PROGRAM PLC\_PRG

VAR

CODE\_1 : Code\_1 ; //Instance of function Code\_1

IN1 : LREAL;

IN2 : LREAL;

IN3 : LREAL;

IN4 : LREAL;

IN5 : LREAL;

IN6 : LREAL;

IN7 : LREAL;

END\_VAR

IN1 := 200 ;

IN2 := 500 ;

IN3 := 5000 ;

IN4 := 100 ;

IN5 := 400 ;

IN6 := 50 ;

IN7 := 5 ;

CODE\_1 (In1 := IN1, In2 := IN2, In3 := IN3, In4 := IN4, In5 := IN5, In6 := IN6, In7 := IN7);

FUNCTION\_BLOCK Code\_1

VAR\_INPUT

In1: LREAL;

In2: LREAL;

In3: LREAL;

In4: LREAL;

In5: LREAL;

In6: LREAL;

In7: LREAL;

END\_VAR

VAR\_OUTPUT

Out1: ARRAY[0..1] OF BOOL;

Out2: BOOL;

END\_VAR

VAR

Input\_Average : LREAL ;

Input\_Average\_int : DINT ;

rtb\_Switch: LREAL;

rtb\_RelationalOperator: BOOL;

Array\_: ARRAY [1..100] OF LREAL := [100(10)];

END\_VAR

(\* Outputs for Atomic SubSystem: '<Root>/Code\_1' \*)

(\* Switch: '<S1>/Switch' incorporates:

\* Gain: '<S1>/Gain2'

\* Product: '<S1>/Product'

\* Sum: '<S1>/Sum'

\* Trigonometry: '<S1>/Trigonometric Function' \*)

Input\_Average := (In1 + In2 + In3 + In4 + In5 + In6 + In7 )/7;

Input\_Average\_int := LREAL\_TO\_DINT (Input\_Average);

IF In5 >= 0.5 THEN

IF Input\_Average > 1000 THEN

Array\_ [Input\_Average\_int ] := Input\_Average ;

rtb\_Switch := SIN(((0.017453292519943295 \* In3) + In2) + In4) \* In1;

ELSE

Array\_ [Input\_Average\_int + 100] := Input\_Average \* Input\_Average ;

rtb\_Switch := SIN(((0.017453292519943295 \* In3) + In2) + In4) \* In1;

END\_IF;

ELSE

rtb\_Switch := In6;

END\_IF;

(\* End of Switch: '<S1>/Switch' \*)

(\* RelationalOperator: '<S1>/Relational Operator' \*)

rtb\_RelationalOperator := rtb\_Switch >= In7;

(\* End of Outputs for SubSystem: '<Root>/Code\_1' \*)

(\* Outport: '<Root>/Out1' incorporates:

\* Logic: '<S1>/BL4' \*)

Out1[0] := rtb\_RelationalOperator;

(\* Outputs for Atomic SubSystem: '<Root>/Code\_1' \*)

Out1[1] := NOT rtb\_RelationalOperator;

(\* Outport: '<Root>/Out2' incorporates:

\* Gain: '<S1>/Gain3'

\* RelationalOperator: '<S1>/Relational Operator1' \*)

Out2 := ( -rtb\_Switch) >= In7;

(\* End of Outputs for SubSystem: '<Root>/Code\_1' \*)