.

Coaxial cable inside the FIP

The coaxial cable run inside the FIP should not be in the same loom as other cables.

Inside the FDCIE, keep the coaxial run towards the ASE away from the switchmode power supply and the processor boards.

Coil the excess coaxial away from the switchmode supply and the processor boards.

See AS/CA S009: 2013 Table 2 Page 55.

Testing for signal strength

The ASE has a simple way of checking the signal strength before the antenna location is fixed permanently. **The minimum required signal is -85dbm as recommended by Romteck.**

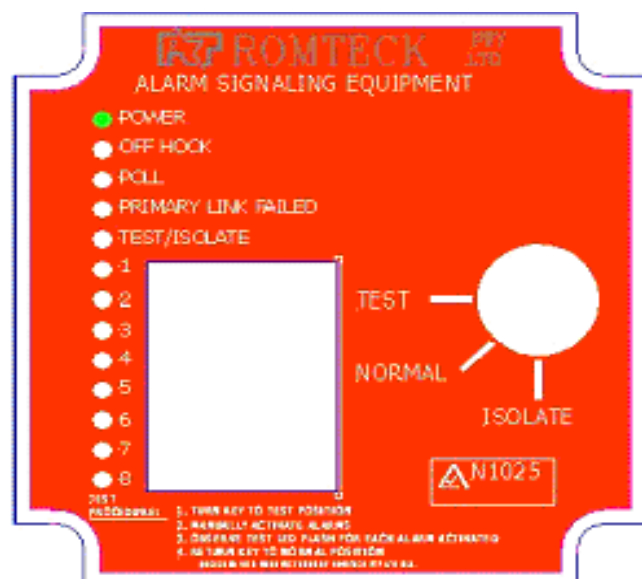
1. Before applying power to the ASE, place the key switch to TEST.
2. Apply power and immediately place the switch to NORMAL.
3. The ASE will move into a signal strength test mode after a minute or so.
4. Once the ASE is connected to the mobile network, the Primary Link Failed and the Test / Isolate light will continue to flash.
5. Some of the lights numbered 8 to 1 will stay solid. This display between 8 and 1 provide an indication of the signal strength as bars, see detailed below.

Move the key switch the TEST or ISOLATE position to exit the signal strength mode. The ASE will start a new connection with Firecomm.

Received Signal Strength display

Bars	LED displayed	Signal Strength	Suitability
7	8 7 6 5 4 3 2	Excellent ($\geq -51\text{dBm}$)	Recommended
6	8 7 6 5 4 3	Very Good ($\geq -63\text{dBm}$)	Recommended
5	8 7 6 5 4	Good ($\geq -73\text{dBm}$)	Recommended
4	8 7 6 5	Fair ($\geq -83\text{dBm}$)	Marginal
3	8 7 6	Poor ($\geq -93\text{dBm}$)	Very Marginal
2	8 7	Weak ($\geq -103\text{dBm}$)	Totally unsuitable
1	8	Very Weak ($\geq -111\text{dBm}$)	Totally unsuitable
	None	No Service	Wont work at all

Signal strength display.
LEDS 8 to 5 must be on.
The more LEDs or bars
the better



Indicator Light explanation

POWER is a green light (LED)

1. 'On' for a good power supply for the ASE
2. 'Off' has no power supply connected

OFF HOOK is a yellow light (LED)

1. 'Off' is normal
2. 'On' when communicating with FireComm in the backup dialling mode
3. 'On' when the power is first applied to the ASE

POLL is a red light (LED)

1. A pulse every 2 seconds is Normal operation
2. 'On' momentarily, a status is pending for FireComm
3. 'On' permanently, lost communication with FireComm. The key switch can be in the Test or Isolate position

PRIMARY LINK FAIL is a red light (LED)

1. 'Off' primary link is working, all is Normal
2. 'On solid' the primary link and the backup dialling mode have failed. In this state there are no communication with FireComm
3. 'Slow flash' is an indication that the ASE failed to complete its backup dialling sometime in the past. The primary link communication with FireComm is operating normally. The TFS Comms Tech resets the LED

TEST / ISOLATE is a red light (LED)

1. 'Off' is normal
2. 'Flashes rapidly' 4 per sec, when the key is placed in the Normal position. FireComm control this function because the ASE was placed OFFLINE. Contact FireComm for a reason for the OFFLINE.
3. 'Solid' if the key is in a TEST or ISOLATE position
4. 'Slow flash' 1 per sec, a status has been acknowledged by FireComm

INPUTS are a red light (LED)

Lights 1 to 8 will reflect the status of the panel and connection wiring

1. 'Off' is Normal Status
2. 'Rapid flash' of 4 per sec is an ALARM or FIRE Status, generally on input 1 (F1)
3. 'Slow flash' of 1 per sec is a FAULT Status , generally on input 2 (A2)
4. 'Very slow flash' of 1 every 2 sec is ISOLATED Zone, only on input 4 (A4)
5. 'On permanently' there is a problem between the FTS the Panel or ASE
6. Scrolling lights in waterfall. The ASE has lost its configuration. Contact TFS Comms Tech

Key positions and their meanings

The ASE is programmed so that the NORMAL, ISOLATE or TEST key switch positions are recorded individually in the ASE. FireComm also record this key change data and the changing status.

TEST key position: (Refer 8.4 of the TFS Code of Practice)

An internal timer inside the ASE times out **after 2 hours** with the key in the TEST position. This time out of the internal timer will cancel the **TEST mode and return the ASE to NORMAL operation.**

The ASE will flash the TEST / ISOLATE light for the ten minutes prior to the expiration of the two-hour timeout. The TEST key switch position must be used carefully where extensive testing in a premise may take more than two hours.

The brigade will respond to a FIRE or ALARM (F1, 2, 3, 4 etc.) status received after this 2-hour period.

ISOLATE key position (ASE Isolate)

The premise remains in ISOLATE **forever**. Any FIRE status from the premise in ISOLATE is recorded but not acted on by TFS.

NORMAL key position

The brigade responds to a FIRE status.

Multidropped ASE and communication connection cabling

(relevant to existing Multi-drops. No new Multi-Dropped Systems will be allowed by TFS)

Single pair private lines interconnect some ASEs.

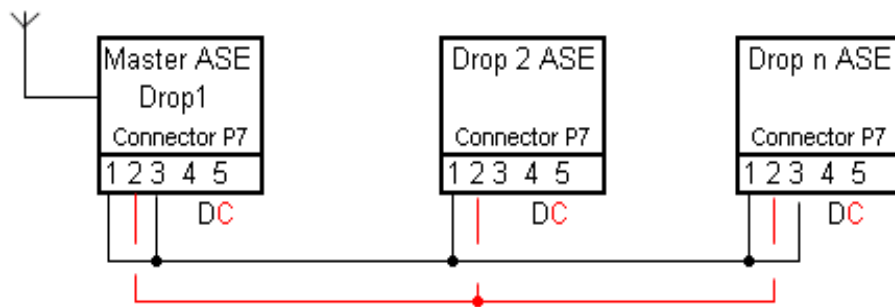
The Master and Slave multidropped ASE is connected by this private line.

The connection is polarity sensitive and connects on connector P7 terminals 1 and 2.

Where the private line extends outside the building line, the Multidrop and Master ASE are prone to lightning damage and to some extent mains borne interference.

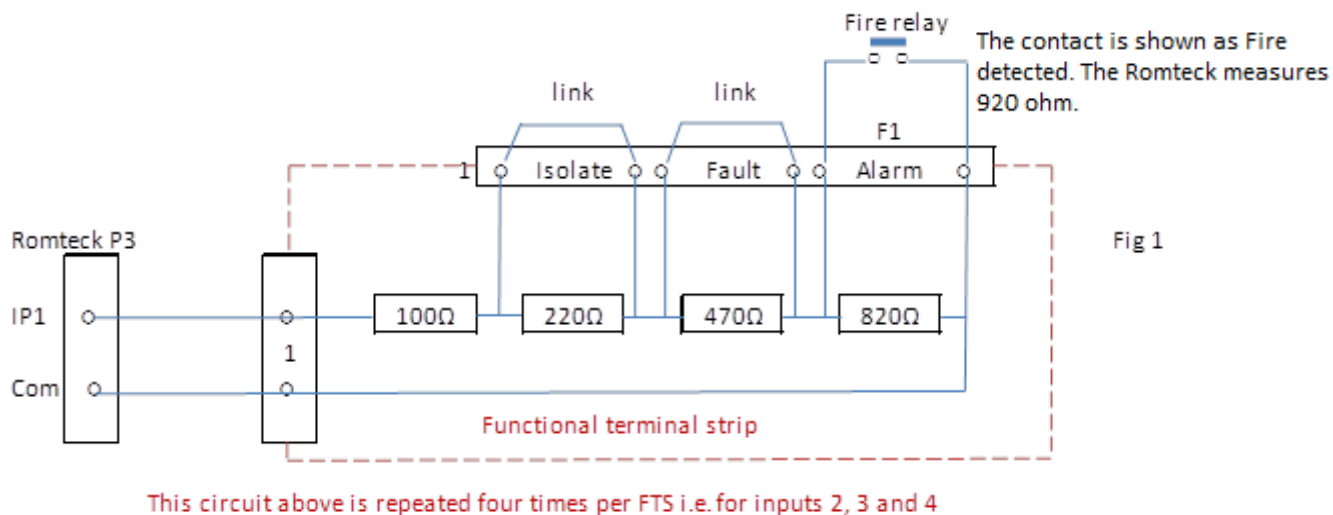
It will be an advantage if additional protection is provided on this private line between the individual buildings.

The private lines are also subject to rodent damage and water ingress.
See connections below.



The Multidrops are connected by a polarity sensitive twisted pair landline
Pin 1 connects to pin 1 and Pin 2 connects to pin 2
The master and the last ASE in the multidrop configuration have pins 1 and 3 connected

The Functional Terminal Strip board (FTS)



If more than the 4 standard alarm circuits are needed, a second FTS is installed.
The connections for the second FTS are on connector P2 of the ASE, see page 9.

The FTS has a series resistor network installed on the circuit board. For a normal status, the contacts by - pass the resistors and the Romteck measures 100 Ω at connector P3 or P2.

The schematic above in Fig1 is for input 1. This circuit is repeated four times on an FTS for inputs 2, 3 and 4.

As shown above, Input 1 has contact F1 connected across the 820 Ω Alarm resistor. If an A1 is required, remove the link across the Fault connector and connect the FDCIE A1 contact across the Fault resistor.

Input 1 now logs F1 and the A1 status with FireComm.

For an F2 remove the link across the Alarm connector on input 2. Connect the FDCIE F2 contact across the Alarm resistor. The FDCIE A2 contact is connected across the Fault resistor.

Input 3 would have the FDCIE A3 connected across Fault and FDCIE F3 connected across Alarm.

Input 4 would have the FDCIE A4 connected across Isolate and FDCIE F4 connected across Alarm.

Circuit operation for input 1

The FIRE contact is connected across the 820-ohm alarm resistor. As the panel detects a fire, this contact opens. The loop resistance is now 920 ohms. The Romteck reports an F1 status to FireComm.

For input 2, the Panel Fault contact opens, the loop resistance is 570 ohms and an A2 is reported to FireComm.

For input 4, the Zone Isolated contact opens, the loop resistance is 320 ohms and an A4 is reported to FireComm.

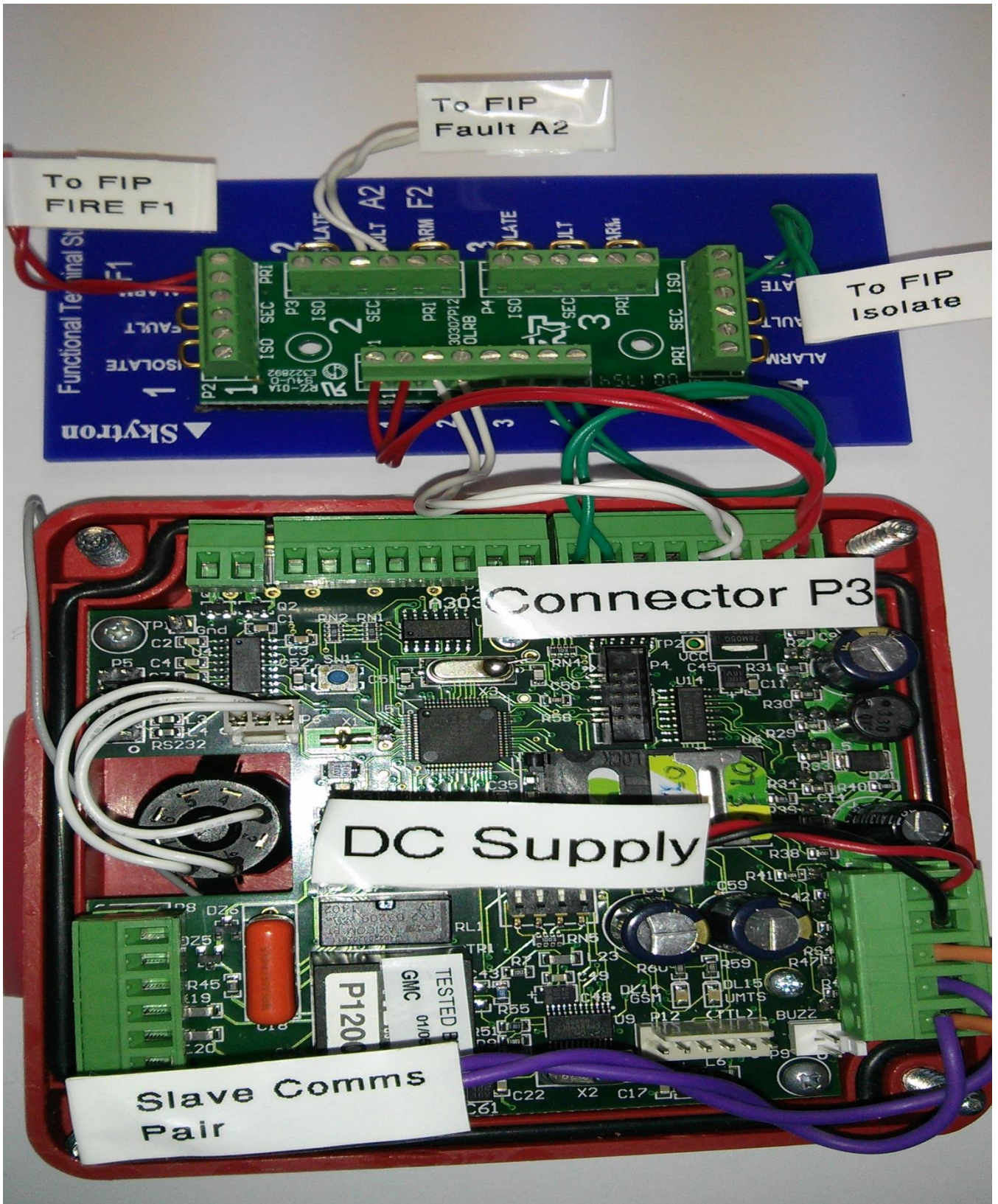
Other circuit operation.

If F1 and A1 are open, 1390 ohms is measured. An F1 and A1 are reported to FireComm from input 1.

If F2 and A2 are open, 1390 ohms is measured. An F2 and A2 are reported to FireComm from input 2.

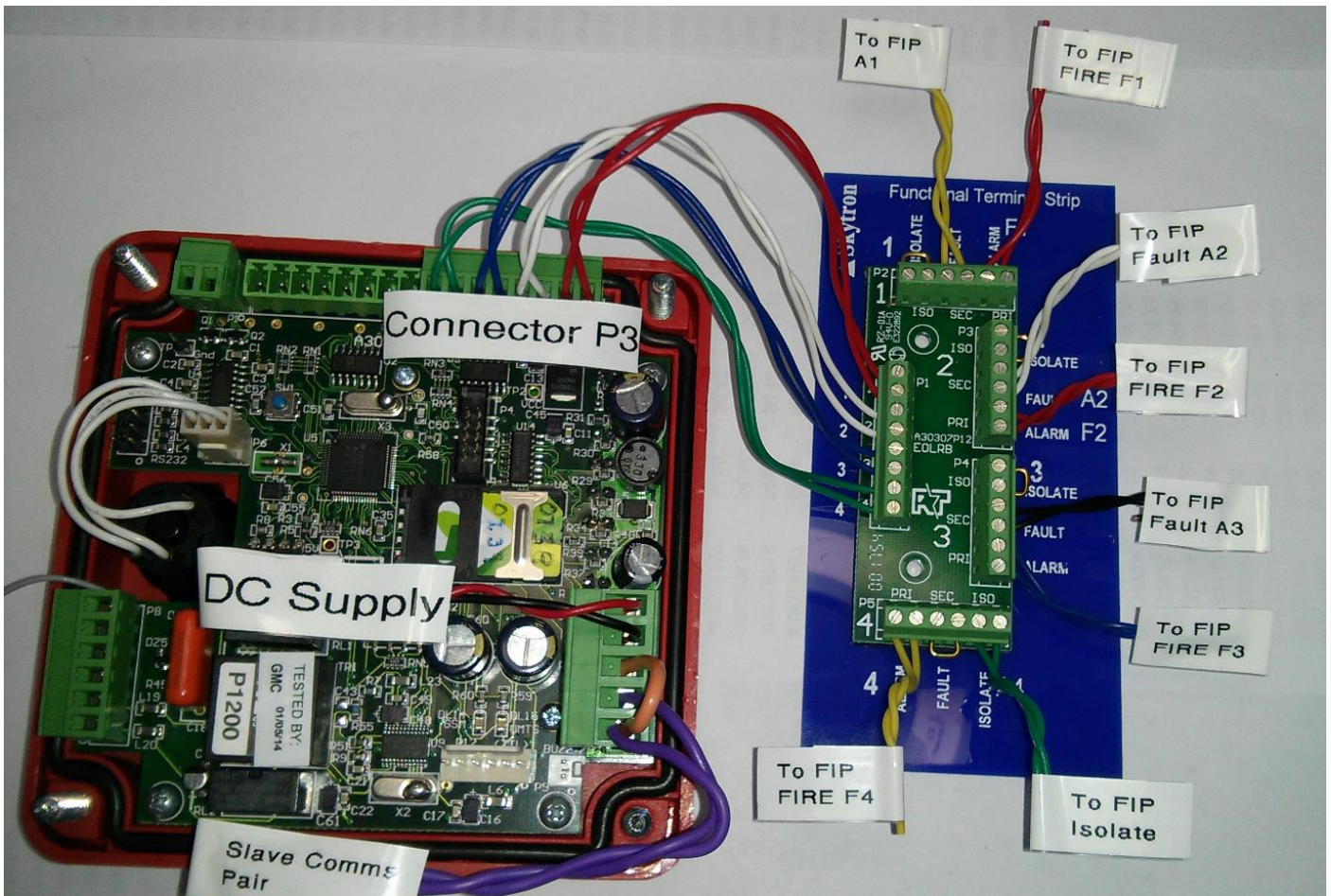
If A3 is used, the A3 contact opens, 570 ohms is measured on input 3. An A3 status is sent to FireComm.

FTS and ASE showing standard connection for status F1 (Fire or Alarm), A2 (Panel Fault) and A4 (Isolate zone)

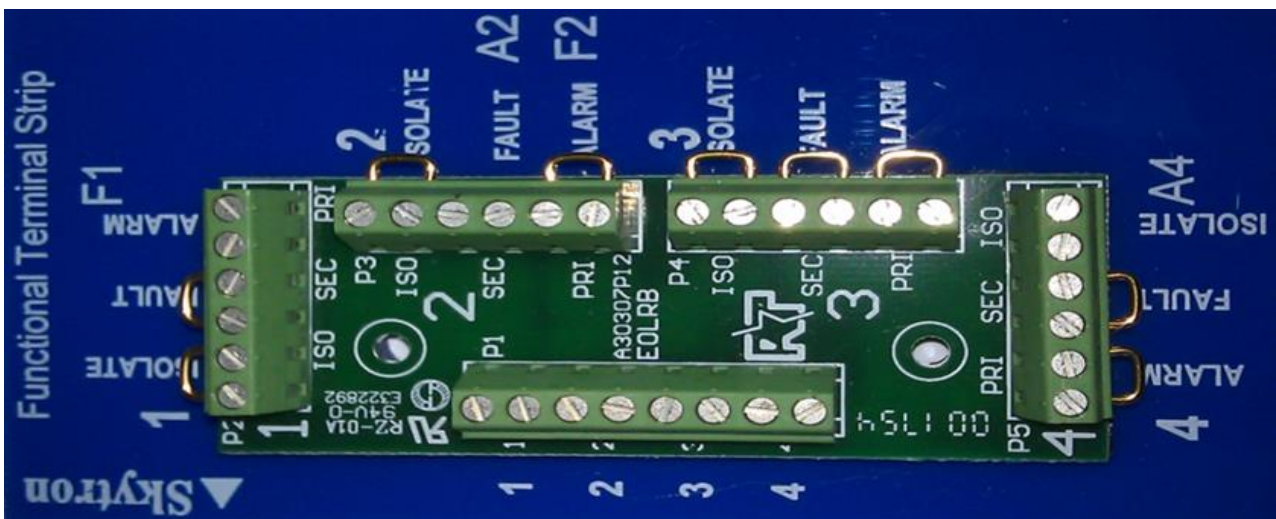


If the ASE is a standalone alarm, the slave communication pair is not used.

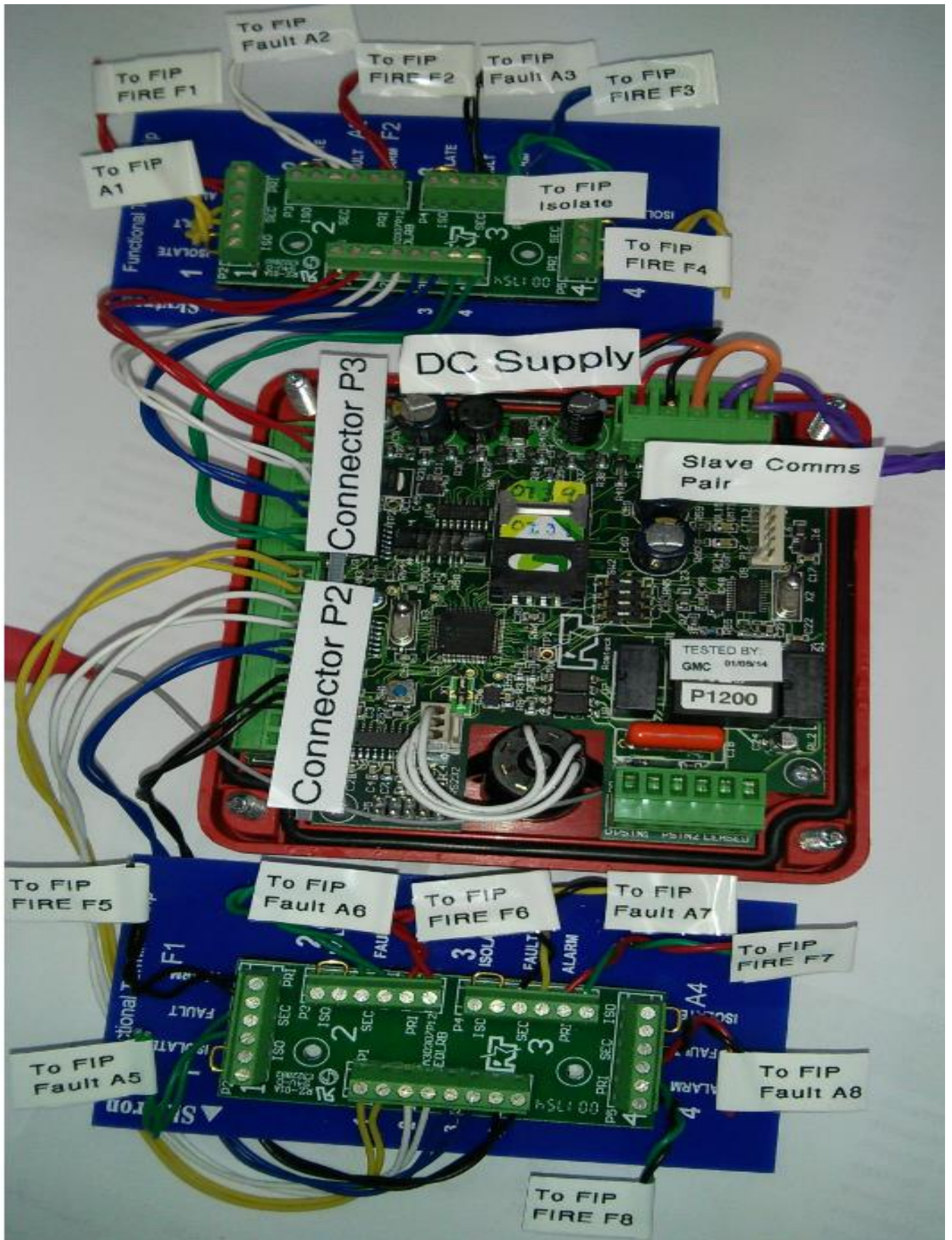
FTS and ASE showing connection for additional status: A1 F1, A2 F2, A3 F3, A4 and F4



Functional Terminal Strip (FTS)

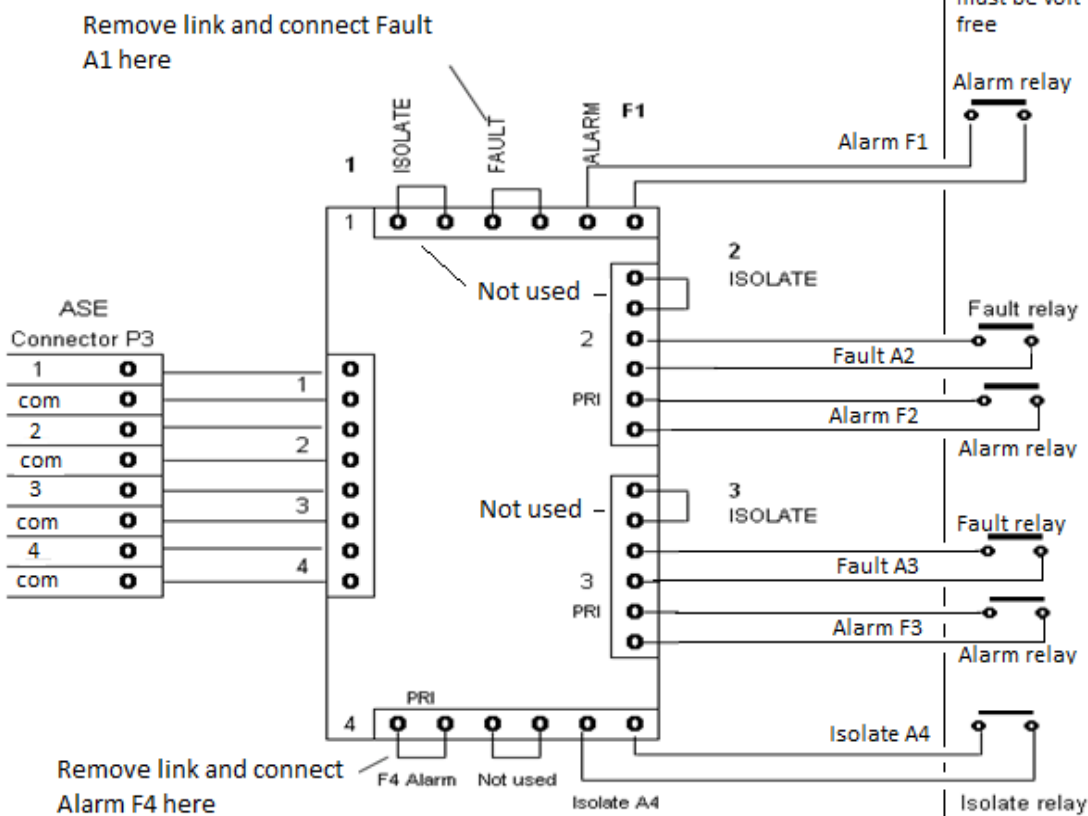


FTS and ASE connection for all status: A1 F1, A2 F2, A3 F3, A4 F4, A5 F5, A6 (not used generally) F6 , A7 F7, A8 and F8



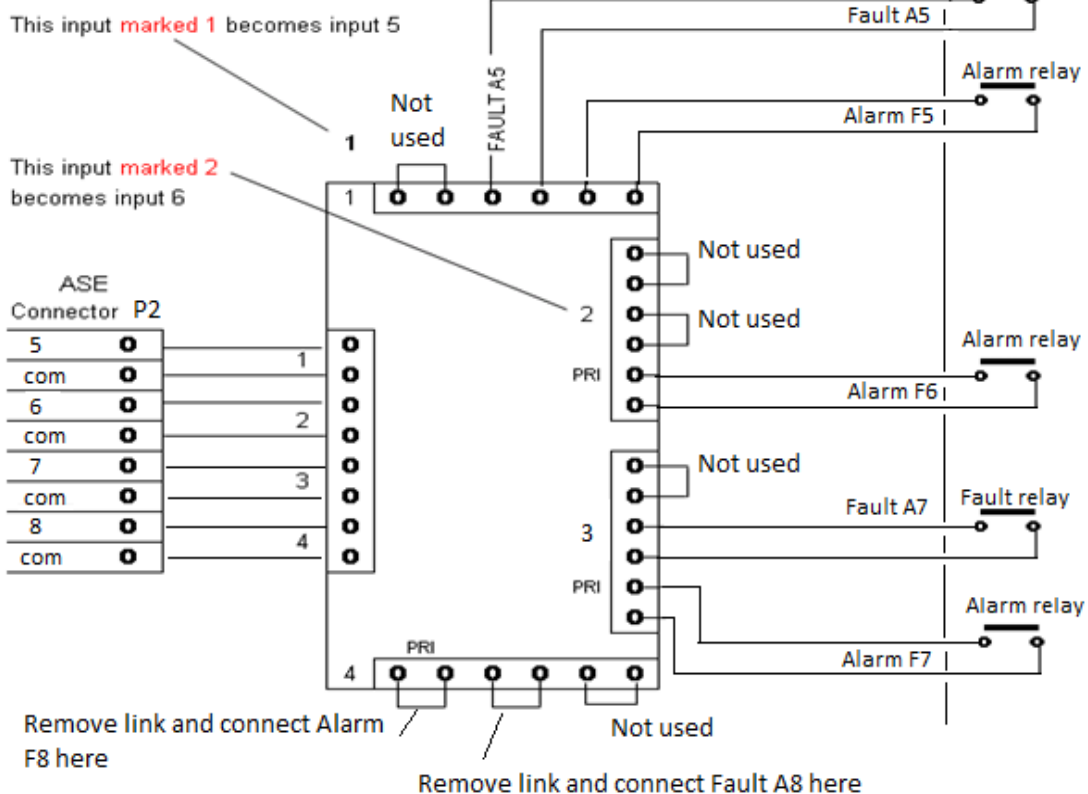
Functional Terminal Strip connection for Tasmanian premises

Standard Functional Terminal Strip for inputs 1-4



The FIP contacts are shown in the fail safe condition.

Install the 2nd FTS for inputs 5-8



That is, the contact opens when a Fire or Fault has been sensed.