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USING T-GEN2 IN F3200

This bulletin describes using the T-Gen2 Grade 3 Evacuation Warning System in F3200 panels.

The newly released T-Gen2 product range is described in Product Bulletin PBG0203 and the 100V Splitter Board is in PBG0205. A complete Building Occupant Warning System (BOWS) is described in PBG0206.

The various F3200 panels – 8U, 15U and larger, support various arrangements of the T-Gen2 products.

8U F3200

The 8U F3200 gearplate has 4 positions that are suitable for the T-Gen 60, as well as the F3200 8 Zone and 8 Relay Modules. Thus if a T-Gen 60 is fitted, the capacity of the panel is reduced. Suitable standoffs are included with the T-Gen 60 for mounting it on the gearplate.

The T-Gen 120 does not easily mount on the 15U gearplate – drilling extra holes and using special mounting hardware would be required.

There are no mounting facilities for 100V Switching Modules, nor 100V Splitter Modules, so if these are required suitable mounting and space will need to be found.

Mounting the T-Gen2 User Interface (FP1121 or FP1122) in the 8U F3200 is not recommended, as many of the LEDs are not visible when the outer door is closed, and there will be virtually no battery space available.

The 8U F3200 has a 3A PSU. Figure 1 shows the T-Gen2 load that can be supported by the 3A PSU, depending on the rest of the alarm load of the panel and the strobe current on the T-Gen2.

15U F3200

The 15U F3200 supports:

- A T-Gen 60 on the gearplate LHS.
- An FP1121 3U User Interface complete with a T-Gen 60 on the 19” rack.
- An FP1122 3U User Interface with no T-Gen2 on the 19” rack, connected to a T-Gen2 mounted on the gearplate.

The T-Gen 120 does not easily mount on the 15U gearplate – drilling extra holes and using special mounting hardware would be required.

Also, there is no direct mounting for the 100V Switching or 100V Splitter Modules, so if these are required positions will need to be found and mounting arranged.

The F3200 card frame must not be used for mounting the T-Gen2, as the weight is too much for the mounting and there is accessibility to high voltage terminals on the bottom of the PCB.

The 15U F3200 is available in 3A and 6A versions, so refer to Figures 1 and 2 for the respective T-Gen2 loads that can be supported.

F3200 28U/40U Build-To-Order Panels

BTO F3200 panels will use the 15U gear plate as standard, so this has mounting for a T-Gen 60 (T-Gen 120 will require special drilling and hardware).

The T-Gen 60 can be mounted easily by fitting the 6.35mm plastic standoffs (included with FP1115) into the gearplate from the rear. The T-Gen 60 will need to be earthed using a suitable lead from J5.

There is no mounting for 100V Switching or 100V Splitter Modules, so holes will need to be drilled and M4 nuts fitted to hold the modules in place.

The 19” rack can house the FP1121 3U Door complete with a T-Gen 60, or the FP1122 3U User Interface connected to a T-Gen2 mounted inside the cabinet.

F3200 Power Supplies

The standard F3200 PSU is 3A, and there is a 6A version available. Under AS 1670.1:2015 the PSU must be able to supply the full alarm load of the panel and any connected EWS without any batteries.

Therefore it is necessary to do a design check to make sure the PSU is able to power the F3200 in alarm, plus what the T-Gen2 requires in alarm, without exceeding the PSU rating.

As the T-Gen2 can draw 3A @ 60W load, 6A at 120W load, plus the connected strobe load up to 2A, the total load on the T-Gen2 will need to be less than the maximum.

Figure 1 shows the connectable 100V load on a T-Gen 60 for various alarm currents on the F3200 with a 3A PSU, taking into account the T-Gen2 strobe current from 0 to 2A.

Basically the F3200 with a 3A PSU can support:

- One T-Gen 60 with no strobe current loaded to 55W on the 100V output, with no extra alarm current on the F3200; decreasing to 0W on the 100V output as the F3200 alarm current increases to 3A.
- One T-Gen 60 with 2A of Strobe current and 14.5W of 100V load, if the F3200 has no extra alarm load; decreasing to 0W on the 100V output as the F3200 alarm current increases to 1A.

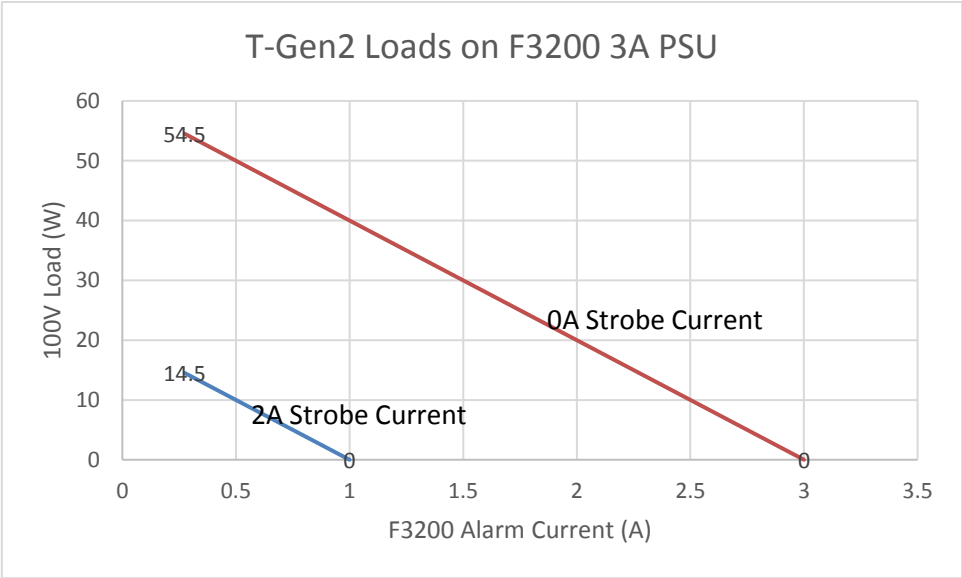

Figure 1
Permissible T-Gen2 100V Load v 3A F3200 Alarm Current and Strobe Current

Figure 2 shows the connectable 100V load on 1 or 2 x T-Gen 60 or 1 x T-Gen 120 for various alarm currents on the F3200 with the 6A PSU, taking into account the T-Gen2 strobe current from 0 to 2A.

Basically the F3200 with a 6A PSU can support:

- One T-Gen 60 with no strobe current loaded to 60W on the 100V output, if the F3200 alarm current is less than 3A; decreasing to 0W on the 100V output as the F3200 alarm current increases to 6A.
- One T-Gen 60 with 2A of Strobe current and 60W of 100V load, if the F3200 alarm load is less than 1A; decreasing to 0W on the 100V output as the F3200 alarm current increases to 4A.
- Two T-Gen 60 or one T-Gen 120 with 0A of Strobe current and 115W of 100V load combined, if the F3200 alarm load has no extra alarm current; decreasing to 0W on the 100V output as the F3200 alarm current increases to 6A.

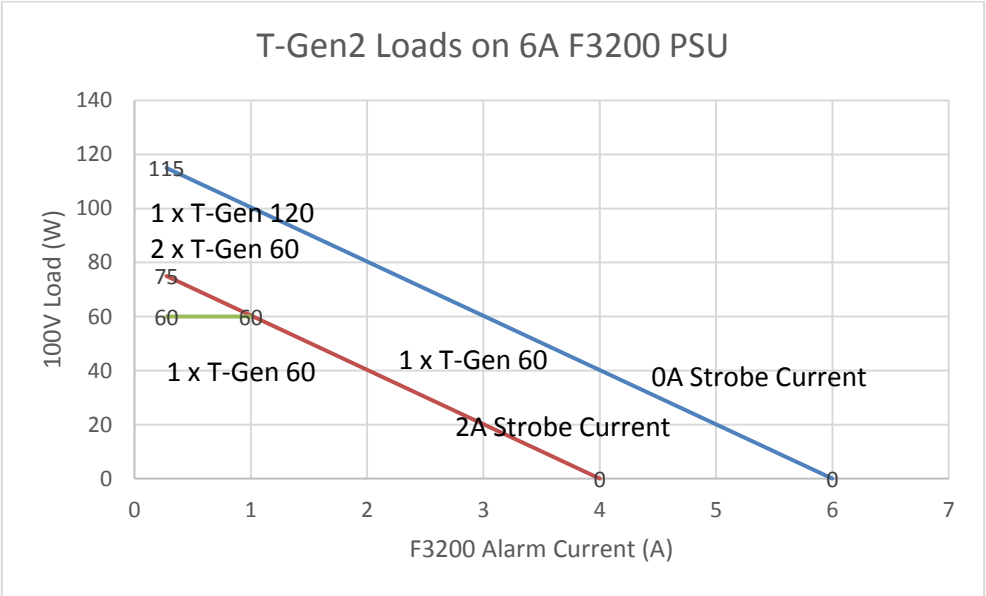

Figure 2
Permissible T-Gen2 100V Load v 6A F3200 Alarm Current and Strobe Current

To determine the supportable load, calculate the F3200 panel alarm current (excluding the T-Gen2 requirements); Use the graph to determine the T-Gen2 100V load that is supported for that F3200 alarm current. Extrapolate between the 0A strobe current and 2A strobe current lines to determine the actual 100V load that can be supported based on the strobe current that must also be supplied.

The T-Gen2 units should be connected to the F3200 Main Board battery terminals using the LM0459 fused lead

If the required load cannot be supported by the F3200 PSU, options are:

- Use a separate PSU (and battery) to power the T-Gen2. The PSU2406 5A and 10A PSUs are suitable. Empty 8U or 15U expansion cabinets could house the PSU and battery, providing power back to the T-Gen2 mounted in the F3200.
- Use a BTO panel with multiple PSUs.
- Use an external BOWS (FP1136 or FP1137) as these contain their own PSU, T-Gen2 unit(s) and battery space.