DATE: **17 December 2018**

TO: **Valued Customers – Australia and New Zealand**

FROM: **ANZ Product Management Johnson Controls**

SUBJECT: **T-GEN2 GRADE 2 EMERGENCY WARNING SYSTEM**

This bulletin describes the new, powerful, feature-packed, AS4428.16 listed T-Gen2 Grade 2 Emergency Warning System (EWS) which includes

- *Updated T-Gen2 60W and 120W tone generator amplifiers*
- *100V Splitter Module*
- *100V Switching Module*
- *T-Gen2 Grade 2 User Interface and zone expansion modules*
- *Complete T-Gen2 Emergency Warning Systems (EWS)*

A Grade 2 system is a multi-zone Emergency Warning System (EWS) that will usually have a phased evacuation and may involve the alert signal and emergency speech functions. Grade 2 systems must be powered separately to the fire alarm panel and include a user interface with emergency PA microphone. See PBG0210 for details on designing a Grade 2 or 3 EWS.

The Vigilant T-Gen2 Grade 2 system is the first Grade 2 product to be independently assessed and ActivFire listed to AS 4428.16:2015 and is also compliant with the requirements of NZS 4512. The Grade 2 system utilizes existing T-Gen2 parts; such as the T-Gen 60 (FP1115) and T-Gen 120 (FP1116) tone generator/amplifiers (Figure1) which have been enhanced to incorporate the Grade 2 functionality, 100V Switching Module, along with a new Grade 2 User Interface (Figure 2) and zone expansion modules. See PBG0203A for details of all the T-Gen2 modules.

The T-Gen2 system can be incorporated into the Vigilant MX1/MX4428/F3200 or Simplex 4100ES / 4100ESi fire alarm panels or used as a standalone EWS (FP1129 – refer PBG0214).

Key Features

- Self-contained or FIP combo Emergency Warning System suits multiple applications
- ActivFire listed to AS 4428.16 for Grade 2 applications
- Emergency PA microphone, Alert/Evacuate/Speech controls
- 4 zones of control/indication, expandable to 20 zones
- Auto/Manual operation
- Zone Paging options – up to 20 separately-selectable speaker areas
- Selectable priority for Paging/Remote/Background Audio inputs
- Alarm inputs and Fault output signals for fire panel connection
- Optional High Level Interface with Vigilant MX1, MX4428, F3200 or Simplex 4100ESi
- Programmable Alert to Evacuate delay (0-600sec or manual)
- Programmable Alert / Evacuate Cascading across all zones.
- Pre-recorded Alert and Evacuate messages, field re-recordable for flexibility
- Integral 14 Amp (peak) Power Supply with fault supervision
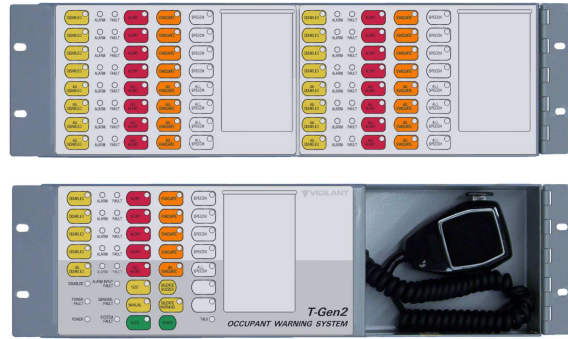
Figure 1
T-Gen2 60W Model

Figure 2
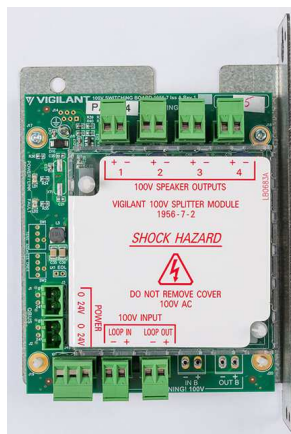T-Gen2 Grade 2 User Interface Parts

Configuring T-Gen2

SmartConfig V2.8 or higher is required for T-Gen2 V2.00 for preparation of site-specific configurations. This includes new defaults and the programming choices for the new features.

Updating an Existing T-Gen2

Existing T-Gen2 units with V1.xx firmware can be upgraded to V2.00 by using the upgrade process described in PBG0216A. The existing configuration (default or site-specific) will be supported, but preparing and installing a new configuration based on a V2 template is recommended as this will allow use of the new features.

100V Splitter Module (FP1118)

The 100V Splitter Module takes the T-Gen2's 100V output and splits it into 4 x 100V outputs, each with its own open/short circuit fault supervision and isolation relay for disconnection on short circuit. This provides 4 outputs with short-circuited fault tolerance between them, and by daisy-chaining multiple modules together additional outputs can be provided. (See PBG0205).

100V Splitter Module

100V Switching Module (FP1117)

The 100V Switching Module provides similar functionality as the 100V Splitter Module, with the additional feature that the four outputs can be controlled by the T-Gen2. This allows each output to be connected and disconnected from the T-Gen2's 100V feed, allowing functions like zone selective alert / evacuate or paging to be done. A separate paging console/microphone can be used to enable area-selective PA paging (See PBG0203A).

100V Switching Module

T-Gen2 Grade 2 User Interface

The Grade 2 User Interface is available for T-Gen2 as a 3U 19 inch rack mounting module containing a microphone and the first 4 zones.
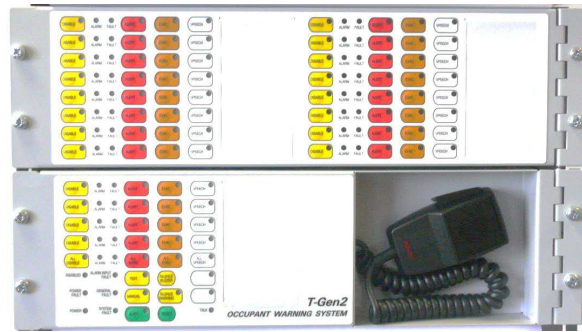

Grade 2 User Interface 3U Door

This provides:

- Alert, Evacuate, Speech and Disable controls and indications for each of the first 4 evacuation zones
- Alert, Evacuate, Speech and Disable controls and indications for All Zones.
- Auto/Manual controls
- 2 programmable buttons for playing messages
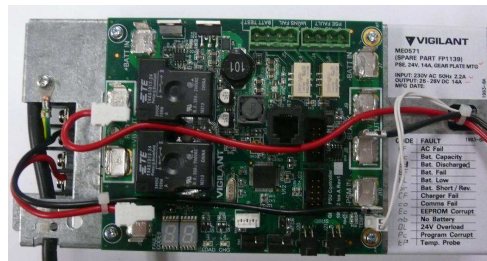- Test Mode to observe operation with no sounds/strobes activated

The Grade 2 User Interface can be expanded with an additional 8 or 16 zones of control and indicators to provide up to 20 zones in total.

Grade 2 User Interface 3U Door and 16 Zone Expansion Door

PSE 14A power Supply

The Grade 2 EWS must use the new FP1139 14A Power Supply Equipment (PSE). The PSE is compliant with AS 7240.4 and provides mains power, battery connection and battery charging, including fault supervision of the various conditions.
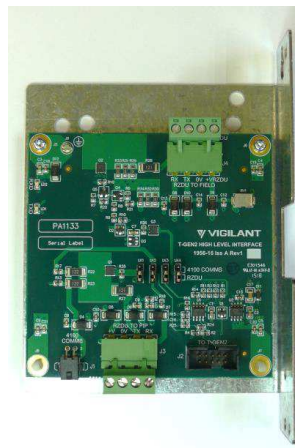

FP1139 14A PSE

HLI board (FP1143)

A new High Level Interface (HLI) board gives the T-Gen2 the capability to communicate directly with the Vigilant MX1, MX4428 and F3200 fire panels to exchange status and information using the RZDU protocol, or Simplex 4100ES / ESi panels using 4100Comms protocol.

Up to 32 zone alarms or control signals can be sent by the FIP and the T-Gen2 fault status is returned to the FIP.
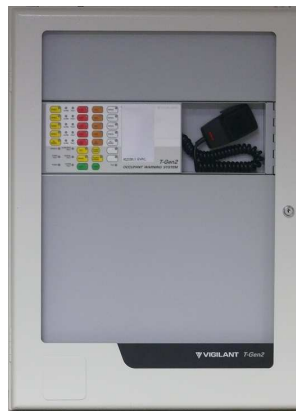

FP1143 High Level Interface Module

Stand Alone EWS

The T-Gen2 is available as a complete Grade 2 AS4428.16 listed 4 zone Emergency Warning System mounted in a 15U cabinet with a compliant power supply and space for several additional modules.

This is available as FP1129, with User Interface zone expansion units as FP1126 (16Z expansion door) and FP1128 (8Z board) for up to 20 zones.

Further expansion can be achieved by using the FP1130 15U blank-door expansion cabinet, allowing additional T-Gen2 (60 or 120W), 14A PSE and 100V Switching/Splitter Modules to be housed adjacent to the EWS unit. See PBG0214.

Larger build to order Grade 2 EWS systems can also be ordered – based on 28U and 40U cabinets.

FP1129 4 Zone T-Gen2 Grade 2 EWS

Designing & Pricing T-Gen2 Systems

The latest version of MX1Cost (V2.13) or 4100Cost (V1.13) can be used to design and price T-Gen2 Grade 2 systems as a kit of parts to be customer installed, or as factory-built build-to-order systems in standard or larger 28U/40U cabinets.

Ordering Codes

FP1115	T-Gen 60,24V, C/W INSTALL LIT & MTG
FP1116	T-Gen 120,24V, C/W INSTALL LIT & MTG
FP1117	100V SWITCHING MODULE, C/W LIT, LOOMS & MTG BRK
FP1118	100V SPLITER MODULE, C/W LIT, LOOMS & MTG BRK
FP1124	GRADE 2 EWS USER INTERFACE 3U DOOR, C/W & LOOM & MIC, GREY
FP1125	GRADE 2 EWS USER INTERFACE 3U DOOR, C/W LOOM & MIC, BLACK
FP1126	GRADE 2 16Z EWS EXTENDER, 3U DOOR, C/W LOOM, GREY
FP1127	GRADE 2 16Z EWS EXTENDER, 3U DOOR, C/W LOOM, BLACK
FP1128	GRADE 2 8Z EXPANSION BRD, C/W LOOM & MTG
FP1129	FP, 120W, T-GEN2 EWS, GRADE 2, 4Z, 15U CAB
FP1130	FP, T-GEN 2 EXP CAB, C/W 14A PSU, 15U, BLANK DR
FP1139	FP, PSE GEARPLATE MTG, 24V, 14A, SPARE
FP1143	FP, T-GEN2 HLI BOARD

References

Existing bulletins, manuals, wiring diagrams and PowerPoints for MX1, 4100ES and 4100ESi have all been updated to reference the T-Gen2 Grade 3 or Grade 2 systems. In addition the following collateral is available.

Bulletins

PBF0285A	USING T-GEN2 IN MX4428
PBG0203A	T-GEN2 60/120W EMERGENCY WARNING SYSTEM
PBG0207A	USING T-GEN2 IN F3200
PBG0210	Designing T-Gen2 Emergency Warning Systems
PBG0214	T-GEN2 GRADE 2 EMERGENCY WARNING SYSTEM (EWS)
PBG0216A	T-Gen2 Firmware Updates
PBK0029A	USING T-GEN2 IN MX1
PBS0071B	USING T-Gen2 IN 4100 Series Panels

Sales PowerPoints

T-Gen2 Grade2 Long	Complete T-Gen2 Grade 2 system PPT
T-Gen2 Short	Summary of the T-Gen2 Grade 2 options

Data Sheets / Brochures

T-Gen2UIG2datVIG1810	EWS -Grade 2 User Interface Data Sheet
T-Gen2infVIG1810	EWS - Amplifier/Tone Generator Data Sheet
T-Gen2EWSVIG1810	EWS - Grade 2 Data Sheet
FP1118infVIG1810	EWS- 100V Splitter Module Data Sheet
FP1117infVIG1810	EWS- 100V Switching Module
EWSbroVIG1811	EWS New Zealand Brochure
T-Gen2BROVIG1807	EWS Australian brochure

Manuals

LT0667	T-Gen2 60W/120W Emergency Warning System Installation & Operating instructions
LT0668	100V Switching Module Installation Instructions
LT0671	100V Splitter Module Installation Instructions
LT0681	Grade 2 User Interface Installation Instructions
LT0682	Grade 2 User Interface Operating Manual
LT0683	T-Gen2 Grade 2 16 Zone Extender Door Installation Instructions

LT0684	T-Gen2 Grade 2 8 Zone Expansion Board Installation Instructions
LT0685	14A PSE Installation Instructions
LT0687	T-Gen2 EWS Installation Instructions
LT0690	4100ESi 14A PSE Module Bay Mtg Bracket Installation Instructions
LT0691	T-Gen2 High Level Interface (HLI) Installation Instructions
LT0360	MX1 FIRE ALARM SYSTEM NEW ZEALAND INSTALLATION GUIDE (Includes T-Gen2)

Software

SF0534	T-Gen2 V2 Amplifier / Tone Generator software
SmartConfig+	Full licensed SmartConfig V2.8.0.0 programming software
SmartConfig Lite	Public SmartConfig Lite V2.8.0.0 programming Software

Drawings

1992-037	GRADE 2 15U EXPANSION CAB SALES PRESENTATION
1992-034	T-GEN2 GRADE 2 15U 120W 4 ZONE EWS SALES PRESENTATION
1992-017	3U GRADE 2 UI DOOR SALES PRESENTATION
1992-029	3U GRADE 2 16Z EXTENDER DOOR SALES PRESENTATION
1976-348	4100ESi 14A PSE BAY MTG BRACKET SALES PRESENTATION
1956-017	T-GEN2 HIGH LEVEL INTERFACE (HLI) SALES PRESENTATION
1956-021	100V Switching Module, c/w Lit, Looms & Mtg Brkt (FP1117
1956-022	100V Splitter Module, c/w Lit, Looms & Mtg Brkt (FP1118

Further Product Information

All products listed above are now available for sale. All bulletins, data sheets and related downloads are available from the ***Fireplace*** website at https://www.vigilant-fire.com.au.

Ordering

For ordering, please contact Johnson Controls Customer Service on AUS Customer Tel: 1300 725 688 / NZ Customer Tel: +64 9 635 0617 or fdp.customerservice.anz@jci.com.

For technical support, contact Johnson Controls Australian Technical Support Centre on 1300 552 559, or Craig Barnett +64 27 220 8048 for New Zealand.

Thank you for your valued business and continued support.

David Churstain   **Dwayne Kuipers**

Johnson Controls   Johnson Controls

Product Manager   Senior Product Manager
Fire Detection – ANZ Region   Fire Detection – ANZ Region

E-mail : david.churstain@jci.com   E-mail : dwayne.kuipers@jci.com