

596SGFI

DUAL CURRENT SENSING GROUND FAULT INDICATOR

QUICK START GUIDE





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PRODUCT SUMMARY

The Model 596SGFI is a dual channel, current sensing / ground fault detector module. In conjunction with the GCK Monitor / Test System, it can be used to monitor the current in any speaker circuit, as well as to detect a fault to ground in either side of the speaker line from an amplifier. When using a floating output amplifier, both speaker line current sensing and ground fault indications may be used at the same time.

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SPEAKER LINE CURRENT SENSING

The speaker line current sensing function can be used with any power amplifier. Speaker line current limit for the 596SGFI is 3 amperes (approx. 200 Watts @ 70.7 V).

AMPLIFIER OUTPUT TOPOLOGY	MAX SPEAKER LINE POWER
4 ohms	36 W
8 ohms	72 W
25 V	75 W
70.7 V	212 W
100 V	300 W

Table 1: Amplifier power out for three (3) amps speaker line current

Figure 2 shows wiring of the 596SGFI using the 1544ZOP Monitor Test function. Up to two 596SGFI modules may be connected to each 1544ZOP for supervising up to four speaker circuits.

Connect the amplifier outputs and speaker lines to the "SPKR LINE A" and "SPKR LINE B" connections. Connect the "Monitor A" and "Monitor B" outputs to the 1544ZOP using a twisted, shielded pair cable such as Belden 8451 or equal.

Important: To prevent possible damage to your amplifier, the 596SGFI Module Speaker Line Inputs must come from an amplifier and the Speaker Line Outputs must go to a speaker load.

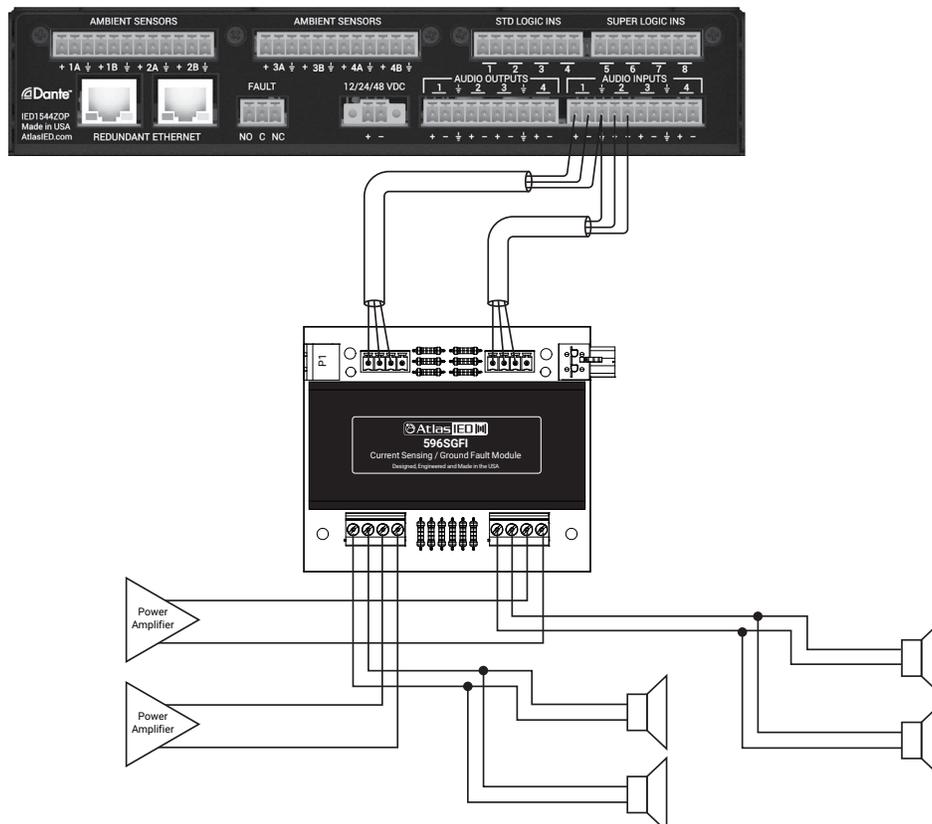


Figure 2: Connections for speaker line current sensing with 1544ZOP / 1544ZOPC

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GROUND FAULT SENSING

The 596SGFI may be used to indicate when a ground fault occurs on floating speaker lines. This function requires an external 5 VDC power supply (supplied by others). If a ground fault is sensed between a speaker line conductor and ground, the associated LED indicator will illuminate, and a relay will activate.

Figure 3 shows the 596SGFI wiring for ground fault indications and connections to a customer fault indicating system. The module has one normally open relay contact for each speaker circuit which closes when a ground fault condition is sensed. These contacts may be wired to customer fault reporting systems to signal when a ground fault occurs.

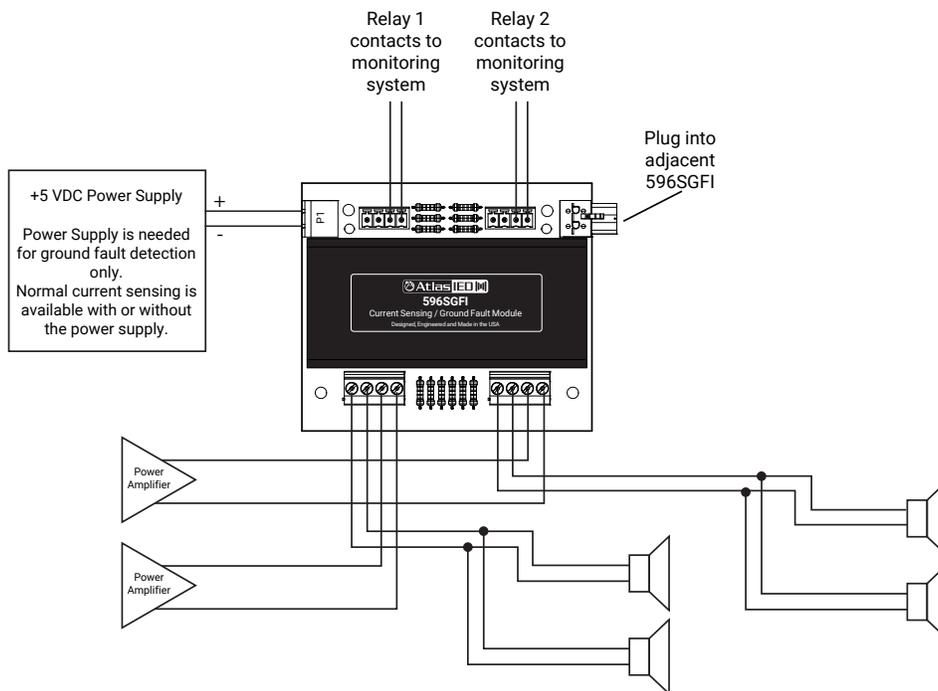


Figure 3: Connections for Ground Fault Sensing with floating output amplifiers

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GROUND FAULT SENSING (CONTINUED)

Important: The 596SGFI module cannot be used to indicate ground faults on an amplifier with single-ended speaker line outputs (where one side of the amplifier output is grounded by design). See Figure 4. The connection to the grounded side of the amplifier output will cause a ground fault indication.

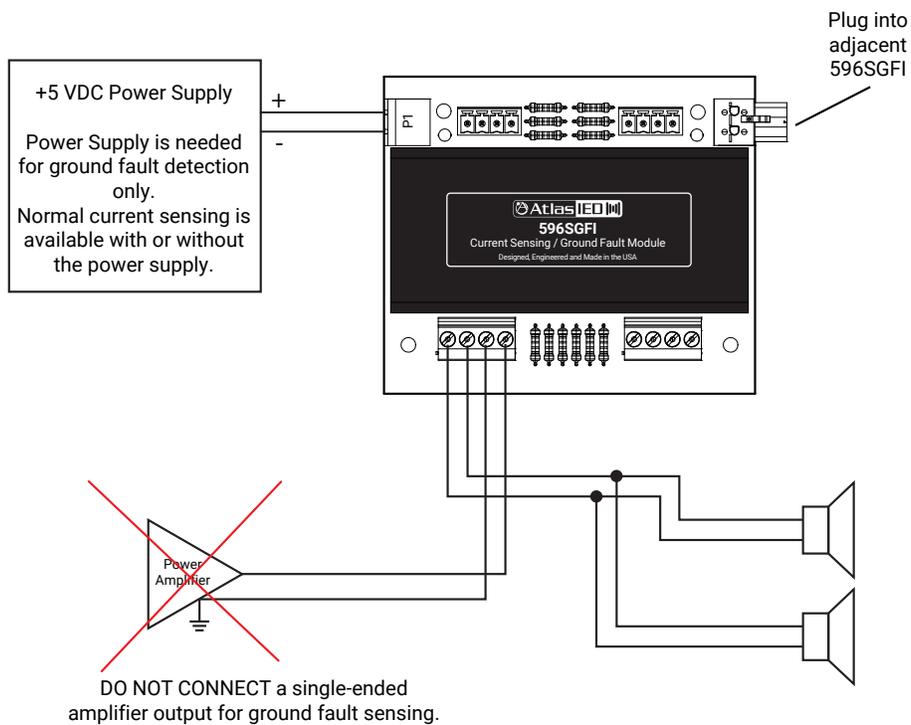


Figure 4: Do not connect to a single-ended amplifier for ground fault sensing

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INSTALLATION USING SNAPTRACK

When multiple 596SGFI modules are powered from a single power supply, they can be plugged together and mounted in a SNAPTRACK as illustrated in Figure 4. SNAPTRACK, part # 3TK2-48 is available at TE Connectivity: www.te.com

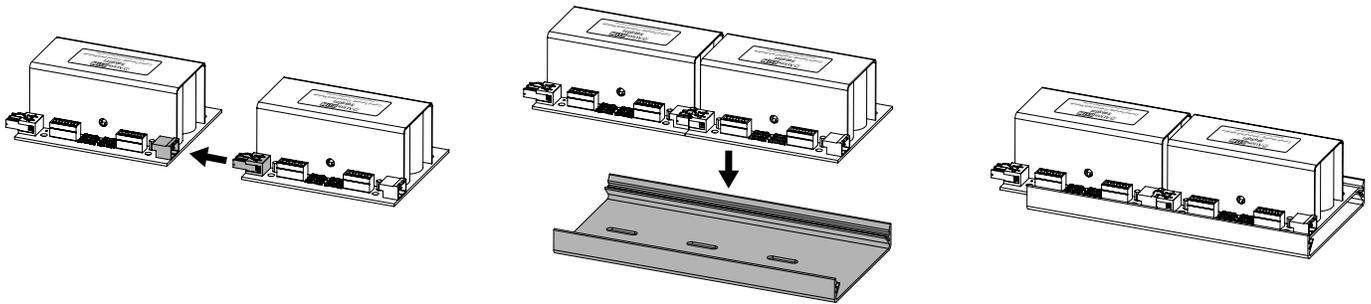


Figure 5: Plugging modules together and mounting using SNAPTRACK

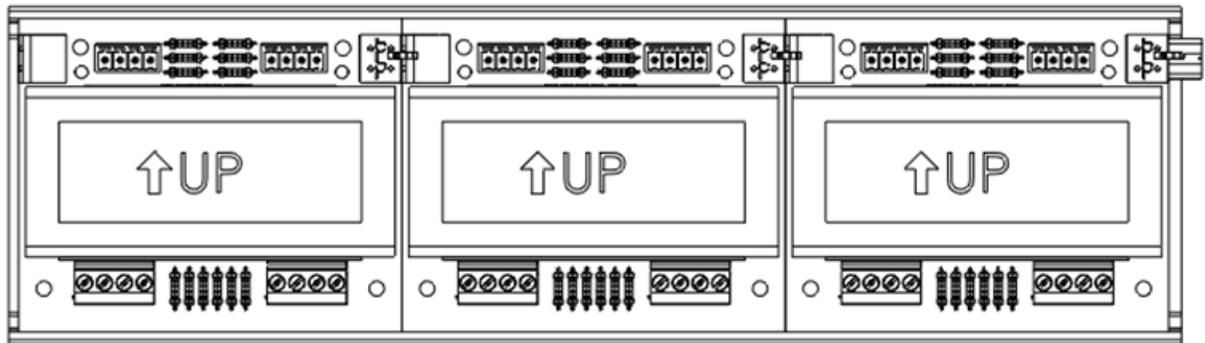


Figure 6: Three 596SGFI modules mounted in SNAPTRACK