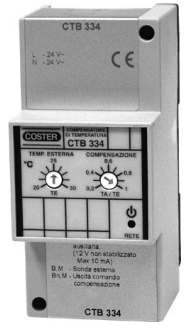


SUMMER TEMPERATURE COMPENSATOR FOR RTB 645 CONTROLLER

CTB 334 Eng.

- In pairing with SAA 010 detector (industrial type room detector used, in this application, as outside temperature detector)
- Adapts room temperature to outside temperature
- Power supply 24 Volt ~, DIN rail mounting



1. APPLICATION

CTB 334 compensator is designed for use in zones where room temperature is regulated by RTB 645 controllers.

2. OPERATION

During the summer season RTB 645 controller regulates the refrigeration plant so as to maintain the room temperature at the pre-set value.

The purpose of CTB 334 compensator is to adjust the pre-set room temperature in relation to an increase in outside temperature, in order to maintain a comfortable room temperature. It also contributes two additional advantage: it keeps as low as possible the thermal difference between the room and outside; and limits to the indispensable the intervention of the refrigeration group thereby keeping down running costs.

The parameters that can be pre-set are:

- outside temperature above which you want compensation to start its intervention. By means of the OT potentiometer you can select a value between +20 and +30°C.
- ratio between the desired variation in room temperature in respect of the outside temperature variation.

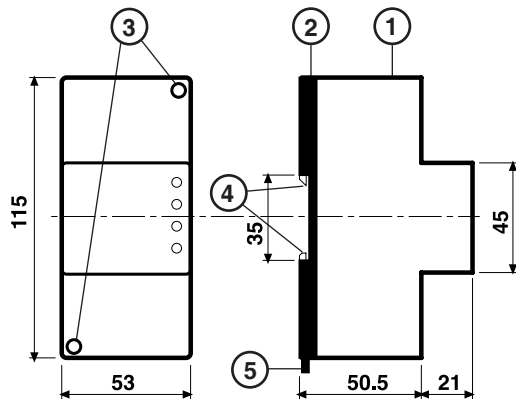
Using the potentiometer RT/OT you can set, for each degree of increase in the outside temperature, an increase in the desired room temperature of between 0.2 and 1°C.

The maximum value of the temperature variation set is +5°.

To adjust the value of the room temperature set, the output signal of the compensator is sent to the "Temperature Adjuster" (Rt°) of RTB 645. In complex installations where several RTB 645 controllers are used (e.g. hotels, residential blocks, commercial and public offices), the CTB 334 compensator can control up to 30 "Temperature adjuster" inputs connected in parallel. If the "Temperature adjuster" input of RTB 645 is connected to the output of the CTB 334 temperature compensator, the same input cannot be used either for an external temperature adjuster (Rt°) or for signalling the opening of a window (s1, c1).

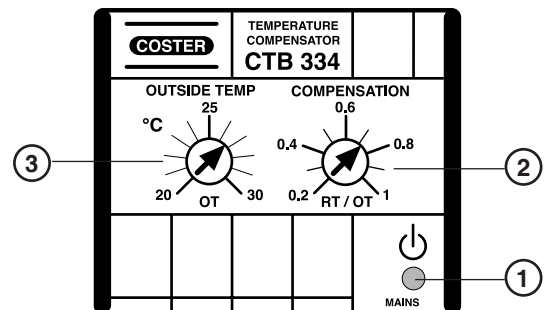
The CTB 334 unit can also supply a continuous output voltage of +8...+12V– rectified (but not stabilised) with a load capacity of 10mA, for the powering of any accessory devices.

3. OVERALL DIMENSIONS



- 1 – Protective cover for electronic components
- 2 – Base with transformer, relay and terminal blocks
- 3 – Screws for securing base and cover
- 4 – DIN rail securing elements
- 5 – DIN rail release lever

4. FACIA



- 1 – Mains LED
- 2 – Desired variation in room temperature in respect of 1° C variation in outside temperature.
- 3 – Value of outside temperature above which you want to start compensation.

5. TECHNICAL DATA

Power supply	24 Volt $\sim \pm 10\%$	Enclosure	DIN 3E module
Frequency	50...60 Hz	Mounting	on DIN 35 rail
Consumption	3 VA	Materials :	
Number of RTB 645 connectable	maximum 30	Base	Nylon
Auxiliary output power supply:		Cover	ABS
Voltage	+8...+12 V- rectified	Ambient temperature :	
Current	10 mA max	Operating	0...45 °C
Protection	IP40	Storage	-25...+60 °C
Radio disturbances	VDE0875/0871	Ambient humidity	Class F DIN 40040
Vibration test	with 2g (DIN 40 046)	Weight	0.250 kg
Construction standards	Italian Electrotech. Committee (CEI)		

6. INSTALLATION

CTB 334 must be installed in a dry location that respects the relevant ambient conditions given under 5. TECHNICAL DATA. If installed in a location classified as "Hazardous" it must be installed in a cabinet for electrical equipment constructed according to the regulations in force for the class of danger concerned.

The controller can be mounted on a DIN rail and housed in a standard DIN enclosure.

7. ELECTRICAL CONNECTION

Proceed as follows:

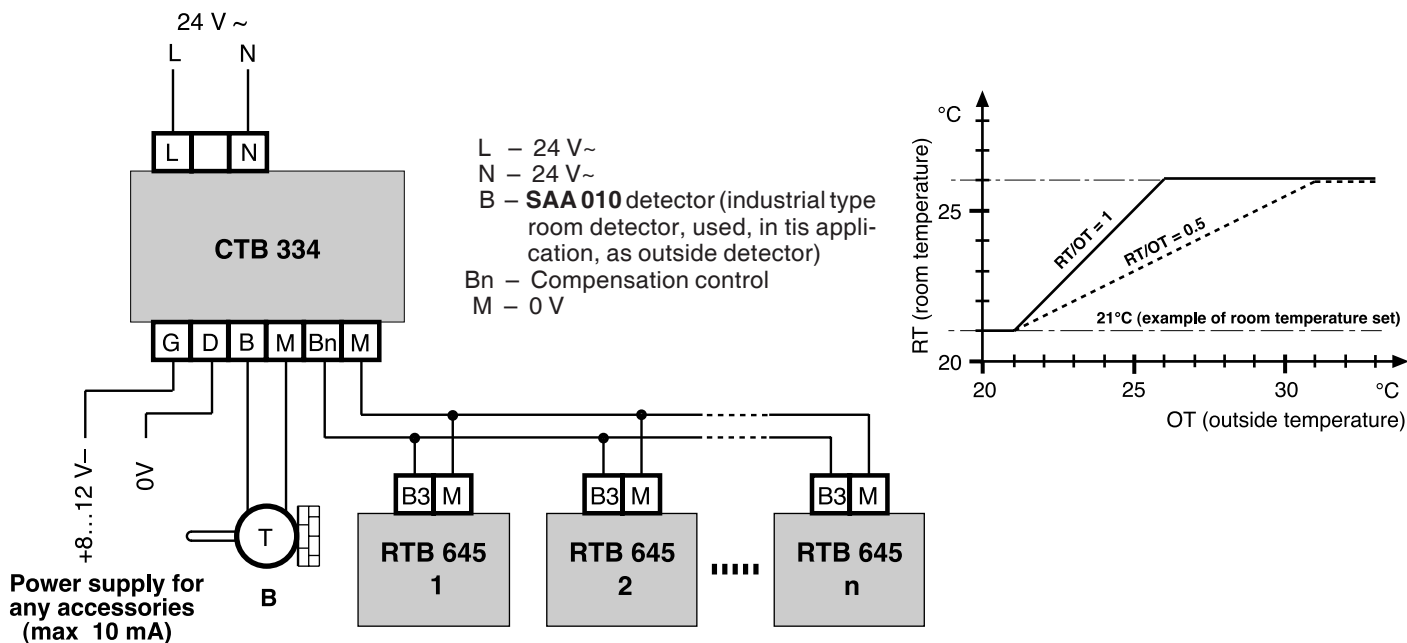
- Separate the base and cover (remove the securing screws (3.3)).
- Mount the base on the DIN rail and check that the securing elements (3.4) anchor it securely.
- Make the electrical connection according to the diagram and in observance of the safety regulations in force using the following cables: :
 - 1.5 mm² for the power supply,
 - 1 mm² for all the other connections.
- Switch on power (24 V~) and check its presence at terminals L and N..
- Replace the cover on the base/terminal block and secure it with the two screws supplied (3.3).

You are advise not to insert more than two cables in a single terminal of the controller and, if necessary, to use an external junction box.

8. WIRING DIAGRAM

IMPORTANT:

- the CTB 334 needs only the SAA 010 detector, used as outside detector,
- one CTB 334 can be connected to a maximum of 30 RTB 645 controllers,
- the distance between the CTB 334 and the last RTB 645 must not exceed 300 meters,
- when connecting CTB 334 and RTB 645 the polarity must be strictly observed.



Amendments to data sheet

from version	to version	Page	Section	Details of amendments
26.04.04 MZ	05.04.06 MZ	1-2	Various	Add SAA 010 detector.