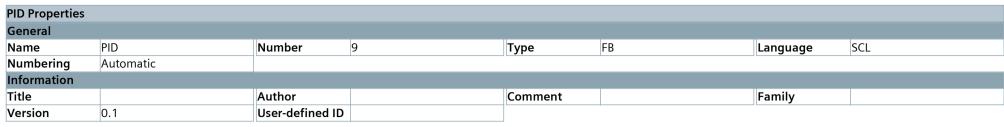
Totally Integrated
Automation Portal

Program blocks / 02_Controller

PID [FB9]



Name	Data type	Default value	
▼ Input			
SP	Real	0.0	
PV	Real	0.0	
MV	Real	0.0	
kp	Real	0.0	
ki	Real	0.0	
kd	Real	0.0	
▼ Output			
MV_PID	Real	0.0	
InOut			
▼ Static			
ер	Array[01] of Real		
de	Real	0.0	
suma_ep	Real	0.0	
Temp			
Constant			

```
0001 #ep[0]:=#SP-#PV;
0002
0003 IF (ABS(#ep[0]))<(ABS(#SP)) THEN
0004
       #de:=#ep[0]-#ep[1];
0005
0006
       IF #MV<10.0 THEN
0007
       IF #MV>-10.0 THEN
0008
         #suma ep:=#suma ep+#ep[0];
0009
       END_IF;
0010
       END_IF;
0011
0012
       #MV_PID:=#kp*#ep[0] + #ki*#suma_ep + #kd*#de;
0013
0014
       IF #MV_PID > 10.0 THEN
0015
         #MV_{PID} := 10.0;
0016
       END_IF;
0017
0018
       IF #MV_PID < -10.0 THEN
0019
         \#MV_{PID} := -10.0;
0020
       END_IF;
0021
0022
       #ep[1]:=#ep[0];
0023
0024 ELSE
0025
       #ep[1]:=0.0;
0026
       #suma_ep:=0.0;
0027
0028 END_IF;
```