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jmcollin78 / **versatile_thermostat**

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main | Go to file | Code

bontiv Fix translation erro... | 34007ee · 12 hours ago

.devcontainer	Add heaterr state in ...	2 weeks ago
.github	Rename chatmode a...	3 weeks ago
.vscode	#1001 - add sleep m...	5 months ago
custom_components	Fix translation error. ...	12 hours ago
documentation	update german tran...	last week
images	Feat: #1554 - add ma...	last month
plans	Auto-TPI, second PR ...	2 months ago
scripts	Feat: #1144 - Detecti...	last month
tests	Fix #1798 - 9.0.1 - he...	5 days ago
.bashrc	Release 3.6.0 (#134)	3 years ago
.gitattributes	Allow dev container t...	3 months ago
.gitignore	thermostat_prop ref...	3 weeks ago
.pylintrc	Issue_766-enhance_...	2 years ago
CONTRIBUTING-cs....	Added czech translat...	5 months ago
CONTRIBUTING-de....	Update CONTRIBUTI...	4 months ago
CONTRIBUTING-fr.md	Release 3.6.0 (#134)	3 years ago
CONTRIBUTING-pl....	🇵🇱 PL Documentatio...	2 months ago
CONTRIBUTING.md	Release 3.6.0 (#134)	3 years ago
LICENSE	Initial commit	4 years ago
README-cs.md	Add missing de/cs/pl...	last month
README-de.md	Add missing de/cs/pl...	last month
README-fr.md	Add missing de/cs/pl...	last month
README-pl.md	Add missing de/cs/pl...	last month
README.md	Fix README missing ...	last month
container	Feature 234 add cen...	2 years ago
copy-to-forum.txt	Issue 348 self regula...	2 years ago
faq.md	#1318 - add service t...	3 months ago
hacs.json	Auto-TPI, second PR ...	2 months ago
pyproject.toml	Fix or ignore Pyright ...	8 months ago
pyrightconfig.json	Release 8.0.0 (#1202)	3 months ago
requirements_dev.txt	Auto-TPI, second PR ...	2 months ago
requirements_test.txt	Auto-TPI, second PR ...	2 months ago
setup.cfg	Release 3.6.0 (#134)	3 years ago

README | Contributing | MIT license

RELEASE V9.0.2 | COMMIT ACTIVITY 287/YEAR
LICENSE MIT | HACS CUSTOM | BUY ME A BEER $5

Versatile Thermostat

This README file is available in languages : English | Français | Deutsch | Čeština | Polski

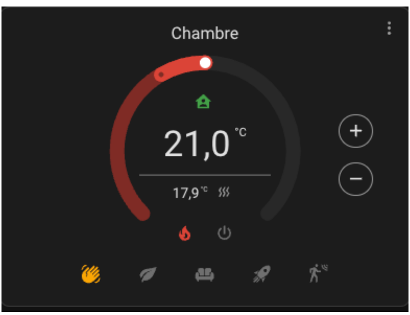
Versatile Thermostat

> 💡 This thermostat integration aims to greatly simplify your heating management automations. Since all typical heating events (nobody home?, activity detected in a room?, window open?, power load shedding?), are natively managed by the thermostat, you don't need to deal with complicated scripts and automations to manage your thermostats. ;-).

This custom component for Home Assistant is an upgrade and a complete rewrite of the "Awesome thermostat" component (see Github) with added features.

Screenshots

Versatile Thermostat UI Card (Available on Github) :



About

A full featured Thermostat for Home Assistant: presets, window, motion, presence and overpowering management

python | thermostat | home-assistant | hacs-integration | hacs-custom

- Readme
- MIT license
- Contributing
- Activity
- **975** stars
- **14** watching
- **114** forks

Report repository

Releases 301

9.0.2 Latest
5 days ago

+ 300 releases

Packages

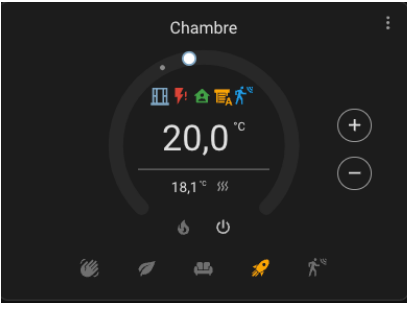
No packages published

Contributors 56

+ 42 contributors

Languages

- **Python** 99.9%
- **Other** 0.1%



What's New?

NEW

Release 8.6

> 1. added `max_opening_degrees` parameter for `over_climate_valve` VTherms allowing to limit the maximum opening percentage of each valve to control hot water flow and optimize energy consumption or other use cases.
> 2. added a valve recalibration function for an *VTherm* `over_climate_valve` allowing to force a maximum opening then a maximum closing to attempt recalibration of a TRV. More information here.

Release 8.5

> 1. added heating failure detection for VTherms using the TPI algorithm. This feature detects two types of anomalies:
>   - **heating failure**: the radiator is heating strongly (high on_percent) but the temperature is not increasing,
>   - **cooling failure**: the radiator is not heating (on_percent at 0) but the temperature keeps rising.
>
> These anomalies may indicate an open window, a faulty radiator, or an external heat source. The feature sends events that can be used to trigger automations (notifications, alerts, etc.). More information here.

Release 8.4

> 1. added auto TPI (experimental). This new feature allows automatically calculating the best coefficients for the TPI algorithm. More information here
> 2. added a temperature synchronization function for a device controlled in `over_climate` mode. Depending on your device's capabilities, *VTherm* can control an offset calibration entity or directly an external temperature entity. More information here,
> 3. added a feature named "timed preset" which aims to select a preset for a certain duration and come back to the previous preset after the expiration of the delay. The new feature is totally described here.

Release 8.3

1. Addition of a configurable delay before activating the central boiler.
2. Addition of a trigger for the central boiler when the total activated power exceeds a threshold. To make this feature work you must:
    - Configure the power threshold that will trigger the boiler. This is a new entity available in the `central configuration` device.
    - Configure the power values of the VTherms. This can be found on the first configuration page of each VTherm.
    - Check the `Used by central boiler` box.

Each time a VTherm is activated, its configured power is added to the total and, if the threshold is exceeded, the central boiler will be activated after the delay configured in item 1.

The previous counter for the number of activated devices and its threshold still exist. To disable one of the thresholds (the power threshold or the activated-devices count threshold), set it to zero. As soon as either of the two non-zero thresholds is exceeded, the boiler is activated. Therefore a logical "or" is applied between the two thresholds.

More informations here.

🍻 Thanks for the beers 🍻

Buy me a coffee

A big thank you to all my beer sponsors for their donations and encouragements. It means a lot to me and motivates me to keep going! If this integration has saved you money, buy me a beer in return; I would greatly appreciate it!

Glossary

`VTherm` : Versatile Thermostat as referred to in this document

`TRV` : Thermostatic Radiator Valve equipped with a valve. The valve opens or closes to allow hot water to pass.

`AC` : Air Conditioning. An AC device cools instead of heats. Temperatures are reversed: Eco is warmer than Comfort, which is warmer than Boost. The algorithms take this information into account.

`EMA` : Exponential Moving Average. Used to smooth sensor temperature measurements. It represents a moving average of the room's temperature and is used to calculate the slope of the temperature curve, which would be too unstable on the raw data.

`slope` : The slope of the temperature curve, measured in ° (C or K)/h. It is positive when the temperature increases and negative when it decreases. This slope is calculated based on the `EMA` .

`PAC` : Heat pump

`HA` : Home Assistant

`underlying` : the device controlled by `VTherm`

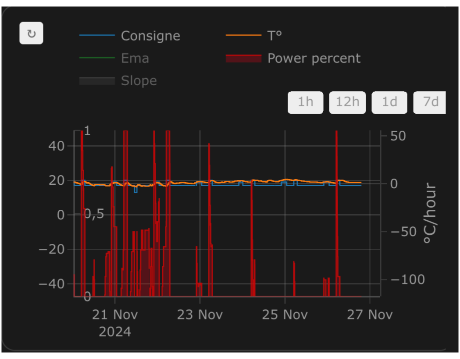
Documentation

The documentation is now divided into several pages for easier reading and searching:

1. Introduction
2. Installation
3. Quick start
4. Choosing a VTherm type
5. Basic attributes
6. Configuring a VTherm on a `switch`
7. Configuring a VTherm on a `climate`
8. Configuring a VTherm on a valve
9. Presets
10. Window management
11. Presence management
12. Motion management
13. Power management
14. Auto start and stop
15. Centralized control of all VTherms
16. Central heating control
17. Advanced aspects, security mode
18. Heating Failure Detection
19. Self-regulation
20. Auto TPI learning
21. Algorithms
22. Lock / Unlock
23. Temperature synchronisation
24. Timed preset
25. Reference documentation
26. Tuning examples
27. Troubleshooting
28. Release notes

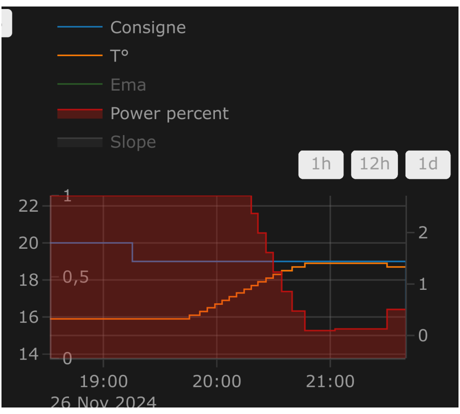
Some results

Temperature stability around the target configured by preset:

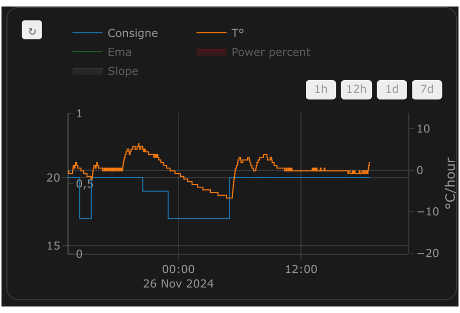


On/off cycles calculated by the integration `over_climate` :

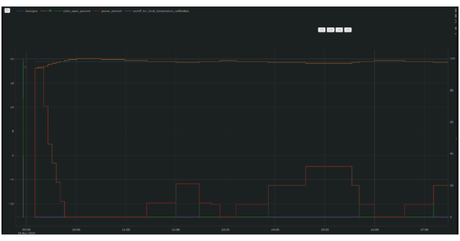
Regulation with an `over_switch` :



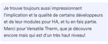
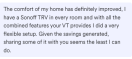
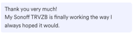
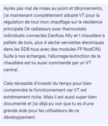
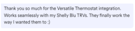
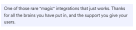
Strong regulation in `over_climate` :



Regulation with direct valve control in `over_climate` :



Some comments about the integration

 Je trouve toujours aussi impressionnant l'implication et la qualité de certains développeurs et de leur modules pour HA, et tu en fais partie. Merci pour Versatile Therm, que je découvre encore mais qui est d'un très haut niveau!	 The comfort of my home has definitely improved, I have a Sonoff TRV in every room and with all the combined features your VT provides I did a very flexible setup. Given the savings generated, sharing some of it with you seems the least I can do.	 Thank you very much! My Sonoff TRVZB is finally working the way I always hoped it would.
 Après pas mal de mises au point et tâtonnements, j'ai maintenant complètement adopté VT pour la régulation de tout mon chauffage sur la résidence principale (14 radiateurs avec thermostats individuels connectés Danfoss Ally et 1 chaudière à pellets de bois, plus 4 sèche-serviettes électriques dans les SDB tous avec des modules FP NodON). Suite à nos échanges, l'allumage/extinction de la chaudière est lui aussi commandé par un VT central. Cela nécessite d'investir du temps pour bien comprendre le fonctionnement car VT est extrêmement riche. Mais il est aussi super bien documenté et j'ai déjà pu voir que tu es d'une grande aide pour les utilisateurs de ce développement.	 Thank you so much for the Versatile Thermostat integration. Works seamlessly with my Shelly Blu TRVs. They finally work the way I wanted them to :)	 One of those rare "magic" integrations that just works. Thanks for all the brains you have put in, and the support you give your users.

Enjoy!

Contributions are welcome!

If you wish to contribute, please read the contribution guidelines.

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