LOGIC FUNCTIONS

MODULE

USER MANUAL

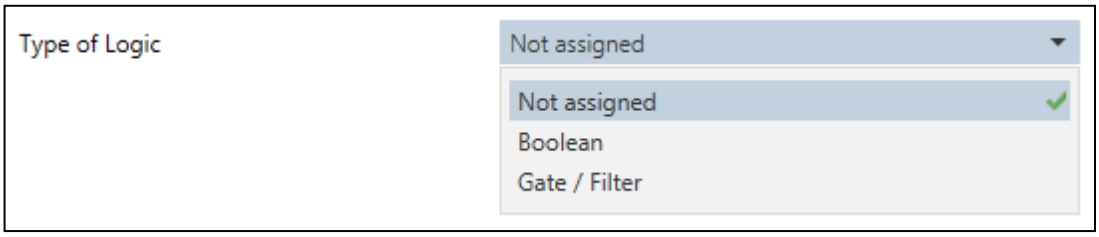
INTRODUCTION

- Some DINUY Actuators incorporate a Logic Functions module, which allow operations in binary logic with data from the KNX bus, as well as sending the results through communication objects.
- Up to 8 different and independent functions can be configured.

CONFIGURATION

GENERAL Configuration

- First, it is necessary to establish the type of logic to be performed:



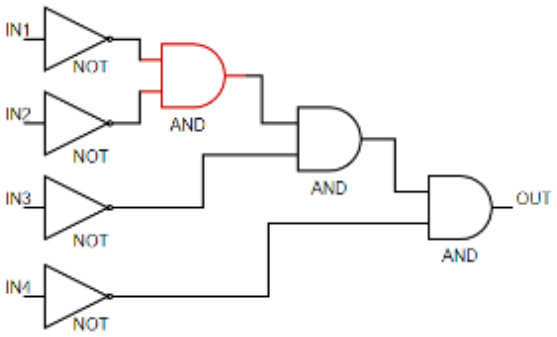
- **Boolean Logic:** logic gates with 1-bit data type for inputs and outputs.
- **Gate / Filter Logic**: gates which allow the telegrams that arrive at the input, filtering according to the parameterization, with selection of the data type.

Boolean Logic Configuration

State Disable Logic object after recovering bus voltage: (●) Enable (0) ( ) Disable (1)

Boolean function: AND

Black color Gates can be enabled



Input 1

Inverted: ☐

Reaction with event on input: ( ) Do not execute logic (●) Execute logic

Value of Input after recovering bus voltage: Set input to 0

Input 2

Inverted: ☐

Reaction with event on input: ( ) Do not execute logic (●) Execute logic

Value of Input after recovering bus voltage: Set input to 0

Input 3

Input enabled: ☐

Input 4

Input enabled: ☐

Output

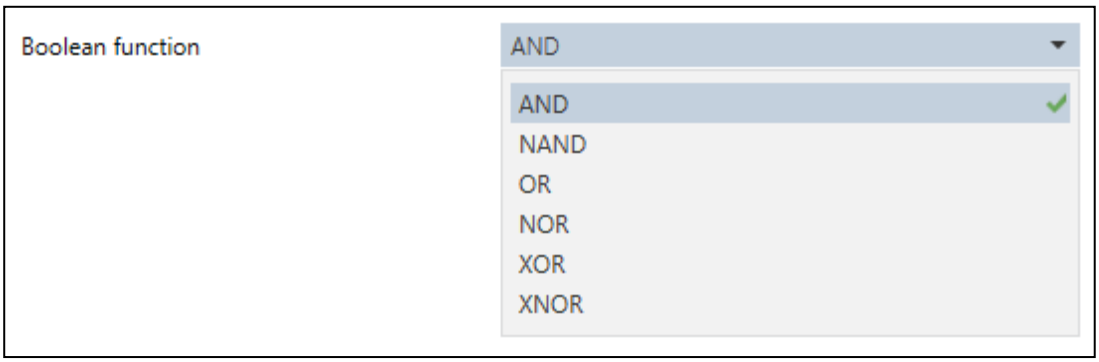
Sending condition: (●) On change ( ) Always

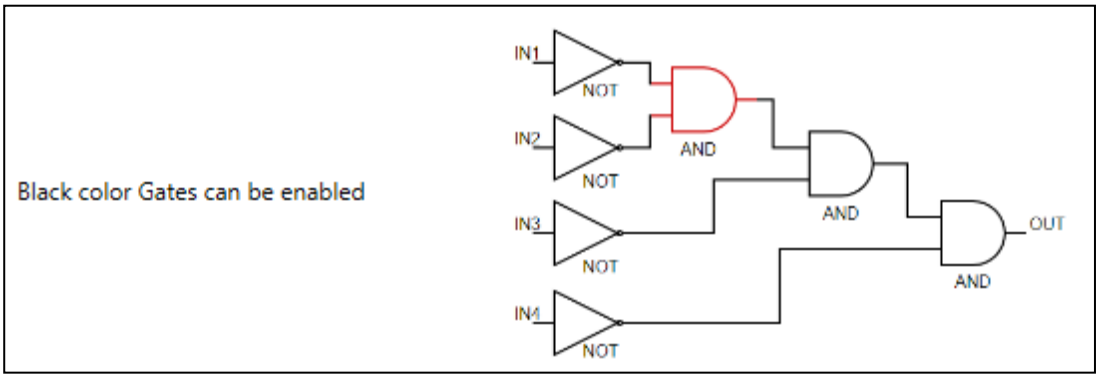
Cyclical transmission: No

Execute after recovering bus voltage: ☐

- **State Disable Logic object after recovering bus voltage:** the function can be enabled or disabled on bus voltage recovery.

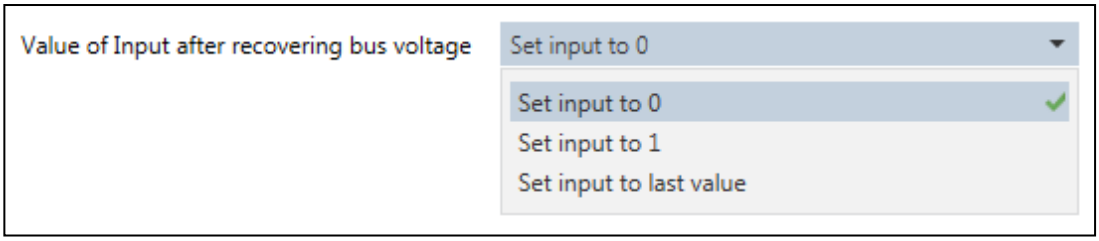
- **Boolean function:** establece el tipo de función que será aplicada a todas las entradas.





Inputs: the first 2 inputs will always be active; they cannot be deactivated. Instead, inputs 3 and 4 may be enabled, or not.

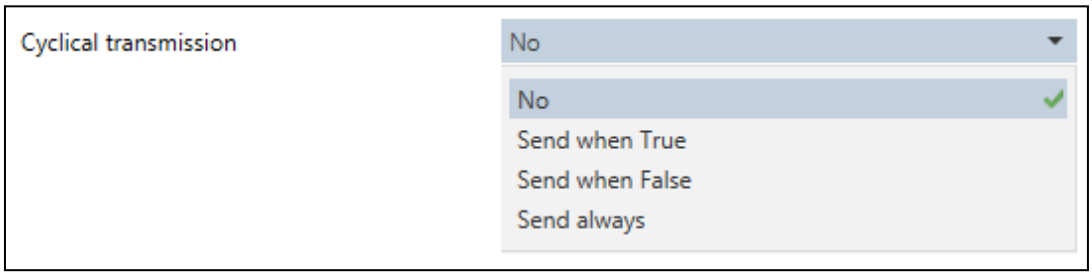
- **Inverted:** the inputs can be inverted, or not.
- **Reaction with event on input:** sets if the logic will be triggered after an event on the input or not. If "Do not execute logic" is selected, the logic will not be triggered, even if the input changes its state, but if any other input receives a value, it will be considered and the logic will be executed.
- **Value of Input after recovering bus voltage:** the value of the input after bus voltage recovery.



Outputs: the output object will always have a value of 1 bit.

- **Sending condition:** this parameter defines when the value must be sent, when the value of the output changes or always, even if the status is not changed.

- **Cyclical transmission:** allows cyclic sending of the output status according to it, true (1), false (0) or always (0 or 1).



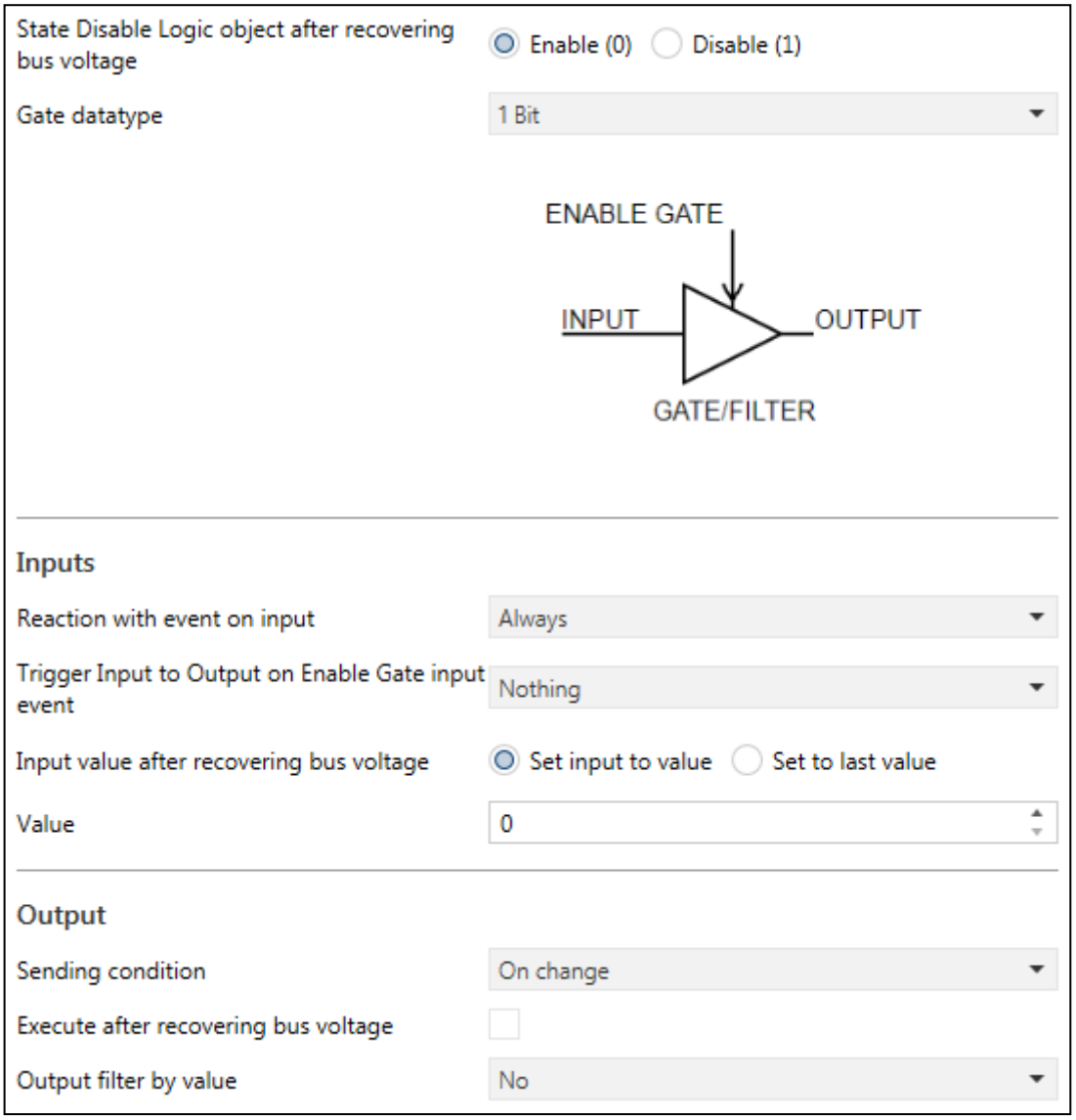
- **Cycle base time:** in case of selecting one of the three cyclical sending, it establishes the transmission base time.
- **Factor (Total time = base x Factor):** in case of selecting one of the three cyclical sending, it establishes the transmission factor time. The cycle time will result from multiplying the Base by this Factor.
- **Execute after recovering bus voltage:** if it is selected the function will be executed after bus voltage recovery. If it is not selected, not even the response of the reading at the starting will execute the logic.

Boolean Function Communication Objects

Number	Name	Object Function	Length	C	R	W	T	U	Data Type	Priority
701	[Log1] Logic Disable	1 = Disable, 0 = Enable	1 bit	C	-	W	-	-	enable	Low
702	[Log1] Input 1	Boolean	1 bit	C	-	W	-	-	boolean	Low
703	[Log1] Input 2	Boolean	1 bit	C	-	W	-	-	boolean	Low
704	[Log1] Input 3	Boolean	1 bit	C	-	W	-	-	boolean	Low
705	[Log1] Input 4	Boolean	1 bit	C	-	W	-	-	boolean	Low
706	[Log1] Output	Boolean	1 bit	C	-	-	T	-	boolean	Low

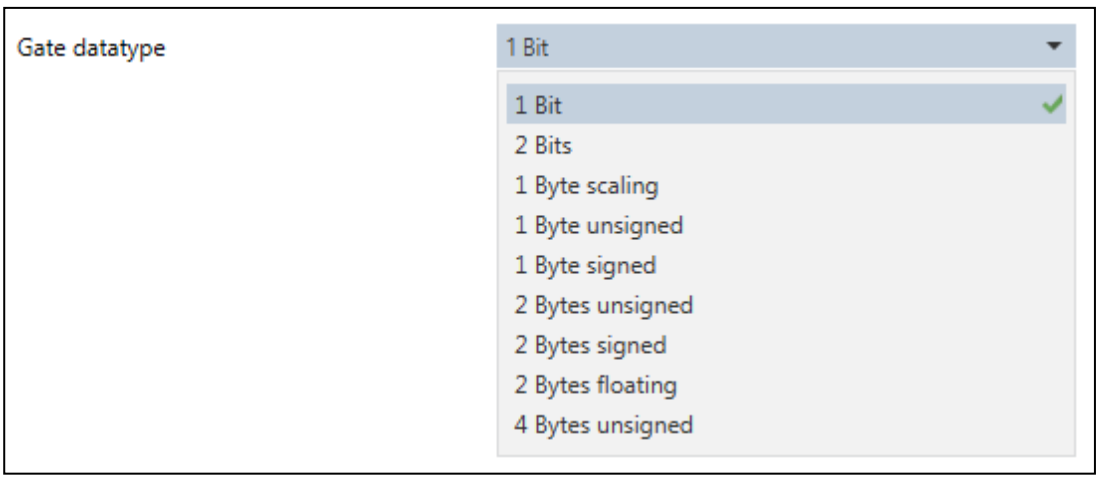
Number	Name	Function	Description
701	[Log] Logic Disable	1 = Disable, 0 = Enable	The logic function can be enabled (0) or disabled (1)
702	[Log] Input 1	Boolean	Input 1 Object of the logic
703	[Log] Input 2	Boolean	Input 2 Object of the logic
704	[Log] Input 3	Boolean	Input 3 Object of the logic
705	[Log] Input 4	Boolean	Input 4 Object of the logic
706	[Log] Output	Boolean	The output object of the logic function (0 or 1). It is the result of the function

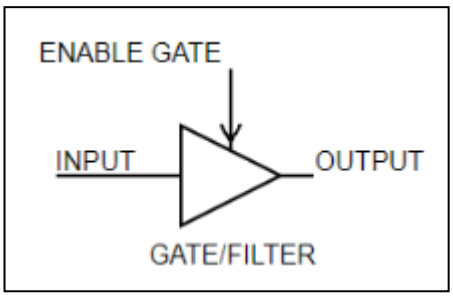
Gate / Filter Logic Configuration



- **State Disable Logic object after recovering bus voltage:** the function can be enabled or disabled on bus voltage recovery.

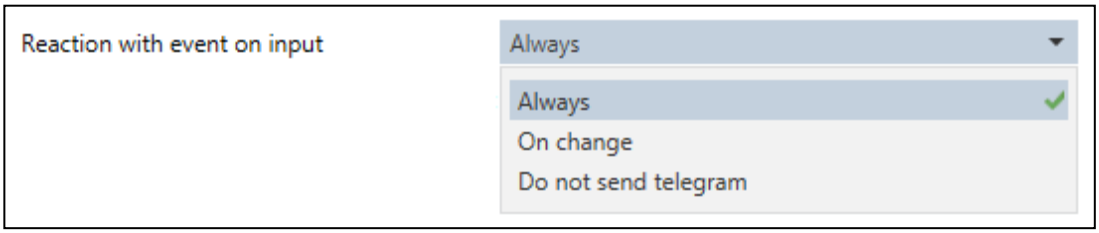
- **Gate datatype:** different standard KNX datapoint types can be selected.





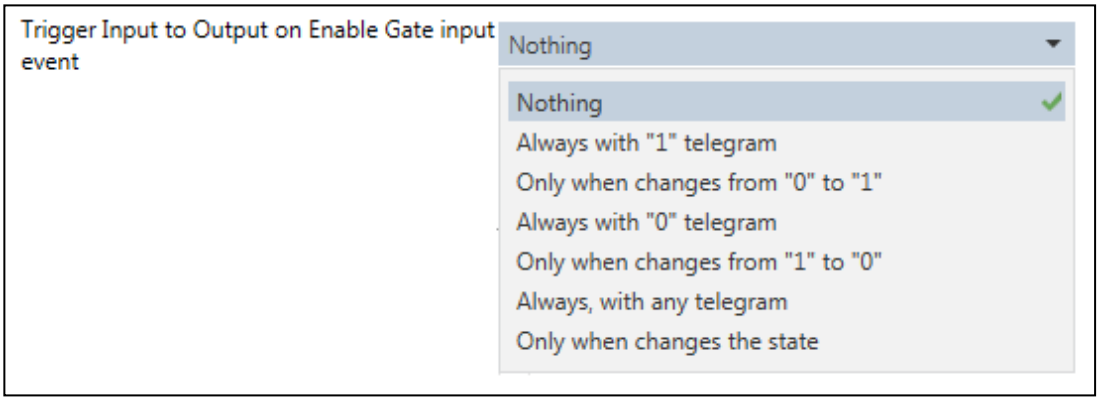
Input: the function will only have 1 input object.

- **Reaction with event on input:** the reaction of output with event on input.



  - **Always:** the value of the object "[Log] Input" Will be triggered to the Output whenever a value is received in this input, independent of it changes or not. This triggering Will be This triggering will be independent of the value of the object "[Log] Enable Gate Input".
  - **On change:** the value of the "[Log] Input" object will be triggered to the Output when its value changes, from 0 to 1, or from 1 to 0. This triggering will be independent of the value of the "[Log] Enable Gate Input" object.
  - **Do not send telegram:** the value of the "[Log] Input" object will not be triggered to the Output, even if it changes. The triggering will only be carried out if the object "[Log] Enable Gate Input" allows it.

- **Trigger Input to Output on "Enable Gate" input event:** the input will be triggered to the output when a telegram is received on the "Enable Gate Input" object. Through this parameter it is possible to set when is done the triggering, regardless of what is established in the previous parameter "Reaction with event on input". In short, it allows the transmission of the input value to the output, when requested.



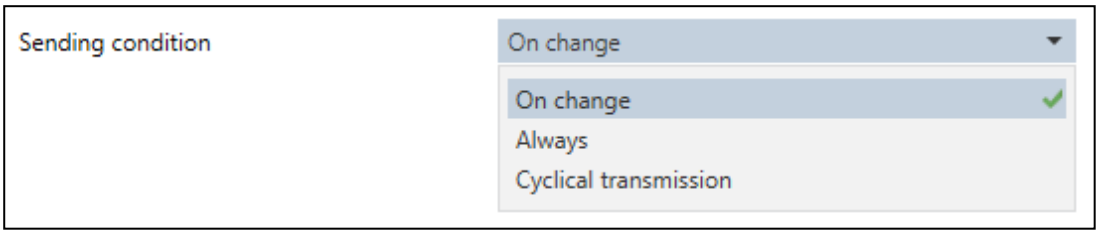
  - **Nothing:** the object "[Log] Enable Gate Input" never triggers the Input to the Output.
  - **Always with "1" telegram:** the Input is triggered to the Output when "[Log] Enable Gate Input" object receives a "1".
  - **Only when changes from "0" to "1":** the Input is triggered to the Output when "Enable Gate Input" object changes from "0" to "1".

- **Always with "0" telegram:** the Input is triggered to the Output when "[Log] Enable Gate Input" object receives a "0".
- **Only when changes from "1" to "0":** the Input is triggered to the Output when "[Log] Enable Gate Input" object changes from "1" to "0".
- **Always, with any telegram:** the Input is always triggered to the Output, regardless of the telegram received on the "[Log] Enable Gate Input" object.
- **Only when changes the state:** the Input is triggered to the Output when "[Log] Enable Gate Input" object changes from "1" to "0", or from "0" to "1".

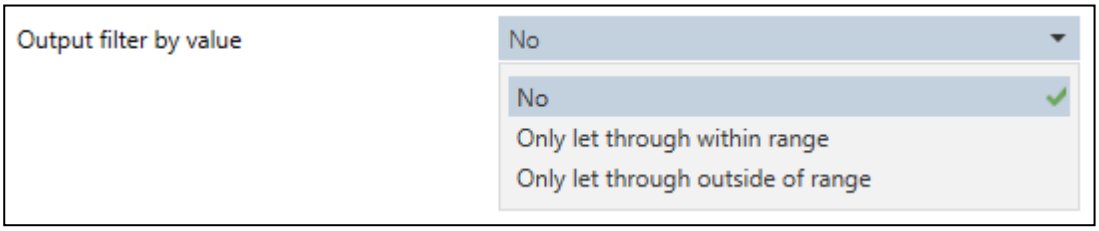
- **Input value after recovering bus voltage:** the value of the input after bus voltage recovery.

Output:

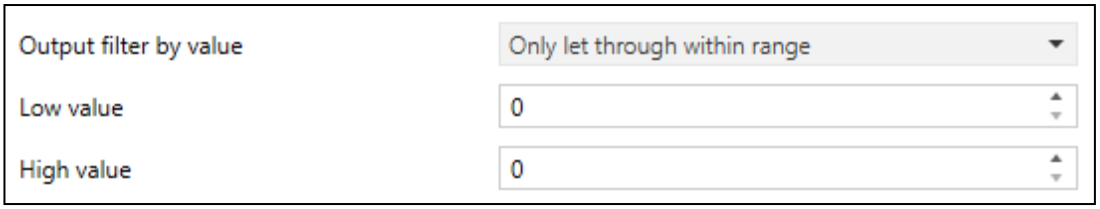
- **Sending condition:** sets when the value must be sent.



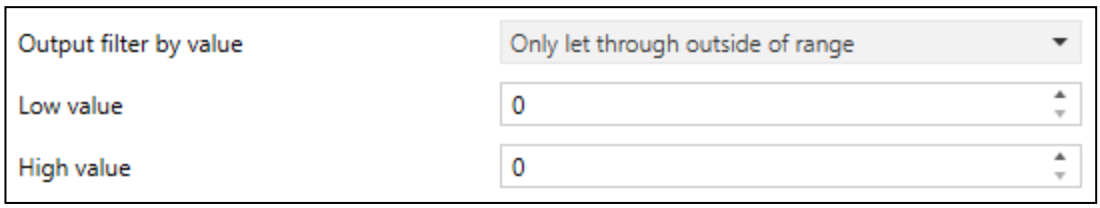
- **Cycle base time:** in case of selecting one of the three cyclical sending, it establishes the transmission base time.
- **Factor (Total time = base x Factor):** in case of selecting one of the three cyclical sending, it establishes the transmission factor time. The cycle time will result from multiplying the Base by this Factor.
- **Execute after recovering bus voltage:** if it is selected the function will be executed after bus voltage recovery. If it is not selected, not even the response of the reading at the starting will execute the logic.
- **Output filter by value:** it allows to filter the triggering of values from the Input to the Output according to established ranges.



- **No:** no filter is set.
- **Only let through within range:** only will be triggered the values within the established range.



- **Only let through outside range:** only will be triggered the values outside the established range.



Gate / Filter Logic Communication Objects

	Number	Name	Object Function	Length	C	R	W	T	U	Data Type	Priority
	701	[Log1] Logic Disable	1 = Disable, 0 = Enable	1 bit	C	-	W	-	-	enable	Low
	702	[Log1] Input 1	Boolean	1 bit	C	-	W	-	-	boolean	Low
	703	[Log1] Enable Gate Input	Boolean	1 bit	C	-	W	-	-	boolean	Low
	706	[Log1] Output	Boolean	1 bit	C	-	-	T	-	boolean	Low

Number	Name	Function	Description
701	[Log] Logic Disable	1 = Disable, 0 = Enable	The logic function can be enabled (0) or disabled (1)
702	[Log] Input 1	Boolean 2 Bits 0..100% 0..255 -128..127 0..65535 -32768..32767 2 Bytes floating 0..4294967295	Input object of the function
703	[Log] Enable Gate Input	Boolean	Input object to enable, or not, the filtering gate. If the gate is disabled, the Input will not be triggered to the Output. This object can be used to trigger the Input to the Output when any established condition is fulfilled
706	[Log] Output	Boolean 2 Bits 0..100% 0..255	Output object of the function

	-128..127
	0..65535
	-32768..32767
	2 Bytes floating
	0..4294967295