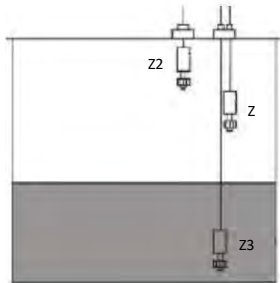# CTS Mains Alarm—Day Tank Controller Functions
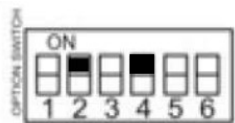
1 Install the Tank Probes as shown in the diagram
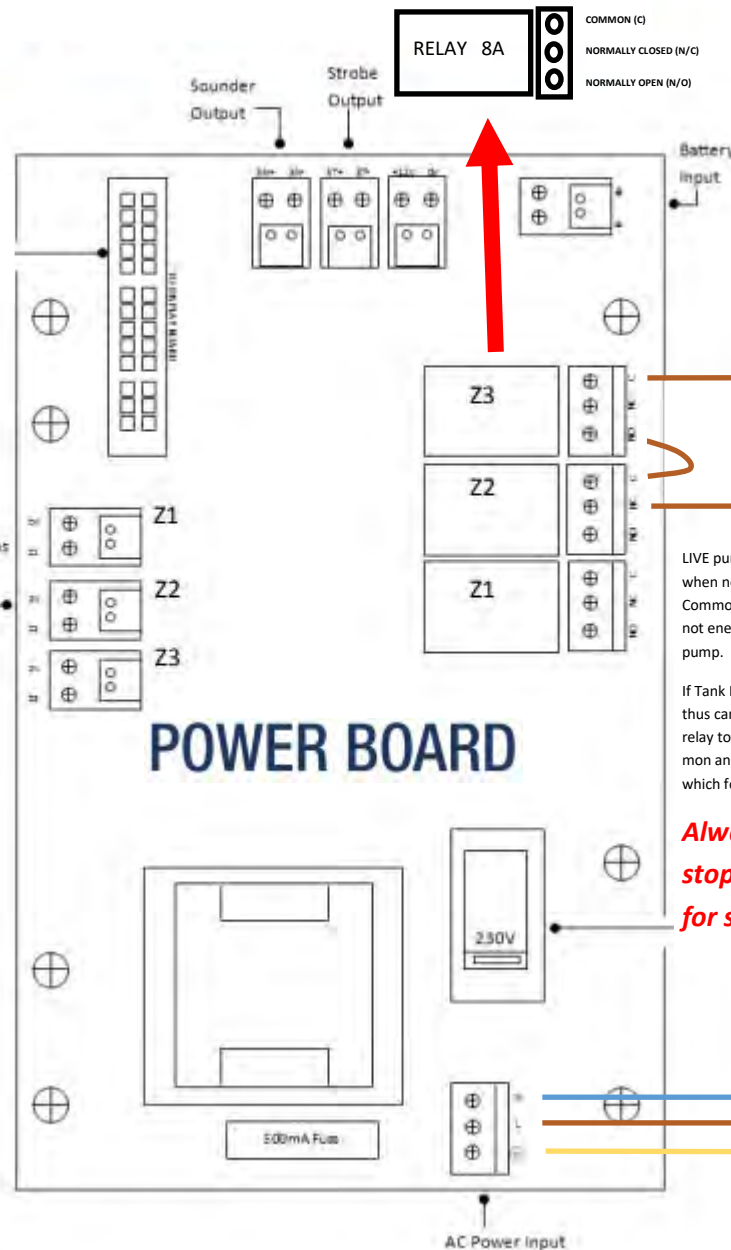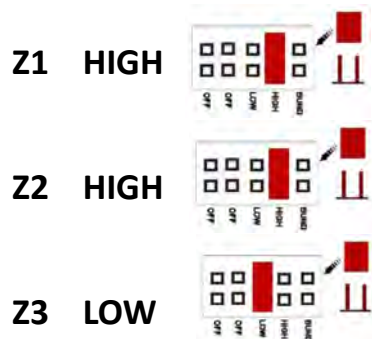

The CTS 2 Zone Mains alarm has a built in Day Tank Controller function.
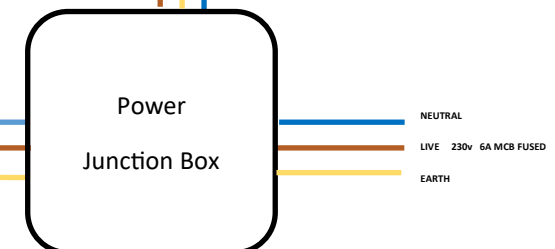
When enabled a pump LIVE feed can be wired through the LOW relay (Z3) so that when the Low level probe in the day tank activates the pump switches ON to start filling the day tank. The Low Relay Z3 latches (stays energised) so the pump keeps pumping until the fluid reaches the High Level Probe Z1 and activates it, at which point the system resets and the Low level relay Z3 which is powering the pump switches off. The Sounder is disabled for the LOW and HIGH alerts but the strobe will still flash**

The Ultimate HIGH - HIGH Tank Level Probe Z2 acts as a safety switch as the pump LIVE feed is looped through relay Z2 as shown in the diagram. If Z2 ever activates then the sounder will also activate as a local alert to the failure.

RELAY 8A — COMMON (C) — NORMALLY CLOSED (N/C) — NORMALLY OPEN (N/O)

Sounder Output — Strobe Output — Battery Input

2 Connect the Tank Probes to the Alarm

Z1 = HIGH

Z2 = HIGH — HIGH

Z3 = LOW

Probe Connections

Z1 / Z2 / Z3

3 Configure the Alarm Display Board option switch 2= ON & 4 = ON

POWER BOARD

Z3 / Z2 / Z1

LIVE pump feed is connected through the Z2 (HIGH HIGH) relay as when not in alarm the power flows through Normally Closed and Common, then looped into relay Z3 (LOW) into Normally Open (so not energised until in alarm) and then connect Common back to pump.

If Tank Probe Z1 (HIGH) fails to operate for some unknown reason and thus can't stop the pump flowing then there is still the Z2 (HIGH HIGH) relay to disconnect the LIVE feed to the pump if it activates as Common and Normally Open will become connected on relay activation which following the circuit diagram will cut the power to the pump.

Always install a manual emergency stop button on the pump power feed for safety.

4 Set the Zone Jumpers as diagram on Display Board

Z1   HIGH

Z2   HIGH

Z3   LOW

230V

500mA Fuse

AC Power Input

5 Wire the pump as per the diagram

Power Junction Box

NEUTRAL

LIVE   230v   6A MCB FUSED

EARTH

** (can be disconnected from board if required)