CONTHERM SCIENTIFIC LTD

TECHNICAL MEMORANDUM **PRODUCT : G.P SERIES 5**

No : 0037

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FROM : Russell Kirkwood **DATE :** 16/2/93

TO : ALL AGENTS

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SUBJECT : CAT 270M OVEN / ZP19 TRIAC OVERHEATING

Contherm have recently introduced a larger size GP oven CAT 270M. The element sizes on these ovens (2 x 1275Watt or 2 x 1750Watt are causing the standard triac on the ZP19 PCB to overheat and fail. Any existing 270M ovens in the field with element wattages above 1750Watts **TOTAL** must be modified using the parts and method described in this technical memo.

HARDWARE REQUIRED:

A) 1 x 240A45 'opto 22' solid state relay mounted on a 100mm X 115mm finned heatsink and fitted with quick connect spade terminals complete with 4 self tapping screws to fix heatsink to cabinet chassis.

B) 3 x 'piggyback' spade terminals.

C) 1 X quick connect terminal & shroud (needed if TWO elements)

D) 1 length of GREY appliance wire (1.0mm) complete with plastic shrouded quick connect fittings each end, 300mm long.

E) 1 length of YELLOW appliance wire (1.0mm) complete with plastic shrouded quick connect fittings each end, 500mm long.

F) 1 length of BLACK appliance wire (1.0mm) complete with plastic shrouded quick connect fittings each end, 800mm long.

G) New GP wiring layout diagram as per this memo.

If this hardware is ordered from Contherm as a complete kit of parts it will be supplied with the wires attached to the appropriate spade terminals on the solid state switch.

METHOD

A) Remove all power from the cabinet and unplug at wall socket.

B) Remove cover.

C) Select a suitable place (usually to the left of and slightly to the rear of the existing element legs) to mount the solid state relay module with its heatsink.

D) Unplug the GREY wire from the element leg and connect it to terminal 3 on the solid state relay **OR** if the cabinet has TWO elements, CUT the grey wire leading from the first element leg back to the ZP19 PCB, fit the spare quick connect terminal & shroud to THIS wire and connect **IT** to terminal 3 on the solid state relay. (this will leave a grey wire connecting the two elements together), also **ADD** a 'piggyback' terminal to this element leg.

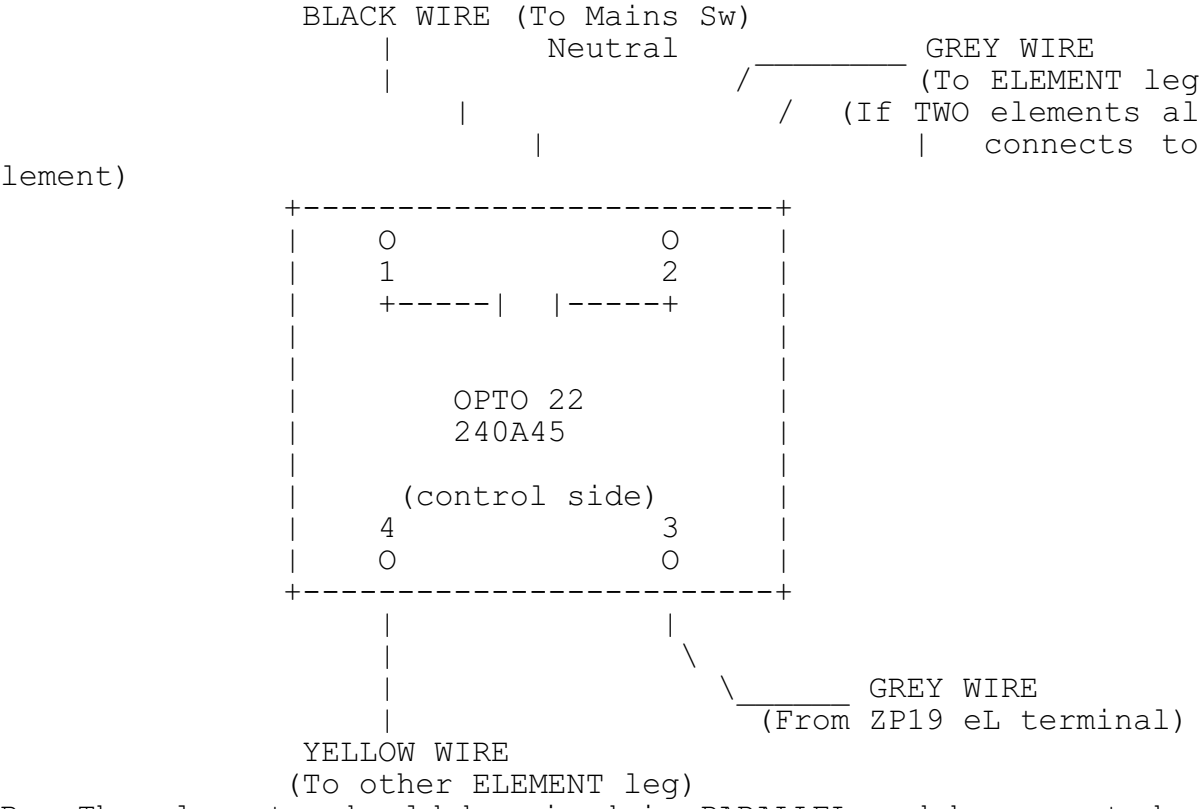
E) Connect the length of YELLOW wire from terminal 4 on the solid state relay to the existing yellow wire on the element leg using the 'piggyback' quick connect adapter. (This element leg will now have two YELLOW wires on it).

F) Connect the length of GREY wire supplied from terminal 2 on the solid state relay to the element leg that originally had a grey wire on it. (This element leg should now have only one GREY wire on it **OR** if TWO elements fitted should have two grey wires, one going from the element leg to terminal 2 of the solid state relay and one going to the other element).

G) Connect the BLACK wire from terminal 1 on the solid state relay to the NEUTRAL connection on the MAINS SWITCH using the 'piggyback' connector provided. (This terminal will now have two BLACK wires and one BLUE wire on it.)

WIRING:

The wiring to the solid state relay should now look like this:



NB: The elements should be wired in PARALLEL and be operated via the solid state relay.
If the wiring is correct run the cabinet and check for normal operation.

ELECTRICAL GP LAYOUT ZP19 G.P.M 270