

Project1 / 480T_Crane [CPU 416-2DP] / Program blocks

ramp [FC4]

ramp Properties							
General							
Name	ramp	Number	4	Type	FC	Language	STL
Numbering	Automatic						
Information							
Title		Author		Comment	--- When parameter Force is on: Output = Force_value. When parameter Force is off and parameter Enable is off, Output is not updated. When parameter Force is off and parameter Enable is on, Output is calculated with formula Output[n] = Output[n-1] +- (Change_per_s * Cycle-time / 1000) Binary outputs: Done is on: Force is off and Input = Output Ramp_up is on: Force is off and Enable is on and Input > Output Ramp_down is on: Force is off and Enable is on and Input < Output		
Version	0.1	User-defined ID					

ramp						
Name	Data type	Offset	Default value	Supervision	Comment	
▼ Input						
Force	Bool				Force_value to Output	
Force_value	Real				Force_value	
Enable	Bool				Enable ramp	
Input	Real				Input	
Change_per_s	Real				Change per second	
Cycletime	Int				Cycletime (ms)	
▼ Output						
Done	Bool				Ramp done	
Ramp_up	Bool				Ramping up	
Ramp_down	Bool				Ramping down	
▼ InOut						
Output	Real				Filtered value	
▼ Temp						
Equal	Bool	0.0			Input = Output	
Less	Bool	0.1			Input <Output	
Greater	Bool	0.2			Input > Output	
Constant						
▼ Return						
ramp	Void					

Network 1: Input = Output

```
0001      L      #Force_value
0002      A      #Force           // Force is on => Output = Force_value
0003      JC      OUT
0004      L      #Input
0005      L      #Output
0006      ==R
0007      =      #Equal
0008      >R
0009      =      #Greater
0010      <R
0011      =      #Less
0012      AN     #Enable           // If Enable is off or Input = Output =>
0013      O      #Equal           // no ramping
0014      JC      OVER
0015      L      #Change_per_s
0016      L      #Cycletime
0017      ITD
0018      DTR
0019      *R
0020      L      1000.0
0021      /R           // Step
0022      L      #Output
0023      A      #Greater
0024      JC      POSI
0025      TAK
0026      NEGR
0027 POSI: +R
```

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0028A(0029L#Input 0030>=R// New output >= input 0031) 0032A#Greater// Old output < old input 0033O(0034A(0035<=R// New output <= input 0036) 0037A#Less// Old output > old input 0038) 0039JCOUT 0040TAK 0041OUT: T#Output// New output = old output +- Step 0042OVER: AN#Force 0043A#Equal 0044=#Done// Ramp done 0045AN#Force 0046A#Enable 0047A#Greater 0048=#Ramp_up// Ramping up 0049AN#Force 0050A#Enable 0051A#Less 0052=#Ramp_down// Ramping down 0053 0054 0055 0056 0057 Network 2: Setting the BR-bit to set the ENO output of the block 0001SET// set RL0 0002SAVE// save RL0 to BR bit 0003 0004		