

Configuration guide for M-INOC and M-OC modules

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Introduction

M-OC and M-INOC modules are equipped with open-collector type inputs, which enable the modules to control resistive loads supplied with voltage up to 40V DC. M-INOC type modules are additionally equipped with ground-detecting inputs.

The M-INOC-8s module is a component of the Ampio system and can be used for:

- switching the light on/off,
- · smoothly controlling the lighting,
- indicating the ground impulse in order to control other devices.

The device's eight outputs are capable of independently controlling eight receivers. The OUT1 to OUT8 outputs initiate the ground impulse and ar also equipped with pulse-width modulation (PWM), thanks to which they enable, for example, LED diodes' brightness adjustment.

This document is meant to explain the configuration of the M-OC and M-INOC type of modules, using the specific example of M-INOC-8s.

Configuration in Ampio Designer

Device parameters

To change the device parameters, enter the device settings (cog icon) and select the *Parameters* tab on the left. In the *Curve Values* sub-tab, it is possible to set the control for each channel separately.

Curve value



The output can be controlled in a linear characteristic in several different ways. Moreover, the start and end of the control do not have to mean 0 and 100% either (select any value from the range 0-255). After the change has been made, send the new parameters to the device.



Device monitor

The current values can be viewed and set in the Functions tab, OC sub-tab.

Inputs 8	outputs	Flag	8-bit flag	16-bit flag	1-Wire	RGBW	Diagnostics	ос	CCT
NUMBE	R DE	ESCRIPTIC	01	LOCATION			VISUAL		
1					۰.	Θ	18	7	Ð
2					۵.	Θ	74		+

Conditions

Logical conditions can be created both from output values and to control outputs. Detailed function parameters are set by clicking on the cog icon on the dark background.

		-									
M-INOC-8s	oloc	0 🗄 1. 🔁 10	× 🛛 × Simple	0	→ M-INOC-8s	o oc	0 <u>12. ×</u> 🕀	× Simple	0	Set	۵ 🙆

Configuration in the Smart Home Configurator

Device monitor

M-INOC-8s is configured in the Ampio Smart Home configurator application. In order to check if the module is working correctly, open the *Device monitor*. There, you can also activate the outputs and inputs, and name them. To save your changes, click *Save names*.

The condition-MAC:	0000AB57/LOC: 0000AB57	minok ver: 5.0.0.4951			×
Inputs/Outputs	Output values 📘 Fla	ags Bin 👃 DS 18B20			
Inputs:		Binary value out	outs:		
1 we1	2 Description	1 wy1	2 Description		
3 Description	4 Description	3 Description	4 Description		
5 Description	6 Description	5 Description	6 Description		
7 Description	8 Description	7 Description	8 Description		
				🔁 Get names	×
				🚺 Save Names	Close

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.

he condition-MAC: 0000AB57/LOC: 0000AB57 minok ver: 5.0.0.4951	×
he condition-MAC: 0000AB57/LOC: 0000AB57 minok ver: 5.0.04951	×
Save Names Close	

Flags in this module work in exactly the same fashion as it is the case with all the other Ampio system modules. The *Device monitor* allows you to also search for and name the DS18B20 temperature sensors.

Device parameters

In the Device parameters window, you can change the frequency of the PWM outputs' modulation.

■ Device parameters-MAC: 0000AB57/LOC: 0000AB57 minok ver: 5.0.0.4951 -		×
Basic 🔓 OUTPUTS 📘 FLAGS Bin 🗾 Curves		
PWM modulation frequency: 246Hz (default) 123Hz 492Hz		
Load C Set default	📩 Send	

In the OUTPUTS tab, you can define the value to which selected outputs will be set after a power reboot. Initial values can also be set up for particular flags after selecting the right tab (FLAGS Bin).

🔳 De	evice parameters-	MAC: 0000AB5	7/LOC: 0000AB57 mir	ok ver: 5.0.0.49	51 -	- 0	×
<u> ()</u> E	Basic 🔓 OUTPUT	FLAGS I	Bin 🗾 Curves				
Initia	al values of outp	uts:					
	1 VALUE	~ 121	2 VALUE	~ 0	3 VALUE	~ 0	
	4 VALUE	~ 222	5 VALUE	~ 0	6 VALUE	~ 0	
	7 VALUE	~ 0	8 VALUE	~ 0			
	• 1		Cat definite			± c	
	Loa		C+ Set <u>d</u> efault			<u>് 5</u> end	1

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 create a better visual effect when switching the lights on. 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*.

Device parameters-MAC: 0000AB57/LOC: 0000AB57 r Basic OUTPUTS FLAGS Bin Curves Curves of linear outputs:	ninok ver: 5.0.0.4951 — 🗆 🗙
Output no.: 1 Curve type Logarithmic Range [%]: 0 100 Output no.: 3 Curve type Sine Range [%]: 0 100	Output no.: 2 Curve type Arc tangent Range [%]: 0 Output no.: 4 Curve type No data
Output no.: 5 Curve type No data ~	Output no.: 6 Curve type No data ~
Output no.: 7 Curve type No data ~	Output no.: 8 Curve type No data ~
Load C Set defaul	t Send

Conditions

When creating conditions in Smart Home configuration, you can establish dependencies from the M-INOC module or control it. Dependencies can be created from the input, output, flag, or the temperature sensor. 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).

The condition-MAC: 0000AB57/LC	DC: 0000AB57 minok ver: 5.0.0.4951			×
The definition of forcing inf	formation. Warning!!! in this w	vindow, we only mark what we wa	ant to respond to.	
Tinputs/Outputs 🖓 Output v	values 📘 Flags Bin 🚦 DS 18B20		Features	
Inputs: Inp	iption t t iption t t iption t iption t iption t int int int int int int int	2 Act 4 Description Act 6 Description Act 8 Description Act	Type of logical operation: (AND) all Type of condition: Basic function	~ ~
			Save Names	Accept Close

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.

The condition-MAC: 0000AB57/LOC: 0000AB57 minok ver: 5.0.0.4951	×
The definition of forcing information. Warning!!! in this window, we only mark what we wan	t to respond to.
🕶 Inputs/Outputs 🖓 Output values 📘 Flags Bin 🚦 DS18820	Features
Linear outputs: $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Type of logical operation: (AND) all Type of condition: Basic function Basic function Image: Condition of the second

Device reactions

As a reaction to any condition, you can select one of various functions that can be controlled by M-INOC-8s' 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.

Device reaction-MAC: 0000AB57/LOC: 0000AB57 minok ver: 5.0.0.4951	×
Definition of module working mode:	
V Outputs Binary flags 👷 Events	
1 wy1 Image: Construction of the point o	Function: Temporary V
4 Description 5 Description 6 Description	Toggle V
Read Read Read - 0 + - 0 + - 0 +	Delay time [0 -167772.15] s: 0 00:00:00,00
7 Description 8 Description	Time of duration, (0 - permanent) [0 -167772.15] s:
	0 Permanent
	Value to set Value [0255]: Speed [1255]: 255 255
🔀 Get names	✓ Accept X Close

On the right side, you can select what function should be used in the condition and set its parameters. For example, for the *Temporary* function of the *Switch off/Set as temporary* operation, define the delay, duration (0 means permanent), value to set, change pace and, optionally, end value (if duration is different from 0), as well as the speed of reaching the end value.

Den instrumentionen MARC: 0000ADE7/I OC: 0000ADE7 ministrumente 0.0.4051	
Definition of module working mode:	^
Outputs Binary flans & Fvents	
1 wy1 Read 0 + 0 + 0 + - - +	Function: Temporary Cyclical Stair Inc/Dec Extended Auto Inc/Dec Rewrite value Time of duration, (0 - permanent) [0 -167772.15] s: 20 00:00:20,00 Value to set Value [0255]: Speed [1255]: 255 End value Value [0255]: Speed [1255]: [0 255
Get names Save Names	✓ Accept X Close

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