

Crabtree

Control Modules

Installation Instructions – Digital Timer 1 Channel

List No. 302/TD1

Important Information

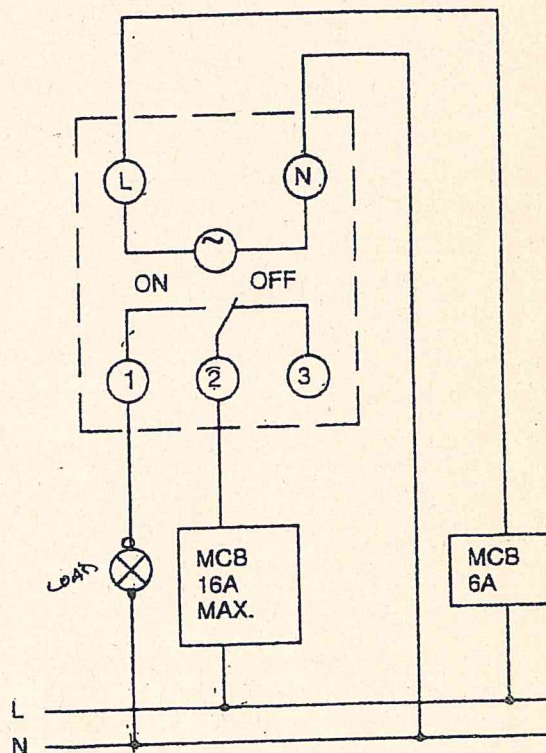
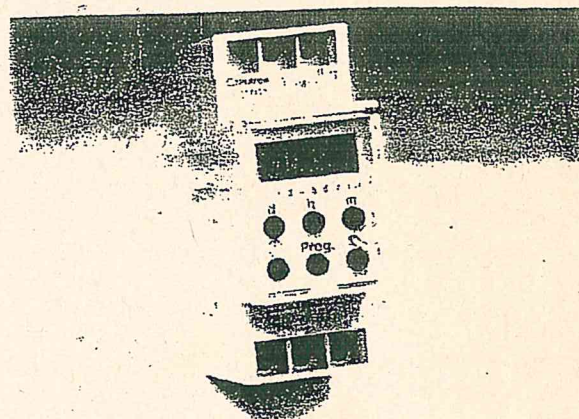
The product referred to in this installation leaflet should be installed by suitably qualified personnel in accordance with the requirements of relevant legislation, regulations (including the IEE Wiring Regulations) and the accepted practice in the industry. Any further information which may be required about the use for which any specific product has been designed and tested or about the conditions of use is available on request or from the relevant standard.

Technical Data:

Operating voltage:	190 – 240 V
Frequency:	45 – 60 Hz
Power consumption:	approx. 8.5 VA
Switching Capacity:	16 A, 250 V ~, $\cos \phi = 1$ 10 A, 250 V ~, $\cos \phi = 0.6$
Contact material:	AgCdO
Movement:	quartz controlled
Settings:	42
Shortest possible switching interval:	1 minute
Switching accuracy:	precise-to-the-second
Accuracy:	better than ± 1 sec./day at 20 °C
Power reserve:	approx. 250 hrs at 20 °C
Permissible ambient temperature:	- 10 °C... + 50 °C
Protection Class:	II acc. to VDE 0633
Protection Category:	IP 20
Interference suppression degree:	Tested in accordance with EN 55014 and EG 82/499/EWG specifications. If the timers are used in combination with other devices within a system, please check that the entire consumer unit does not cause interference.

Connection:

Timer to be connected as indicated in the wiring diagram.



Note:

Despite precautions strong interference could cause a disturbance of the microprocessor-controlled time switch. Interference can be avoided if the following details are considered during installation:

- The device should not be installed close to inductive loads
- A separate power supply should be used (if necessary use a mains suppression filter)
- Interference suppression of inductive loads (varistor, RC-section)

Starting up:

After connection to power supply, to reset, the following 4 buttons have to be pressed simultaneously (d) + (m) + (c) + (arrow)

**Setting time and day:**

Keep (c) button depressed during setting procedure. Set the time by pressing (h) or (m). If the (h) or (m) keys are pressed for more than 1 second, rapid advance will commence. Set the arrow display to the relevant day by pressing (d). Release (c) button – the clock is now running. Note that the clock uses the 24 hour system.

**Programmable memory locations:**

There are 3 ON and 3 OFF switching commands per day. For programs repeated daily, 42 switching commands are also available (21 ON and 21 OFF).

Response time entry:

A) Press (Prog.) once. The display shows the arrow standing above 1 (i.e. Monday). Now the switching commands for Monday can be entered. By pressing (d) another day can be chosen.

Note: If no buttons are pressed within approximately 40 seconds, then the display reverts back to the time and automatic operation. If necessary start program entry again.

ON – Switching command:

If ON is indicated on the right side of the display, the switching ON time can be selected by pressing (h) or (m). Store indicated switching command by pressing (Prog.).

OFF – Switching command:

OFF is now indicated on the right side of the display. The switching OFF time can be selected by pressing (h) or (m) and can be stored by pressing (Prog.).

Response times 2 and 3 of the indicated weekday can be entered as already described or you can skip the respective commands or weekdays by pressing (Prog.) or (d).

When the program entry is finished, press (c). The switching contact is now positioned according to the respective switching program.

1-7**B) Entry of daily response times:**

Regardless of the indicated day, every individual ON or OFF switching command can be changed to a daily command by pressing (1-7) after having entered the desired response time. Daily commands occupy only one memory location on the appointed day entered and are indicated by a second arrow above '1-7' on that particular day.

C) Override of daily response times on the appointed days:

Several OFF switching commands which are carried out at the same time have priority over the daily ON-switching commands.

Example: Daily switching ON at 08:00 a.m., except Sunday: one daily ON-switching command (1-7) and one OFF-switching command on Sunday 08:00 a.m. is necessary.

D) Duration of the commands for several weekdays:

Example: Desired switching-ON period from Monday 08:00 p.m. to Wednesday 08:00 a.m. After having entered the ON-command on Monday, an arbitrary

OFF-command is selected and programmed by pressing (d) or (Prog.), ensuring that the intermediate commands are cleared.

**Recall:**

ON and OFF response times can be recalled one after the other by pressing (Prog.).

To choose another day for starting the recall sequence by pressing (d). Daily response times are displayed every day after the normal program locations 1 ON ... 3 OFF.

Exception: On the day on which the daily response time has been entered, a normal display occurs, e.g. with '3' ON and an arrow above '1-7' (see diagram). After end of recall, (c) has to be pressed to return to time display.

**Change/clearance of commands:**

Recall the respective command by pressing (Prog.) and (d), and change it by pressing (h) or (m). Clear the indicated command by pressing (h) + (m) simultaneously. Then press (c) to return to the time display.

1...45**Holiday program:**

The holiday control enables an interruption of the automatic program sequence for 1 – 45 days.

Entry: Keep pressing (h) continuously during the total entry. Pressing (arrow) the number of the holiday days is increased. After 45 (days), the display starts again with 0. The holiday program starts at 0:00 h of the next day and the display shows '≡ OFF'.

Recall/Change/Clearance:

By pressing (h), the remaining holidays are displayed. By means of a repeated pressing of (arrow), the holiday program can be extended or set to 0, so that the automatic program sequence continues. The holiday program includes priority switchings of permanent controls.

**Override :**

By pressing (arrow), switching alternates between ON and OFF. The following program setting cancels the manual control.

**Permanent control:**

By pressing (arrow) + (m) simultaneously, the following functions are switched: permanently ON; permanently OFF; automatic operation. The point on the display indicates the permanent function ON or OFF:



Summer Time +1 hour: press (d) + (h) simultaneously
Winter Time – 1 hour: press (d) + (m) simultaneously

Mounting

This Control Module can be mounted in Starbreaker Consumer Units or in a separate enclosure. If mounted in a Starbreaker Consumer Unit, it should be connected to the live busbar via an mcb of 6A.

Enclosures

A range of enclosures are available for wall mounting these units.

- 744/3 – Terminal Cover
- 744/4 – General Purpose enclosure to IP20
- 703/1 – All purpose enclosure to IP54
- 743 – Blanking plate is available for blanking off spare ways

