
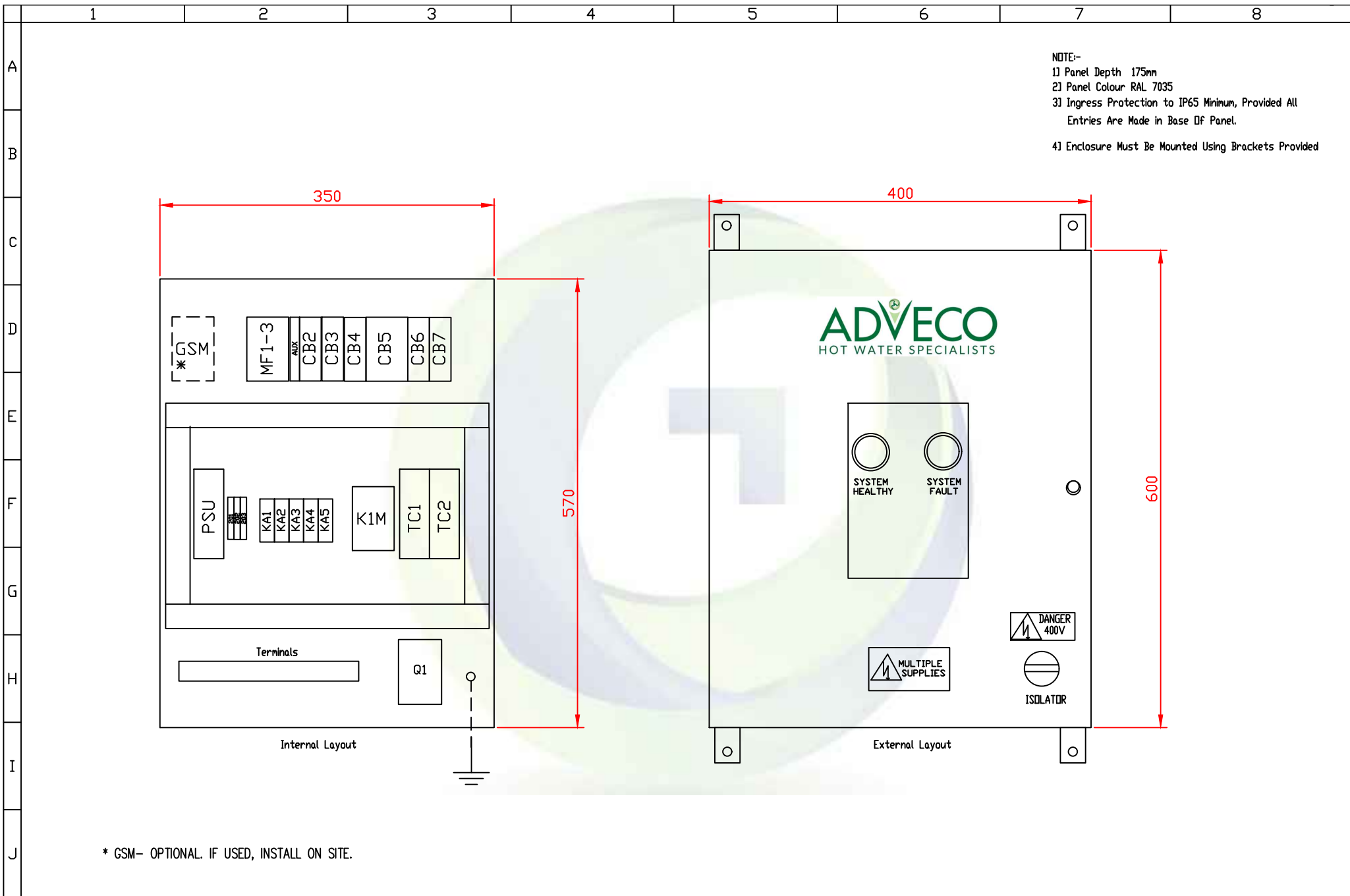


	1	2	3	4	5	6	7	8					
	Issue	Revision	Sheet	By	Date	<u>Drawing Control Notes</u>							
A	0	Original Issue Pre-Production	1-7	WW	02/01/25	Arrangement Drawing Panel/Kiosk	2						
B	A	For Approval	1-8	UTK	25/02/25	Wiring Schematic	3-7						
	B	UPDATED TERMINALS	1-8	SB	14/04/25	Terminal Plan	8						
	C	Approved	1-8	WS	06/05/25	Labels	2						
C						Time Switch Guide	9						
						Enclosure	Std Manufacturer						
D						<u>Cable Colours</u>							
						415VAC L1	Brown						
						415VAC L2	Black						
E						415VAC L3	Grey						
						415VAC N	Blue						
						EQUIP	Grn/Ylw						
						240VAC L	Brown						
						240VAC N	Blue						
						110VAC L	Red						
						110VAC N	Blue						
						24VAC L	White						
						24VAC N	Orange						
						24VDC +	Blue						
F						24VDC -	Blue						
	<p>NOTES:</p> <p>ALL GLANDING IS CARRIED OUT IN THE BASE OF ENCLOSURE TO MAINTAIN INGRESS PROTECTION</p> <p>INCOMING SUPPLY MUST HAVE EARTH CONDUCTOR AND BE BONDED TO EQUIPOTENTIAL STUD PROVIDED</p> <p>TC2 TIMER USED TO TIME CONTROL HOT WATER SYSTEM. FACTORY SET TO PERMANENTLY ON. (TO BE ST BY USER)</p> <p>TC1 TIMER USED FOR THERMAL DISINFECTION VIA DESTRAT PUMP AND WILL OVERRIDE TC2 TO TURN ON HEAT SOURCE.</p> <p>TC1 IS FACTORY SET TO DISINFECT TWICE PER WEEK FOR 2 HOURS.</p> <p>A SITE LEGONELLA RISK ASSESMENT MUST BE CARRIED OUT AND THE DISINFECTION PROGRAMME ALTERED TO MEET THE RECOMMENDATIONS OF THE ASSESMENT.</p> <p>*810367 IS OPTIONAL SMS MODULE AND SUPPLIED WITH INTERNAL ANTENNA.</p> <p>PANEL MUST BE SITED IN A MOBILE SERVICE AREA.</p> <p>FOR INSTALLATIONS BELOW GROUND OR IN BAD SERVICE AREAS, CONTACT ADVECO FOR OPTIONS.</p>					<u>MISCELLANEOUS</u>							
											Ammeters CT Circuits	White	
										4-20mA	Yellow		
										VFC	Red		
										IS	Blue		
										Telemetry	Pink		
										ELV	Violet		
G													
H													
I													
J													

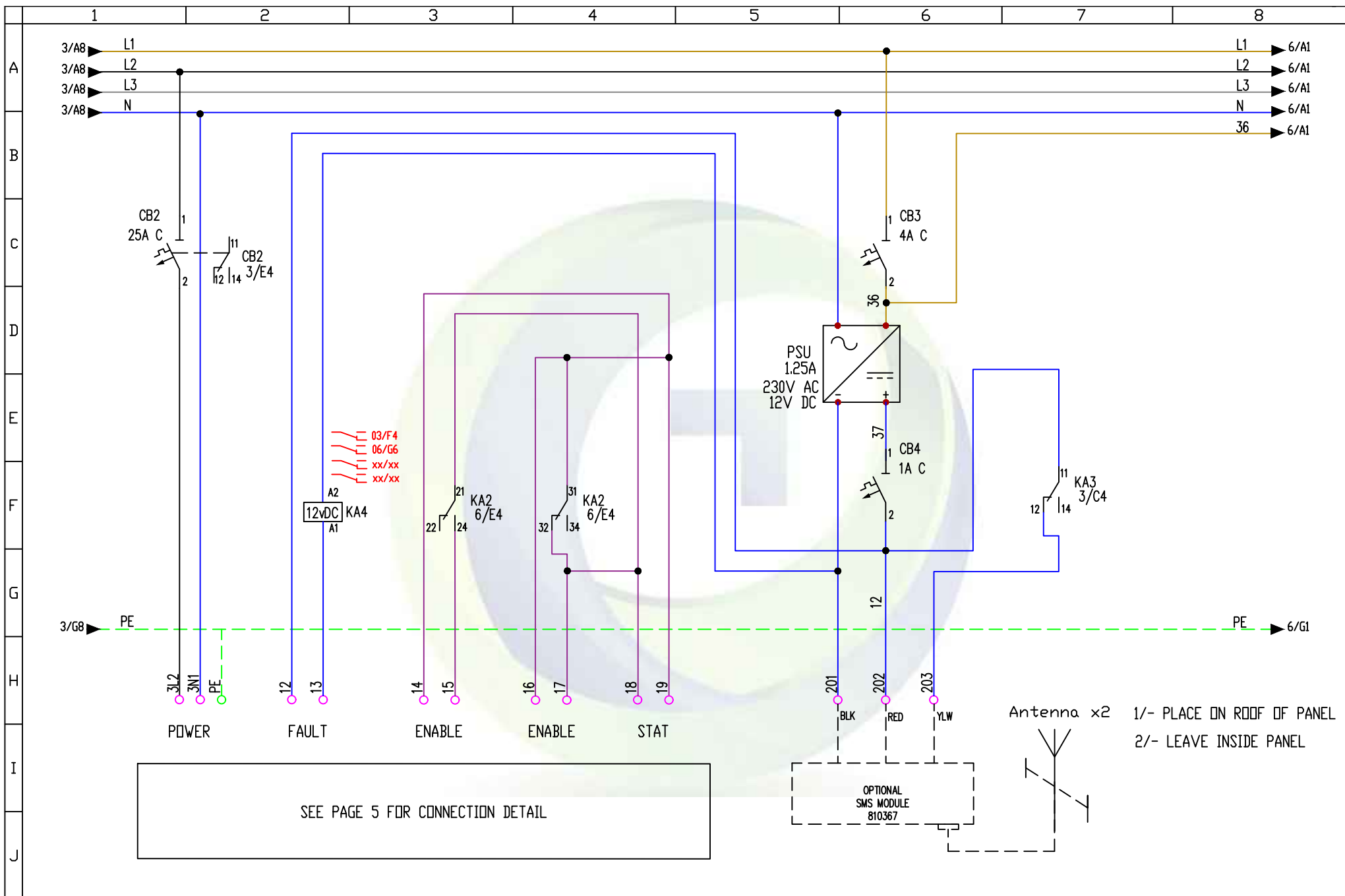
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	Drawn	UTK	Adveco Ltd	Fusion Control Panel Type 810366/K Project Control Sheet	C	WEP21462	1
	Date	25/02/25					
	Checked	WW	Unit 7&8, Armstrong Mall, Southwood, Farnborough, Hants GU14 0NR			T: 01252 551 540	of 9
	Approved	BS					



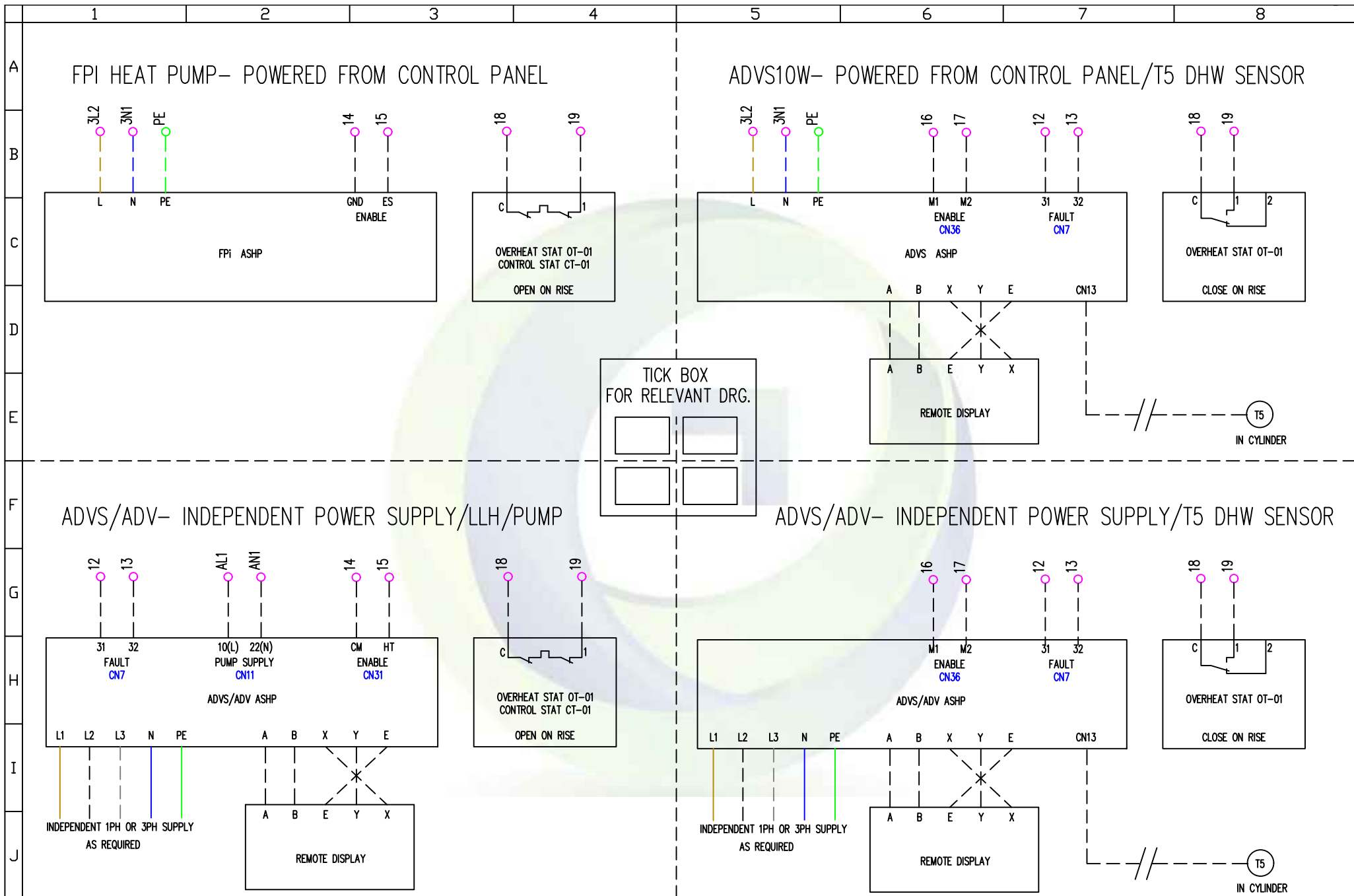
\* GSM- OPTIONAL. IF USED, INSTALL ON SITE.

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	Drawn	UTK	Adveco Ltd	Fusion Control Panel Type 810366/K General Arrangement	C	WEP21462	2
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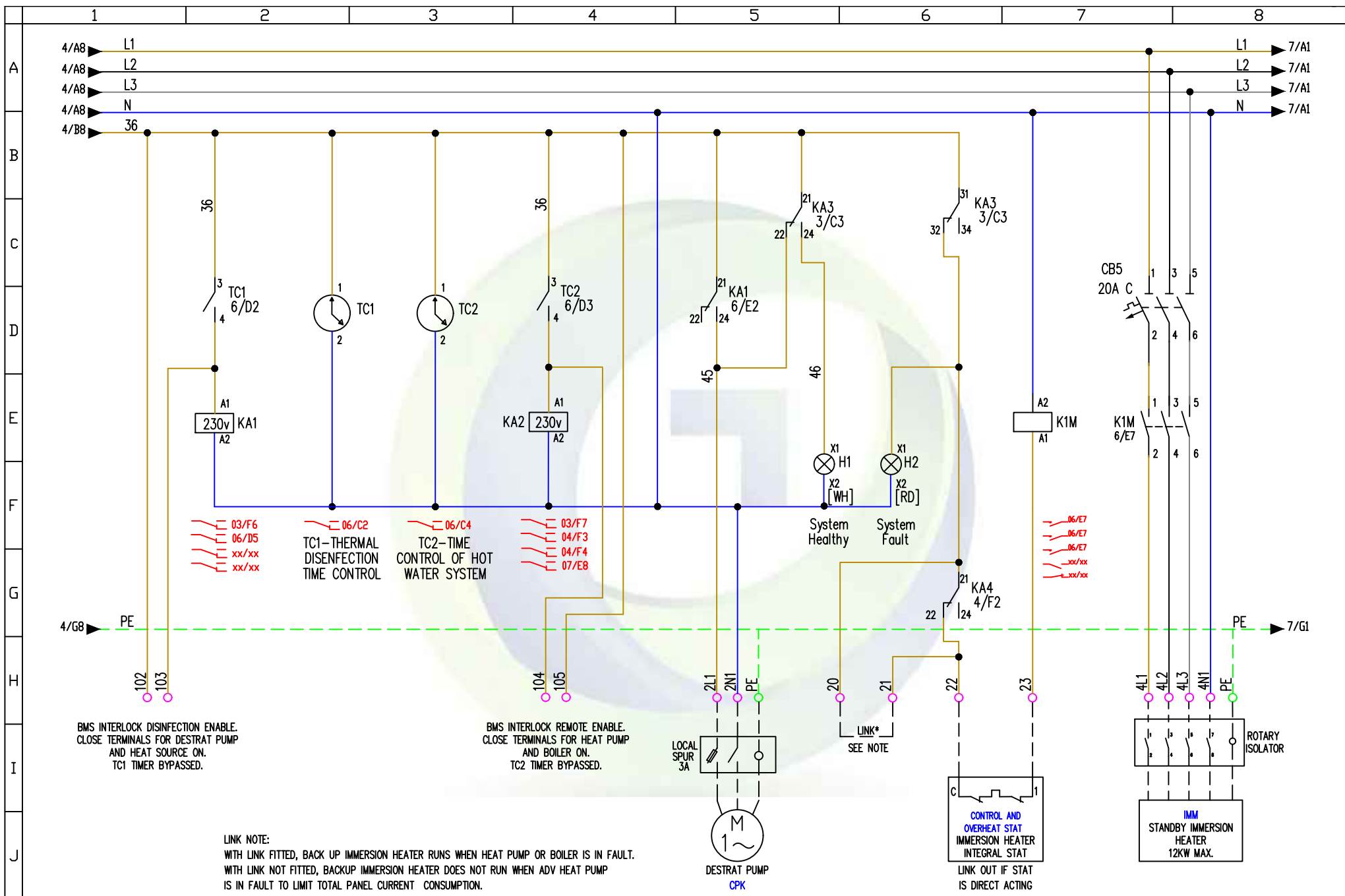




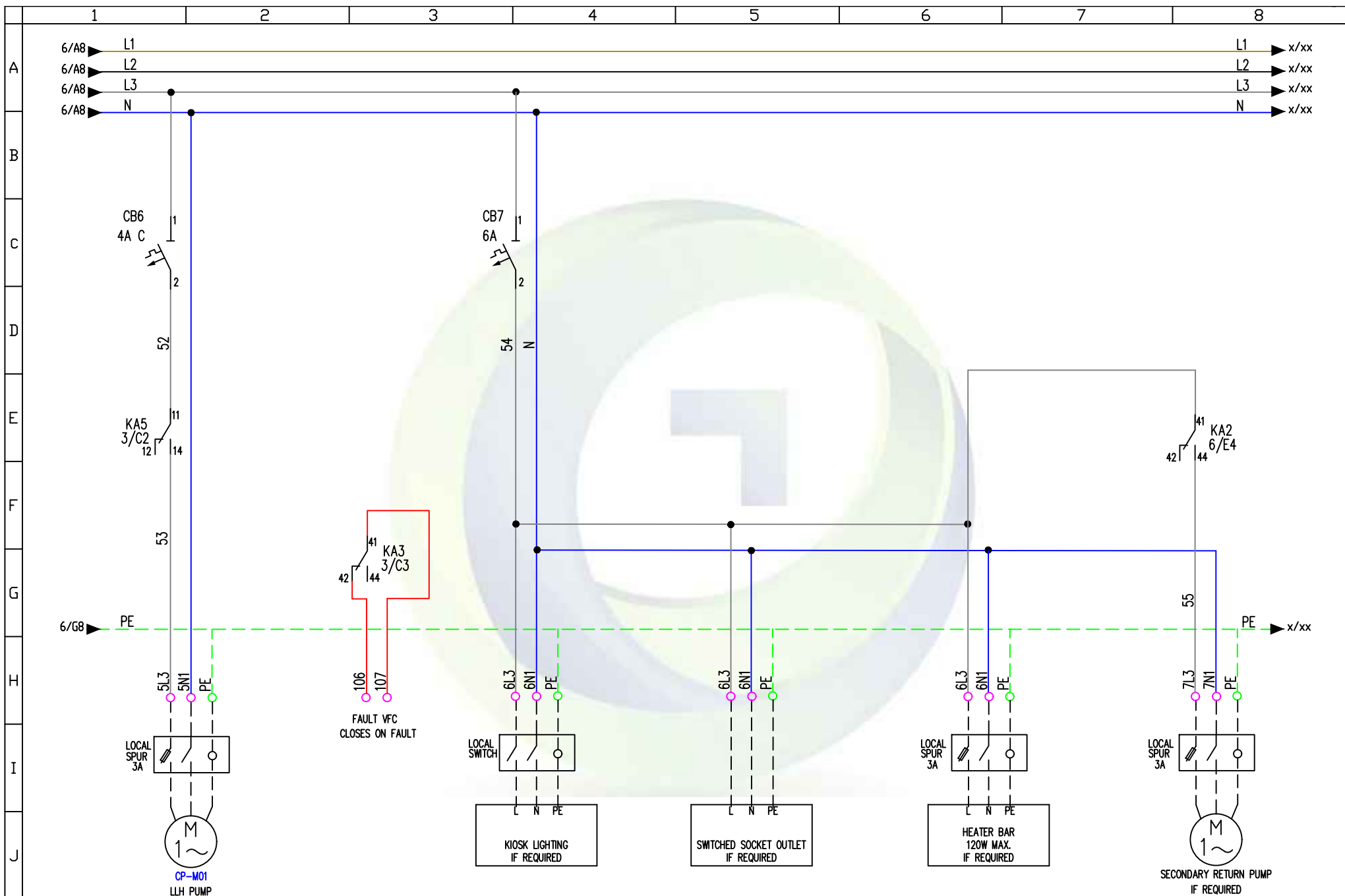
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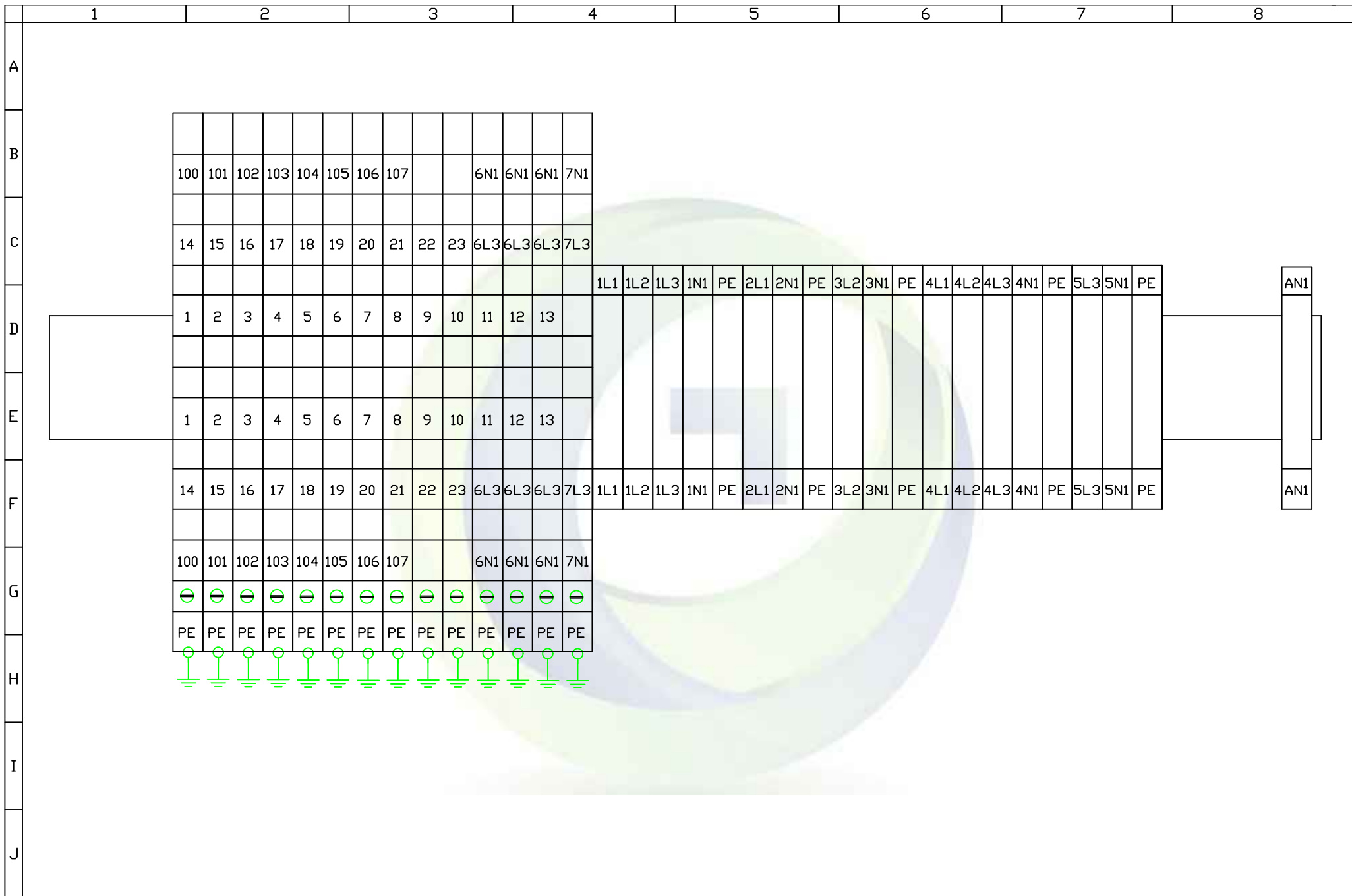
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Drawn	UTK	Adveco Ltd	Fusion Control Panel Type 810366/K Wiring Schematic	C	WEP21462	6
Date	25/02/25					
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	Date	25/02/25					
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	Approved	WW					
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	Scale	[Not to Scale]	Originator	Title	Issue	Drawing Number	Sheet
	Drawn	UTK	Adveco Ltd	Fusion Control Panel Type 810366/K Terminal Arrangement	C	WEP21462	8
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	Checked	BS					
	Approved	WW					
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Date	25/02/25
Checked	BS
Approved	WW

Originator	Advenco Ltd
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Title	Fusion Control Panel Type 810366/K Time Switch Programme Guide
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Issue	C
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Drawing Number	WEP21462
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Sheet	9
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**Installation/Operating Instructions for Din Rail Mounting Digital Time Switch**  
Type: FOX.TSD-1

**SPECIFICATIONS**

- No. of channels 1
- Contact rating 16A, 230V AC  
2A Inductive  
volt free switching
- Min switching time 1 minute
- Capacity 6 programme blocks
- Voltage supply 24VDC, 24VAC, 110VAC, 230VAC
- Mains frequency 50Hz
- Possible settings Clock time, time on /  
time off, days of week,  
block programme
- Display LCD figures 4mm High  
2.5 seconds per day
- Deviation 100 hours
- Reserve 16s
- Manual switch DIN rail mounted
- Mounting 2.5mm<sup>2</sup> max  
Width 18mm
- Connections (1 module), projection  
from DIN rail 55mm,  
height 90mm

**IMPORTANT**

**This unit should be installed by a competent person in accordance with the IEE Wiring regulations. If in doubt consult a qualified electrician.**

- Before connecting the timer to the supply, check that the supply voltage and frequency correspond to the rating plate (on side of timer).
- Do not overload. Refer to the Ampere rating (Amps) on the rating plate.
- Do not expose the timer to extremely high or low temperatures. Do not place the timer in direct sunlight.
- Do not allow the timer to come into contact with water.
- If the time switch is mounted near equipment where heat produced raises the local ambient temperature above 55°C, then a ½ module space (9mm) should be left between the time switch and the equipment.
- If used to operate a contactor, then a 1 module space should be left between timer and contactor.

**INSTALLATION**

- This timer is designed to be DIN rail mounted.
- Ensure that the supply voltage is connected to terminals 1 and 2.
- Terminals 3 and 4 are volt free contacts. Live in goes to terminal 3 and Live out goes to load.
- There is no neutral switching with the FOX.TSD-1, ensure that maximum loading is not exceeded.

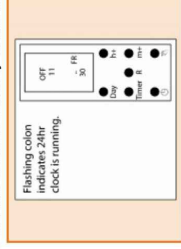
**HOW TO OPERATE**

When the timer is new or when it has not been used for some time it may need to be "charged". To do this, connect the power. The built-in rechargeable battery will begin to charge. When symbols appear in the display (after approx. 2 minutes), press the "R" reset button (use a pencil or pen). **Caution:** this will cancel all memory including timer settings. The timer will be 'clean for new commands. If a power failure should occur (or should the timer be disconnected from the power supply for a short time), the built-in rechargeable battery will then provide power to the clock and guarantee that the time and switching programmes are retained and not disturbed or lost.

**HOW TO SET 24 HOUR CLOCK**

**Present time and day**

1. Keep  $\odot$  button pressed during the entire "present time and day" setting procedure.
2. Set the present time using buttons "h," (hour) and "m," (minute). If you keep buttons "h," and "m," pressed for longer than a second the figures in the display will scroll continuously. Set the present day of the week using button "Day".
3. Release  $\odot$  button. The clock is now running. The flashing colon indicates this. Use a reliable time signal (e.g. telephone or radio) to set the clock accurately to the minute.



**SWITCHING TIME(S)**

You can set as many as six switching-on commands and an equal number of corresponding switching-off commands in the following manner:

1. Press "Timer" button once. The actual time will disappear from the display. This **TIMER ON** indication will be displayed instead, denoting a vacant "on" time in No. 1 programme.

**NOTE:** Setting hours and minutes: When setting switch-on time and switch-off time be sure to set minutes as well as hours. E.g. if 08.00 is required set all 4 digits: '08' and '00'.

2. Set the required switching-on time using button "h," and "m,".
3. Set the day(s). See "Day" button selection (over) on which the switching-on command must be executed.
4. Depress button "Timer" once. **TIMER OFF** will be displayed.
5. Set the required switching-off time using button "h," and "m,".
6. Set the day(s) on which the switching-off command must be executed. (Default setting is every day).
7. Pressing the "Timer" button will move the timer to programme 2 ON.

When the **2 TIMER ON** indication appears you can begin setting another switch-on command, if you wish. Six such programmes may be stored in this manner, following steps 2) to 6). After setting the required "on" and "off" times, press  $\odot$  to revert to present time.

**EXAMPLE**

1	TIMER	ON	MO	TU	TH	FR	SA	SU
2	TIMER	OFF	TU	TH	FR	SA	SU	
3	TIMER	ON	TH	FR	SA	SU		
4	TIMER	OFF	FR	SA	SU			
5	TIMER	ON	SA	SU				
6	TIMER	OFF	SU					

The switching commands will be carried out every day if no day or days have been set.

Note: Be sure that the desired day or days are chosen on both the "on" and the "off" displays.

**EXAMPLE**

1	TIMER	ON	MO	TU	TH	FR	SA	SU
2	TIMER	OFF	TU	TH	FR	SA	SU	
3	TIMER	ON	TH	FR	SA	SU		
4	TIMER	OFF	FR	SA	SU			
5	TIMER	ON	SA	SU				
6	TIMER	OFF	SU					

If a day or block programme of days is chosen, the timer will respond to each of those day and omit the blanks.

**"DAY" BUTTON SELECTIONS**

**Every day of the week**  
If you do not enter the day when setting a switching command, the switching will be carried out at the set time on every day of the week.

**Only one day of the week**  
If you enter a particular day while setting a switching command (using button "Day"), the command will be carried out at the set time only on that specific day of the week.

**Abbreviations** MO = Monday, TU = Tuesday, WE = Wednesday, TH = Thursday, FR = Friday, SA = Saturday, SU = Sunday.

**On a weekly combination (or 'block' programming) days**

When pressing button "Day" several times, you will find by means of the display that three combinations of days are also possible:

MO TU WE TH FR SA = Monday to Friday

SA SU = Saturday to Sunday

If you enter these combinations of days instead of one individual day, the on/off command will be carried out at the set time on each of the corresponding days of the week. This programme will repeat itself week after week until the programme is changed or the timer is disconnected.

**HOW TO CHECK, CHANGE OR DELETE SWITCHING COMMANDS**

**Checking**

By pressing button "Timer" a number of times you can make switching-on and switching-off commands visible in the display: first set the commands are presented and then the free spaces.

**Changing**

You can change a switching command by making it appear on the display and pressing "Day", "h," and "m," buttons accordingly.

**Deleting**

Deleting a timer command period (an "on" and "off" time) by pressing the "Timer" button until the required program number on time is displayed in the window and pressing "h," until -- is displayed immediately after 23. Do the same with "m," until -- appears after 59. Repeat this sequence for the "off" mode. The deleted command then becomes available for reprogramming. Press button "Timer" after changing or deleting a command to save the new command.

**Switching back to present time**

After setting the switching commands you return to normal time reading by pressing  $\odot$  button. **Is power being supplied to connecting load?**

The word "ON" or "OFF" in the display, above the time reading, informs you about the actual switching condition.

**OVERRIDE SWITCH**

When in the "OFF" mode, pressing the button marked  $\odot$  will switch "ON" the power to the load connected to the timer. If the button is pressed again the power will switch off. If the button is not pressed again, power will remain on until the completion of the next on/off command when power will switch off. If not pressed again the power will remain off until the following "ON" command has been reached.

