Bit mask of discrete inputs

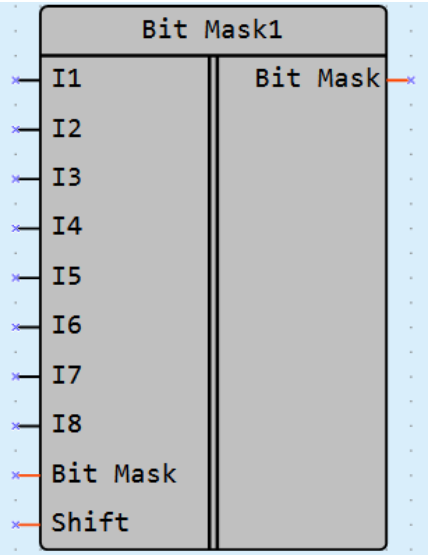

Figure 1 – Symbol

Inputs	Data type	Description	Range
I1-I8	Bool	Inputs	0/1
Bit mask	Int	Original mask	0-2^32-1
Shift	Int	Shift	0-3
Outputs	**Data type**	**Description**	**Range**
Bit mask	Int	New bit mask	0-2^32-1

Description of how the macro works

The macro allows you to collect discrete input signals into a bit mask for further processing.

To increase the number of processed input signals, it is possible to connect several (up to four) blocks in series. To do this, the output (Bit mask) of the first block is connected to the input (Bit Mask) of the second block, then set the shift (Shift) according to the block number in the sequence (starting with 0).

In the macro properties, you can set the address of the first bit (default = 0). Taking into account the shift, we get:

	First bit address=0	First bit address=1
Shift=0	DI 1-> bit 0, DI 8-> bit 7	DI 1-> bit 1, DI 8-> bit 8
Shift=1	DI 1-> bit 8, DI 8-> bit 15	DI 1-> bit 9, DI 8-> bit 16
Shift=2	DI 1-> bit 16, DI 8-> bit 23	DI 1-> bit 17, DI 8-> bit 24
Shift=3	DI 1-> bit 24, DI 8-> bit 31	DI 1-> bit 25, DI 7-> bit 31

Example of work

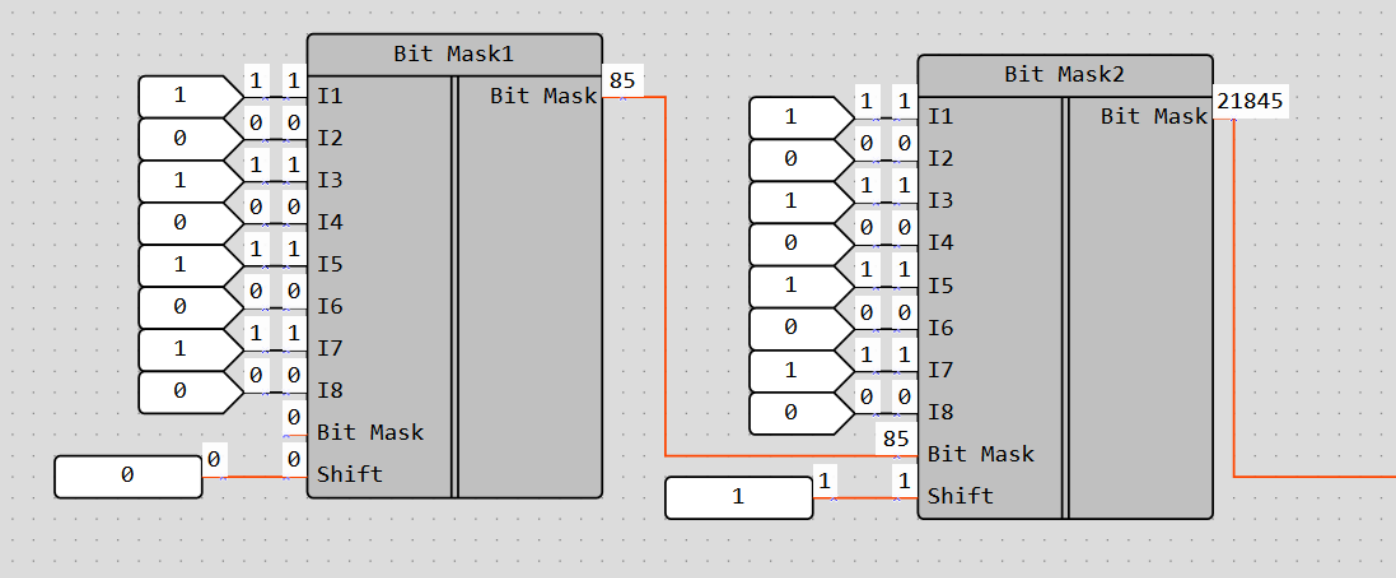

Figure 2 – Example of macro operation in the first bit=0 mode

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