



LOAD DISTRIBUTOR TYPE A

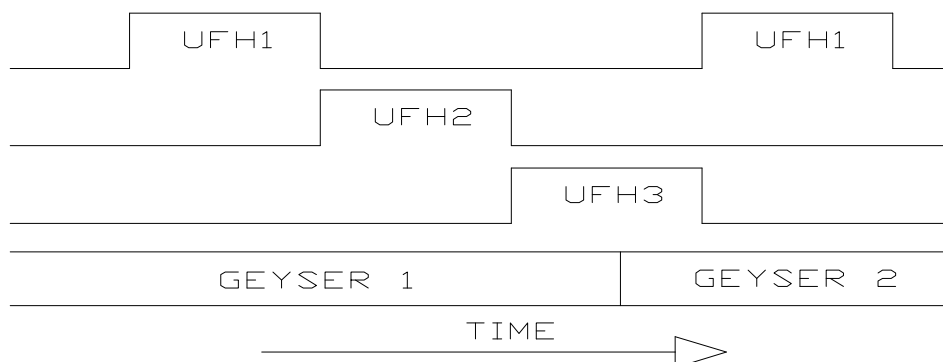
Introduction

The load distributor makes use of a Siemens Programmable Logic Controller (PLC) LOGO! 230RC and is fitted with a custom made program, designed to reduce the peak current demand by time-spreading loads. The unit has 4 relay outputs Q1-4 and 8 inputs I1-8, all I/O's are 220V compatible. The PLC can be mounted on a DIN-rail. A qualified electrician can perform the installation. No previous experience in PLC's is required.

Description of the inputs and outputs

- Q1,2,3 Only 1 of 3 relays is closed at any time for a set duration. The default value is 20min, but can be changed by the user.
- Q4 This relay is controlled by the real time clock (RTC). There are up to 3 camms allowing the user to set 3 different ON and OFF times. It can typically be used to control one or more geysers. The geysers would be switched off during peak times. By default, the camms are set to be off from 6h00 until 8h00 and from 16h00 until 21h00. Again, this could be changed by the user. By using external contactors, signals Q1-3 and Q4 could be combined to switch only 1 geyser on at any one time. Refer to figure 1 and 2.
- I1-4 When applying the 220V live to an input, the corresponding output will switch off. This can be used as an overriding function.

Timing diagram



Note that the switching of the geysers is not related to the switching of the UFH's, as they are different timers.

Wiring diagram

Refer to page 3. Since the Under Floor Heaters UFH are time-switched, only 1 circuit breaker is required. More than one UFH may be connected in parallel to a single output, as long as the maximum rating of the output relay is not exceeded (10A). The geysers can also have a common circuit breaker.

Electrical specifications

Voltage range	115 – 240V
Current consumption	10-25mA
Output relay current	max 10A
Input low detection	<40V
Input high detection	>79V
Real time clock backup time	80hrs
Operating temp range	0 - 55°C

For more information, please refer to the manufacturers datasheet at [Siemens automation website](#)

Changing of timer parameters

WARNING: changing values requires a certain amount of expertise. Care should be taken when changing the timers.

You can change the default values of the timers by following the procedures set out below. Whilst the device is in RUN mode, press the ▼ arrow, followed by **ESC**. Then press ▼ to select **Set Param**. Press OK. You can select the Timer, daily1, daily2 and daily3 by pressing ▲▼. Then press OK to select that screen. Navigate to the field requiring changing by pressing ◀▶. Then press ▲▼ to change the value. Continue until finished, then press OK. Press ESC to quit this menu.

Setting of the real time clock (RTC)

The next menu item below Set Param, is set. You will find the RTC setting there. Follow the same procedure as set out above to navigate through the fields.

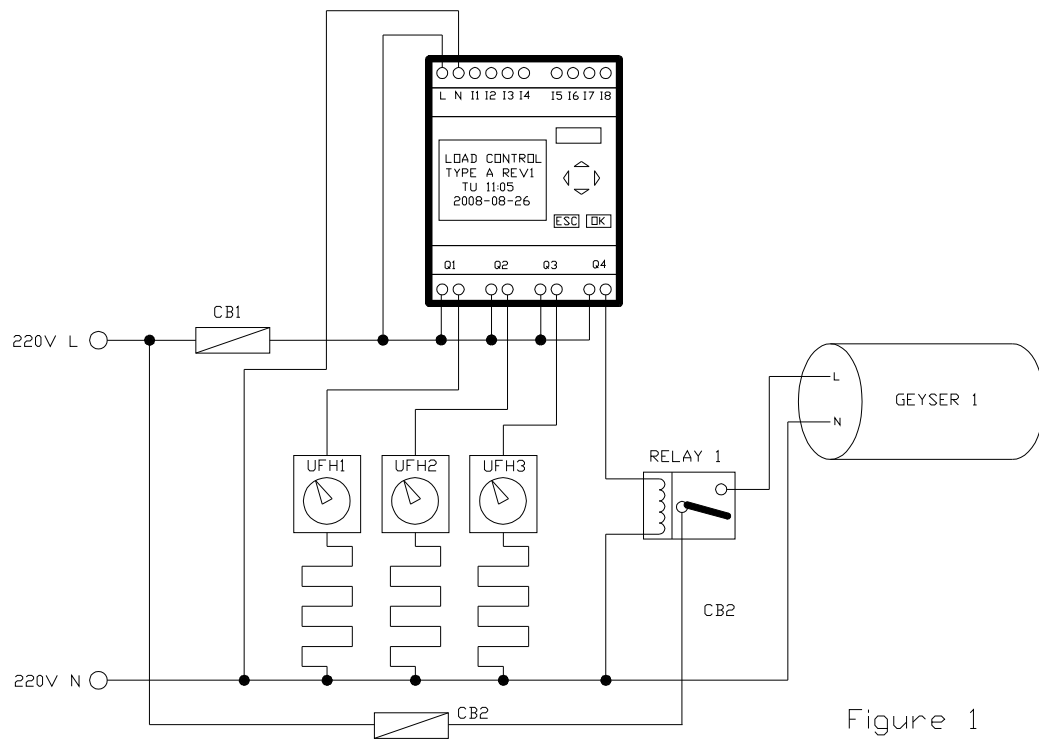


Figure 1

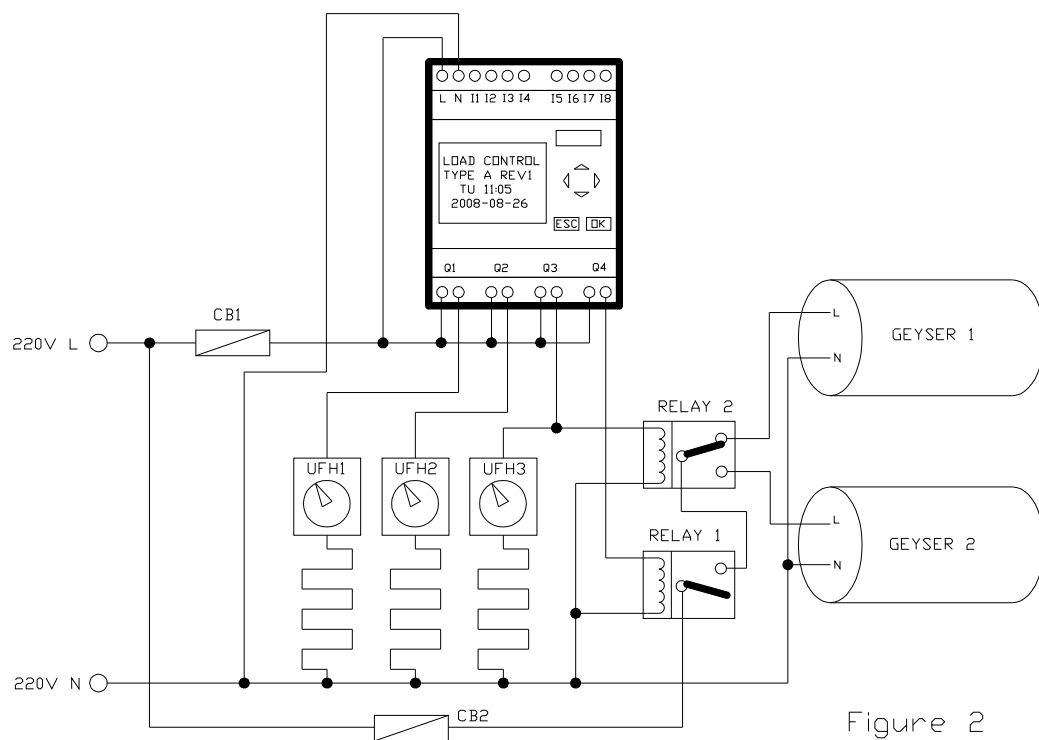


Figure 2