

NEURAL NETWORK

HIDDEN NEURON [FB2]

HIDDEN NEURON Properties

General

Name	HIDDEN NEURON	Number	2	Type	FB	Language	SCL
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	Non-retain	True	True	True	False		
X_2	Real	0.0	Non-retain	True	True	True	False		
X_3	Real	0.0	Non-retain	True	True	True	False		
X_4	Real	0.0	Non-retain	True	True	True	False		
X_5	Real	0.0	Non-retain	True	True	True	False		
X_6	Real	0.0	Non-retain	True	True	True	False		
X_7	Real	0.0	Non-retain	True	True	True	False		
X_8	Real	0.0	Non-retain	True	True	True	False		
X_9	Real	0.0	Non-retain	True	True	True	False		
▼ Output									
Y	Real	0.0	Non-retain	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	Non-retain	True	True	True	False		
W_2	Real	0.0	Non-retain	True	True	True	False		
W_3	Real	0.0	Non-retain	True	True	True	False		
W_4	Real	0.0	Non-retain	True	True	True	False		
W_5	Real	0.0	Non-retain	True	True	True	False		
W_6	Real	0.0	Non-retain	True	True	True	False		
W_7	Real	0.0	Non-retain	True	True	True	False		
W_8	Real	0.0	Non-retain	True	True	True	False		
W_9	Real	0.0	Non-retain	True	True	True	False		
BIAS	Real	0.0	Non-retain	True	True	True	False		
Temp									
Constant									

```
0001
0002 // Weighted sum plus a bias
0003 #Y := #W_1 * #X_1 +
0004       #W_2 * #X_2 +
0005       #W_3 * #X_3 +
0006       #W_4 * #X_4 +
0007       #W_5 * #X_5 +
0008       #W_6 * #X_6 +
0009       #W_7 * #X_7 +
0010       #W_8 * #X_8 +
0011       #W_9 * #X_9 +
0012       #BIAS;
0013
0014 // ReLU
0015 IF #Y < 0.0 THEN
0016   #Y := 0.0;
0017 END_IF;
```

Symbol	Address	Type	Comment
#BIAS		Real	
#W_1		Real	
#W_2		Real	
#W_3		Real	
#W_4		Real	
#W_5		Real	
#W_6		Real	
#W_7		Real	
#W_8		Real	
#W_9		Real	
#X_1		Real	
#X_2		Real	
#X_3		Real	
#X_4		Real	
#X_5		Real	
#X_6		Real	
#X_7		Real	
#X_8		Real	

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Symbol	Address	Type	Comment		
#X_9		Real			
#Y		Real			

Totally Integrated Automation Portal

NEURAL NETWORK

NEURAL_NETWORK_INITIALIZATION [FC6]

NEURAL_NETWORK_INITIALIZATION Properties

General

Name	NEURAL_NETWORK_INITIALI-ZATION	Number	6	Type	FC	Language	SCL
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
NEURAL_NETWORK_INITIALIZATION	Void		

0001

0002 (*

0003 Neurona 1 (Capa Oculta):

0004 *)

0005 "HIDDEN NEURON_DB_1".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_1;

0006 "HIDDEN NEURON_DB_1".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_1;

0007 "HIDDEN NEURON_DB_1".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_1;

0008 "HIDDEN NEURON_DB_1".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_1;

0009 "HIDDEN NEURON_DB_1".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_1;

0010 "HIDDEN NEURON_DB_1".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_1;

0011 "HIDDEN NEURON_DB_1".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_1;

0012 "HIDDEN NEURON_DB_1".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_1;

0013 "HIDDEN NEURON_DB_1".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_1;

0014 "HIDDEN NEURON_DB_1".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_1;

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0018 (*

0019 Neurona 2 (Capa Oculta):

0020 *)

0021 "HIDDEN NEURON_DB_2".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_2;

0022 "HIDDEN NEURON_DB_2".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_2;

0023 "HIDDEN NEURON_DB_2".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_2;

0024 "HIDDEN NEURON_DB_2".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_2;

0025 "HIDDEN NEURON_DB_2".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_2;

0026 "HIDDEN NEURON_DB_2".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_2;

0027 "HIDDEN NEURON_DB_2".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_2;

0028 "HIDDEN NEURON_DB_2".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_2;

0029 "HIDDEN NEURON_DB_2".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_2;

0030 "HIDDEN NEURON_DB_2".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_2;

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0034 (*

0035 Neurona 3 (Capa Oculta):

0036 *)

0037 "HIDDEN NEURON_DB_3".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_3;

0038 "HIDDEN NEURON_DB_3".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_3;

0039 "HIDDEN NEURON_DB_3".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_3;

0040 "HIDDEN NEURON_DB_3".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_3;

0041 "HIDDEN NEURON_DB_3".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_3;

0042 "HIDDEN NEURON_DB_3".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_3;

0043 "HIDDEN NEURON_DB_3".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_3;

0044 "HIDDEN NEURON_DB_3".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_3;

0045 "HIDDEN NEURON_DB_3".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_3;

0046 "HIDDEN NEURON_DB_3".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_3;

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0049 (*

0050 Neurona 4 (Capa Oculta):

0051 *)

0052 "HIDDEN NEURON_DB_4".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_4;

0053 "HIDDEN NEURON_DB_4".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_4;

0054 "HIDDEN NEURON_DB_4".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_4;

0055 "HIDDEN NEURON_DB_4".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_4;

0056 "HIDDEN NEURON_DB_4".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_4;

0057 "HIDDEN NEURON_DB_4".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_4;

0058 "HIDDEN NEURON_DB_4".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_4;

0059 "HIDDEN NEURON_DB_4".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_4;

0060 "HIDDEN NEURON_DB_4".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_4;

0061 "HIDDEN NEURON_DB_4".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_4;

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0064 (*

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<div>0065 Neurona 5 (Capa Oculta):</div> <div>0066 *)</div> <div>0067 "HIDDEN NEURON_DB_5".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_5;</div> <div>0068 "HIDDEN NEURON_DB_5".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_5;</div> <div>0069 "HIDDEN NEURON_DB_5".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_5;</div> <div>0070 "HIDDEN NEURON_DB_5".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_5;</div> <div>0071 "HIDDEN NEURON_DB_5".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_5;</div> <div>0072 "HIDDEN NEURON_DB_5".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_5;</div> <div>0073 "HIDDEN NEURON_DB_5".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_5;</div> <div>0074 "HIDDEN NEURON_DB_5".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_5;</div> <div>0075 "HIDDEN NEURON_DB_5".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_5;</div> <div>0076 "HIDDEN NEURON_DB_5".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_5;</div> <div>0077</div> <div>0078</div> <div>0079</div> <div>0080 (*)</div> <div>0081 Neurona 6 (Capa Oculta):</div> <div>0082 *)</div> <div>0083 "HIDDEN NEURON_DB_6".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_6;</div> <div>0084 "HIDDEN NEURON_DB_6".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_6;</div> <div>0085 "HIDDEN NEURON_DB_6".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_6;</div> <div>0086 "HIDDEN NEURON_DB_6".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_6;</div> <div>0087 "HIDDEN NEURON_DB_6".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_6;</div> <div>0088 "HIDDEN NEURON_DB_6".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_6;</div> <div>0089 "HIDDEN NEURON_DB_6".W_7 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_7_6;</div> <div>0090 "HIDDEN NEURON_DB_6".W_8 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_8_6;</div> <div>0091 "HIDDEN NEURON_DB_6".W_9 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_9_6;</div> <div>0092 "HIDDEN NEURON_DB_6".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_6;</div> <div>0093</div> <div>0094</div> <div>0095</div> <div>0096 (*)</div> <div>0097 Neurona de salida</div> <div>0098 *)</div> <div>0099 "OUTPUT NEURON_DB".W_1 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_1_O;</div> <div>0100 "OUTPUT NEURON_DB".W_2 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_2_O;</div> <div>0101 "OUTPUT NEURON_DB".W_3 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_3_O;</div> <div>0102 "OUTPUT NEURON_DB".W_4 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_4_O;</div> <div>0103 "OUTPUT NEURON_DB".W_5 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_5_O;</div> <div>0104 "OUTPUT NEURON_DB".W_6 := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".W_6_O;</div> <div>0105 "OUTPUT NEURON_DB".BIAS := "NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION".B_O;</div>																																																																																																																																																																																						
<table><tr><th>Symbol</th><th>Address</th><th>Type</th><th>Comment</th></tr><tr><td>"HIDDEN NEURON_DB_1".BIAS</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_1</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_2</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_3</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_4</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_5</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_6</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_7</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_8</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_1".W_9</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".BIAS</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_1</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_2</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_3</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_4</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_5</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_6</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_7</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_8</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_2".W_9</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".BIAS</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_1</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_2</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_3</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_4</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_5</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_6</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_7</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_8</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_3".W_9</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".BIAS</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_1</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_2</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_3</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_4</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_5</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_6</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_7</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_8</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_4".W_9</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_5".BIAS</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_5".W_1</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_5".W_2</td><td></td><td>Real</td><td></td></tr><tr><td>"HIDDEN NEURON_DB_5".W_3</td><td></td><td>Real</td><td></td></tr></table>			Symbol	Address	Type	Comment	"HIDDEN NEURON_DB_1".BIAS		Real		"HIDDEN NEURON_DB_1".W_1		Real		"HIDDEN NEURON_DB_1".W_2		Real		"HIDDEN NEURON_DB_1".W_3		Real		"HIDDEN NEURON_DB_1".W_4		Real		"HIDDEN NEURON_DB_1".W_5		Real		"HIDDEN NEURON_DB_1".W_6		Real		"HIDDEN NEURON_DB_1".W_7		Real		"HIDDEN NEURON_DB_1".W_8		Real		"HIDDEN NEURON_DB_1".W_9		Real		"HIDDEN NEURON_DB_2".BIAS		Real		"HIDDEN NEURON_DB_2".W_1		Real		"HIDDEN NEURON_DB_2".W_2		Real		"HIDDEN NEURON_DB_2".W_3		Real		"HIDDEN NEURON_DB_2".W_4		Real		"HIDDEN NEURON_DB_2".W_5		Real		"HIDDEN NEURON_DB_2".W_6		Real		"HIDDEN NEURON_DB_2".W_7		Real		"HIDDEN NEURON_DB_2".W_8		Real		"HIDDEN NEURON_DB_2".W_9		Real		"HIDDEN NEURON_DB_3".BIAS		Real		"HIDDEN NEURON_DB_3".W_1		Real		"HIDDEN NEURON_DB_3".W_2		Real		"HIDDEN NEURON_DB_3".W_3		Real		"HIDDEN NEURON_DB_3".W_4		Real		"HIDDEN NEURON_DB_3".W_5		Real		"HIDDEN NEURON_DB_3".W_6		Real		"HIDDEN NEURON_DB_3".W_7		Real		"HIDDEN NEURON_DB_3".W_8		Real		"HIDDEN NEURON_DB_3".W_9		Real		"HIDDEN NEURON_DB_4".BIAS		Real		"HIDDEN NEURON_DB_4".W_1		Real		"HIDDEN NEURON_DB_4".W_2		Real		"HIDDEN NEURON_DB_4".W_3		Real		"HIDDEN NEURON_DB_4".W_4		Real		"HIDDEN NEURON_DB_4".W_5		Real		"HIDDEN NEURON_DB_4".W_6		Real		"HIDDEN NEURON_DB_4".W_7		Real		"HIDDEN NEURON_DB_4".W_8		Real		"HIDDEN NEURON_DB_4".W_9		Real		"HIDDEN NEURON_DB_5".BIAS		Real		"HIDDEN NEURON_DB_5".W_1		Real		"HIDDEN NEURON_DB_5".W_2		Real		"HIDDEN NEURON_DB_5".W_3		Real	
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"HIDDEN NEURON_DB_2".W_9		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".BIAS		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_1		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_2		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_3		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_4		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_5		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_6		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_7		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_8		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_3".W_9		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".BIAS		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_1		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_2		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_3		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_4		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_5		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_6		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_7		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_8		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_4".W_9		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_5".BIAS		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_5".W_1		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_5".W_2		Real																																																																																																																																																																																				
"HIDDEN NEURON_DB_5".W_3		Real																																																																																																																																																																																				

Totally Integrated Automation Portal			
Symbol	Address	Type	Comment
"HIDDEN NEURON_DB_5".W_4		Real	
"HIDDEN NEURON_DB_5".W_5		Real	
"HIDDEN NEURON_DB_5".W_6		Real	
"HIDDEN NEURON_DB_5".W_7		Real	
"HIDDEN NEURON_DB_5".W_8		Real	
"HIDDEN NEURON_DB_5".W_9		Real	
"HIDDEN NEURON_DB_6".BIAS		Real	
"HIDDEN NEURON_DB_6".W_1		Real	
"HIDDEN NEURON_DB_6".W_2		Real	
"HIDDEN NEURON_DB_6".W_3		Real	
"HIDDEN NEURON_DB_6".W_4		Real	
"HIDDEN NEURON_DB_6".W_5		Real	
"HIDDEN NEURON_DB_6".W_6		Real	
"HIDDEN NEURON_DB_6".W_7		Real	
"HIDDEN NEURON_DB_6".W_8		Real	
"HIDDEN NEURON_DB_6".W_9		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_2		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_3		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_4		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_5		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_6		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".B_O		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_2		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_3		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_4		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_5		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_6		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_1_O		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_2		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_3		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_4		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_5		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_6		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_2_O		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_2		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_3		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_4		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_5		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_6		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_3_O		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_2		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_3		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_4		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_5		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_6		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_4_O		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_5_1		Real	
"NEURAL_NETWORK_WEIGHTS_BIASSES_NORMALIZATION".W_5_2		Real	

NEURAL NETWORK

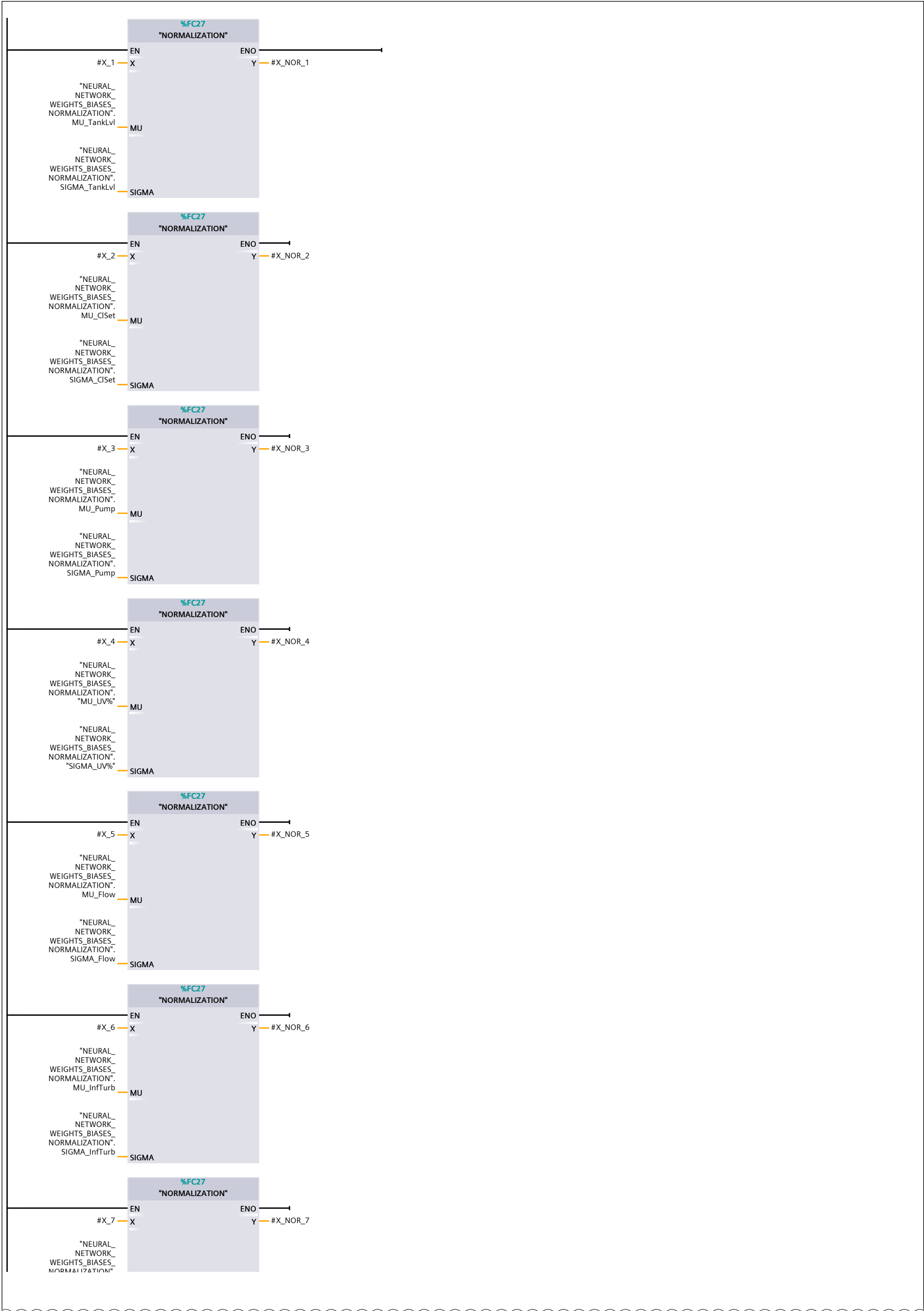
NEURAL NETWORK [FC12]

NEURAL NETWORK Properties							
General							
Name	NEURAL NETWORK	Number	12	Type	FC	Language	LAD
Numbering	Automatic						
Information							
Title		Author		Comment	SARRERAK: ['consigna', 'bomba', 'uv', 'caudal', 'ntu']	Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
▼ Input			
X_1	Real		
X_2	Real		
X_3	Real		
X_4	Real		
X_5	Real		
X_6	Real		
X_7	Real		
X_8	Real		
X_9	Real		
▼ Output			
Y	Real		
InOut			
▼ Temp			
Y_1	Real		
Y_2	Real		
Y_3	Real		
Y_4	Real		
Y_5	Real		
Y_6	Real		
X_NOR_1	Real		
X_NOR_2	Real		
X_NOR_3	Real		
X_NOR_4	Real		
X_NOR_5	Real		
X_NOR_6	Real		
X_NOR_7	Real		
X_NOR_8	Real		
X_NOR_9	Real		
Constant			
▼ Return			
NEURAL NETWORK	Void		

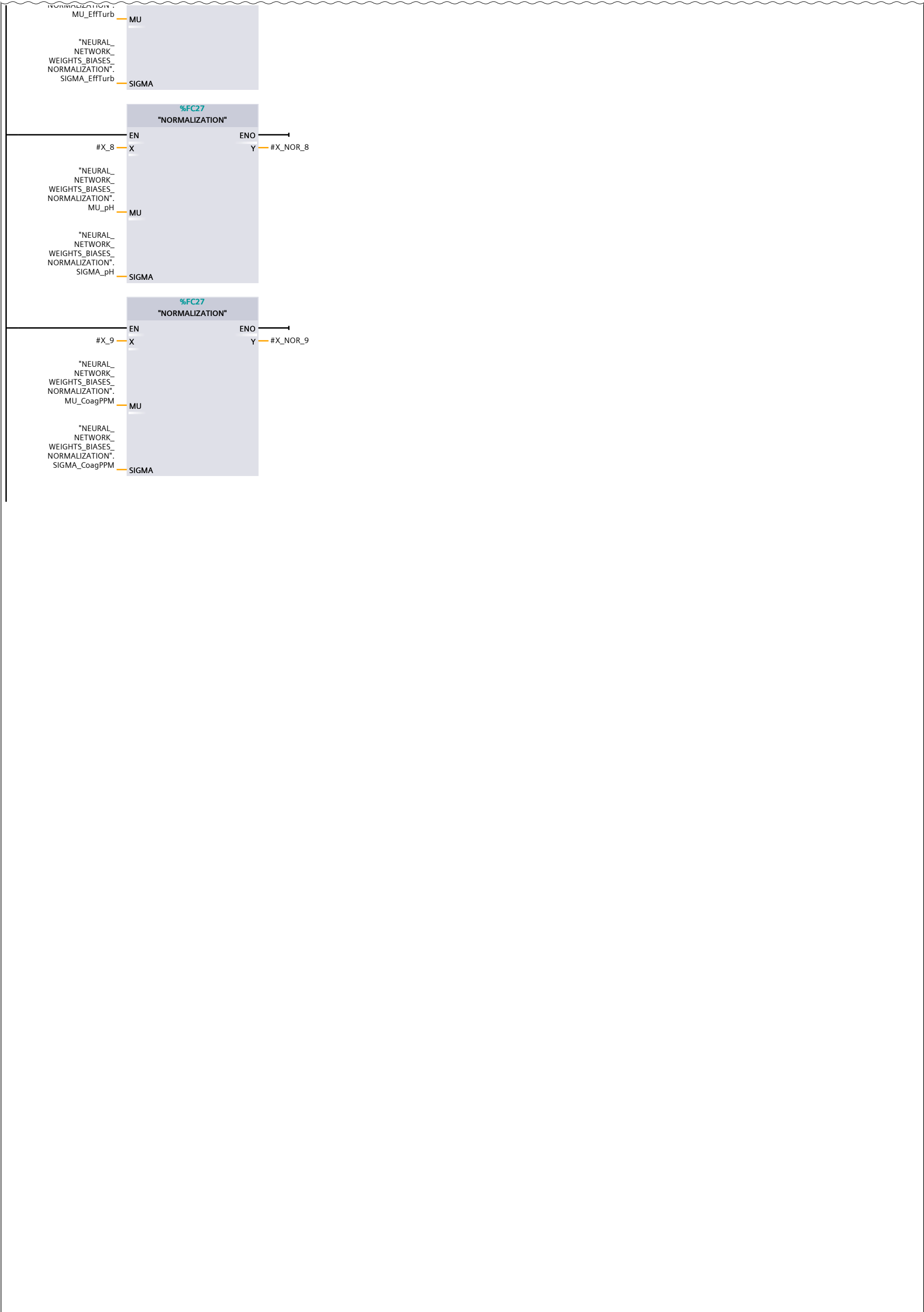
Network 1: NORMALIZACION

Network 1 : NORMALIZACION (1.1 / 2.1)

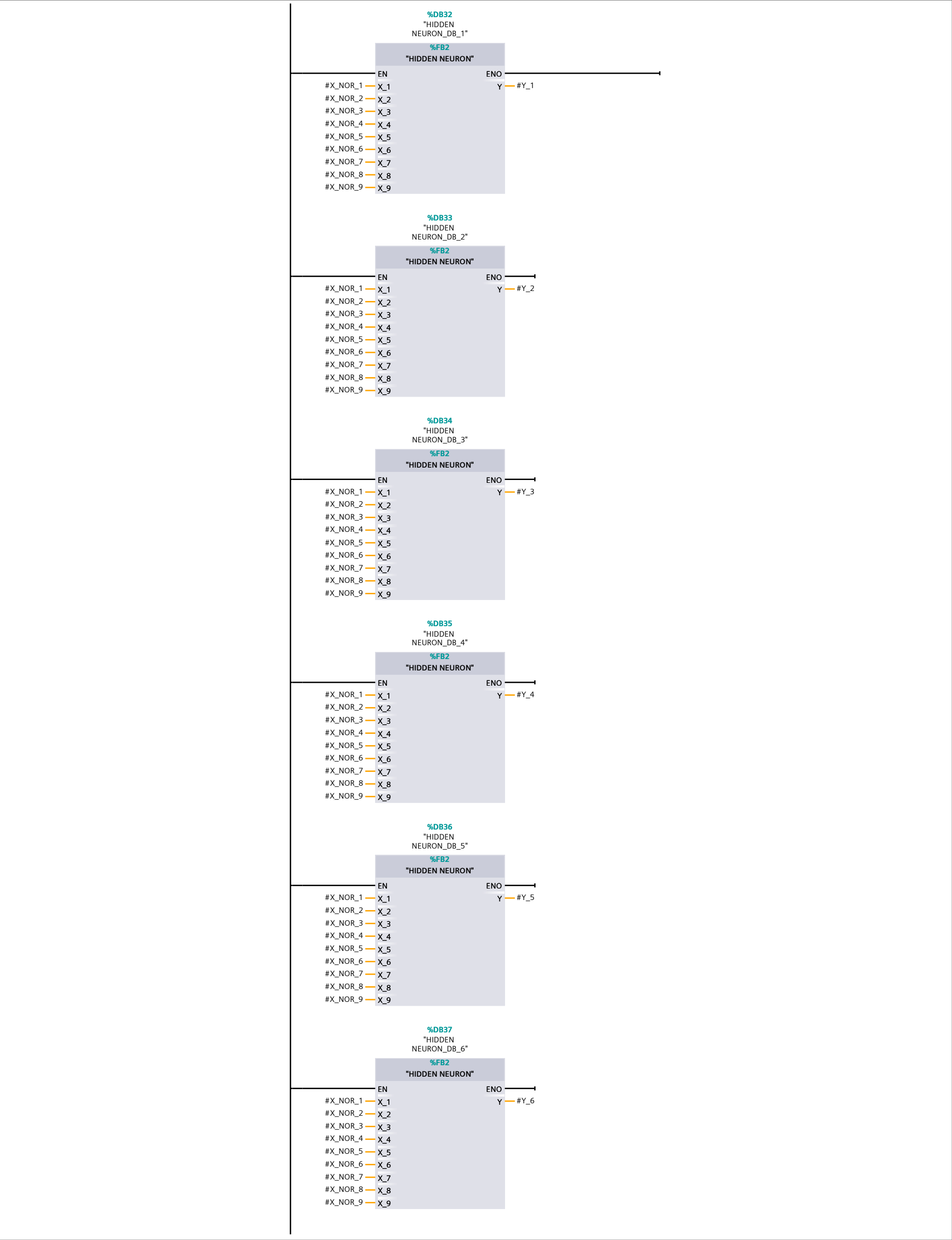


Network 1 : NORMALIZACION (2.1 / 2.1)

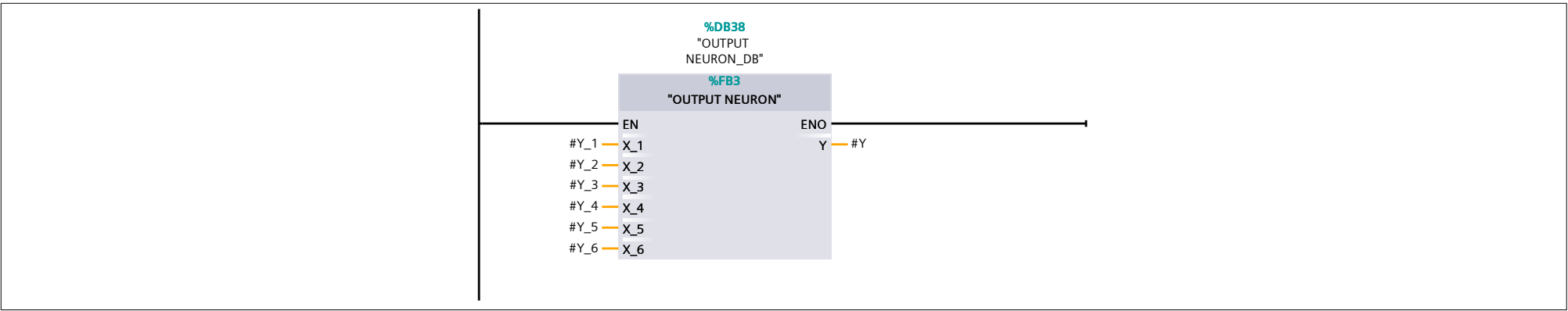
1.1 (Page3 - 2)



Network 2: CAPA OCULTA



Network 3: CAPA SALIDA



NEURAL NETWORK

HIDDEN NEURON_DB_1 [DB32]

HIDDEN NEURON_DB_1 Properties							
General							
Name	HIDDEN NEURON_DB_1	Number	32	Type	DB	Language	DB
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

Totally Integrated Automation Portal

NEURAL NETWORK

HIDDEN NEURON_DB_2 [DB33]

HIDDEN NEURON_DB_2 Properties

General

Name	HIDDEN NEURON_DB_2	Number	33	Type	DB	Language	DB
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

NEURAL NETWORK

HIDDEN NEURON_DB_3 [DB34]

HIDDEN NEURON_DB_3 Properties									
General									
Name	HIDDEN NEURON_DB_3	Number	34	Type	DB			Language	DB
Numbering	Automatic								
Information									
Title		Author		Comment				Family	
Version	0.1	User-defined ID							
Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

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NEURAL NETWORK

HIDDEN NEURON_DB_4 [DB35]

HIDDEN NEURON_DB_4 Properties

General

Name	HIDDEN NEURON_DB_4	Number	35	Type	DB	Language	DB
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

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NEURAL NETWORK

HIDDEN NEURON_DB_5 [DB36]

HIDDEN NEURON_DB_5 Properties

General

Name	HIDDEN NEURON_DB_5	Number	36	Type	DB	Language	DB
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

NEURAL NETWORK

HIDDEN NEURON_DB_6 [DB37]

HIDDEN NEURON_DB_6 Properties									
General									
Name	HIDDEN NEURON_DB_6	Number	37	Type	DB			Language	DB
Numbering	Automatic								
Information									
Title		Author		Comment				Family	
Version	0.1	User-defined ID							
Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
X_7	Real	0.0	False	True	True	True	False		
X_8	Real	0.0	False	True	True	True	False		
X_9	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
W_7	Real	0.0	False	True	True	True	False		
W_8	Real	0.0	False	True	True	True	False		
W_9	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

NEURAL NETWORK

OUTPUT NEURON [FB3]

OUTPUT NEURON Properties							
General							
Name	OUTPUT NEURON	Number	3	Type	FB	Language	SCL
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	Non-retain	True	True	True	False		
X_2	Real	0.0	Non-retain	True	True	True	False		
X_3	Real	0.0	Non-retain	True	True	True	False		
X_4	Real	0.0	Non-retain	True	True	True	False		
X_5	Real	0.0	Non-retain	True	True	True	False		
X_6	Real	0.0	Non-retain	True	True	True	False		
▼ Output									
Y	Real	0.0	Non-retain	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	Non-retain	True	True	True	False		
W_2	Real	0.0	Non-retain	True	True	True	False		
W_3	Real	0.0	Non-retain	True	True	True	False		
W_4	Real	0.0	Non-retain	True	True	True	False		
W_5	Real	0.0	Non-retain	True	True	True	False		
W_6	Real	0.0	Non-retain	True	True	True	False		
BIAS	Real	0.0	Non-retain	True	True	True	False		
Temp									
Constant									

```
0001
0002 // Konbinaketa lineala
0003 #Y := #W_1 * #X_1 + #W_2 * #X_2 + #W_3 * #X_3 + #W_4 * #X_4 + #W_5 * #X_5+ #W_6 * #X_6  + #BIAS;
```

Symbol	Address	Type	Comment
#BIAS		Real	
#W_1		Real	
#W_2		Real	
#W_3		Real	
#W_4		Real	
#W_5		Real	
#W_6		Real	
#X_1		Real	
#X_2		Real	
#X_3		Real	
#X_4		Real	
#X_5		Real	
#X_6		Real	
#Y		Real	

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NEURAL NETWORK

OUTPUT NEURON_DB [DB38]

OUTPUT NEURON_DB Properties

General

Name	OUTPUT NEURON_DB	Number	38	Type	DB	Language	DB
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
X_1	Real	0.0	False	True	True	True	False		
X_2	Real	0.0	False	True	True	True	False		
X_3	Real	0.0	False	True	True	True	False		
X_4	Real	0.0	False	True	True	True	False		
X_5	Real	0.0	False	True	True	True	False		
X_6	Real	0.0	False	True	True	True	False		
▼ Output									
Y	Real	0.0	False	True	True	True	False		
InOut									
▼ Static									
W_1	Real	0.0	False	True	True	True	False		
W_2	Real	0.0	False	True	True	True	False		
W_3	Real	0.0	False	True	True	True	False		
W_4	Real	0.0	False	True	True	True	False		
W_5	Real	0.0	False	True	True	True	False		
W_6	Real	0.0	False	True	True	True	False		
BIAS	Real	0.0	False	True	True	True	False		

Totally Integrated Automation Portal

NEURAL NETWORK

NORMALIZATION [FC27]

NORMALIZATION Properties

General

Name	NORMALIZATION	Number	27	Type	FC	Language	SCL
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
▼ Input			
X	Real		
MU	Real		
SIGMA	Real		
▼ Output			
Y	Real		
InOut			
Temp			
Constant			
▼ Return			
NORMALIZATION	Void		

0001 #Y := (#X - #MU) / #SIGMA;

Symbol	Address	Type	Comment
#MU		Real	
#SIGMA		Real	
#X		Real	
#Y		Real	

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NEURAL NETWORK

NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION [DB39]

NEURAL_NETWORK_WEIGHTS_BIASES_NORMALIZATION Properties

General

Name	NEURAL_NET-WORK_WEIGHTS_BIASES_NORMALIZATION	Number	39	Type	DB	Language	DB
Numbering	Automatic						

Information

Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Static									
W_1_1	Real	-1.5254	False	True	True	True	False		
W_2_1	Real	-2.8213	False	True	True	True	False		
W_3_1	Real	-2.0056	False	True	True	True	False		
W_4_1	Real	-0.531	False	True	True	True	False		
W_5_1	Real	0.0872	False	True	True	True	False		
W_6_1	Real	-2.642	False	True	True	True	False		
W_7_1	Real	2.2675	False	True	True	True	False		
W_8_1	Real	1.6801	False	True	True	True	False		
W_9_1	Real	-2.4497	False	True	True	True	False		
B_1	Real	2.1953	False	True	True	True	False		
W_1_2	Real	0.1749	False	True	True	True	False		
W_2_2	Real	1.147	False	True	True	True	False		
W_3_2	Real	0.011	False	True	True	True	False		
W_4_2	Real	0.9485	False	True	True	True	False		
W_5_2	Real	-0.7185	False	True	True	True	False		
W_6_2	Real	-0.5225	False	True	True	True	False		
W_7_2	Real	0.5567	False	True	True	True	False		
W_8_2	Real	-3.0506	False	True	True	True	False		
W_9_2	Real	0.2267	False	True	True	True	False		
B_2	Real	0.3133	False	True	True	True	False		
W_1_3	Real	-0.95	False	True	True	True	False		
W_2_3	Real	-1.6201	False	True	True	True	False		
W_3_3	Real	0.7642	False	True	True	True	False		
W_4_3	Real	-0.7214	False	True	True	True	False		
W_5_3	Real	0.0942	False	True	True	True	False		
W_6_3	Real	-0.7018	False	True	True	True	False		
W_7_3	Real	1.4409	False	True	True	True	False		
W_8_3	Real	0.2737	False	True	True	True	False		
W_9_3	Real	-2.2615	False	True	True	True	False		
B_3	Real	2.1811	False	True	True	True	False		
W_1_4	Real	-0.4291	False	True	True	True	False		
W_2_4	Real	-0.1496	False	True	True	True	False		
W_3_4	Real	-0.168	False	True	True	True	False		
W_4_4	Real	-1.5874	False	True	True	True	False		
W_5_4	Real	0.3165	False	True	True	True	False		
W_6_4	Real	0.6999	False	True	True	True	False		
W_7_4	Real	0.9615	False	True	True	True	False		
W_8_4	Real	1.7618	False	True	True	True	False		
W_9_4	Real	-1.9396	False	True	True	True	False		
B_4	Real	-0.6922	False	True	True	True	False		
W_1_5	Real	-0.4147	False	True	True	True	False		
W_2_5	Real	1.626	False	True	True	True	False		
W_3_5	Real	-0.9535	False	True	True	True	False		
W_4_5	Real	1.3389	False	True	True	True	False		
W_5_5	Real	0.4307	False	True	True	True	False		
W_6_5	Real	0.1598	False	True	True	True	False		
W_7_5	Real	0.8035	False	True	True	True	False		
W_8_5	Real	-1.2008	False	True	True	True	False		
W_9_5	Real	1.5433	False	True	True	True	False		
B_5	Real	5.7215	False	True	True	True	False		
W_1_6	Real	2.5432	False	True	True	True	False		
W_2_6	Real	2.2072	False	True	True	True	False		
W_3_6	Real	0.4781	False	True	True	True	False		
W_4_6	Real	-2.3549	False	True	True	True	False		
W_5_6	Real	-0.0015	False	True	True	True	False		
W_6_6	Real	-0.7786	False	True	True	True	False		
W_7_6	Real	0.1003	False	True	True	True	False		
W_8_6	Real	-0.336	False	True	True	True	False		

