

M-OUT-4s configuration guide

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Introduction

The M-OUT-4s module is equipped with voltage analogue outputs that allow it to integrate with devices that have voltage control inputs compatible with 0 – 10V DC, 1 – 10V DC, or 0 – 5V DC standards.

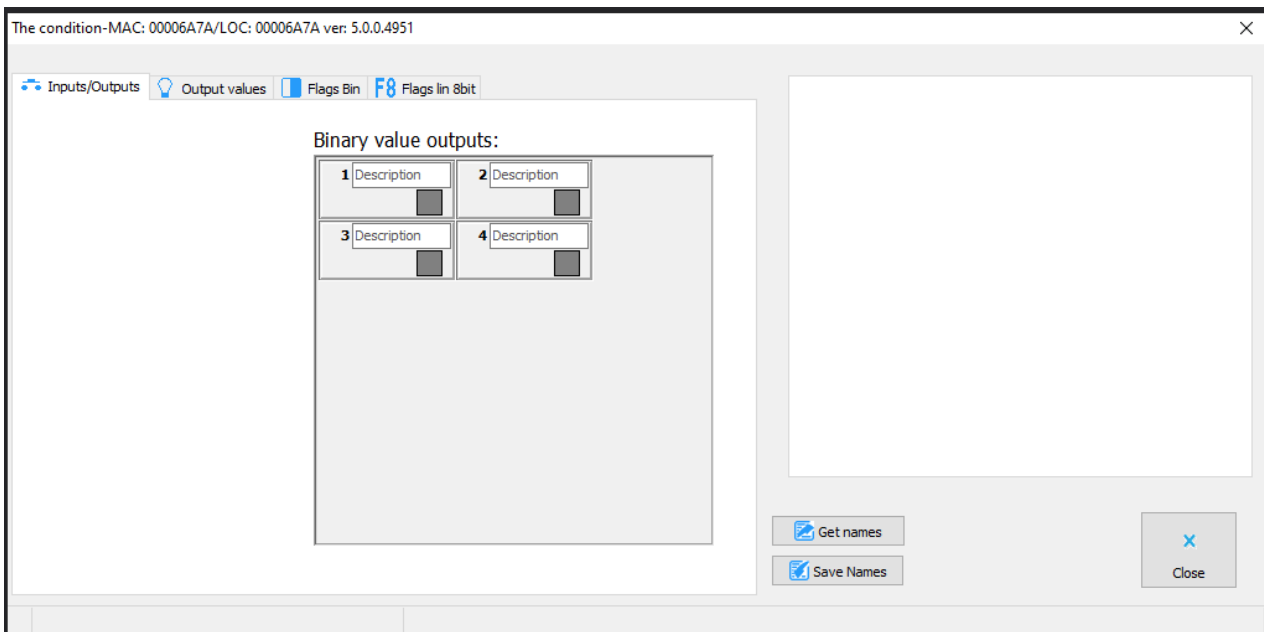
This allows the module to control, among others.:

- light fixtures,
- recuperators,
- inverters, etc.

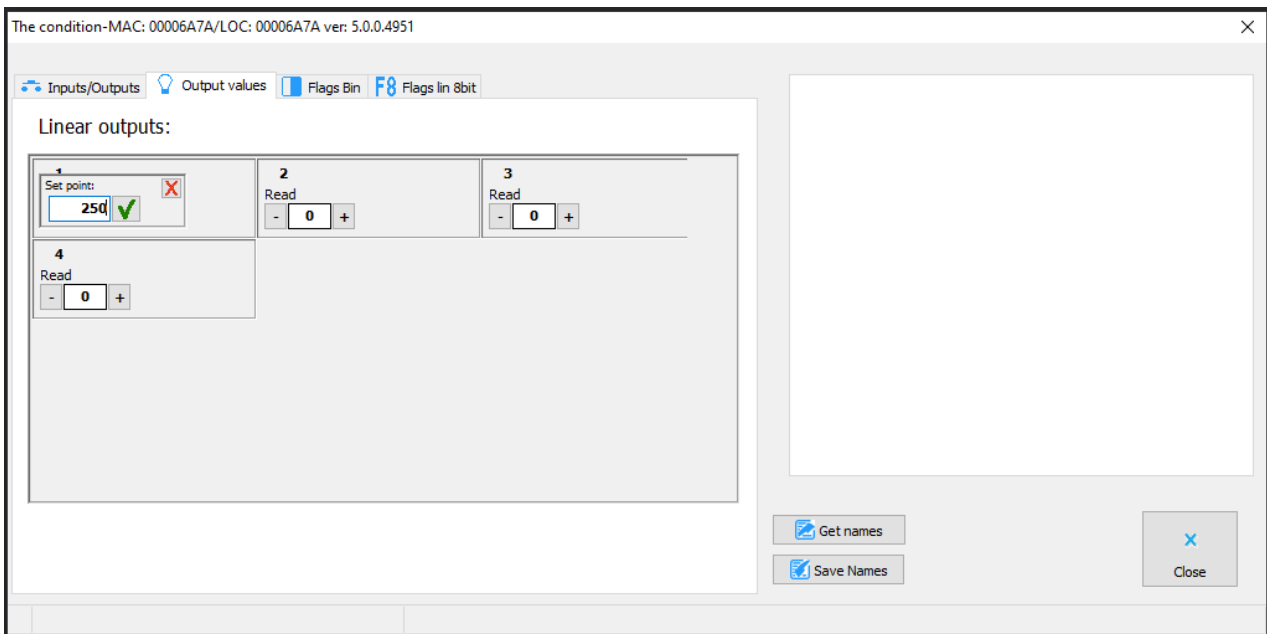
Four outputs of the device enable it to independently control four receivers. The outputs operate within the range of 0 – 10V DC. With the use of this module, you can, for example, make the intensity of ventilation dependent on the temperature received from a heating zone.

Device monitor

The M-OUT-4s module is configured in the Ampio Smart Home configurator. In order to check if the module is working correctly, open the *Device monitor*. There, you can also activate the outputs and name them. To save your changes, click *Save names*.



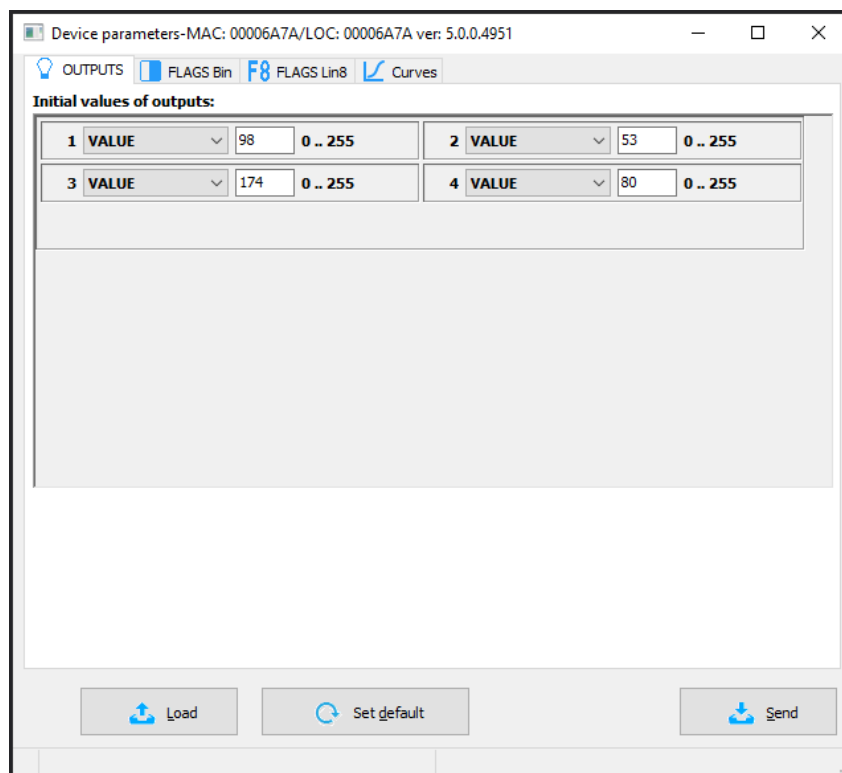
Apart from the simple on/off information, in the *Output values* tab you can also define a value per output within the range of 0-255 (which corresponds to 0-10V).



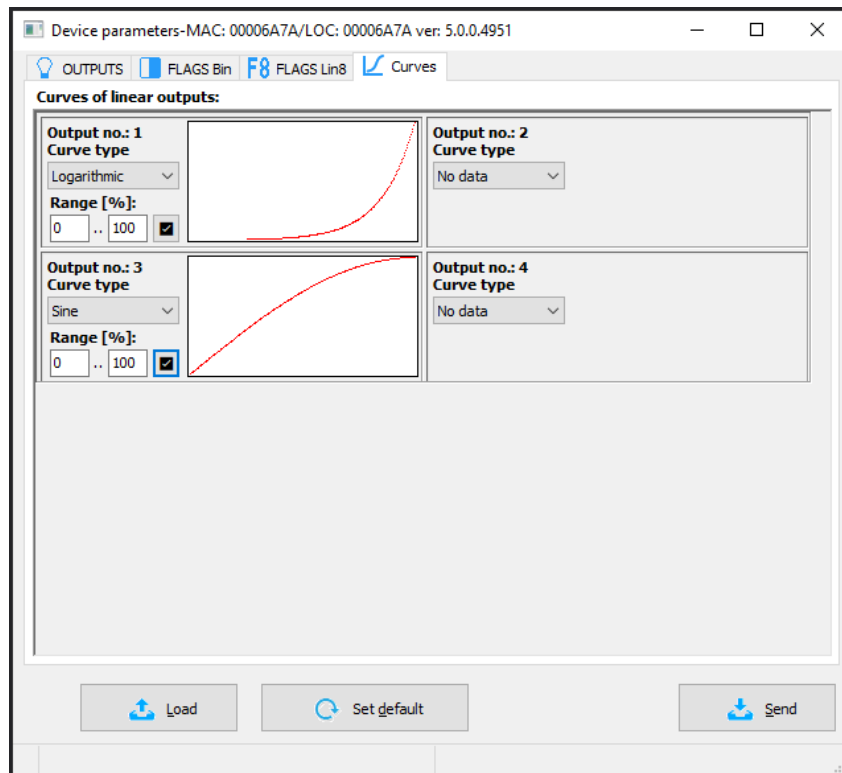
Flags in this module work in exactly the same fashion as it is the case with all the other Ampio system modules.

Device parameters

Next, go to the *Device parameters* tab. Open *Outputs*, where you can define the value to which selected devices will be set after power supply is reset.

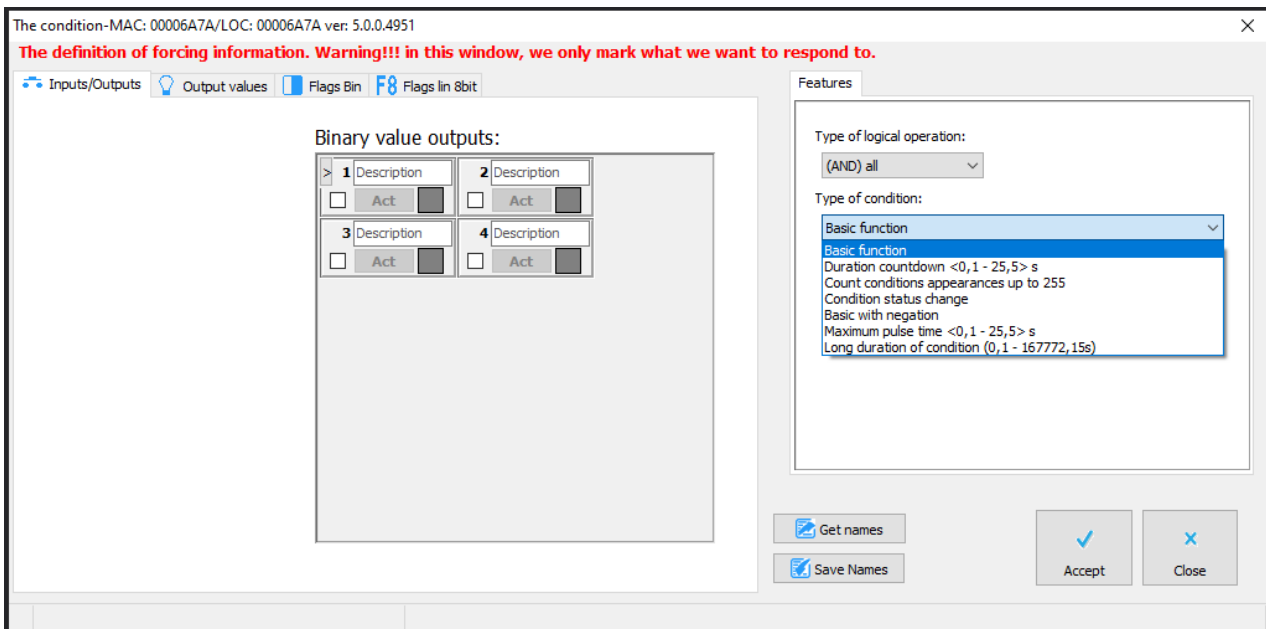


The initial values can also be defined for selected flags in the *FLAGS Bin* and *FLAGS Lin8* tabs. The *Curves* tab provides options for specifying how an output should be activated. Select the control range - for some devices a range between, e.g. 20% and 80% is advantageous. Then, select one curve from the list - this will allow the output to be activated more smoothly. Available curves are: *line*, *logarithmic*, *sine*, *tangent*, and *arc tangent*. After confirming, you will see a graph corresponding to the setting. Once this stage of configuration is completed, click on *send to device*.

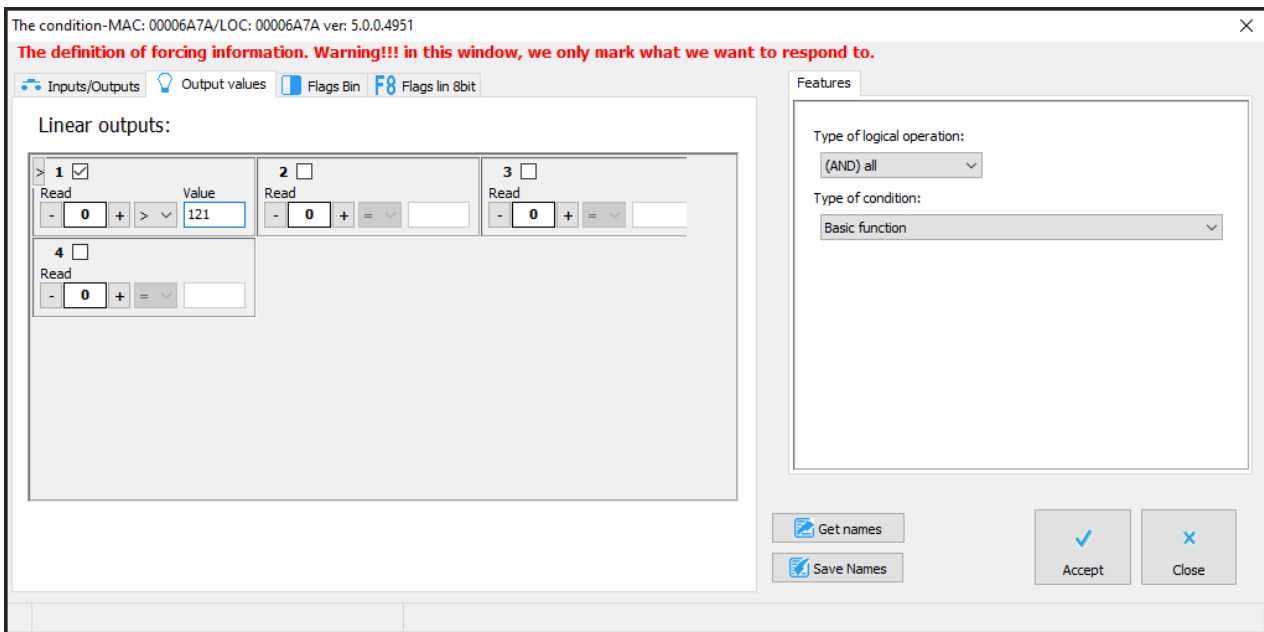


Conditions

When creating conditions in Smart Home configuration, you can establish dependencies from the M-OUT-4s module. Dependencies can be created from the output's status, output's value, or output's flag. If you want to check whether an output is switched on, or not, tick the appropriate output in the *Inputs/Outputs* tab (Binary value outputs).

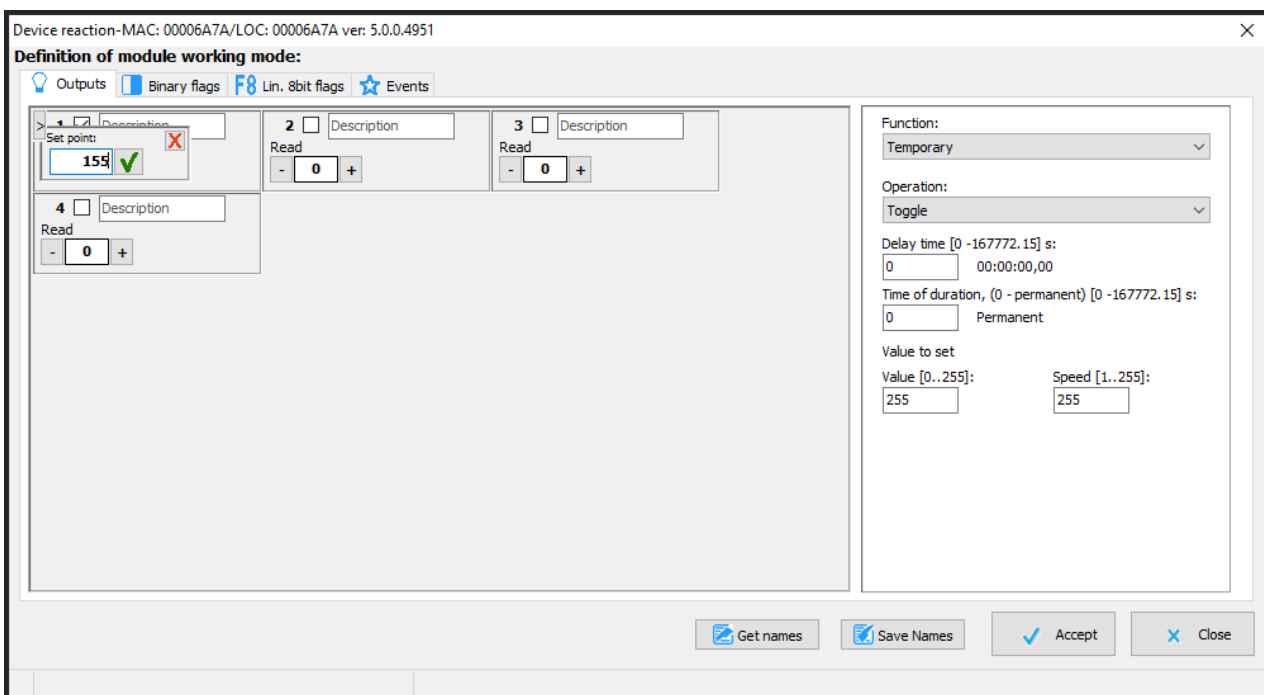


If you would like to ascertain whether the selected output has reached its set value (e.g. 100), you can do that in the *Output values* tab.



Device reactions

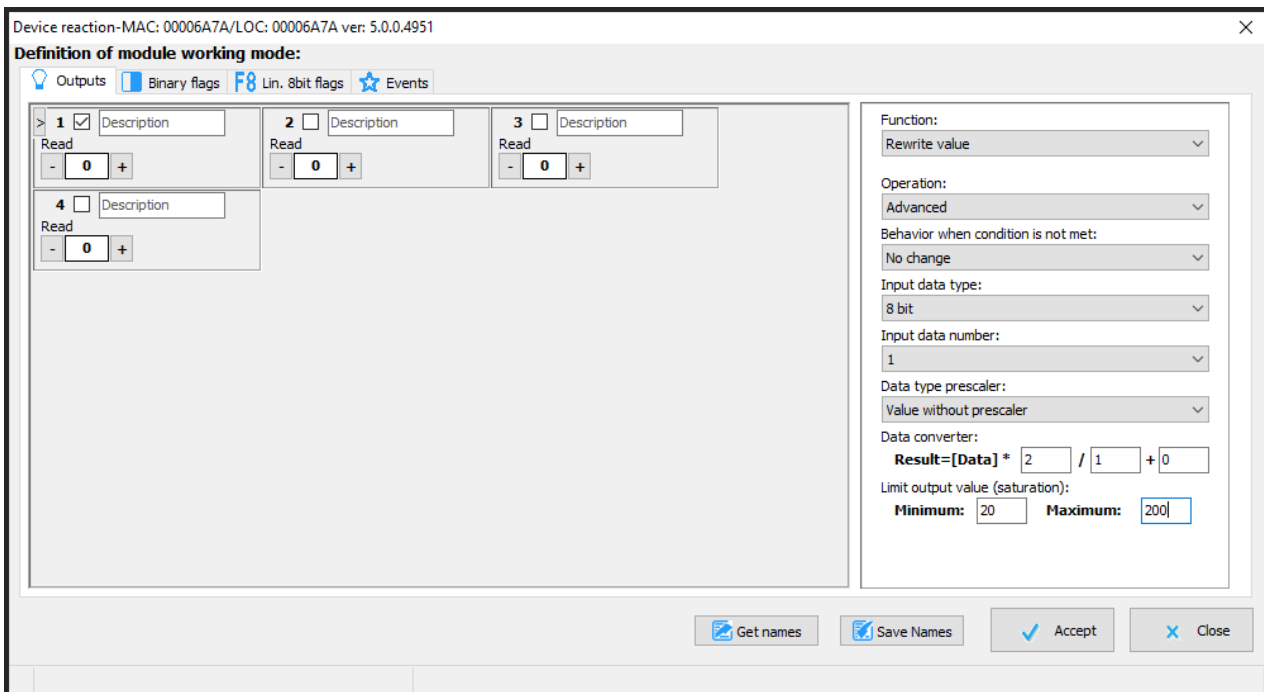
As a reaction to any condition, you can select one of various functions that can be controlled by M-OUT-4s' outputs. In the figure below, on the left side, there is an overview of current values, which can be edited to test the reaction of a given output.



In the same window, on the right side, there is a list of functions that can be selected for a given condition, as well as the function parameters. Due to the fact that the module's outputs can not only be switched on/off, but also accept values in the range of 0-255, a lot of configuration possibilities are available.

For example, you can get a value from the source device (first part of the condition), calculate it and set the calculated value on M-OUT-4s' output.

In the figure below, an 8-bit value is downloaded, number 1 (e.g. 1 output) selected, data type prescaler is left on default, and the value in the converter is multiplied by 2. Saturation limits the value to the range of 20 to 200. This means that if the input returns 0, the output will receive 20 (the *minimum* limit). With an input returning 30, the output will take the value of 60. With an input returning 220, the output will take the value of 200 (the *maximum* limit).



Once the condition is created, it is necessary to confirm it and send it to device.