

Templates

Templates in Home Assistant allow you to create **dynamic entities**. They **derive values** from other data using **conditions and logic**. You can **specify templates** for entity properties like names and states.

Supported Template Entities in Home Assistant

(BEFORE 2021.8.1 release)

Entity Type	Key After - platform: template	Purpose
Sensor	sensors:	Creates a virtual sensor based on a template value (e.g., temperature, status, power).
Binary Sensor	binary_sensors:	A sensor with only on/off states (e.g., motion detected, door open).
Switch	switches:	A virtual switch to control other entities or trigger automations.
Light	lights:	Creates a light entity that can turn on/off and sometimes adjust brightness.
Fan	fans:	Defines a fan entity that can be toggled on/off or adjusted in speed modes.
Cover	covers:	Used for garage doors, blinds, shutters, or anything that "opens" and "closes".
Lock	locks:	Creates a virtual lock that can be locked/unlocked via automation.
Button	buttons:	A stateless button entity that triggers an action when pressed (e.g., a "reset" button).
Number	numbers:	A numeric input that can be set within a defined range (e.g., volume control).
Select	selects:	A dropdown-style selector for choosing from multiple options (e.g., fan speed mode).

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Cover	- cover:	Used for garage doors, blinds, shutters, or anything that "opens" and "closes".
Lock	- lock:	Creates a virtual lock that can be locked/unlocked via automation.
Button	- button:	A stateless button entity that triggers an action when pressed (e.g., a "reset" button).
Number	- number:	A numeric input that can be set within a defined range (e.g., volume control).
Select	- select:	A dropdown-style selector for choosing from multiple options (e.g., fan speed mode).

Example Comparison

Before 2021.8.1 Release

sensor:

- platform: template

sensors:

room_temperature:

friendly_name: "Room Temperature"

unit_of_measurement: "°C"

value_template: "{{ states('sensor.living_room_temperature') | float }}"

After 2021.8.1 Release

template:

- sensor:

- name: "Room Temperature"

- unique_id: room_temperature

- unit_of_measurement: "°C"

- state: "{{ states('sensor.living_room_temperature') | float }}"

Jinja Template Syntax Breakdown

Basic syntax:

`{{ ... }}` → Output data

`{% ... %}` → Logic (if statements, loops)

`{# ... #}` → Comments

Core Data Types in Home Assistant Templates

- **String** – Text-based values (e.g., "Living Room Light")
- **Integer** – Whole numbers (e.g., 42, 0, -5)
- **Float** – Decimal numbers (e.g., 3.14, 99.99)
- **Boolean** – True/False values (e.g., True, False)
- **None / Null** – Represents an empty or unknown value (None)

Core Data Types in Home Assistant Templates: Code Examples

String – Text-Based Values {{ "Living Room Light" }}	Output Living Room Light
Integer – Whole Numbers {{ 42 + 8 }}	Output 50
Float – Decimal Numbers {{ 3.14 * 2 }}	Output 6.28
Boolean – True/False Values {{ is_state("light.living_room", "on") }}	Output True
None / Null – Empty or Unknown Values {{ states("sensor.unknown_sensor") }}	Output None
Bonus: Handling none Values Safely {{ states("sensor.temperature") float(default=0) }}	Output 23.5 (if unavailable or unknown → defaults to 0.0)