

STE-10 NIGHT COOLING WITH OUTDOOR AIR

Climatix is set up to use cool outdoor air to cool the building during summer nights.

- If the outdoor temperature has stayed above 12 °C during the day, the unit starts at night to check the exhaust air temperature inside the building.
- If the exhaust air temperature is higher than the setpoint, the unit continues cooling using outdoor air.
- If night cooling is combined with a room temperature sensor, the room temperature is measured continuously. In this case, the unit only starts night cooling when the room temperature is above the setpoint.

Function:

When unit is in standby status it can start to cool the building only by cold outside air.

Night cooling is usually used in summer when the building is heated due to high daytime temperatures.

The function can be used with extract air temperature sensor and night kick if there is no room temperature sensor see Night kick.

The selected fan step for Night cooling is the same as for Unoccupied. This setting is located under: Unit > Fans > Fanstep UnOcc

Conditions:

Night cooling is activated if following conditions are met:

- Unit is in standby status.
- Outside air temperature is higher than setting for Min outs tmp ($\text{Outside air temp} > \text{Min outs tmp}$).
- Outside air temperature is lower than difference between room/extract air temperature and delta ($\text{Outside air temp} < \text{Room/Extract air temp} - \text{Delta}$).
- Room/extract air temperature is higher than sum of room/extract air setpoint and hysteresis ($\text{Room/Extract air temp} > \text{Room tmp setpoint/Setpoint tmp} + \text{Hysteresis}$).
- Night cooling is activated.

Night cooling is disabled under following conditions:

- Unit is not in standby status.
- Outside air temperature is higher than difference between room/extract air temperature and delta ($\text{Outside air temp} > \text{Room temp/Extract air temp} - \text{Delta}$).
- Room/extract air temperature is lower or equal to room/extract air setpoint ($\text{Room temp/Extract air temp} \leq \text{Room tmp setpoint/Setpoint tmp}$).
- Sensor for room/extract air temperature or outside air temperature is broken.
- Min runtime has passed.

Unit > Operating mode > Night cooling

Parameter	Value	Description
Room tmp setpoint	-64.0...64.0 [°C]	Desired setpoint for room temperature alternatively extract air temperature if there is no room temperature sensor. <u>This parameter is only available with supply temperature control.</u> For other temperature control types Setpoint tmp is used.
Hysteresis	0.0...64.0 [°C]	Hysteresis (shifting) for cut in.
Delta	1.0...64.0 [°C]	Minimum difference between room/extract and outside air temperature.
Min outs tmp	-64.0...64.0 [°C]	Lowest outside air temperature to allow night cooling.
Min runtime	0.0...999.0 [min]	Shortest runtime since start.