Operating Instructions

Model : DT / PRT
DT-N / PRT-N

This product should be installed by a qualified electrician. Improper installation may result in injury, death or property damage.

Contents Table

What is a room thermostat ?

A room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of the boiler and radiators.

Neither does the setting effect how quickly the rooms cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The heating system will not work if a time switch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature - say 18ºC - and turn it up by 1ºC

each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRV's) on individual radiators. If you don't have TRVs you should choose a temperature that is reasonable for the whole house. If you do have TRVs you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.

Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

What is a programmable room thermostat ?

A programmable room thermostat is both a programmer and a room thermostat. A programmer allows you to set On and "Off time periods to suit your own lifestyle. A room thermostat works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

So, a programmable room thermostat lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs.

Turning a programmable room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of the boiler and radiators.

Neither does the setting effect how quickly the room cools down. Turning a programmable room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with and the different times you have chosen and then leave it alone to do its job.

The best way to do this is to set low temperatures first, say 18ºC, and then turn them up by one degree each day until you are comfortable with the temperatures. You wont have to adjust the thermostat further. Any adjustment above these setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one programmable room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.

The time on the programmer must be correct. Some types have to be adjusted in spring and Autumn at the change between Greenwich Mean Time and British Summer Time.

You may be able to temporarily adjust the heating programme, for example “Override”, “Advance” or “Boost” These are explained in the manufacturers instructions.

Programmable room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

Installation Procedure

DO's

1.Do mount the thermostat at eye level.
2.Do read the instructions fully so that you get the best from our product.

DON'Ts

1.Do not install near a direct heat source as this will effect the workings of the thermostat.
2.Do not push hard on the LCD otherwise you will damage the liquid crystal display and this is not repairable.

Installation

The thermostat is designed to be flush mount, a back box of 35mm should have been sunk in the wall prior to installation.

Step 1

Carefully separate the front half of the thermostat from the back plate by placing a small flat head terminal driver in to the slots on the bottom face of the thermostat.

Step 2

Carefully unplug the ribbon connector which is plugged in to the front half of the thermostat.

Place the thermostat front half somewhere safe.
Terminate the thermostat as shown in the diagrams at the back of this booklet.

Screw the thermostat back plate on to the back box

Step 3

Re-connect the thermostat ribbon cable and clip the two halves together.

Step 4

Turn on the power to the thermostat and allow the thermostat to stabilise for 1 hour before calibrating.

How To Setup Your Thermostat

This thermostat has many options available to you. Once you have set these settings you can leave them. They will be stored in the thermostat memory and do not need to be adjusted later.

You need to use the table opposite as a reference guide when initially setting up the thermostat.

We strongly suggest you read the next few pages so that you fully understand the features available and the intended use.

You should also understand that by enabling one feature, another feature maybe made unavailable. This is because the feature is not available in that mode.

Please read the features now, and then follow the setup routine on the following pages.

Feature Table

Feature	Description	Setting
01	Temperature Format	00=°C 01=°F (°C Default)
02	Switching Differential	01=1°C/F, 02=2°C/F 03=3°C/F (01=default)
03	Temperature Calibrate	Enter value
04	Frost Mode	00=Disabled 01=Enabled (01 = Default)
05	Frost Protection Temp	07-17°C (12°C Default)
06	Output Delay	Enter value 00 - 30 minutes (00 = default)
07	Comms (DT-N PRT-N)	Enter unique value
08	Optimum Start PRT only	00 = Disabled (Default) 01 01hr 02-02hr 03=03hr
09	Rate of Change	For information only

Understanding the Features

The installer should read the following features and then setup the thermostat according to the features required.

Temperature Format: Select between°C or °F

Switching Differential: This is the number of degrees the heating switches back on below the set temperature.

Temperature Calibrate: The thermostat is calibrated from the factory, but you can use this function to calibrate if required.

Frost Mode: You can set whether the thermostat will maintain the frost temperature even when the thermostat has been turned off with the power button. As a default, this is enabled.

Frost Protection Temperature: This is used to set the required frost temperature. The range is 07 - 17°C

Output Delay: To prevent rapid switching, an output delay can be entered. This can be from 00 - 30 minutes.

Understanding the Features (Cont)

Optimum Start: Optimum start will delay the start up of the heating system to the latest possible moment to avoid unnecessary heating, so that the dwelling is comfortably warm by the programmed time. The thermostat uses the rate of change (See below) setting to calculate how long the building needs to take to raise the building 1°C (With a rate of change of 20, the thermostat has calculated the building needs 20 minutes to raise the building 1°C).

The Optimum start setting is the maximum number of hours the heating will come on before the programmed time. 00hr = Disabled. 03 is the maximum, and this means the heating will come on a maximum of 03 hrs before the programmed time.

Rate of Change: (This feature is only available on the PRT model) This setting is calculated by the thermostat.

Setting up the Features:

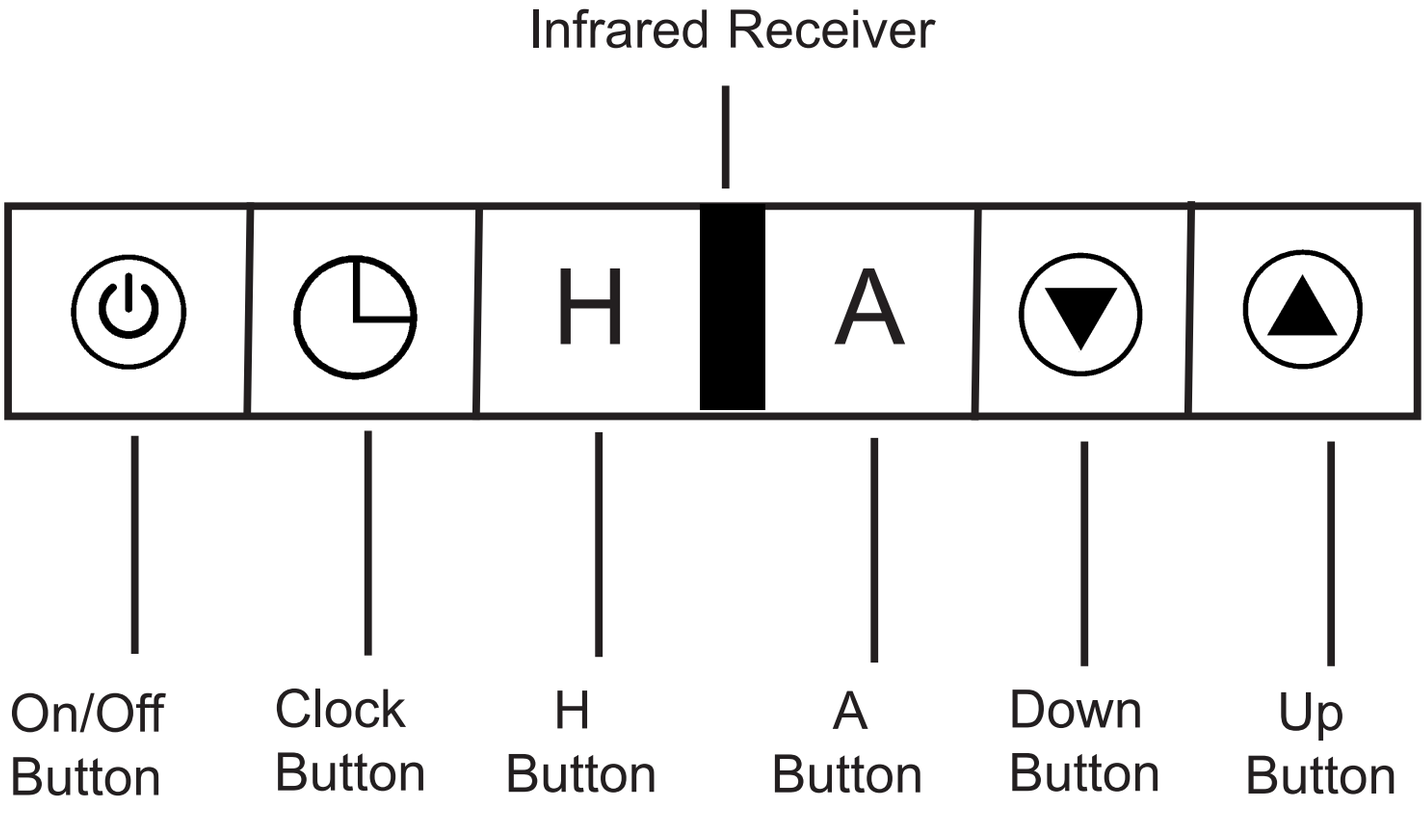
With the thermostat turned off, press ◴ for 3 seconds
On the LCD you will see 01(small) to the top right, and 00 (large) in the centre.

Small setting = Feature # Large setting = Setting

- Use the Up/Down arrow key to change the setting.
- Press ◴ to accept and proceed to the next feature.

	LCD Symbols
	Clock Indicator
	Heat Active Indicator
	Frost Mode On
	Keylock On
 Flashing	Optimum Start Mode Active

3. Button Layout



Temperature Display

Room Temp = Current room temperature

Floor Temp = Current floor temperature (Displayed in Mode 0)

SET = Displayed when you are adjusting the temperature setting.

Setting the Clock (PRT model Only)

To set the clock within the PRT, follow the steps below.

- With the thermostat turned on, press ◴ twice
- You are now able to set the minutes using the up/down keys
- Press H to accept
- You are now able to set the hours using the up/down keys
- Press H to accept
- You are now able to set the day of the week using the up/down keys
- Press A to store and exit

The clock is now set. The PRT has a battery which maintains the clock on a power failure. All program settings are retained in flash memory for 10 years.

Temperature Override

Using the Up/Down arrow keys you can adjust the current set temperature. On the screen, you will see SET and the new temperature displayed.

This temperature will be maintained until the next programmed comfort level. Press A to accept and exit.

Frost Mode

By pressing the “H” button, the thermostat will switch into frost protection mode. You will see ❄ on screen.

The frost protection temperature will now be maintained. To cancel press H. To change the frost temperature setting, see page 10.

Setting the Comfort Levels (PRT Model Only)

The PRT has 4 comfort levels for the weekday and 4 for the weekend. This method of control is not to have on/off times but to allow the occupant to set varying temperatures throughout the day.

For example;
08.00 - 21°C (Wake) 09.30 - 16°C (Go to work)
16.30 - 22°C (Return home) 23.00 - 17°C (Sleep)

If you only want to use 2 levels, you should program the unused levels to --.--

You are now able to program the first comfort level for the weekday.

Follow these steps;

- To begin programming the comfort levels, press clock once. You will see Mo - Fr displayed.

- Use the Up/Down arrow keys to select the time for the 1st comfort level for the weekday.

- Press H to accept

- Enter the required temperature for the 1st comfort level.

- Repeat for comfort levels 2-4.

- You will now see Sa Su on the screen. Repeat for the comfort levels for the weekend.

- Press A to store and exit.

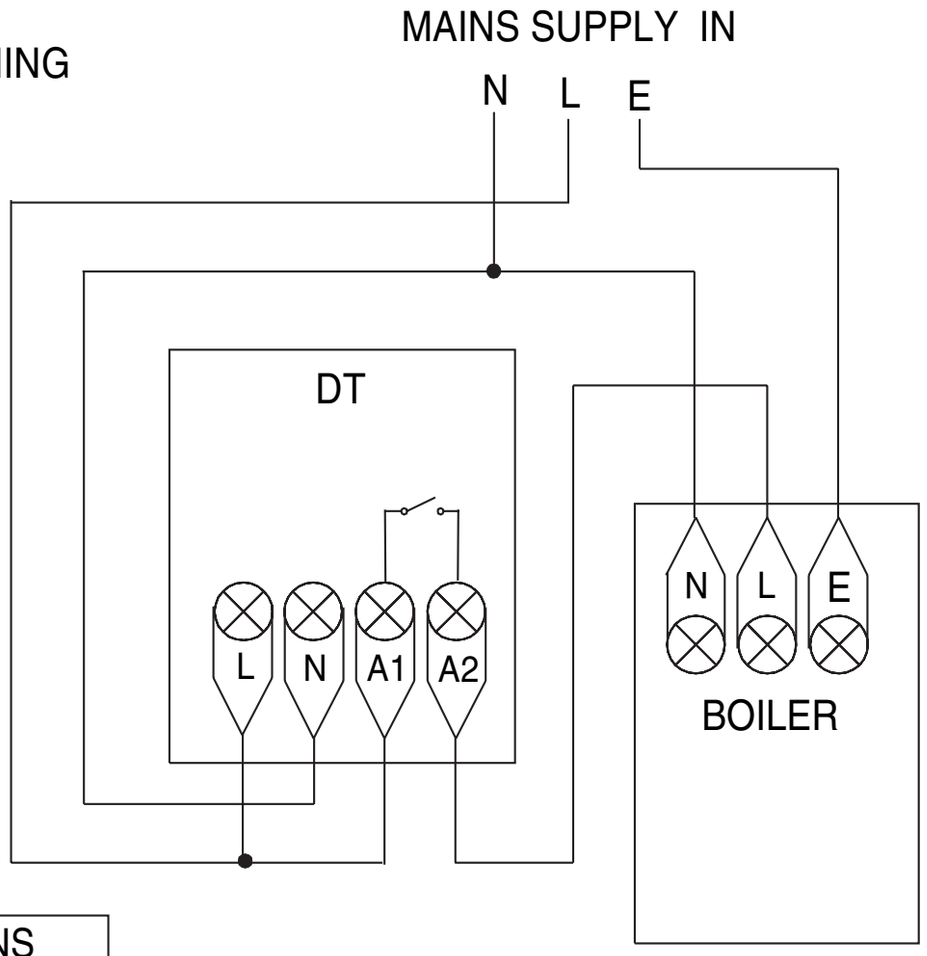
Enabling Keylock

The thermostat has a keylock facility. To enable this press the “A” and “Down” arrow key for 10 seconds.

When the keylock function has been activated, you will see  on screen.

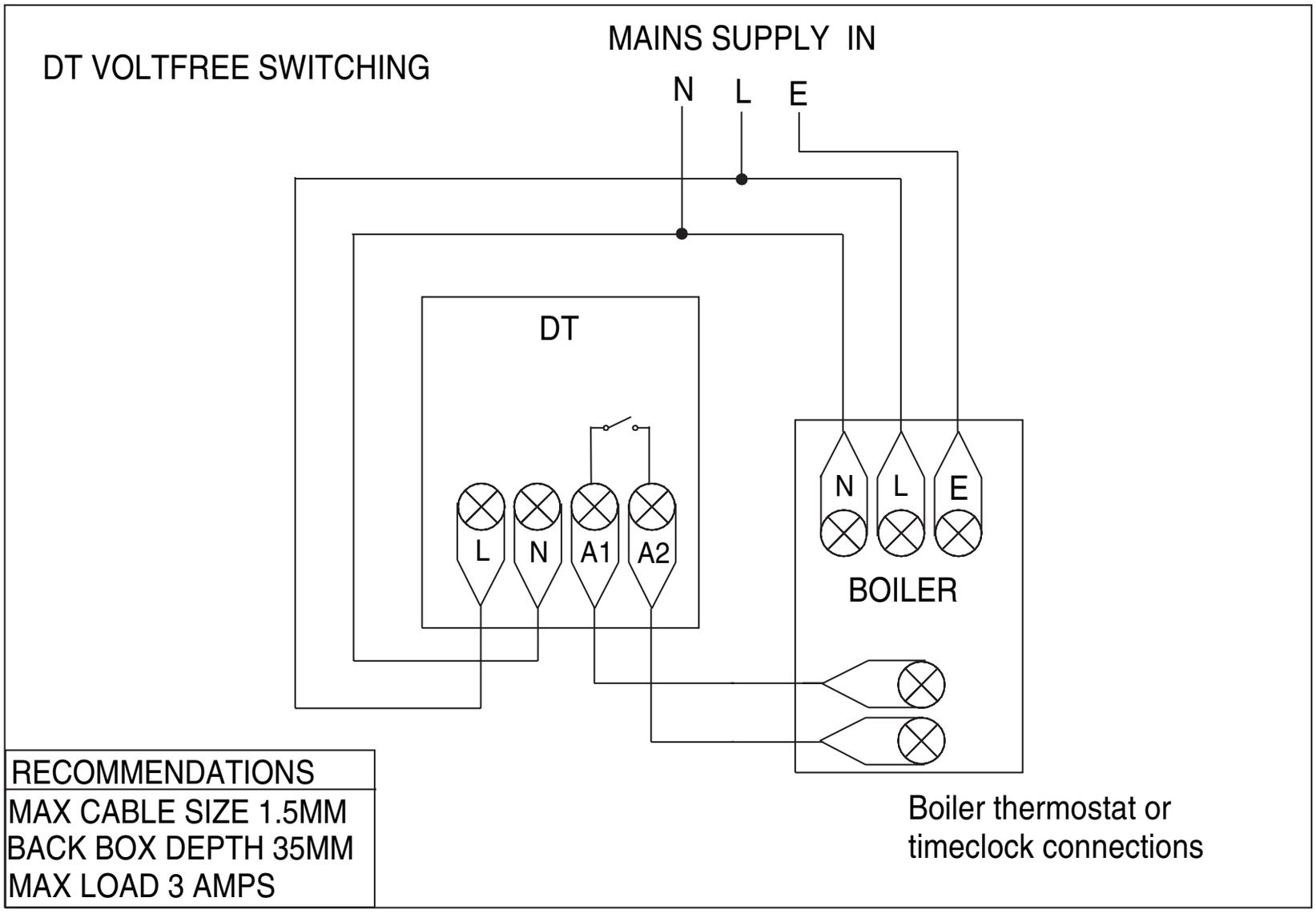
To cancel, repeat the steps above.

DT 240V SWITCHING

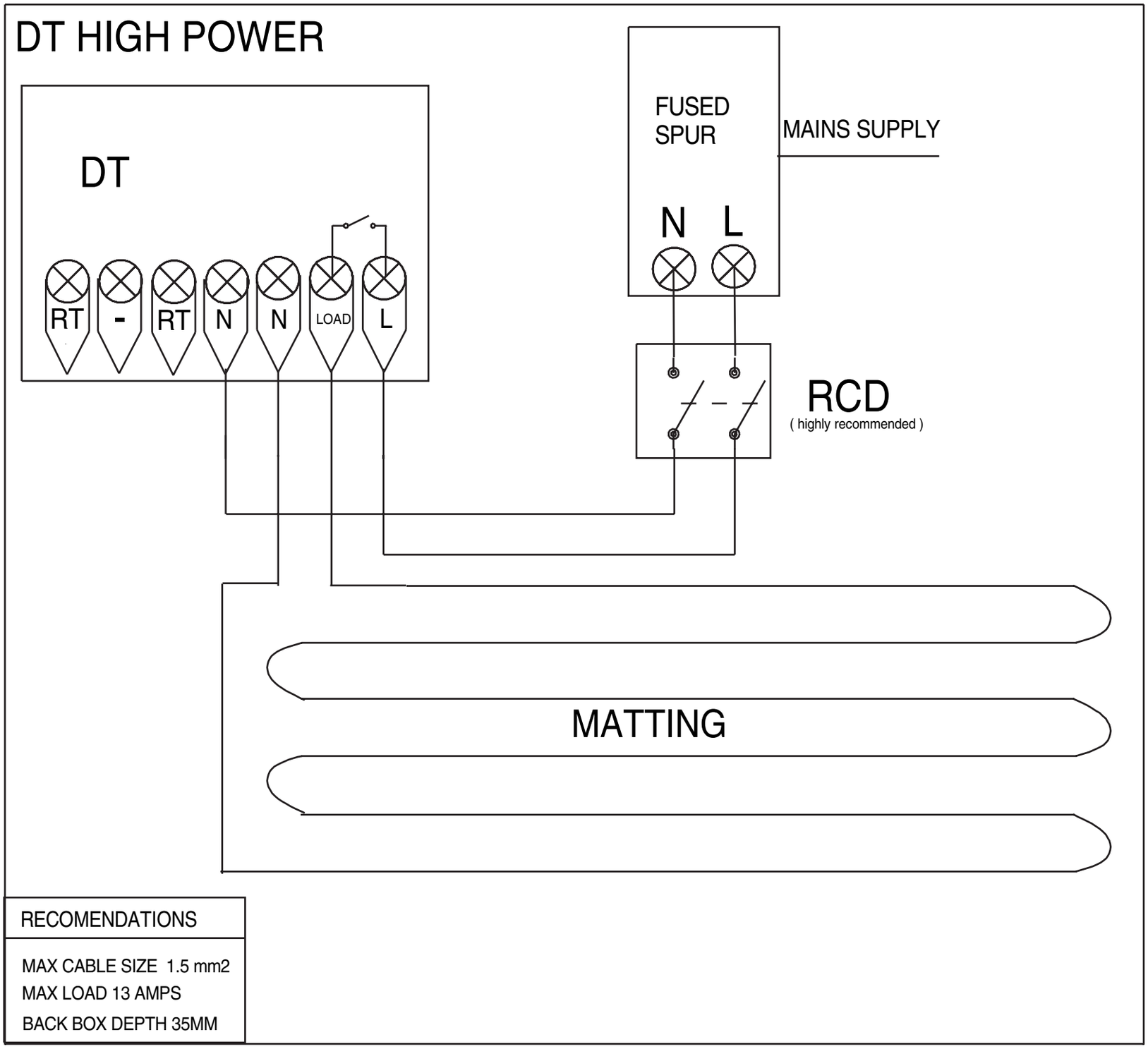


RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

DT VOLTFREE SWITCHING



RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS


DT HIGH POWER
DT
RT
-
RT
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LOAD
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FUSED
SPUR
MAINS SUPPLY
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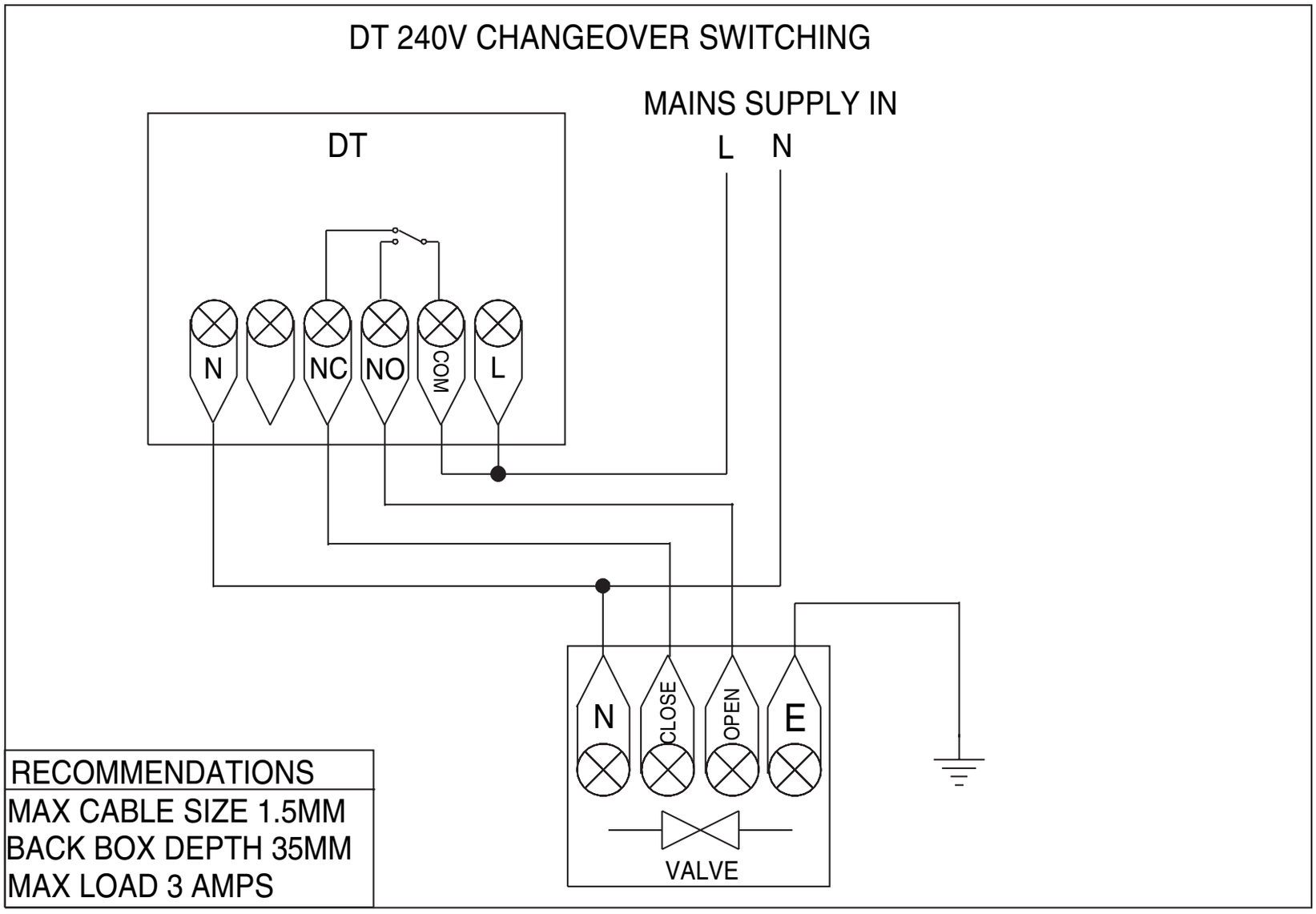
(highly recommended)
MATTING
RECOMENDATIONS
MAX CABLE SIZE 1.5 mm2
MAX LOAD 13 AMPS
BACK BOX DEPTH 35MM


DT 240V CHANGEOVER SWITCHING
MAINS SUPPLY IN
L
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COM
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CLOSE
OPEN
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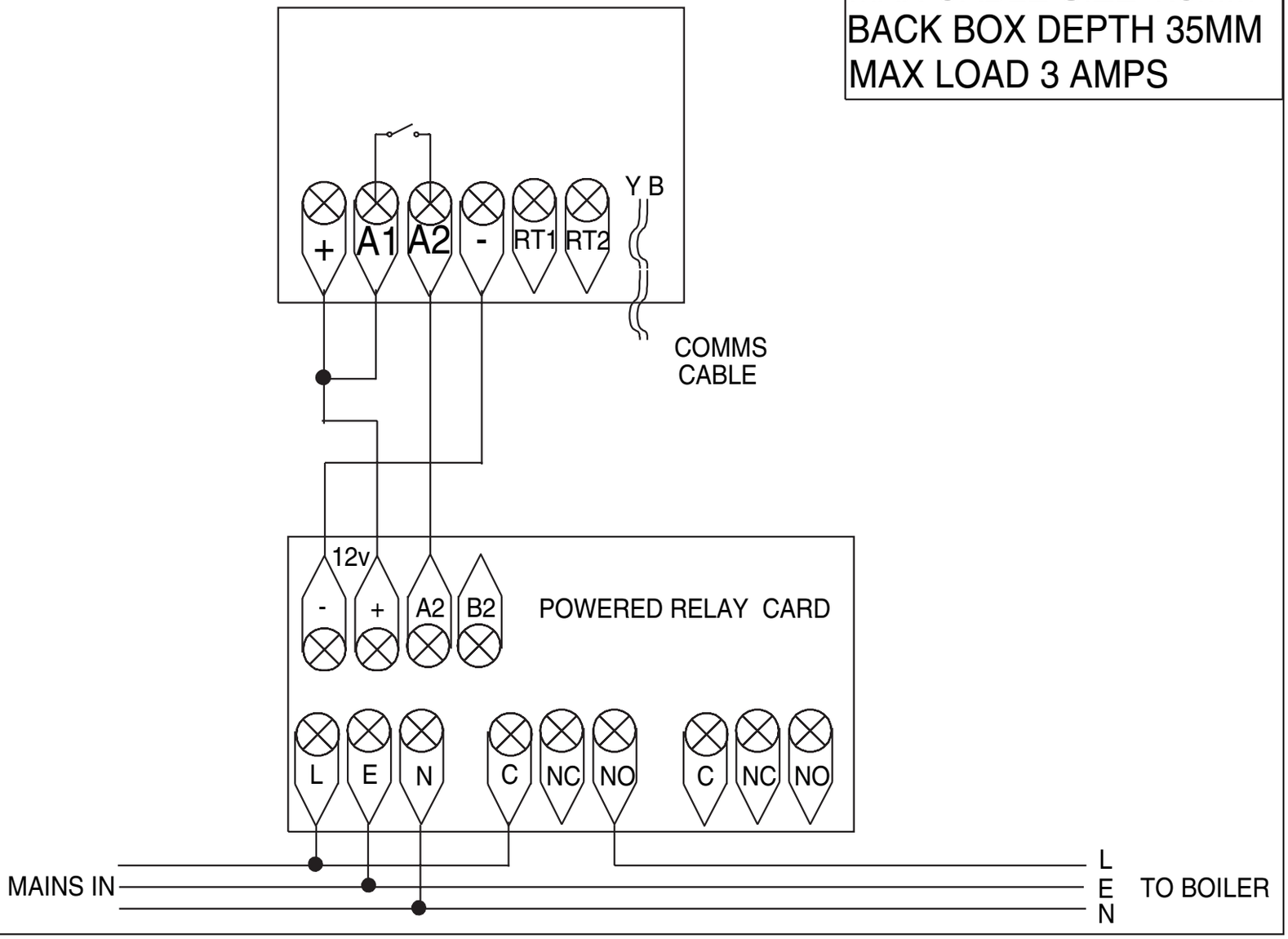
VALVE
RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

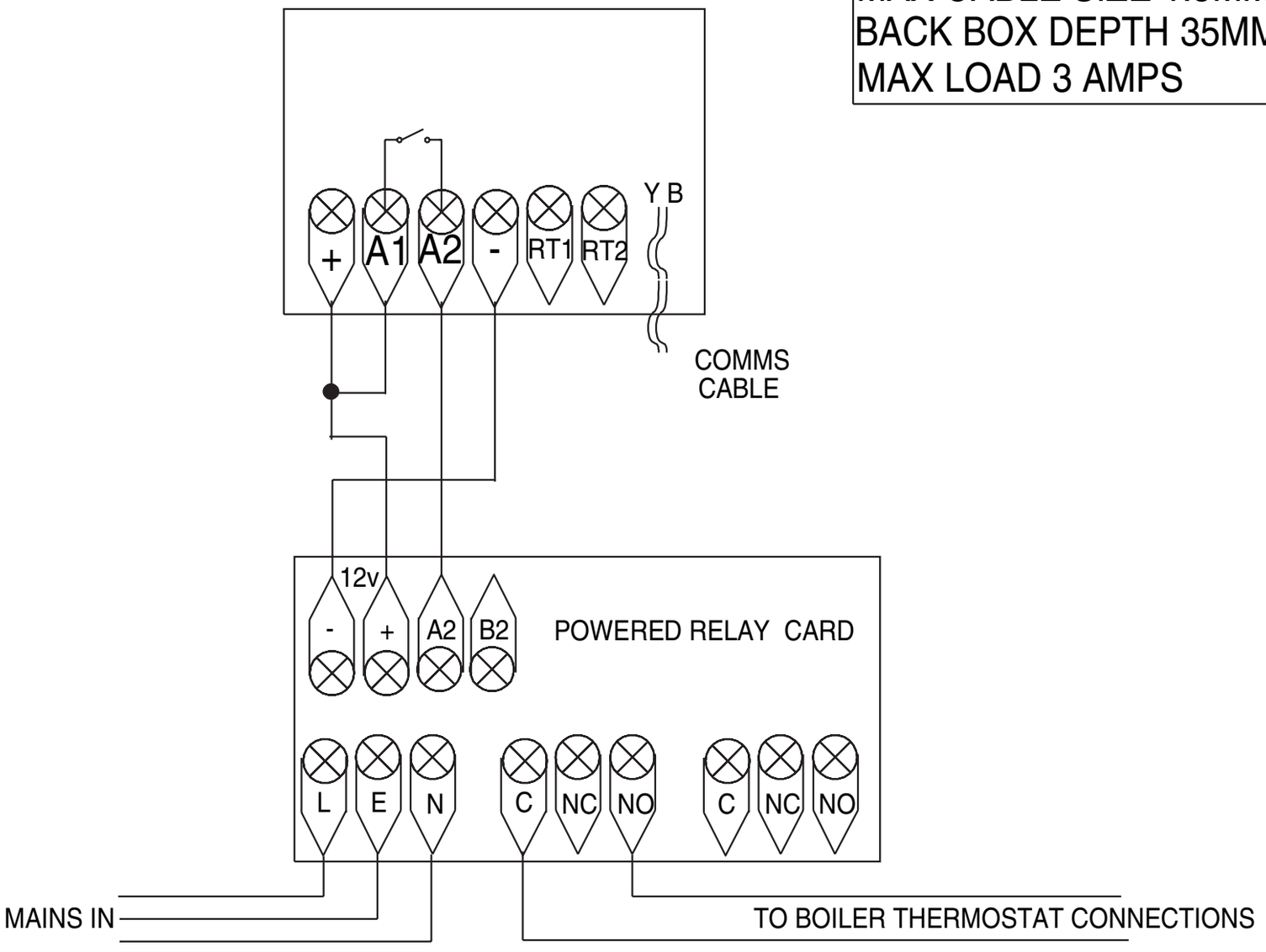
DT - N 240V SWITCHING

RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

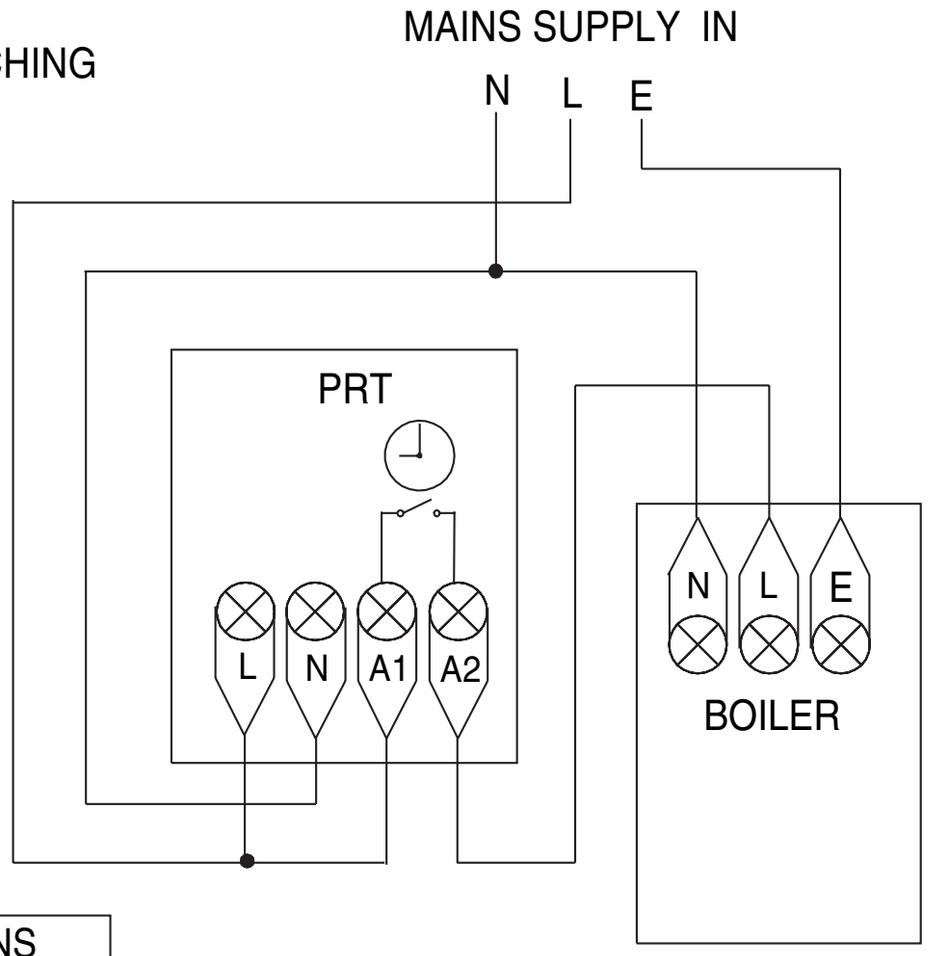


DT - N VOLTFREE SWITCHING

RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

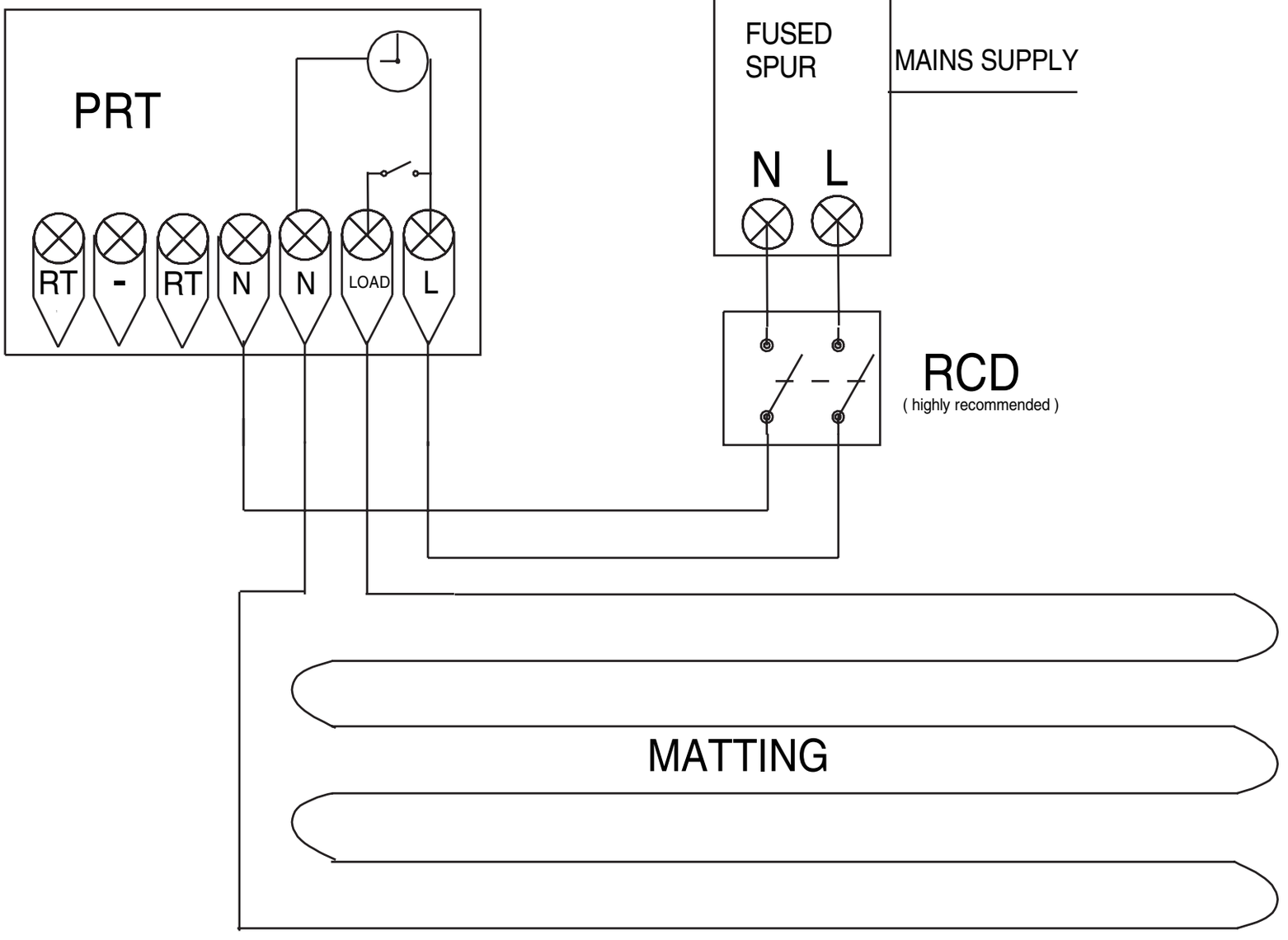


PRT 240V SWITCHING

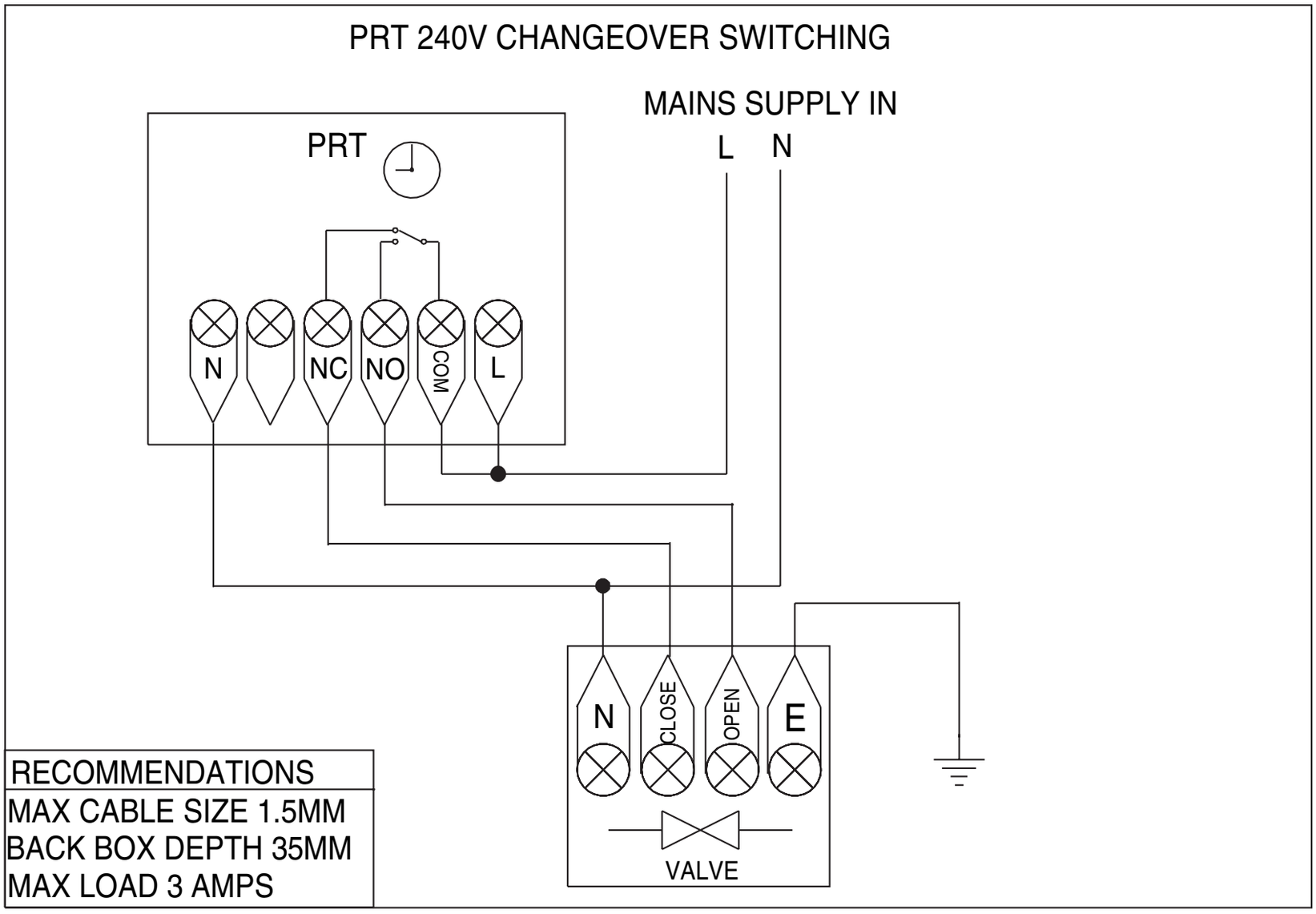


RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

PRT HIGH POWER



RECOMENDATIONS
MAX CABLE SIZE 1.5 mm2
MAX LOAD 13 AMPS
BACK BOX DEPTH 35MM


PRT 240V CHANGEOVER SWITCHING
MAINS SUPPLY IN
L
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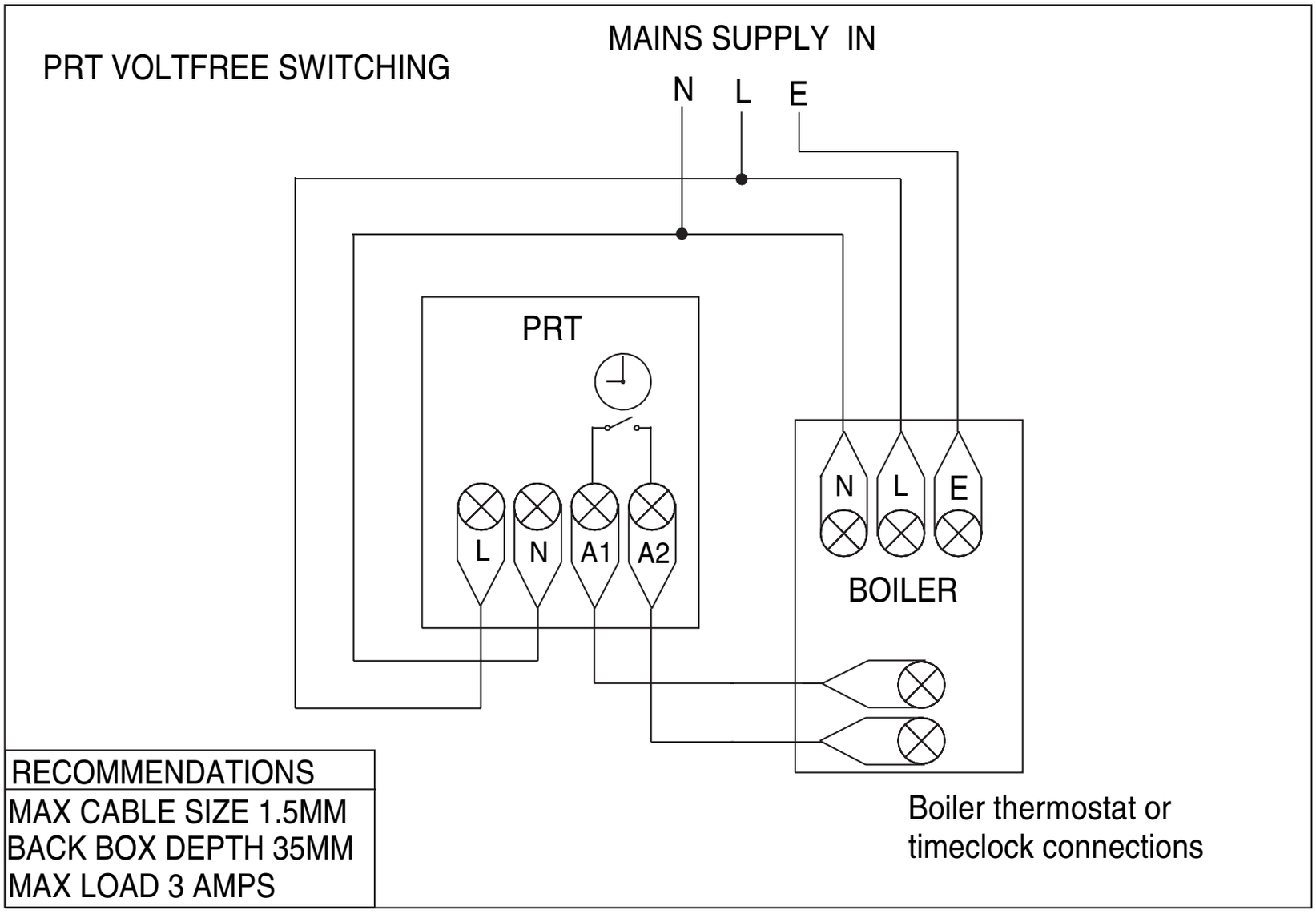
RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

PRT VOLTFREE SWITCHING

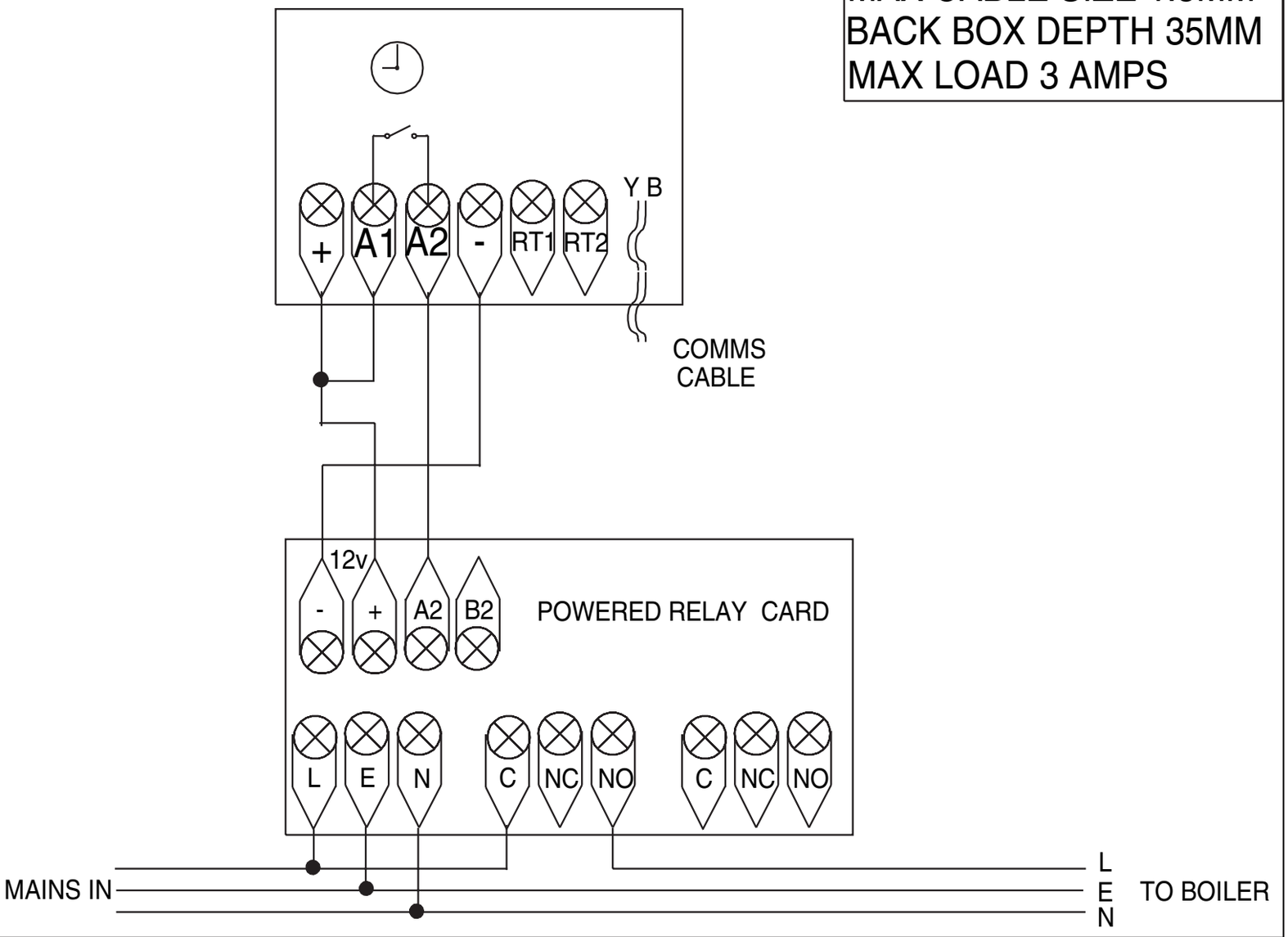


RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS

Boiler thermostat or
timeclock connections

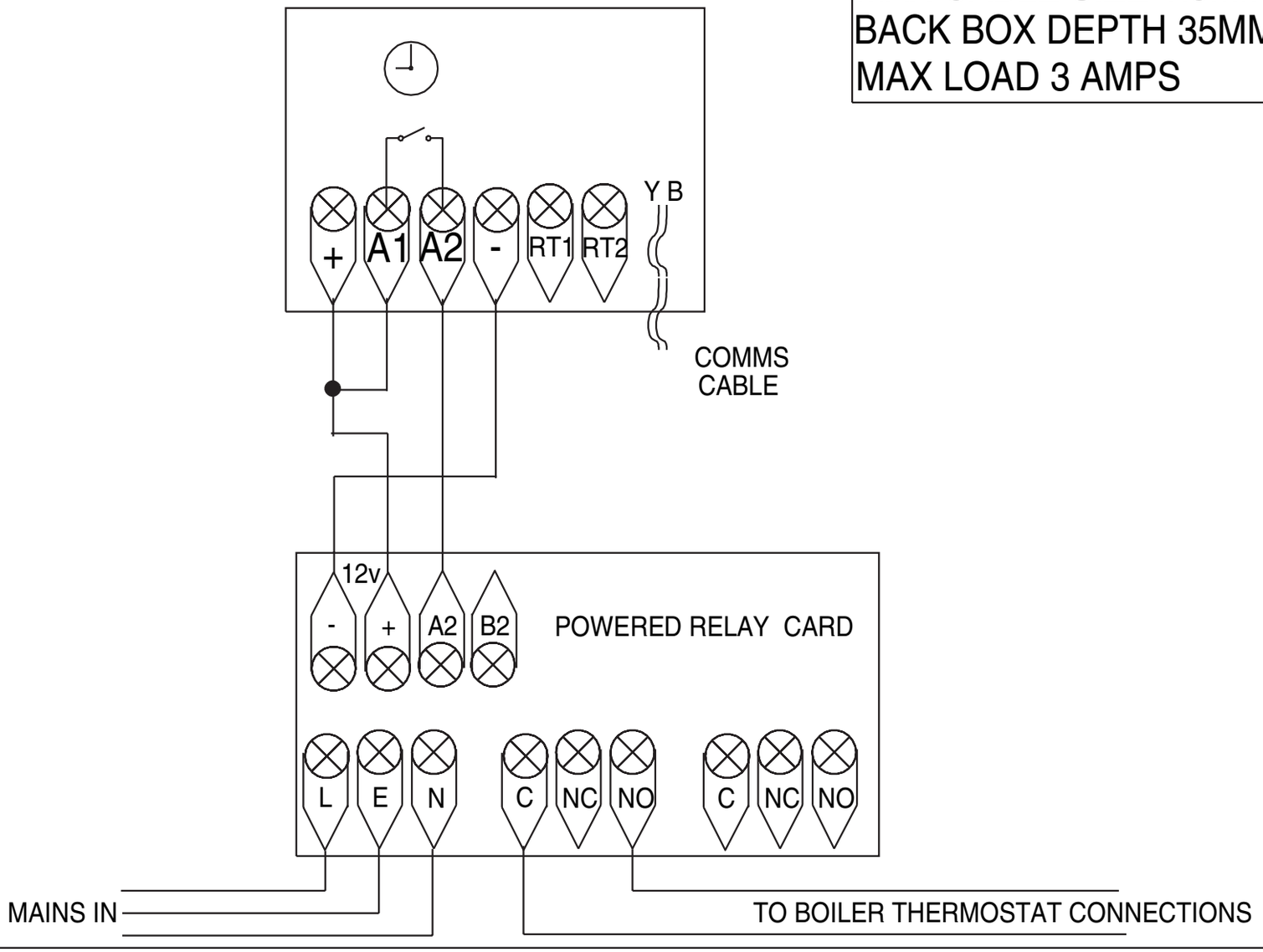
PRT-N 240V SWITCHING

RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS



PRT-N VOLTFREE SWITCHING

RECOMMENDATIONS
MAX CABLE SIZE 1.5MM
BACK BOX DEPTH 35MM
MAX LOAD 3 AMPS



Certification mark

Support Tel: 0870 8032 372

Revision 2 01/12

Ref. DT1