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FUNCTION_BLOCK "Flow_Add"
{ S7_Optimized_Access := 'FALSE' }
VERSION : 0.1
  VAR_INPUT
    In : Real;    // 输入模拟量转换值
    Dividion : DInt;  // 扫描周期
    Low : Real;    // 下限值
    High : Real;    // 上限值
    Clear : Bool;   // 清零按钮
  END_VAR

  VAR_OUTPUT
    Flow_Acc : Real;  // 输出
  END_VAR

  VAR_IN_OUT
    Flow_add : Real;  // 流量增加
  END_VAR

  VAR
    Static0 { S7_SetPoint := 'True' } : Int;
    Static1 { S7_SetPoint := 'True' } : DInt;
    Static2 { S7_SetPoint := 'True' } : Real;
    Static3 { S7_SetPoint := 'True' } : Real;
    Static4 { S7_SetPoint := 'True' } : Real;
    Static5 { S7_SetPoint := 'True' } : Real;
    Static6 { S7_SetPoint := 'True' } : Real;
  END_VAR

BEGIN
  // 该功能块为流量累积;
  //在 OB30 100ms 循环中断调用, Dividion=36000;
  #Static2:= DINT_TO_REAL(#Dividion);      //数据格式转换;
  IF (#In>=#Low) AND (#In<=#High) THEN      //检测 In 流量转换值值在上、下限之间
    认为采集数据有效;
    #Static3 := #In / #Static2;
    #Static4 := #Static3 + #Static4;
    IF #Static4>=100.0 THEN                  //采用多重计数累积; 记录满 100 的个数;
      #Static0 := #Static0 + 1;
      #Static4 := 0.0;
    ELSE
      ;
    END_IF;
  END_IF;

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ELSE ;
END_IF;
////////////////////////////////////
IF #Flow_add<>0 THEN          ///流量补偿,手动增减;
    IF #Flow_add<=5000.0 THEN  ///增减范围在 5000 以下;
        #Flow_add := #Flow_add;
    ELSE
        #Flow_add := 0;
    END_IF;
END_IF;
////////////////////////////////////
#Static1 := DINT_TO_INT(#Static0);
#Static6 := DINT_TO_REAL(#Static1);
#Static5 := #Static6 * 100.0;
#Flow_Acc := #Static4 + #Static5 + #Flow_add;    //累积量输出;
////////////////////////////////////
IF #Flow_Acc >= 300000.0 OR #Clear THEN    //自动清零;
    #Static0 := 0;
    #Static4 := 0;
    #Flow_add := 0;
ELSE
    ;
END_IF;
END_FUNCTION_BLOCK

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