1. Description

The Grade 2 16 Zone Extender Doors are designed for use with the VIGILANT T-Gen2 Emergency Warning System in 19" rack cabinets.

Two 3U 19" rack mounting doors fitted with controls and indication for 8 evacuation zones are available:

- FP1126 FP,GRADE 2 16Z EWS EXTENDER,3U 19" DOOR,GREY
- FP1127 FP,GRADE 2 16Z EWS EXTENDER,3U 19" DOOR,BLACK

They are the same except for the metal colour (FP1126 is grey for use in VIGILANT panels, FP1127 is black for use in Simplex panels).

Both doors can be expanded to 16 zones by adding an FP1128 8 Zone Expansion kit.

The FP1126 and FP1127 3U 16 Zone Extender Doors include all the required hardware to mount the door in an MX1 or Simplex cabinet, and cabling to wire the door to the T-Gen2 Grade 2 User Interface Door.

These instructions cover the fitting and connection of the Grade 2 16 Zone Extender Door in a T-Gen2 EWS or MX1 or Simplex fire alarm panel. The details of any necessary changes to the MX1 or Simplex system configuration, or other hardware are not covered here.

![Figure 1 - Grade 2 16 Zone Extender Door, FP1126 (Grey) Shown](image)

2. Checking the Kit

Before installing the Grade 2 16 Zone Extender Door, check that all items in the kit are present, undamaged and you have the correct coloured door.

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grade 2 16 Zone Extender Door complete with 1 8 Zone Display Board</td>
</tr>
<tr>
<td>1</td>
<td>LM0608 EARTH LOOM 1.0m (for earthing door to fire panel cabinet)</td>
</tr>
<tr>
<td>1</td>
<td>LM0592 Q-BUS LOOM 1.05m (for wiring to a Grade 2 User Interface Door)</td>
</tr>
<tr>
<td>2</td>
<td>LB0692 BLANK ZONE LABEL SET (for labelling zone controls)</td>
</tr>
<tr>
<td>1</td>
<td>LT0683 INSTALLATION INSTRUCTIONS (these instructions)</td>
</tr>
<tr>
<td>1</td>
<td>KT0538 containing 4 x M6 cage nuts, screws and washers and 2 plastic washers for mounting door</td>
</tr>
</tbody>
</table>
3. Mounting the Grade 2 16 Zone Extender Door

The Grade 2 16 Zone Extender Door must be placed above the Grade 2 User Interface Door.

Locate the four positions for the placement of the screws and insert the four cage nuts to suit. Fit the door using one of the M6 screws (including metal washer) in the top hole of the hinge plate but do not tighten it fully.

Fit another M6 screw (including metal washer) into the bottom hole of the hinge plate and tighten both screws onto the cabinet bracket, aligning the door with the hole positions on the cabinet left-hand side.

![Cage Nut](image1)

![M6 Screw and washer](image2)

![M6 Screw and washer](image3)

![Plastic self-retaining washer](image4)

Figure 2 – Mounting the Grade 3 User Interface Door

Insert the two remaining M6 screws (including metal washer) to the screw holes on the non-hinged side of the door. Place a plastic self-retaining washer on each of the screws on the inside of the door to keep these screws on the door when it is open.

4. Wiring a Grade 2 16 Zone Extender Door

The Grade 2 16 Zone Extender Door is connected to:

- Grade 2 User Interface Door (J4) using the UBus loom LM0592 pre fitted to the 16 Zone Extender Door. Secure the loom to the existing 2 User Interface Door looms.
- Cabinet earth from earth tab on door.

WARNING: DO NOT CONNECT/DISCONNECT THE UBUS LEADS (J3, J4) WITH POWER APPLIED – THIS MAY DAMAGE THE EQUIPMENT

![Earth door to cabinet with loom LM0608](image5)

![Plug 16 Zone Extender Door 4 way UBus loom LM0592 into J4 of the Grade 2 User Interface Door](image6)

![Secure Extender Door 4 way UBus loom LM0592 to the Grade 2 User Interface Door with cable ties in 4 places](image7)

Figure 3 – Grade 2 16 Zone Extender Door Wiring
5. Door Labels
The Zone Buttons are labelled using slide-in labels. Two blank labels are provided with each kit (LB0692). You can also generate labels using a Word template (LB0692).

The labels are inserted via the slots in the front of the door overlay.

6. Expanding the 16 Zone Extender Door
The door can be expanded to its full 16 zone capacity by adding an FP1128 8 Zone Expansion kit. This includes an 8 zone module that is fitted to the empty position on the 16 zone door and wired to the existing 8 Zone Module. Full details are included in the 8 Zone Expansion Kit Installation Instructions LT0684.

The FP1128 8 Zone Expansion kit can also be used as a replacement module for the 8 zone display board already fitted to the 16 Zone Door, should this be needed.

7. Configuration
The QBus address rotary switches, SW1 and SW2 on the 8 zone module, need to be set to 01 (for zones 5-12).

The T-Gen2 used with the FP1126/7 Grade 2 16 Zone Extender Door will need configuring to enable the Extender Door. This can be done by editing the T-Gen2 configuration in SmartConfig and increasing the number of zones to that required.

If the standard 16 Zone Extender Door is fitted, then the number of zones supported is 5-12.

If an additional 8 zones is fitted (using FP1128 8 Zone Expansion kit) then 13-20 zones are supported.

Refer to the T-Gen 2 Installation Instructions (LT0667) and the SmartConfig Programming Manual for instructions on configuring the T-Gen2. SmartConfig Lite (SF0323) and its User Manual (LT0345) can be downloaded from the Fireplace: http://vigilant-fire.com.au.

8. Status LEDs
The functionality of the LEDs mounted on the front of the User Interface is described in LT0682.

The Grade 2 16 Zone Extender Door has 2 internal status LEDs for fault diagnostics:
<table>
<thead>
<tr>
<th>LED Name</th>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER/LINK</td>
<td>Green</td>
<td>OFF – no power applied. Flashing every second – operating and communicating with the Grade 2 User Interface. Steady On – not communicating with Grade 2 User Interface, or faulty.</td>
</tr>
<tr>
<td>SYSTEM FAULT</td>
<td>Yellow</td>
<td>OFF – no fault present. Flashing – fault present</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a System Fault is present the SYSTEM FAULT LED shows a sequence of 8 flashes followed by a pause, with each flash short (250msec) if that fault is not present and long (750msec) if that fault is present.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system faults are indicated in this order:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. 16 Zone door not communicating with the Grade 2 User Interface. 2. Check the Grade 2 User Interface connection, T-Gen2 configuration selected, and Address Rotary switch setting on the 16 Zone Door and Grade 2 User Interface. Note this fault will occur when the T-Gen2 is in programming mode (i.e., PC USB connection active).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Invalid Address (Not 01...99). Try rotating the address rotary switches, and then back to the desired address. If cannot be fixed, replace the 8 Zone Module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Firmware CRC Incorrect. Replace the 8 Zone Module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Software Fault. Will not occur.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Unexpected restart occurred. Something happened to cause the User Interface microprocessor to restart. Clears once status sent to T-Gen2. If does not clear, even after power down/up, replace the 8 Zone Module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. No Configuration Data. Will occur on startup until the T-Gen2 sends the necessary configuration data to the 16 Zone Extender Door.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Will not occur.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Hardware mismatch. Replace the 8 Zone Module.</td>
</tr>
</tbody>
</table>

### 9. Power On and Testing

For the first tests apply mains power only to check the operation of the T-Gen2 and User Interface without a battery. Once this is confirmed a battery can be connected. The T-Gen2, Grade 2 User Interface, and 16 Zone Extender Door will need to be configured and connected properly.

- Power on and wait for the T-Gen2 to start up (<10s).
- Check the POWER and AUTO LEDs on the User Interface turn on and that no faults are generated. If faults are generated refer to the T-Gen2 Instructions (LT0667) to use the OLED display to determine the faults that are present.
- Press the SPEECH button for the first zone and use the emergency PA microphone to make an announcement. Check this is heard in the Zone loudspeakers. Press the SPEECH button again to deselect SPEECH.
- Repeat for each configured zone, especially those on the 16 Zone Extender Door.
10. Supplemental Terms and Licensed Software

These Supplement Terms ("Supplemental Terms") are in addition to any Terms and Conditions of Sale ("Agreement") entered into between the End-user ("You") of the Grade 2 16 Zone Extender Door ("Product") and Johnson Controls ("Johnson Controls") regarding your purchase of the Product and use of the Licensed Software (as defined below).

To the extent of any conflict between the terms of the Agreement and any Supplemental Terms, the Supplemental Terms will apply. Your acceptance of the Product will constitute acceptance of these Supplemental Terms.

Title and Copyright. It is hereby understood and agreed that as between Johnson Controls and You, all information and intellectual property relating to the Product and Licensed Software including but not limited to patents, designs, drawings, instruction booklets, specifications, circuit drawings, componentry, trade secrets, trade marks and copyright in such information and intellectual property, and all right, title and interest therein, are the sole property of or licensed by Johnson Controls and You shall gain no right, title or interest in such information whatsoever. You do not acquire any rights to the Products except for the sole purpose for which the Product was supplied to You.

Licensed Software. The Product may contain incorporation of "Open Source" and other Third Party Software ("Licensed Software"). You must not, and must not permit any person reasonably within your control nor procure any person to reverse engineer, decompile, or disassemble the Licensed Software, and any attempt to do so shall be a breach of these Supplemental Terms and the Agreement except and only to the extent that such activity may be expressly permitted, notwithstanding this limitation, either by applicable law or, in the case of open source software, the applicable open source licence. You must not make any changes or modifications to any portion of the Licensed Software, or create any derivative works, without the written permission of an officer of Johnson Controls except as provided with respect to "open source" software. Any reverse engineering shall be at Your sole risk and Johnson Controls accepts no liability for any loss or damage howsoever incurred by You or any third party as a result of or arising out of any modifications made or any reverse engineering.

 Portions of the Licensed Software may be subject to certain third party licence agreements governing the use, copying, modification, redistribution and warranty of those portions of the Licensed Software, including what is commonly known as "open source" software. Such portions of the Licensed Software are governed solely by the terms of such other licence, and no warranty is provided under the Agreement for open source software. By using the Licensed Software You are also agreeing to be bound to the terms of such third party licences. If provided for in the applicable third party licence, You may have a right to reverse engineer such software or receive source code for such software for use and distribution in any program that You create, so long as You in turn agree to be bound to the terms of the applicable third party licence, and Your programs are distributed under the terms of that licence. If applicable, a copy of such source code may be obtained by contacting your Johnson Controls representative.

Limitation of Liability. You acknowledge and agree that, to the extent permitted by law, Johnson Controls has no liability in contract, tort (including negligence or breach of statutory duty), by statute or otherwise for loss or damage (whether direct or indirect) of profits, opportunity, revenue, goodwill, bargain, production, contracts, business or anticipated savings, corruption or destruction of data or for any indirect, special or consequential loss or damage whatsoever except to the extent that such losses are caused by or contributed to by Johnson Controls' Wilful Misconduct or fraud, where "Wilful Misconduct" means any wilful or intentional breach, act or omission done by Johnson Controls with the intent to cause You material harm or where Johnson Controls was aware that material harm would result from such wilful or intentional breach, act or omission. Johnson Control's total liability under any contract and the Agreement shall not exceed the total dollar amount of the Products purchased by You from Johnson Controls.

Additional Copyright notices

; Copyright © 2017, Microchip Technology Inc. and its subsidiaries ("Microchip")
; All rights reserved.
; This software is developed by Microchip Technology Inc. and its subsidiaries ("Microchip").
; Redistribution and use in source and binary forms, with or without modification, are
; permitted provided that the following conditions are met:
; 1. Redistributions of source code must retain the above copyright notice, this list of
; conditions and the following disclaimer.
; 2. Redistributions in binary form must reproduce the above copyright notice, this list
; of conditions and the following disclaimer in the documentation and/or other
; materials provided with the distribution.
; 3. Microchip's name may not be used to endorse or promote products derived from this
; software without specific prior written permission.

; THIS SOFTWARE IS PROVIDED BY MICROCHIP "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES; 
; INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR 
; PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL MICROCHIP BE LIABLE FOR ANY DIRECT, INDIRECT, 
; INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO 
; PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA OR PROFITS; OR BUSINESS 
; INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT 
; LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF 
; THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.