PROGRAM PLC\_PRG

VAR

CODE : Code ; //instance of Code

IN1 : LREAL ;

END\_VAR

IN1 := 100 ;

CODE (In1 := IN1);

FUNCTION\_BLOCK Code

VAR\_INPUT

In1: LREAL;

END\_VAR

VAR\_OUTPUT

Out1: LREAL;

END\_VAR

VAR

INPUTTOINDEX1 : InputToIndex; //instance of InputsToIndex3

INPUTTOINDEX2 : InputToIndex; //instance of InputsToIndex3

END\_VAR

(\* Outputs for Atomic SubSystem: '<Root>/Code 5' \*)

(\* Saturate: '<S1>/Saturation' \*)

IF In1 >= 6.0 THEN

Out1 := 6.0;

INPUTTOINDEX1(Input1:= In1);

ELSIF In1 > -6.0 THEN

Out1 := In1;

INPUTTOINDEX2(Input1:= In1);

ELSE

Out1 := -6.0;

END\_IF;

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

(\* Gain: '<S1>/Influent control Valve' \*)

Out1 := 3333.33 \* Out1;

(\* End of Outputs for SubSystem: '<Root>/Code 5' \*)

FUNCTION\_BLOCK InputToIndex

VAR\_INPUT

Input1 : LREAL ;

END\_VAR

VAR\_OUTPUT

Array\_ : ARRAY [1..100] OF LREAL ;

END\_VAR

VAR

Index1 : LREAL ;

Index2 : DINT ;

i : DINT;

END\_VAR

Index1 := SQRT(Input1);

Index2 := LREAL\_TO\_DINT (Index1);

FOR i:= 0 TO Index2 DO

Array\_[i] := Index2 + i ;

END\_FOR