theben

STB Service Tool software for the control box

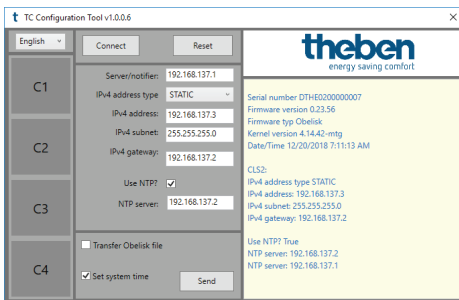Operating instructions

1. Start-up

ⓘ In order to start up the control box, you need the **STB Service Tool** software. It can be downloaded from the Theben website:
https://www.theben.de/tc-649/

ⓘ Please note that you have to load the IP addresses, which you receive from your operator, into the device by using the **STB Service Tool**.

ⓘ If there are any problems when connecting the service tool and the device, please check the proxy connection.

In order to start up and configure the control box

➤ Connect the PC with the "Service" interface by using the LAN cable
➤ Press **Connect**
   → A connection with the control box will be established. The info window shows all relevant data of the control box, including date/time.

The following functions can be used to start up the control box.

ⓘ You have to enter the following settings, which you receive from your operator, into the software.

Server/notifier
IP address the device should report to.

IPv4 address type
STATIC: IP setting of the device will be made manually.
DHCP: IP setting of the device will be made automatically.

IPv4 address/IPv4 subnet
IP address and subnet mask of the device.

IPv4 gateway
IP address of the gateway.

Use NTP
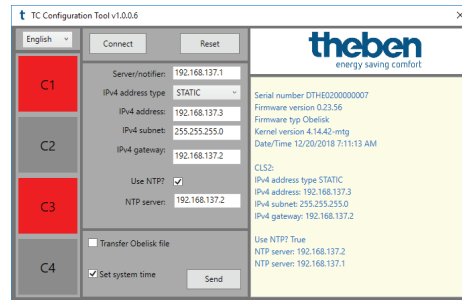The device obtains the time from an NTP server.

NTP server
IP address of the NTP server.

C1/C2/C3/C4
C1 – C4 are not active until a program start/a connection with the device has been established.
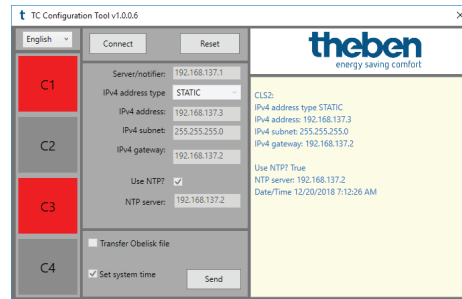C1/C3 red = relay is on
C2/C4 grey = relay is off

Send
The network settings are sent to the control box.
   → They are reported back by the control box and displayed in the info window of the software.

With **Set system time**, you can select whether the current time should be sent to the device.

Reset
All profiles and switch programmes will be deleted and the relays will be reset.

2. Transmit data to operator

Once you have started up the device, you have to transmit the serial number, location, street, and channel assignment to your operator.

3. Contact

Service address
Theben AG
Hohenbergstr. 32
72401 Haigerloch
GERMANY
Phone +49 7474 692-0
Fax +49 7474 692-150

Hotline
Phone +49 7474 692-369
hotline@theben.de
www.theben.de

theben

TC 649   6490330
Control box LAN

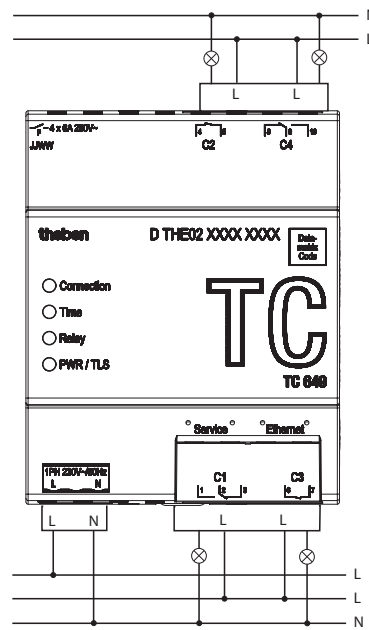Installation and operating
instructions

→ During the start of the operating system, all LEDs are flashing. After approx. 150 s the start process is completed and the power LED (PWR/TLS) flashes.

Wiring diagram

ⓘ Switch the load with a contactor.

⚠ If a load is switched directly, secure the device with a circuit breaker of 6 A.

1.   Basic safety information

⚠ **WARNING**

Danger of death through electric shock or fire!
➤ Installation should only be carried out by a qualified electrician!

- The device is designed for installation on DIN top hat rails (in accordance with IEC 60715)
- It complies with product standard EN 60669-2-1

➤ Do not operate the device outside the specified technical data

⚠ The device must be installed in an enclosed switchgear cabinet made of metal or an appropriate fire-resistant material!

⚠ After proper installation, the housing component under the cover - in the sealed area - must not be accessible!

2.   Proper use

Control box TC 649 is an annual time switch with astronomical function, which can be controlled and updated via LAN and managed centrally from a computer. The control box is used for lighting and ventilation.
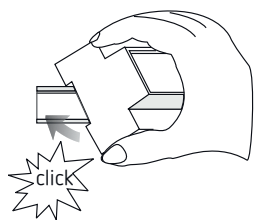
⚠ Do not use on safety devices, e.g. escape route doors, fire safety equipment, etc.

Disposal
➤ For an environmentally appropriate disposal, send the device back to the owner

3.   Installation and connection

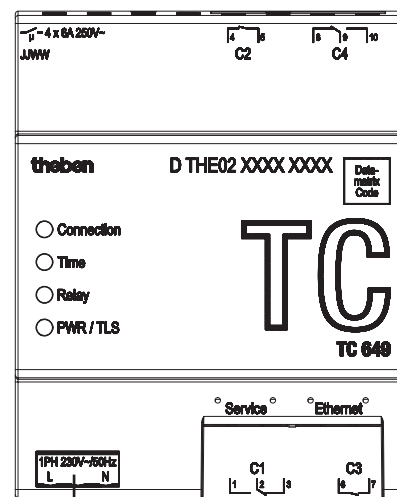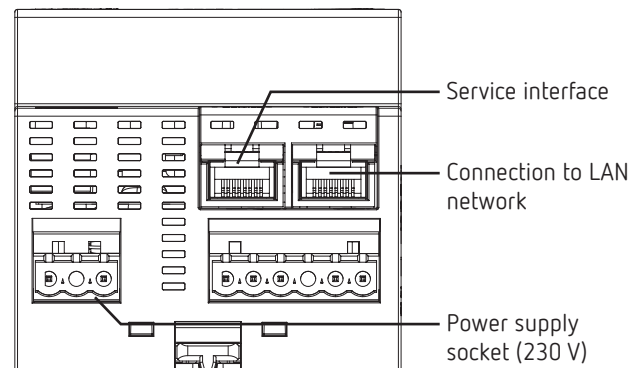### Installing TC 649

click
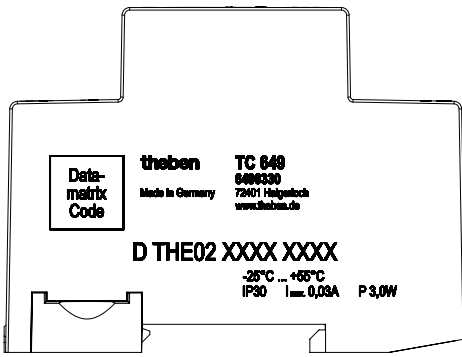
Connecting TC 649

Connecting the power supply
➤ Strip cable to 8 mm (max. 9 mm)
➤ Insert the line into the terminal and fasten it (screw terminal, item no. 9070966)
➤ Plug terminal into power supply socket
➤ Connect to power supply

4.   Device description

Connections

Service interface

Connection to LAN network

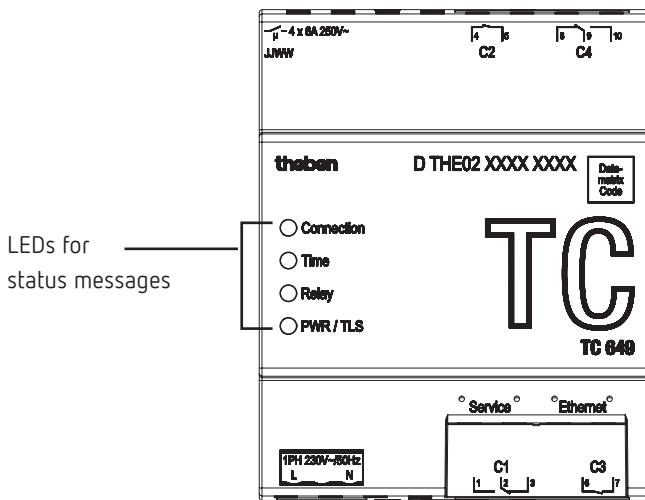Power supply socket (230 V)

Voltage

1

ⓘ The performance specifications can be found on the side and on the device shoulder (see picture). After installation they are not visible any more!

LEDs

ⓘ Status messages are indicated by four LEDs.

LEDs for status messages

Label	Description
Connection	Connection to server
Time	Connection to NTP server
Relay	at least 1 relay connected
PWR/TLS	Power and TLS

5. Start-up

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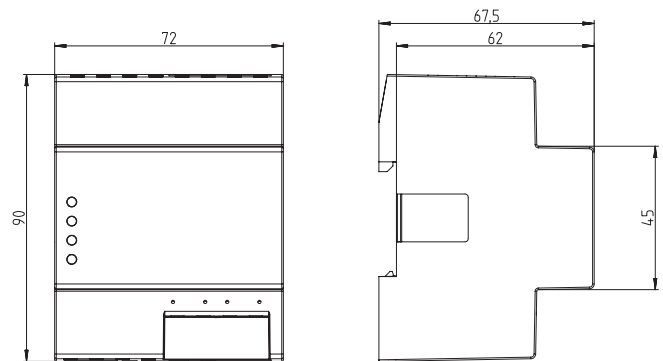
For the professional electrician
➤ Connect voltage.
➤ Download and start **STB Service Tool** software.
➤ Connect PC with "Service" interface.
➤ Carry out configuration in accordance with the specifications of the operator.
➤ Connect LAN network to "Ethernet" LAN interface.
  → The control box connects automatically with the server of the operator.
➤ Send serial number, location, channel assignment, etc. to the operator.

For the operator
➤ Send programs to the devices by using the administration software.

6. Technical data

Operating voltage:	extended operating range 230 V~, −20% +15%
Switching capacity:	6 A/250 V AC, cos φ = 1
Minimum load:	5 V / 1 mA
Switch contact:	µ contact
Frequency:	50 Hz
Power consumption:	3 W
Set operating range:	−10 °C to +45 °C
Threshold for operation:	−25 °C to +55 °C
Threshold for storage and transport:	−25 °C to +70 °C
Humidity:	95%, non-condensing
Protection class:	II subject to designated installation
Protection rating:	IP 30

7. Contact

Service address
Theben AG
Hohenbergstr. 32
72401 Haigerloch
GERMANY
Phone +49 7474 692-0
Fax +49 7474 692-150

Hotline
Phone +49 7474 692-369
hotline@theben.de
Addresses, telephone numbers, etc.
www.theben.de

8. Use of open source software

ⓘ This product uses open source software (OSS). A list of the OSS components used and their licence type and version can be found at https://www.theben.de/tc-649/