

Masked Move
MSK_MV_WORD & MSK_MV_DWORD
User-Defined Function Blocks (UDFBs)

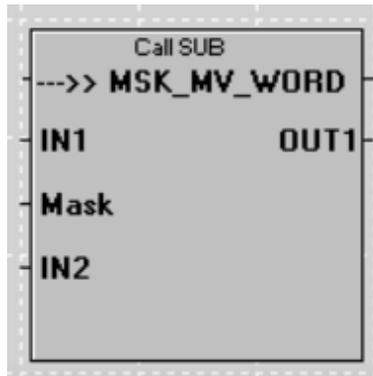
Description:

The Masked Move UDFBs allow users to perform a bit-by-bit Move operation on either a WORD or DWORD variable. The Masked Move UDFBs is designed to perform the bit-by-bit move ONLY on selected bit position, leaving the other bit positions unchanged.

A Mask variable is used to specify which bit-positions are to be written, and which are to be left unchanged. The Mask will contain a 1 in each bit-position to be changed, and a 0 in each bit-position to leave unchanged.

Both Masked Move UDFBs have an incoming and outgoing power rail, 3 inputs and a single output. The UDFB will execute whenever the incoming power rail receives power.

MSK_MV_WORD UDFB



The input and output parameters for this UDFB are listed and described in the table below:

Input	Descriptive Name	Data Type
IN1	Source Variable	UINT
Mask	16-bit Bit Pattern of Bit Positions to be written (write a 0 in each bit-position to leave unchanged) (write a 1 in each bit-position to write to)	UINT
IN2	Destination Variable	UINT
Output	Descriptive Name	Data Type
OUT1	Modified Destination Variable	UINT

IN1

This is the variable containing the source data to be written.

Mask

This is the 16-bit variable that indicates which bits are to be written to the destination variable, and which ones are to be ignored or left unchanged. The Mask will contain a 1 in each bit-position to be written, and a 0 in each bit-position to leave unchanged.

IN2

This is the destination variable to be written to.

OUT2

This is the destination variable after the write has been completed by the UDFB.

MSK_MV_DWORD UDFB



The input and output parameters for this UDFB are listed and described in the table below:

Input	Descriptive Name	Data Type
IN1	Source Variable	UDINT
Mask	16-bit Bit Pattern of Bit Positions to be written (write a 0 in each bit-position to leave unchanged) (write a 1 in each bit-position to write to)	UDINT
IN2	Destination Variable	UDINT
Output	Descriptive Name	Data Type
OUT1	Modified Destination Variable	UDINT

IN1

This is the variable containing the source data to be written.

Mask

This is the 32-bit variable that indicates which bits are to be written to the destination variable, and which ones are to be ignored or left unchanged. The Mask will contain a 1 in each bit-position to be written, and a 0 in each bit-position to leave unchanged.

IN2

This is the destination variable to be written to.

OUT2

This is the destination variable after the write has been completed by the UDFB.