



ADVECO
HOT WATER SPECIALISTS

Control Panels

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ADVECO
HOT WATER SPECIALISTS

Agenda

- Fusion and PPR Derivatives
- Old Control Panels
- Current Control Panel

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McDonalds offering

- All the same offering
- Internal / External
- With or without heat pump

- Otherwise the same

- All using the same control panel

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Old Control Panels

- EB0025
 - Gas with Electric backup
- EB0028
 - Electric with Electric backup
- EB0036
 - Gas or Elec primary and 2 week boost
- **EB0041**
 - Electric with ASHP and electric backup (packaged plant room)
- EB0047
 - Electric with ASHP and electric backup

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New Control Panel

- **810366K**
 - 3 phase Fusion Control Panel for E+, T+, McDonalds (Fusionlike system)
 - Customer fits the GSM module (supplied loose)
- **810365K**
 - 1 phase Fusion Control Panel for E+, T+
 - For P9 but any heat pump
 - Customer fits the GSM module (supplied loose)

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New Control Panel Features

- **810366K**
 - Use with any heat pump
 - Fpi and ADVS10 can be wired from the panel
 - ADVS12 and larger must have a dedicated supply to the heat pump
 - Use with P12 or P24 boiler
 - Backup Immersion up to 12kW
 - Activated when either of boiler/ASHP go into fault
 - Option to prevent immersion activation when ASHP goes into fault to limit current
 - GMS fault notification option
 - Time control clock built in
 - Enable from BMS option
 - Time control clock for thermal disinfection built in
 - BMS disinfection enable is also optional
 - BMS high temp pasteurisation function available (BMS to monitor temperature when active)
 - Destrat pump output
 - Connections for: LLH pump, lighting, socket, heater bar, secondary return pump
 - BMS fault relay

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Control Panels

- All control panels monitor for faults, turn on the backup, and send a message.
- All of the controls are designed and built in. For the installer the control panel is simply a wiring station, put the right wires in the right place and the system will work.
- An electrician will do the wiring, but you must know what goes where, which stat is which, etc because the electrician will not know.

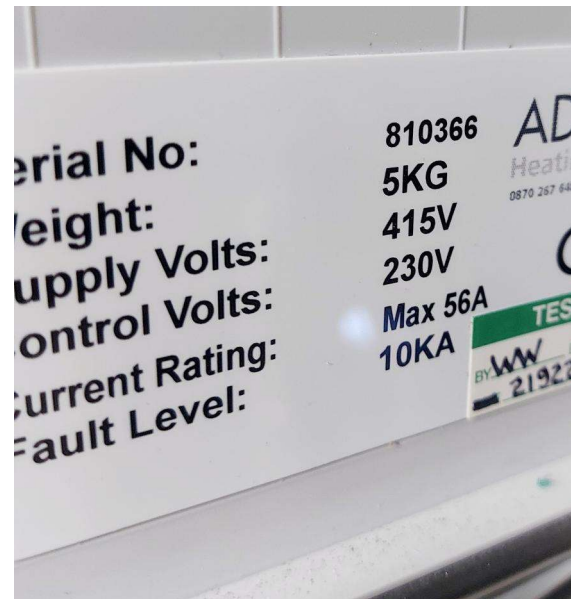
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Fusion Control Panel 810366/K Drawing

Issue	Revision	Sheet	By	Date	Drawing Control Notes							
0	Original Issue Pre-Production	1-7	WW	02/01/25	Arrangement Drivley Panel/Desk	2						
A	For Approval	1-8	UTK	25/02/25	Wiring Schematic	3-7						
B	UPDATED TERMINALS	1-8	SB	14/04/25	Terminal Plate	8						
					Labels	2						
					Enclosure	DN Manufacturer						
NOTES ALL WORKING IS CARRIED OUT IN THE NAME OF ENCLOSURE TO MAXIMIZE PROTECTION. WORKING SHOULD BEET HAVE CARRY CONNECTIONS AND BE SECURED TO CORRESPONDING EGGS PROVIDED. THE UNIT USED IN THE CONTROL UNIT MUST BE SYSTEM FACTORY SET TO PERMANENTLY ON (ON BE SET BY USER). THE UNIT USED FOR MANUAL OPERATION ON INSTANT PUMP AND WILL OVERRIDE TCC TO TURN ON HEAT SOURCE. THE TCC FACTORY SET TO SHUTOFF TIME FOR HEAT FOR 2 HOURS. A NEW (SCHEDULED) NEW ASSESSMENT MUST BE CARRIED OUT AND THE SUBSCRIPTION PROVISIONS ALTERED TO MEET THE RECOMMENDATIONS OF THE ASSESSMENT. PRIORITY IS OPTIMAL, BUT SHOULD ALSO BE APPLIED WITH INTERNAL INTERNAL. PANEL MUST BE USED IN A MOBILE SERVICE AREA. FOR INSTALLATIONS BEING DESIGNED IN A DND SERVICE AREA, CONTACT ADVISE FOR OPTIONS.					Cable Colours 450VAC L1 Green 450VAC L2 Blue 450VAC L3 Grey 450VAC N Blue 450VAC PE Grey/Ye 240VAC L Brown 240VAC N Blue 240VAC PE Red 240VAC L Blue 240VAC N White 240VAC PE Orange 240VAC L Blue 240VAC N Blue							
					TERMINALS Arrangeries CT Circuits White 4-Stat Yellow VFC Red S Blue Memory Pink EVF Yellow							
					ADVVECO HOT WATER SPECIALISTS			Date: 14/04/25 Drawn: SB Checked: UT Approved: UT			Title: Fusion Control Panel Type: Electrical Project: Fusion Control Panel Client: WSP21462 Scale: 1:1 Drawing No: WSP21462-01 of 4	

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810366 Control Box, Appliance Badge



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810366/K Control Panel is delivered with Yellow Link wire in Terminals 20-21

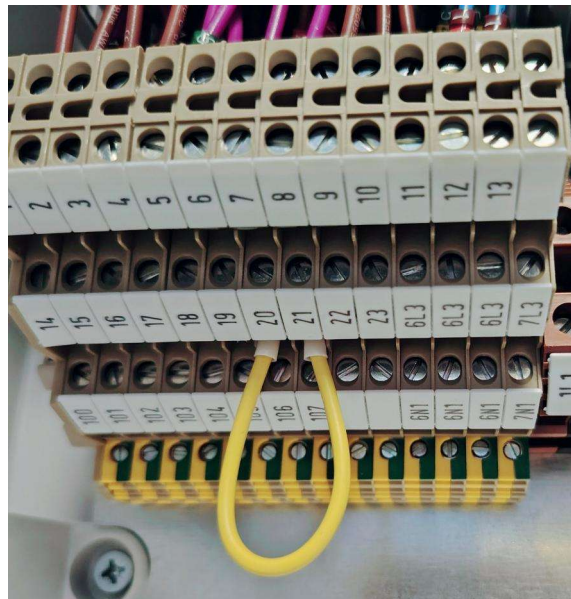
Schematic WEP 21462

Issue 8 Sheet 8

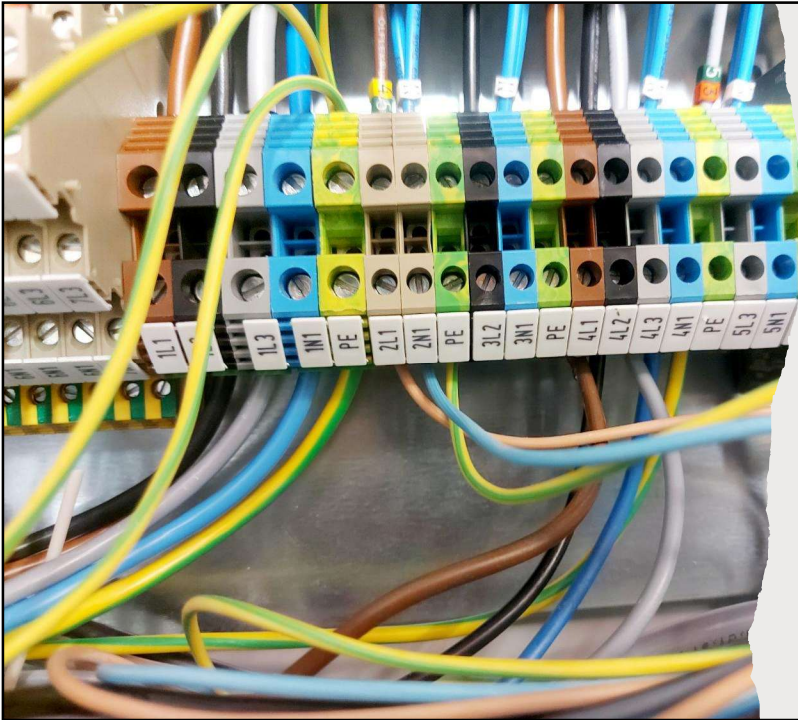
***link note:**

With Link **fitted**, back up immersion **runs** when heat pump **or** boiler is in fault.

With Link **not fitted**, back up immersion does **not run** when ADV heat pump is in fault, in order to limit total **panel** current consumption



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810366/K Control Box

Terminations:

Refer to Drawing WEP21462
From Left to Right

Boiler: 1L1, 1L2, 1L3, 1N1, PE

Destrat: 2L1, 2N1, PE

ASHP: 3L2, 3N1, PE

Back Up Immersion:

4L1, 4L2, 4L3, 4N1, PE

LLH Pump: 5L3, 5N1, PE

(If Required).

**Kiosk Lighting, Heater Bar, Switched
Double Socket Outlet:** 6L3, 6N1, PE

Secondary Return Pump: 7L3, 7N1, PE

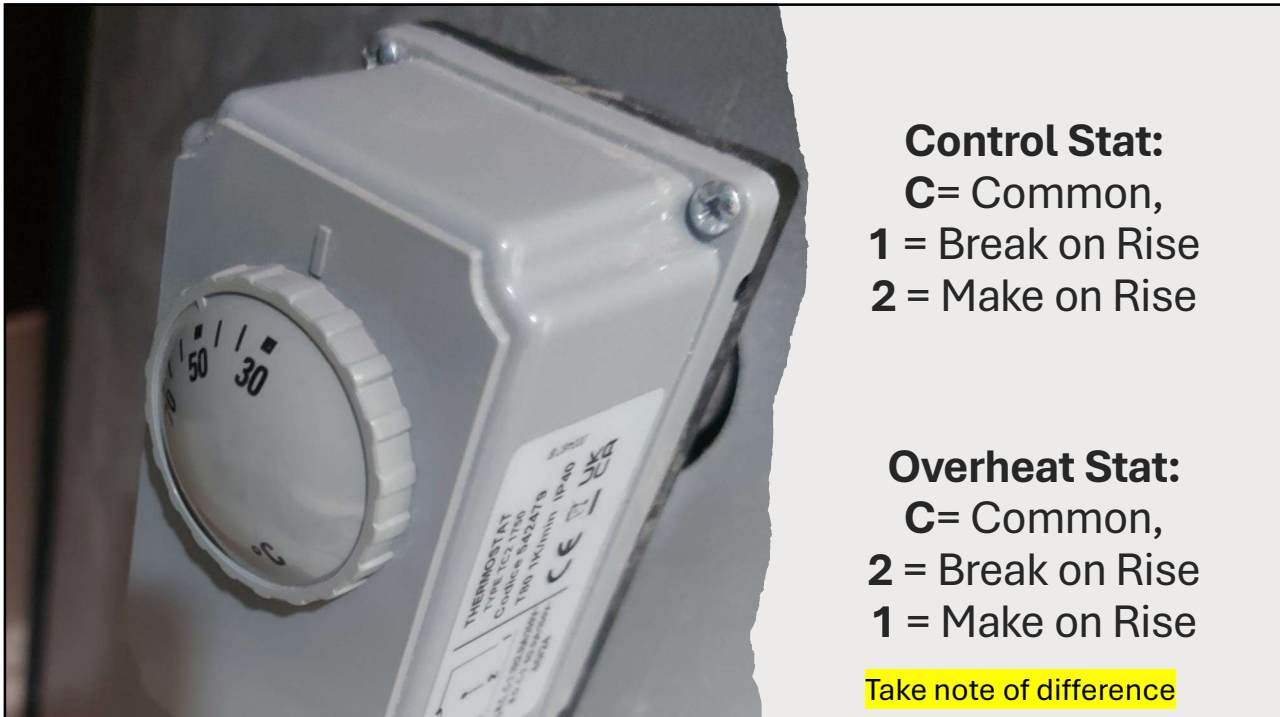
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12 kw remove 40 A Fuses & Fit 25 A Fuses.

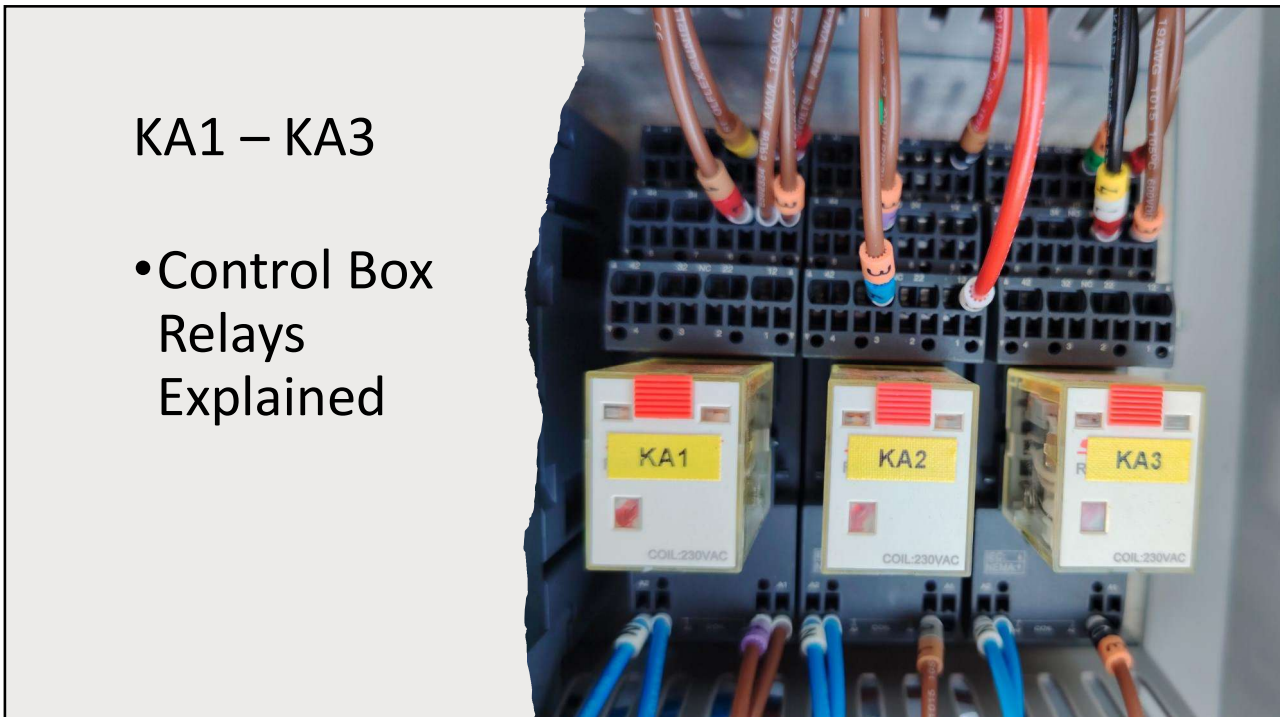
- Both sets of fuses are delivered with the 810366/K Control Box.
- **Electric Boiler 3 Phase**
- 12 kw Fit 25A Fuses
- 24 Kw Fit 40A Fuses



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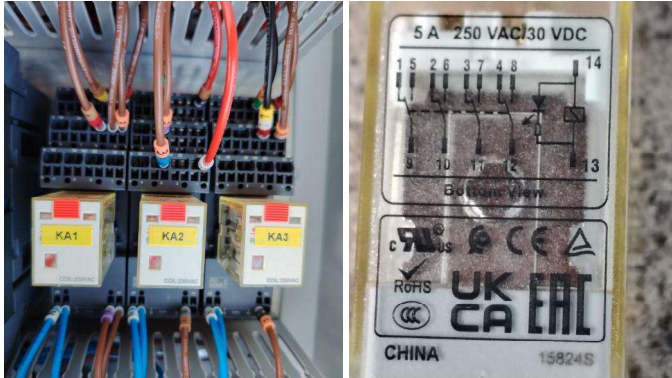


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810366/K Control Box Relays



- How does a relay work
- 230 vac Coil
- KA1
- KA2
- KA3
- A1 – A2
- 13 - 14
- 9 - 1 (NC) - 5 (NO)
- 10 - 2 (NC) - 6 (NO)
- 11 - 3 (NC) - 7 (NO)
- 12 - 4 (NC) - 8 (NO)

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Relay, How
Do They
Work?

A1 230vac

A2 Neutral

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Relay, How Do They Work?



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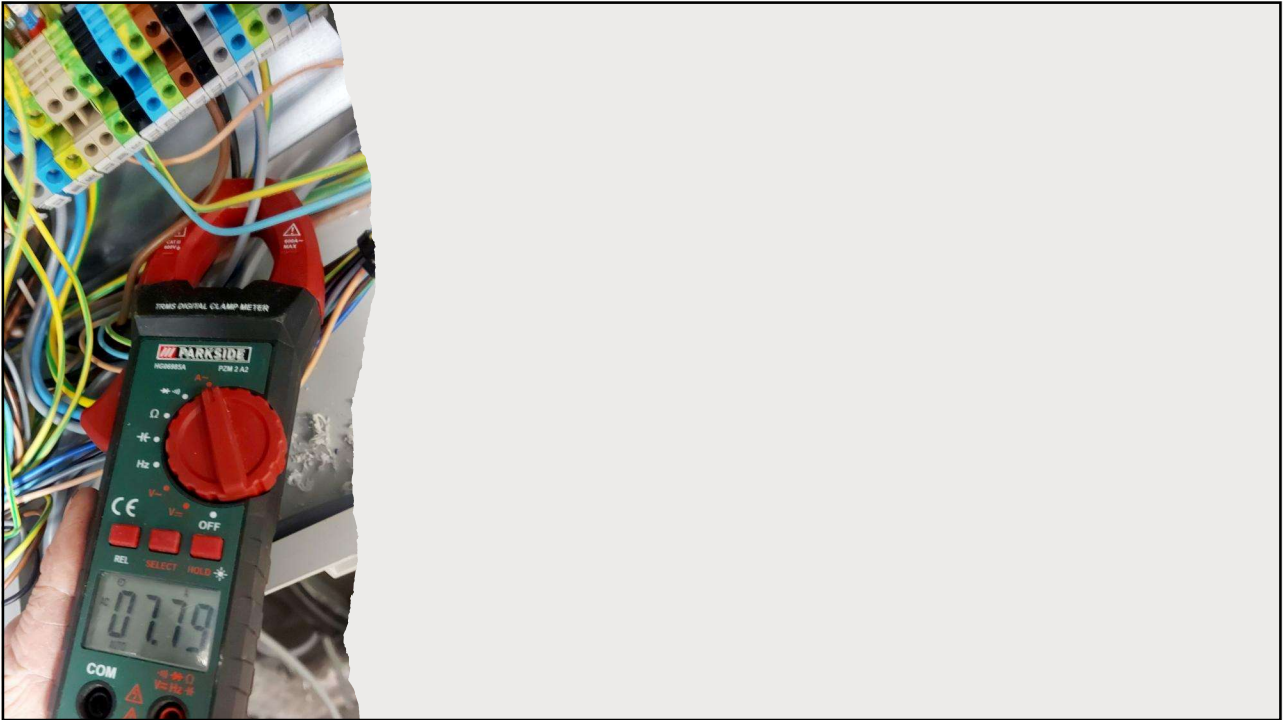
Control Panel Maintenance

Hint/Tip

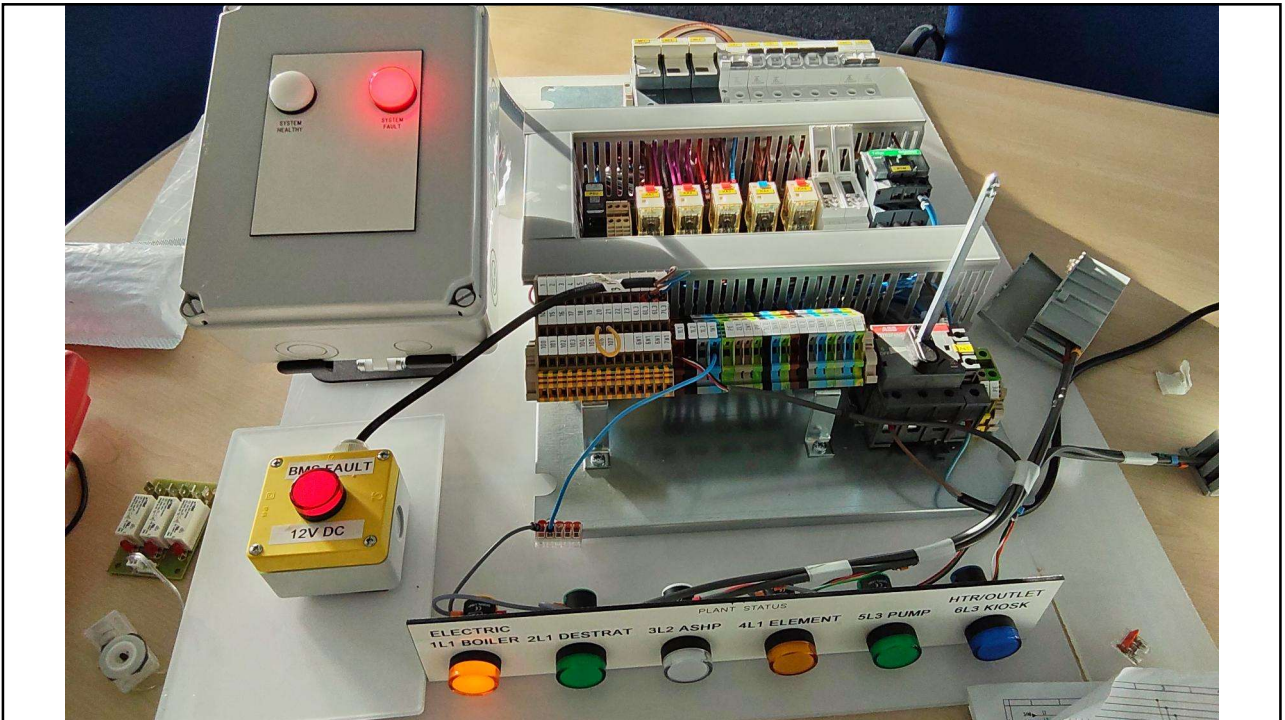
To test back up element is functional, the electric boiler fault state can be induced, by lowering the system pressure below **E1** trigger point 0.2 – 0.4 bar.

- **Control Panel Checks:**
- **Visual** inspection for heat damage
- **Check** tightness of terminals
- **Functionality** of Timers
- **Functionality** of auto changeover system in fault to the backup system
- **Confirm** Email message received by store
- **Legacy Systems**, Be aware that some control panels have **two week boost** & not auto changeover
- **Zero Volts Release (Not many out there)**
- **Listen:** Chattering/buzzing noises.
- **Look:** For signs of distress, heat damage
- **Observe:** The heat up process, does the appliance short cycle, cut in, cut out

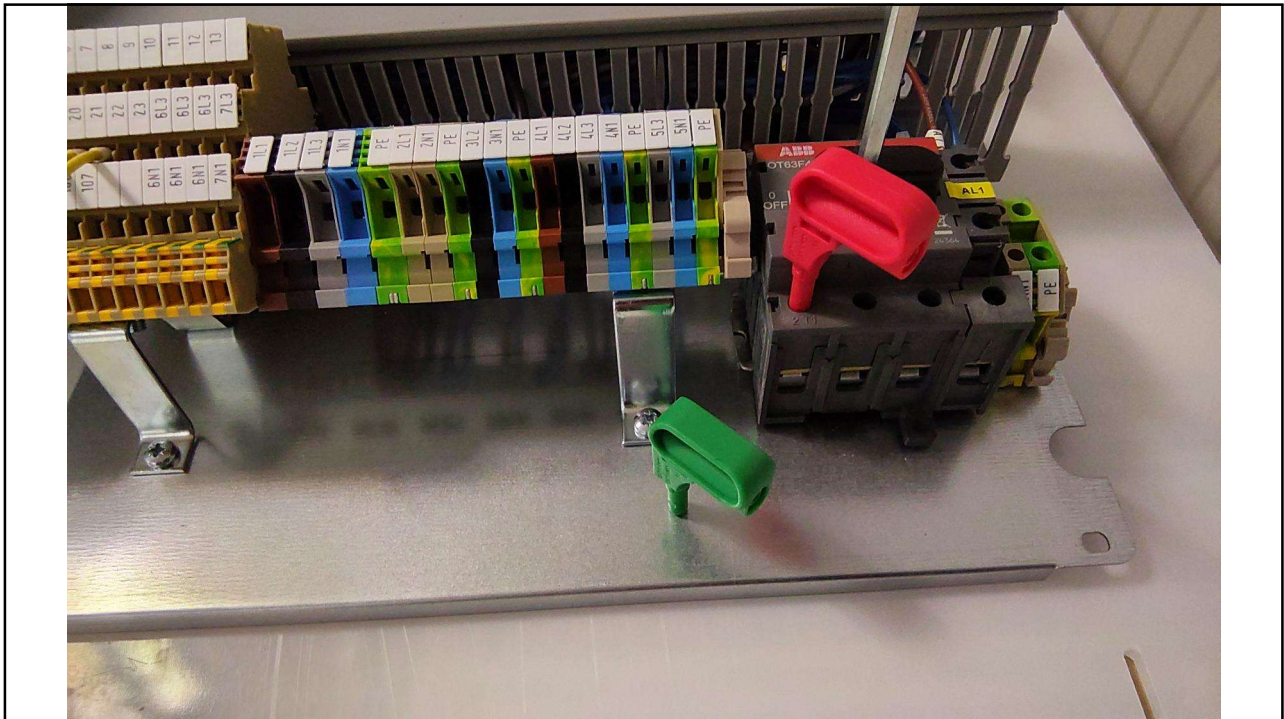
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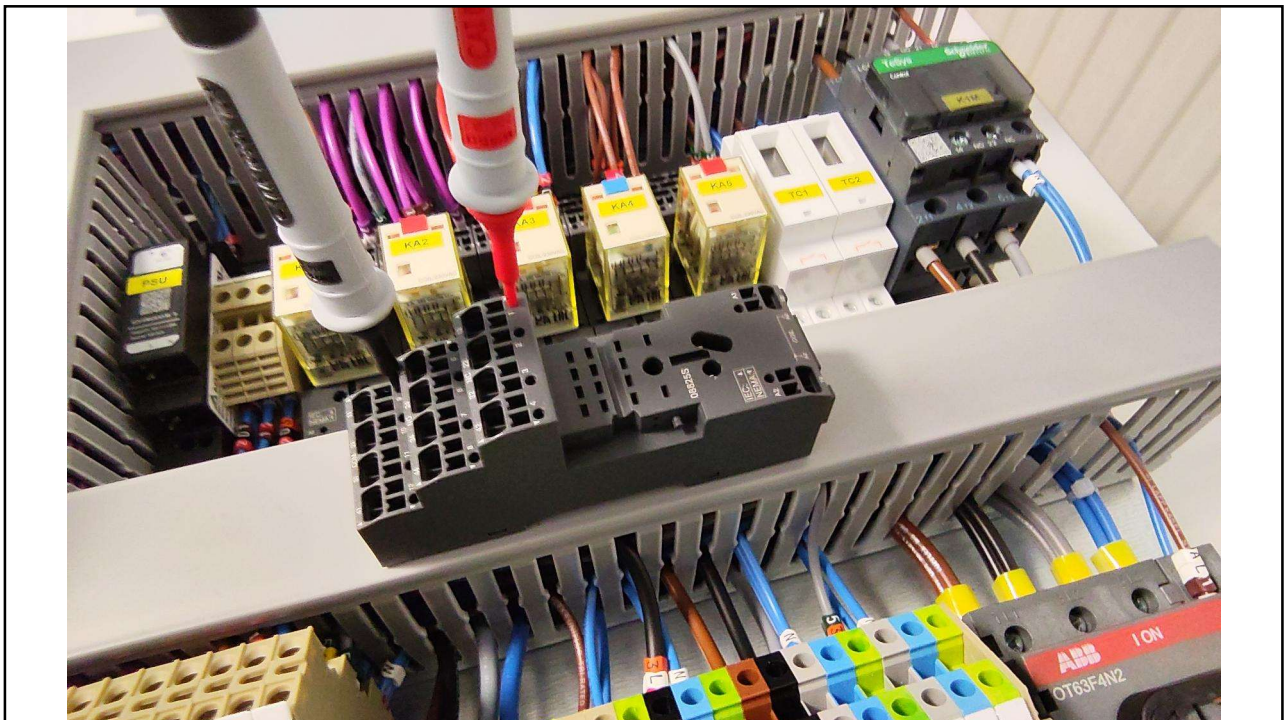
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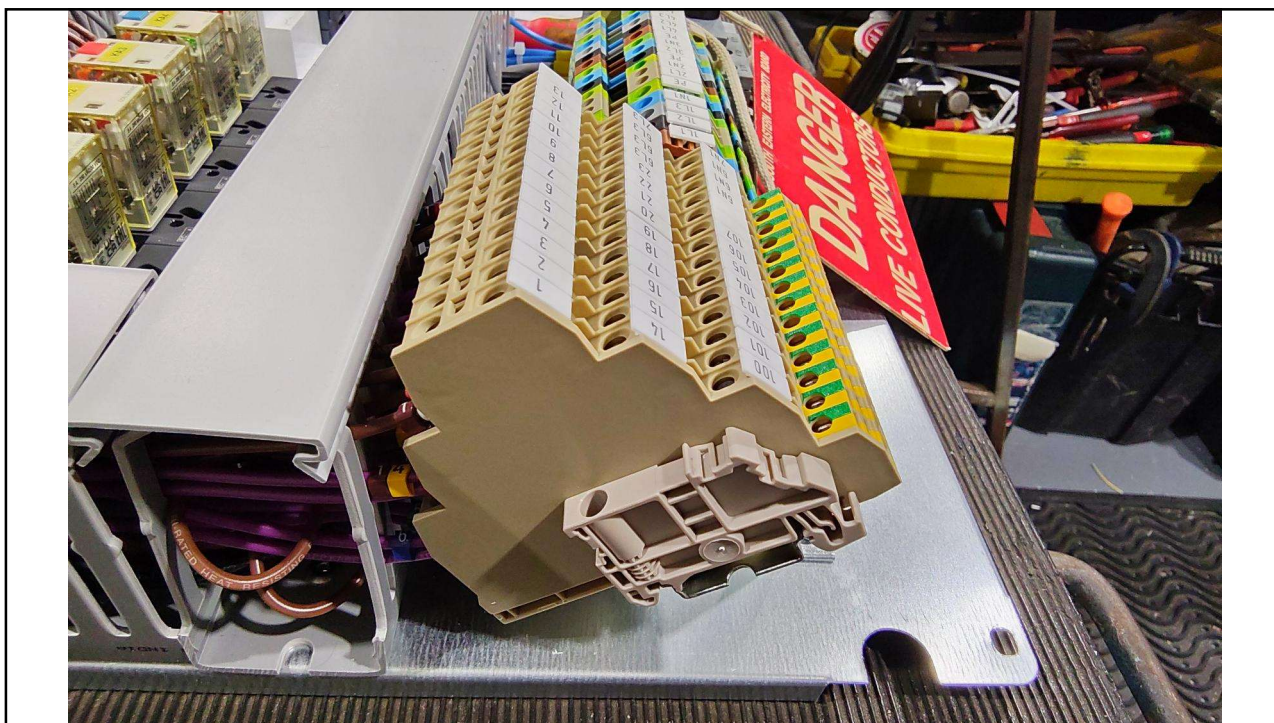
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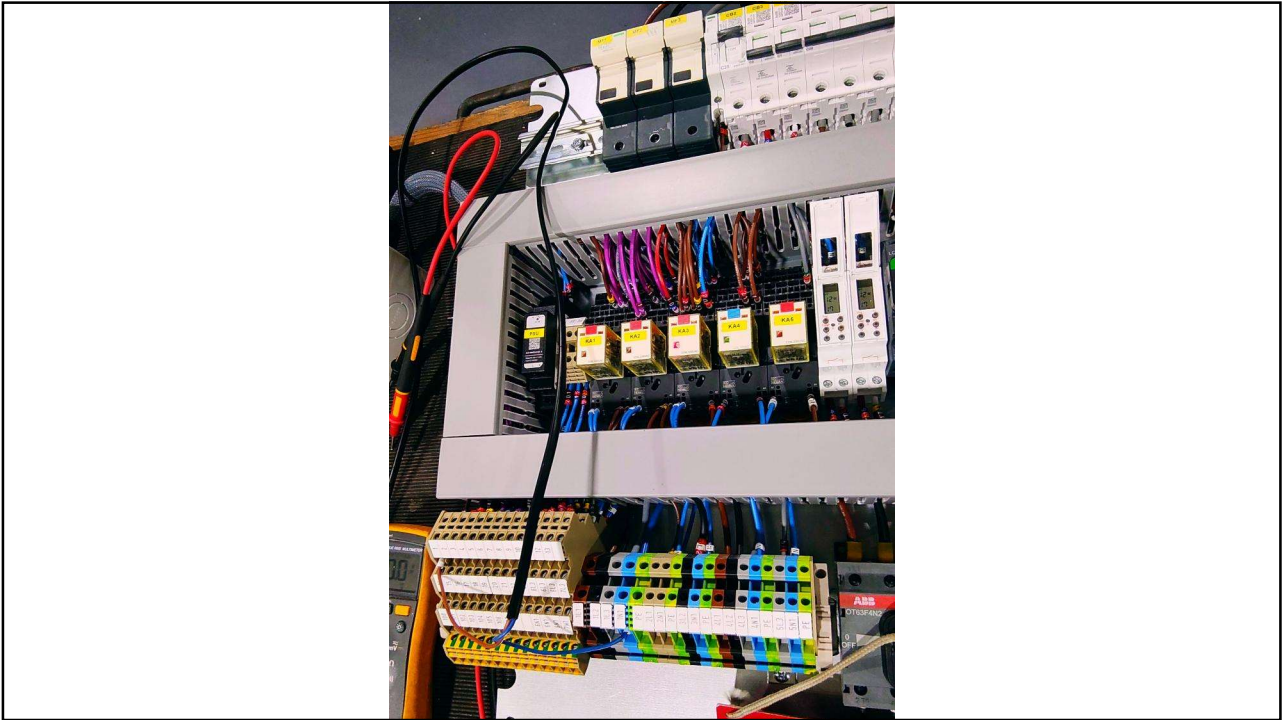
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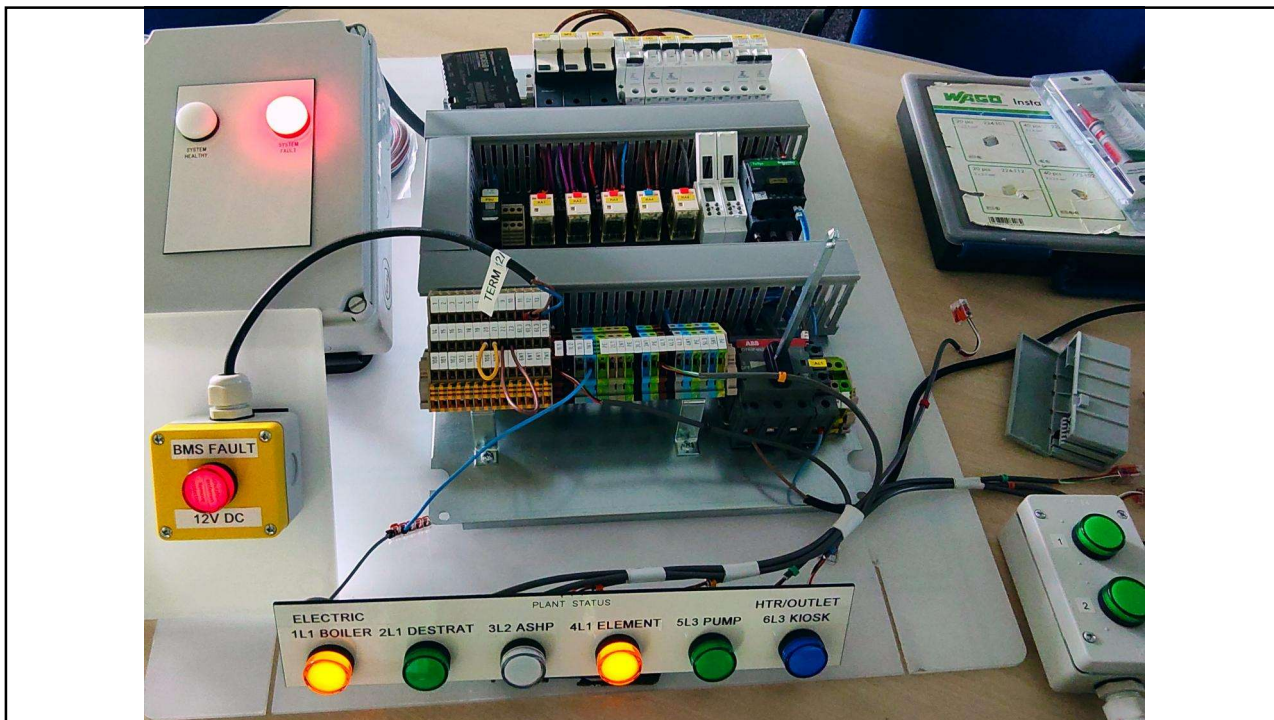
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