



Truma CP plus

Digital Control Panel

▲ WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Evacuate all persons from the vehicle.
- Shut off the gas supply at the gas container or source.
- Do not touch any electrical switch, or use any phone or radio in the vehicle.
- Do not start the vehicle's engine or electric generator.
- Contact the nearest gas supplier or certified service technician for repairs.
- If you cannot reach a gas supplier or certified service technician, contact the nearest fire department.
- Do not turn on the gas supply until the gas leak(s) has been repaired.

Installation and service must be performed by a certified service technician, service agency, or the gas supplier.

Operating instructions **Installation instructions**

Page 2

Page 14

To be kept in the vehicle.

This document is part of the product.



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California Proposition 65 lists chemical substances known to the state to cause cancer, birth defects, death, serious illness or other reproductive harm. This product may contain such substances.

Intended use

The CP plus control panel is suitable only for installation in RVs used for recreation, travel, or camping.


The CP plus control panel controls and monitors a **Truma Combi™ furnace with additional indirect water heating.**


Available models:


- Truma Combi™ eco
- Truma Combi™ eco plus
- Truma Combi™ comfort
- Truma Combi™ comfort plus


Consumer Safety Information

Safety definitions


 This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hurt you and others.

 **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **NOTICE** is used to address practices not related to physical injury.

 Other important information or tips.

Safety behavior and practices

-  **WARNING**
- Use the CP plus control panel only when it is in a technically sound condition.
 - Have a specialist immediately remedy any malfunctions. Remedy the malfunction yourself only if a remedy is specified in the troubleshooting chart in these operating instructions.
 - Have a defective CP plus control panel repaired only by the manufacturer or its service department.
 - Any alteration to the appliance or its controls can be dangerous and will void the warranty.

Display and operating elements



Fig. 1

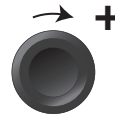
- 1 Display
- 2 Status line
- 3 Menu line (top)
- 4 Menu line (bottom)
- 5 Power supply display
120 VAC (mains supply)
- 6 Time switch display
- 7 Settings/values
- 8 Rotary push button
- 9 Back button

Description

- A rotary push button (8) is used to select menu items in the menu lines (3 + 4) and to adjust settings.
- Information is shown on a backlit display (1).
- The Back button (9) is used to go back to a previous menu.

Rotary push button

The rotary push button (8) is used to select and change setpoints and parameters; it is then tapped to save the values. Selected menu items flash.



Turn clockwise

- The menu is scrolled through from left to right
- Increase values (+)



Turn counterclockwise

- The menu is scrolled through from right to left
- Reduce values (-)



Tap

- Save a selected value
- Select a menu item, go to the setting level



Press (3 seconds)

- Main switching function – control panel on/off

Back button

Press the Back button (9) to go back to a previous menu and cancel settings. This means that the previous values remain unchanged.

Instructions for use

- If there is an interruption to the power supply, the clock has to be reset.
- If a new furnace is connected to the bus system of the control panel, repeat the procedure described in "Initial start-up".

Initial start-up

Perform the following steps for initial start-up:

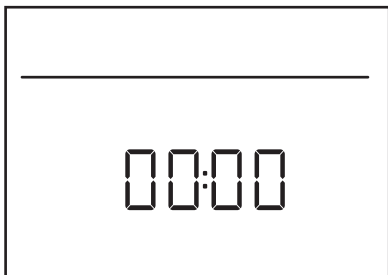
- Switch on the 12 VDC power supply of the control panel and the furnace. With Truma Combi eco plus and Truma Combi comfort plus, also switch on the 120 VAC power supply (mains supply).
- Start searching for the furnace in menu item "Settings" -> "RESET" -> "PR SET".


When you have confirmed the selection, the control panel is initialized. During this process, "INIT .." is shown on the display. The recognized furnace is recorded in the control panel.

Start-up


Start/Stand-by screen

When the control panel is connected to the power supply, after a few seconds a start screen is displayed.



-  • After repairs or upgrades, the procedure described in "Initial start-up" has to be repeated.
- The first time you switch on the control panel, any Truma Combi device that is connected is not switched on automatically.

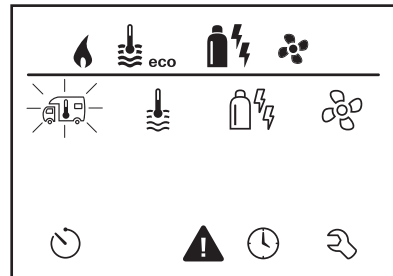
Control panel on/off

- Press the rotary push button (8) for more than 3 seconds.
-  • Previously set values and operating parameters are active again when the panel is switched on.
- When you switch off the control panel, any Truma Combi device that is connected is also switched off automatically.
- Because of internal time lags for the heating, the switching-off process can take a few minutes.

Select setting level

- Tap the rotary push button (8).

The display shows the setting level. The first icon flashes.

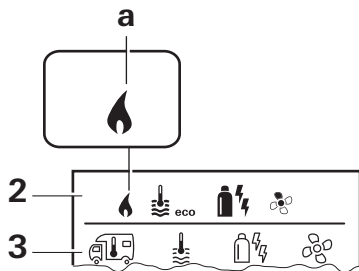


Functions

The functions of menu lines (3, 4) of the CP plus control panel can be selected in any sequence. The operating parameters are shown in the status line or in the displays (5, 6).

Change room temperature

- Use the rotary push button (8) to select the icon in the menu line (3).
- Tap the button to go to the setting level.
- Select the desired temperature with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



Adjustable temperature range:

Temperature display	Range	Increments
Fahrenheit	40 – 86 °F	1 °F
Celsius	5 – 30 °C	1 °C

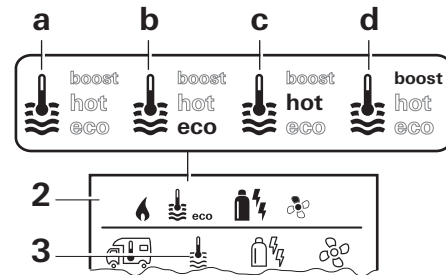
a = Furnace* is switched on.

* This icon flashes until the desired room temperature is reached.

i The temperature can be changed quickly using the rotary push button (8) (on the stand-by screen).

Change hot water level

- Use the rotary push button (8) to select the icon in the menu line (3).
- Tap the button to go to the setting level.
- Select the desired hot water level with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



a = Boiler* – Hot water generator is on.
 b = eco** – Water temperature 104 °F (40 °C)
 c = hot – Water temperature 140 °F (60 °C)
 d = boost* – Boiler content is heated quickly (boiler priority) for up to 40 minutes. The water temperature is then kept at the higher level (about 144 °F (62 °C)) for two subsequent heating cycles. When the water temperature is reached, the room is heated again.

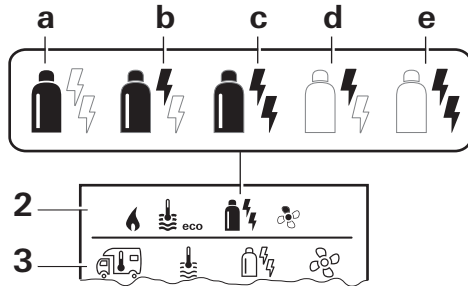
* This icon flashes until the desired water temperature is reached.

** The water temperature 104 °F (40 °C) can be kept in “Heating and hot water mode” for a limited time only (heating priority).



Select energy mode

- Use the rotary push button (8) to select the icon in the menu line (3).
- Tap the button to go to the setting level.
- Select the desired energy mode with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



Icon	Operating mode	Energy mode
a	LP gas	LP gas
b	MIX 1 *	Electricity 850 W+ Gas
c	MIX 2 *	Electricity 1700 W+ Gas
d	EL 1 *	Electricity 850 W
e	EL 2 *	Electricity 1700 W

* Mixed mode and electricity mode
Possible only with Truma Combi eco plus
and Truma Combi comfort plus furnaces
with electric heating elements.

When the furnace is switched on (room temperature, hot water level active), the energy mode selected in the previous heating process is shown in the status line. The factory setting is gas.

Special features in mixed mode

- Interruption in the 120 VAC power supply:

The furnace automatically switches to gas mode. When the 120 VAC power supply is restored, the furnace automatically switches back to mixed mode.
- Fault in combustion process (e.g. fuel shortage):

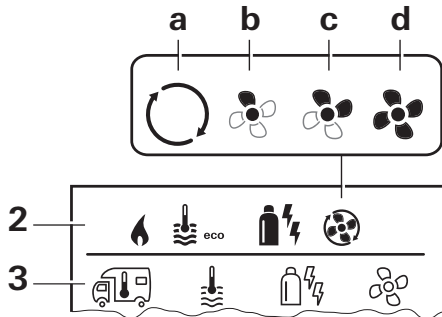
The furnace automatically switches to electric mode. If the furnace is to run in mixed mode again, the cause of the malfunction must be remedied and the furnace has to be started again by going to the menu item "Malfunction" and pressing the rotary push button. See "Malfunction" on page 11.

Special features in electricity mode

- When the 120 VAC power supply is interrupted and the 12 VDC supply is on, an error code is displayed on the control panel.
- When the 120 VAC power supply is reconnected, the furnace will restart automatically with the previous settings without any user interaction. The error code on the control panel will disappear.

Select fan speed


- Use the rotary push button (8) to select the icon in the menu line (3).
- Tap the button to go to the setting level.
- Select the desired fan speed with the rotary push button (8).
- Confirm with the rotary push button (8).



Icon	Operating mode	Description
–	OFF	Fan is switched off. (Can be selected only if furnace is switched off)
a	VENT*	Circulating air, if furnace is switched off. Speed can be selected in 10 increments.
b	ECO	Low fan speed
c	HIGH **	High fan speed
d	BOOST	Fast room heating Available if the difference between the selected and the current room temperature is > 18 °F (10 °C).

* Can increase wear and tear on the motor, depending on how often it is used.

** HIGH fan speed uses more electricity, is louder, and increases wear and tear on the motor.

 When the furnace is switched on (room temperature, hot water level set), the fan speed selected in the previous heating process is shown in the status line (2). The factory setting is ECO.

Set the time switch


WARNING

Risk of carbon monoxide poisoning

The enabled time switch turns the furnace on, even when the recreational vehicle (RV) is parked. The exhaust gas from the furnace can cause poisoning in enclosed spaces (e.g. garages, repair shops).

If you park the RV in an enclosed space:

- Shut off the gas feed to the furnace.
- Disable the time switch (OFF).
- Switch the furnace off. (On the Truma CP plus control panel, press the rotary push button (8) for 3 seconds.)

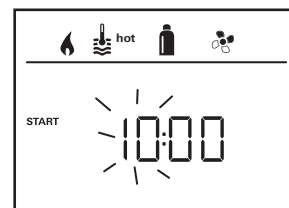
-  The time switch can be selected only if the clock was set on the control panel.
- If the time switch is ON, the “Disable time switch (OFF)” menu is displayed.

- Use the rotary push button (8) to select the icon in the menu line (4).
- Tap the button to go to the setting level.

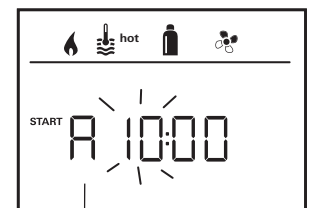
Enter the start time

- Use the rotary push button (8) to set the hours and then the minutes.

24 h mode



12 h mode

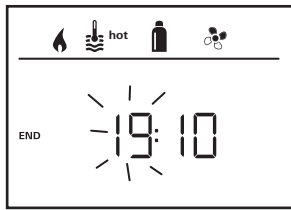


A = a. m.
P = p. m.

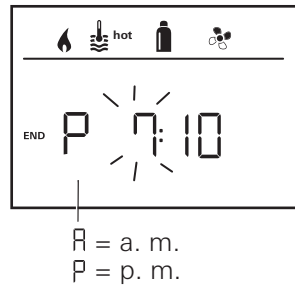
Enter the end time

- Use the rotary push button (8) to set the hours and then the minutes.

24 h mode



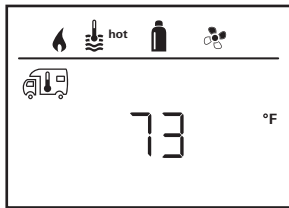
12 h mode



- i** If the start/end time is later than the time when you entered the settings, the operating parameters are not active until the next start/end time is reached. Until then, the operating parameters set outside the time switch remain valid.

Set the room temperature

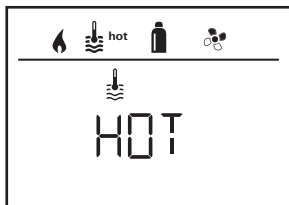
- Select the desired room temperature with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



Example: Temperature display in °F

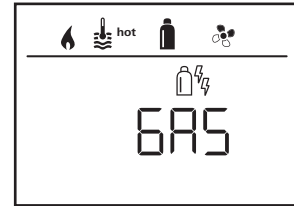
Set the hot water level

- Select the desired hot water level with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



Select energy mode

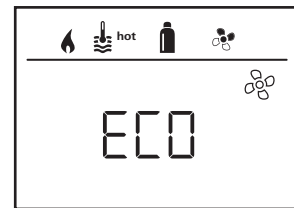
- Select the desired energy mode with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



- i** The "Select energy mode" menu is displayed only if a furnace with electric heating elements is connected (Truma Combi eco plus or Truma Combi comfort plus).

Select fan speed

- Select the desired fan speed with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



- i** The "Select fan speed" menu is displayed only if the room temperature was set.

Enable the time switch (ON)

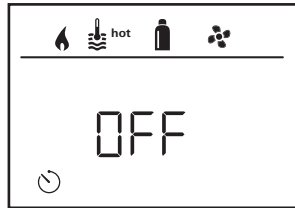
- Enable the time switch (ON) with the rotary push button (8).
- Tap the rotary push button (8) to confirm the value.



- i** The time switch remains enabled, even for several days, until it is disabled (OFF). If the time switch is programmed and enabled, the time switch icon is shown in the status line (2). If the time switch is active, the icon flashes.

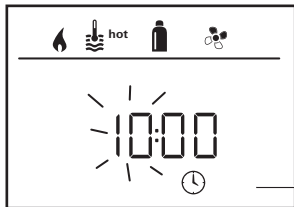
Disable the time switch (OFF)

- Tap the rotary push button to go to the setting level.
- Disable the time switch (OFF) with the rotary push button (8)
- Tap the rotary push button (8) to confirm the value.

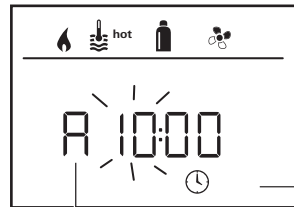


Set clock

Display 24 h mode



Display 12 h mode



A = a. m.
P = p. m.

- Use the rotary push button (8) to select the "Set clock" icon in the menu line (4).

The hour display flashes.

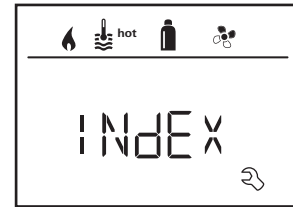
- Use the rotary push button (8) to set the hour.
- Tap the rotary push button (8) again and the minute display flashes.
- Use the rotary push button (8) to set the minutes.
- Tap the rotary push button (8) to confirm the value.

Settings

- Use the rotary push button (8) to select the "Settings" icon in the menu line (4).
- Tap the button to go to the setting level.

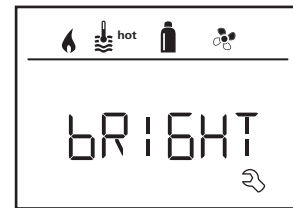
1. Show version number of connected devices

Display the version number of furnace and control panel.



2. Backlighting

Change the backlighting of the CP plus control panel in 10 increments.



3. Language

Select the desired language (English, German, French, Italian).



4. 12 h / 24 h Mode

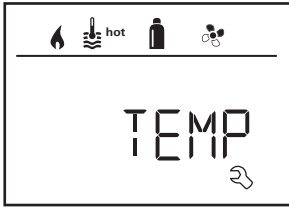
Display in 12 h (a. m., p. m.) / 24 h mode.



 Default 12 h mode.

5. °C / °F temperature display

Select temperature display °C (Celsius) or °F (Fahrenheit).



i Default °F (Fahrenheit).

6. Calibrate temperature sensor (OFFSET)

The temperature sensor of the connected furnace can be adjusted individually to suit the size of the vehicle.

Setting the offset:

Temperature display	Increments	Range
°C (Celsius)	1	± 5 °C
°F (Fahrenheit)	1	± 10 °F



i Default °F (Fahrenheit).

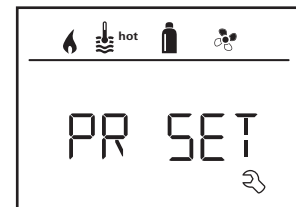
7. Factory setting (RESET)

The reset function resets the control panel to the factory settings. All your settings are deleted. Newly connected devices are recognized and recorded in the control panel.

- Switch on the 12 VDC power supply of the control panel and the furnace. With Truma Combi eco plus and Truma Combi comfort plus, also switch on the 120 VAC power supply (mains supply).

Reset

- Select RESET with the rotary push button (8).
- Tap the rotary push button (8).
- PR SET is shown in the display.
- Tap the rotary push button (8) to confirm.

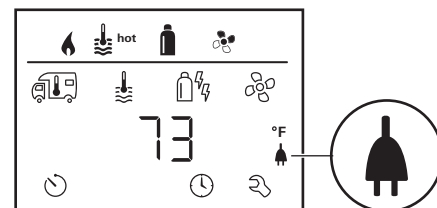


When you have confirmed the selection, the control panel is initialized.

During this process, INIT... is shown in the display.

Display power supply 120 VAC

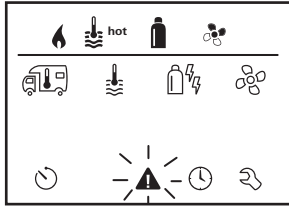
The icon shows that the 120 VAC power supply (mains supply) is available.



- i** The icon is displayed only in combination with a Truma Combi eco plus or Truma Combi comfort plus.

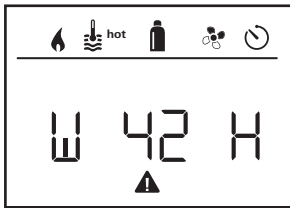
Warning

This icon indicates that an operating parameter has reached an undefined status. In this case, the furnace continues to operate. When the operating parameter returns to the set range, this icon extinguishes automatically.



Display warning code

- Select the icon with the rotary push button (8).
- Tap the rotary push button (8).
The code of the current warning is displayed. The troubleshooting chart can be used to determine the cause of the warning and remedy the error (see Page 13).




W = Warning
42 = Error code
H = Furnace

Cause remedied / return to setting level

- Tap the rotary push button (8).

Cause not remedied / return to setting level

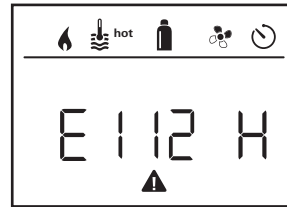
- Press the Back button (9).

 In this case, the warning is not acknowledged in the control panel and the icon remains. The furnace remains in warning status.

Malfunction

In case of a malfunction, the control panel immediately goes to the menu level “Malfunction” and displays the error code of the malfunction.


The troubleshooting chart can be used to determine the cause of the warning and remedy the error (see Page 13).



E = Malfunction
112 = Error code
H = Furnace


Cause remedied / return to setting level

- Tap the rotary push button (8).
- The furnace is restarted.

 This may take a few minutes because of internal time lags of the connected furnace. If the cause was not remedied, the malfunction will occur again and the control panel will again go to the “Malfunction” menu level.

Cause not remedied / return to setting level

- Press the back button.

 In this case, the malfunction is not acknowledged in the control panel and the icon remains. The furnace remains in the malfunction status.

Maintenance

This control panel is maintenance-free.

To clean the front, you can use a non-abrasive cloth moistened with water (and a neutral soap solution).

Technical data

Display

LCD, monochrome, with backlighting

Diagonal 3.3 in. (84 mm)

Dimensions (L x W x H)

3.62 x 4.06 x 1.58 in. (92 x 103 x 40 mm)

Operating temperature range

13 °F to 140 °F (-25 °C to +60 °C)

Storage temperature range

13 °F to 158 °F (-25 °C to +70 °C)

Interface

TIN bus

Power supply

8 – 16.5 VDC

Power consumption

max. 65 mA (100% backlighting)

10 mA (stand-by)

Quiescent current

3 mA (Off)

Weight

approx. 0.22 lb (approx. 100 g)

Subject to change without notice.

Troubleshooting chart (Truma Combi furnace)

Error code	Cause	Remedy
# 17	Hot water mode with empty water container.	Switch off furnace and allow to cool. Fill boiler with water.
# 18	Warm-air outlet blocked.	Check the individual outlet openings.
	Circulated air intake blocked.	Remove blockage from circulated air intake.
# 21	Room temperature sensor/cable defective.	Contact Truma Service.
# 24	Imminent undervoltage, battery voltage too low < 10.4 V.	Charge battery.
# 41	Electronics blocked.	Contact Truma Service.
# 43	Excess voltage > 16.4 V.	Check battery voltage and power sources, such as battery charger.
# 44	Undervoltage, battery voltage too low < 10.0 V.	Charge battery. If necessary, replace old battery.
# 45	Only Truma Combi eco plus or Truma Combi comfort plus models.	
	No 120 VAC supply voltage.	Restore 120 VAC supply voltage.
	Overheating protection has responded.	Contact Truma Service.
#112, #202, #121, #211	Gas cylinder closed.	Check gas supply.
	Switch for gas shut-off valve open.	Close switch for gas shut-off valve.
	Overheating protection has responded.	Switch off furnace and allow to cool; if necessary, fill the water container with cold water. Check warm air outlets and circulated air intake and remove blockages. Switch furnace on again.
#122, #212	Combustion air infeed or exhaust gas outlet closed.	Check for obstructions such as slush, ice or leaves and remove from the openings.
	Switch for gas shut-off valve open.	Close switch for gas shut-off valve.
	Gas pressure regulation system defective.	Contact Truma Service.
	Overheating protection has responded.	Switch off furnace and allow to cool; if necessary, fill the water container with cold water. Check warm air outlets and circulated air intake and remove blockages. Switch furnace on again.
	Electronics defective.	Contact Truma Service.
#255	Furnace has no 12 VDC power supply.	Ensure 12 VDC power supply.
	No connection between the furnace and the control panel.	Ensure connection between furnace and control panel.
	Control panel cable defective.	Contact Truma Service.

If none of the measures in the troubleshooting chart proves successful or if fault codes are displayed that cannot be found in the troubleshooting chart, please contact the Truma Service Center at 1-855-558-7862 or one of our authorized service partners.

Installation Instructions

Read and follow safety rules and instructions before operating this control panel Truma CP plus.

Safety information

- Installation and service must be performed by an authorized Truma installer, service agency or OEM. Improper installation, alteration, service or maintenance can cause property damage, personal injury or loss of life.
- Do not attempt installation as a Do-it-Yourself project.
- Install in recreational vehicles (RVs) only. RVs are recreational vehicles designed as temporary living quarters for recreation, camping, or travel use; such vehicles have their own power or are towed by another vehicle.
- DO NOT modify the appliance in any way. This is dangerous and will void the warranty.
- DO NOT HI-POT appliance unless electronic (circuit board) has been disconnected.
- DO NOT use battery charger to supply power to appliance, even when testing.
- DO NOT connect the 12 Volt DC power to the appliance if the vehicle requires welding. Electrical welding will cause serious damage to the appliance.
- DO NOT shorten the electrical connection cable(s) or remove the sticker that indicates polarity.
- Switch off the vehicle's on-board power supply during installation and when connecting the appliance.
- The appliance may be installed only in the specified position.

USA and CANADA

This appliance must be installed in accordance with local codes or, in the absence of local codes, the Standard for Recreational Vehicles, ANSI A119.2/NFPA 501C or CAN/CSA-Z240 RV.

Description

The CP plus control panel (with polarity protection) is supplied with voltage via a 12 V connector cable. The control panel is connected with a Truma Combi™ furnace with a connector cable (TIN bus).

Dimensions

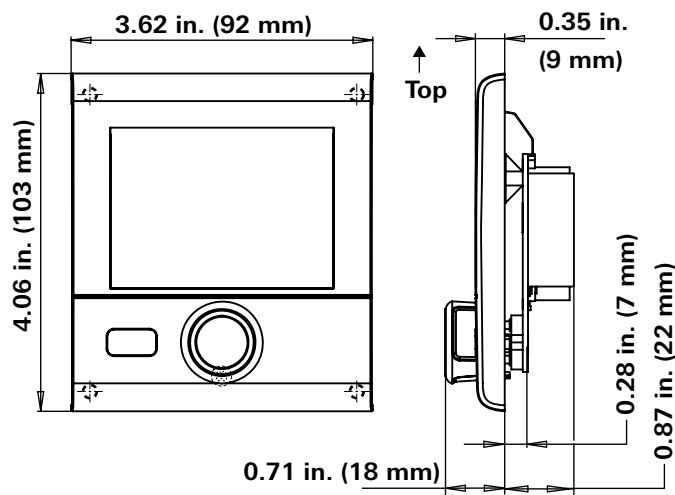


Fig. 1 – Image not to scale

Installation location

Install the control panel in a location that is protected from moisture and wetness.

i Install the control panel at eye level so that it is easy to read the display.

- Prepare an installation opening for the control panel.

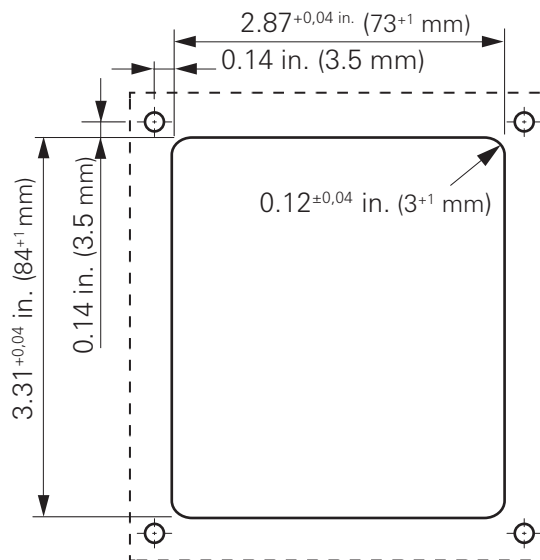


Fig. 2 – Image not to scale

Wiring diagram

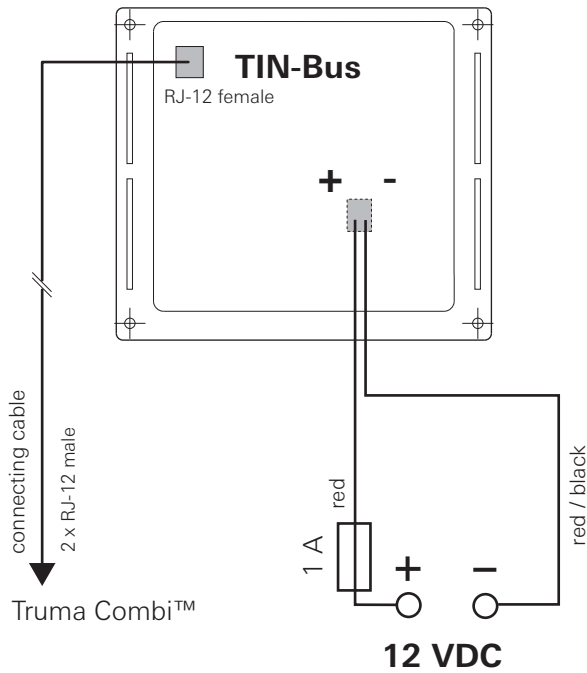


Figure 3 – Rear view

NOTICE If any of the original wire as supplied with the appliance must be replaced, it must be replaced with wire AWG# 18 - 105 °C - UL1015 or its equivalent.

Connection

NOTICE **Danger from electrostatic charge.** Electrostatic charges can destroy the electronics.

- Establish a connection to ground (potential equalization) before touching any electronics.
- Observe the ESD regulations.

i Install the connector cable (TIN bus) in a loop so that it is not under tension. It must be possible to pull the control panel about 8 in. (20 cm) out of the installation opening – with no tension on the connector. Do not pull on the connector cable (TIN bus) when it is plugged into the control panel.

- Plug the connector cable (TIN bus) into the control panel and run the cable to the furnace.
- The plus cable must be protected with a 1 ampere fuse.
- Plug in the 12 V connector cable and connect to a 12 VDC power supply (permanent plus).

Installation

- Mount the control panel frame on to the wall with 4 screws.

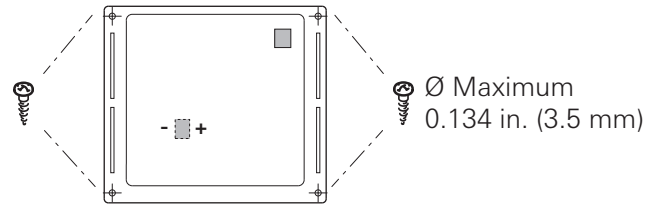


Figure 4 – Front view

- Hook the top of the control panel into the frame via 2 latches.
- Fix the top of the control panel in place with a screw (supplied).
- Slide the rotary push button on to the shaft.

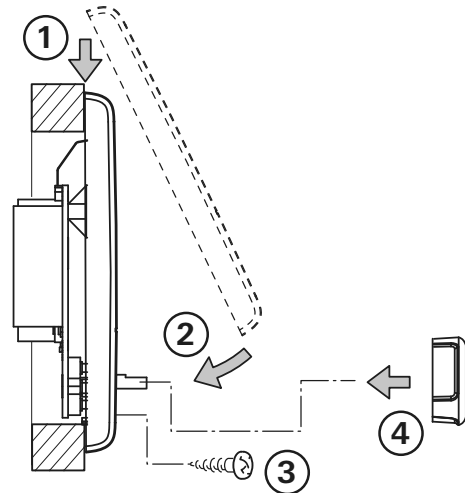


Fig. 5

Subject to change without notice.

USA In case you encounter any problems,
please contact the Truma Service Center
at 855-558-7862 or one of our authorized
service partners. For details see
www.truma.net.

Please have the model number and serial
number (on furnace's type plate) handy
when you call.

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