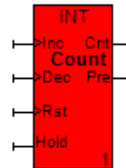


Function Block 40 16Bit Up/Down Counter

Function Description

Output will increment/decrement by one for every 0-to-1 transition at the Inc/Dec inputs. High and Low limits and a Reset value are set at design time. A 0-to-1 transition on the Rst pin will copy the current counter value (Cnt) to the Pre output and then force the counter output to the Reset Value. The counter will not react to Inc or Dec signals if the Hold input is at logic 1. Inc has priority over Dec and Rst has priority over the Hold input. All input signals can be inverted. Output will be set to Reset Value at start.



Popup Parameters

- Output High Limit: -32677...+32767
Inc input ignored when output at this value. Value must be greater than Low Limit.
- Output Low Limit: -32678...+32766
Dec input ignored when output at this value. Value must be less than High Limit.
- Reset value: -32678...+32767
Value must be equal or less than High Limit, and greater or equal to Low Limit.

Input/Output Parameters

Type	Description	Data Type	Range
Input	Increment	Boolean	0, 1
Input	Decrement	Boolean	0, 1
Input	Reset	Boolean	0, 1
Input	Hold	Boolean	0, 1
Output	Counter value	INT	-32678...+32767
Output	Previous Count	INT	-32678...+32767

Notes

VPS_P18 will not accept invalid parameters, i.e. you cannot set the Reset value outside the High and Low limits. Also Low limit cannot be greater than High limit. Function block 40 can be executed in Cycle and Time tasks.

Application

The following example shows how the Up/Down counter can be used with push buttons on PORT-A pins 0 and 1 to obtain a user-adjustable value at Count_OUT. The Timer Blocks 2 and 5 together with Selector Blocks 3 and 6 supply an auto-repeat function for the two push buttons.

