

Energy_Drink_V15.1 / ENERGY_DRINK_PROC [CPU 314C-2 PN/DP] / Program blocks / 01-MAIN PROCESS

TANK_LEVEL [FC8]

TANK_LEVEL Properties							
General							
Name	TANK_LEVEL	Number	8	Type	FC	Language	STL
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

TANK_LEVEL				
Name	Data type	Offset	Default value	Comment
▼ Input				
Tank_Cmd	Bool			
LT_Value	Int			Level transmitter value
Radius	Real			Tank radius
Height	Real			Tank height
Low_Level	Real			
High_Level	Real			
▼ Output				
High_Alarm	Bool			
Low_Alarm	Bool			
Level_Liters	Real			Tank level in liters
Ret_Value	Word			
▼ InOut				
Level_%	DInt			Tank level in %
▼ Temp				
Temp_Level	Real	0.0		
Constant				
▼ Return				
TANK_LEVEL	Void			

Network 1: *****SENSOR SCALING MANAGEMENT*****

```
0001 // LEVEL SENSOR SCALING FROM OUT SIGNAL
0002     CALL  SCALE
0003         IN      :=#LT_Value
0004         HI_LIM  :=#Height
0005         LO_LIM  :=0.0
0006         BIPOLAR :=FALSE
0007         RET_VAL :=#Ret_Value
0008         OUT     :=#Temp_Level
0009
0010 // MAP VAR TEMP_LEVEL TO LEVEL_% TO VISUALIZE THE LEVEL OF THE TANK
0011     L      #Temp_Level
0012     L      10.0
0013     *R
0014     RND
0015     T      #"Level_%"           // LEVEL IN %
0016
```

Network 2: *****CALCULATE VOLUME TANK IN LITERS*****

```
0001 // IF TANK COMMAND => CALCULATE VOLUME IN LITERS BASED ON INPUT PARAMETERS
0002     U      #Tank_Cmd
0003     SPBN   _001
0004     L      #Radius
0005     SQR
0006     L      3.1416
0007     *R
0008     L      #Temp_Level
0009     *R
0010     L      1000.0
0011     *R
0012     T      #Level_Liters       // LEVEL IN LITERS
0013
0014 _001: NOP 0
0015
0016
```

Network 3: *****HIGH LEVEL ALARM*****

```
0001 // IF LEVEL >= HIGH_LEVEL => SET HIGH ALARM
0002     U      #Tank_Cmd
0003     U(
0004     L      #"Level_%"
0005     DTR
0006     L      #High_Level
```

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<div>0007 >=R</div> <div>0008)</div> <div>0009 = #High_Alarm</div> <div>Network 4: *****LOW LEVEL ALARM*****</div> <div>0001 // IF LEVEL <= LOW_LEVEL => SET HIGH ALARM</div> <div>0002 U #Tank_Cmd</div> <div>0003 U (</div> <div>0004 L #"Level_%"</div> <div>0005 DTR</div> <div>0006 L #Low_Level</div> <div>0007 <=R</div> <div>0008)</div> <div>0009 = #Low_Alarm</div>		