*Table 1 Program
01 :1 Execution interval (seconds)

1: Batt Voltage (P10)
1: 1 Loc [ batterie ]

2: If time is (P92)
1: 0 Minutes (Seconds --) into a
2: 600 Interval (same units as above)
3: 30 Then Do

3: Signature (P19)
1: 2 Loc [ Prog_sig ]

4: End (P95)

5: Volt (Diff) (P2)
1: 1 Reps
2: 25 2500 mV 60 Hz Rejection Range
3: 1 DIFF Channel
4: 3 Loc [ Sonde1 ]
5: 0.00062 Multiplier
6: 0.75 Offset

6: Volt (Diff) (P2)
1: 1 Reps
2: 25 2500 mV 60 Hz Rejection Range
3: 2 DIFF Channel
4: 4 Loc [ Sonde2 ]
5: 0.00062 Multiplier
6: 0.75 Offset

7: Volt (Diff) (P2)
1: 1 Reps
2: 25 2500 mV 60 Hz Rejection Range
3: 3 DIFF Channel
4: 5 Loc [ Sonde3 ]
5: 0.00062 Multiplier
6: 0.75 Offset

8: Volt (Diff) (P2)
1: 1 Reps
2: 25 2500 mV 60 Hz Rejection Range
3: 4 DIFF Channel
4: 6 Loc [ Sonde4 ]
5: 0.00062 Multiplier
6: 0.75 Offset
;Probe 1 (psi to mm)

9: Z=F x 10^n (P30)
   1: 0.9986 F
   2: 0 n, Exponent of 10
   3: 7 Z Loc [ Sonde1_Z ]

10: Z=X-Y (P35)
    1: 3 X Loc [ Sonde1 ]
    2: 7 Y Loc [ Sonde1_Z ]
    3: 8 Z Loc [ Sonde1psi ]

11: Z=X*F (P37)
    1: 8 X Loc [ Sonde1psi ]
    2: 703.07 F
    3: 9 Z Loc [ Sonde1_mm ]

;Probe 2 (psi to mm)

12: Z=F x 10^n (P30)
    1: 0.9976 F
    2: 0 n, Exponent of 10
    3: 10 Z Loc [ Sonde2_Z ]

13: Z=X-Y (P35)
    1: 4 X Loc [ Sonde2 ]
    2: 10 Y Loc [ Sonde2_Z ]
    3: 11 Z Loc [ Sonde2psi ]

14: Z=X*F (P37)
    1: 11 X Loc [ Sonde2psi ]
    2: 703.07 F
    3: 12 Z Loc [ Sonde2_mm ]

;Probe 3 (psi to mm)

15: Z=F x 10^n (P30)
    1: 0.9979 F
    2: 0 n, Exponent of 10
    3: 13 Z Loc [ Sonde3_Z ]

16: Z=X-Y (P35)
    1: 5 X Loc [ Sonde3 ]
    2: 13 Y Loc [ Sonde3_Z ]
    3: 14 Z Loc [ Sonde3psi ]
17: \( Z = X \times F \) (P37)
   1: 14 \( X \) Loc [ Sonde3psi ]
   2: 703.07 \( F \)
   3: 15 \( Z \) Loc [ Sonde3_mm ]

;Probe 4 (psi to mm)

18: \( Z = F \times 10^n \) (P30)
   1: 0.99645 \( F \)
   2: 0 \( n \), Exponent of 10
   3: 16 \( Z \) Loc [ Sonde4_Z ]

19: \( Z = X - Y \) (P35)
   1: 6 \( X \) Loc [ Sonde4 ]
   2: 16 \( Y \) Loc [ Sonde4_Z ]
   3: 17 \( Z \) Loc [ Sonde4psi ]

20: \( Z = X \times F \) (P37)
   1: 17 \( X \) Loc [ Sonde4psi ]
   2: 703.07 \( F \)
   3: 18 \( Z \) Loc [ Sonde4_mm ]

;System stabilisation every 24 hours

21: If time is (P92)
   1: 0 Minutes (Seconds --) into a
   2: 1440 Interval (same units as above)
   3: 30 Then Do

;Calculation of the difference between the two probes

22: \( Z = X - Y \) (P35)
   1: 9 \( X \) Loc [ sonde1_mm ]
   2: 12 \( Y \) Loc [ Sonde2_mm ]
   3: 19 \( Z \) Loc [ diff ]

;Flag 4 controls pump 1

23: If \((X <= \ F)\) (P89)
   1: 19 \( X \) Loc [ diff ]
   2: 4 \(< \)
   3: -5 \( F \)
   4: 30 Then Do

24: Do (P86)
   1: 14 Set Flag 4 High
25: Z=X+F (P34)
   1: 19   X Loc [ diff ]
   2: 5.0   F
   3: 27   Z Loc [ CptTmp1 ]

26: Z=ABS(X) (P43)
   1: 27   -- X Loc [ CptTmp1 ]
   2: 26   Z Loc [ CptTmp ]

27: End (P95)

;Flag 5 controls pump 2

28: If (X<=F) (P89)
   1: 19   X Loc [ diff ]
   2: 3  >=
   3: 5   F
   4: 30   Then Do

29: Do (P86)
   1: 15   Set Flag 5 High

30: Z=X+F (P34)
   1: 19   X Loc [ diff ]
   2: -5.0   F
   3: 26   Z Loc [ CptTmp ]

31: End (P95)

32: Z=X*F (P37)
   1: 28   X Loc [ CmpTmp ]
   2: 28.0   F
   3: 25   Z Loc [ Cpt ]

33: End (P95)
;Pump 1

;If the flag 4 is high, the pump 1 microprogram starts.

34:  If time is (P92)
  1: 0        Minutes (Seconds --) into a
  2: 1        -- Interval (same units as above)
  3: 30       Then Do

35:  If Flag/Port (P91)
  1: 14       Do if Flag 4 is High
  2: 30       Then Do

;If the counter is greater than zero, the system runs normally.

36:  If (X<=F) (P89)
  1: 25       X Loc [ Cpt    ]
  2: 3         >=
  3: 0        F
  4: 30       Then Do

37:  Z=X+F (P34)
  1: 25       X Loc [ Cpt    ]
  2: -1.0      F
  3: 26       Z Loc [ CptTmp  ]

38:  Z=X (P31)
  1: 26       -- X Loc [ CptTmp  ]
  2: 25       Z Loc [ Cpt    ]

39:  Do (P86)
  1: 41       Set Port 1 High

;Otherwise the system is off until the next day.

40:  Else (P94)

41:  Do (P86)
  1: 51       Set Port 1 Low

42:  Do (P86)
  1: 24       Set Flag 4 Low

43:  End (P95)
End (P95)

End (P95)

;Pump 2

;If the flag 5 is high, the pump 2 microprogram starts.

If time is (P92)
1: 0 Minutes (Seconds --) into a
2: 1 -- Interval (same units as above)
3: 30 Then Do

If Flag/Port (P91)
1: 15 Do if Flag 5 is High
2: 30 Then Do

;If the counter is greater than zero, the system runs normally.

If (X<>F) (P89)
1: 25 X Loc [ Cpt ]
2: 3 >=
3: 0 F
4: 30 Then Do

Z=X+F (P34)
1: 25 X Loc [ Cpt ]
2: -1.0 F
3: 26 Z Loc [ CptTmp ]

Z=X (P31)
1: 26 -- X Loc [ CptTmp ]
2: 25 Z Loc [ Cpt ]

Do (P86)
1: 42 Set Port 2 High

;Otherwise the system is off until the next day.

Else (P94)

Do (P86)
1: 52 Set Port 2 Low

Do (P86)
1: 25 Set Flag 5 Low
;End of balancing.

;Rain Gauge

58: Pulse (P3)
   1: 1 Reps
   2: 1 Pulse Channel 1
   3: 2 Switch Closure, All Counts
   4: 24 Loc [ rain_mm ]
   5: 0.254 Multiplier
   6: 0.0 Offset

59: If time is (P92)
   1: 0 Minutes (Seconds --) into a
   2: 15 Interval (same units as above)
   3: 10 Set Output Flag High (Flag 0)

;Data recording every 15 minutes.

60: Set Active Storage Area (P80)
   1: 1 Final Storage Area 1
   2: 28 Array ID

61: Real Time (P77)
   1: 1110 Year/Day,Hour/Minute (midnight = 0000)

62: Sample (P70)
   1: 1 Reps
   2: 9 Loc [ sonde1_mm ]

63: Sample (P70)
   1: 1 Reps
   2: 12 Loc [ Sonde2_mm ]

64: Sample (P70)
   1: 1 Reps
   2: 15 Loc [ Sonde3_mm ]
65: Sample (P70)
1: 1    Reps
2: 18   Loc [ Sonde4_mm ]

66: Sample (P70)
1: 1    Reps
2: 19   Loc [ diff ]

67: Totalize (P72)
1: 1    Reps
2: 24   Loc [ rain_mm ]

68: Do (P86)
1: 20   Set Output Flag Low (Flag 0)

69: Minimum (P74)
1: 1    Reps
2: 0    Value Only
3: 1    Loc [ batterie ]

*Table 2 Program
02 : 0.0000 Execution Interval (seconds)

*Table 3 Subroutines
End Program

;Input locations

1    [batterie]
2    [Prog_sig]
3    [Sonde1]
4    [Sonde2]
5    [Sonde3]
6    [Sonde4]
7    [Sonde1_Z]
8    [Sonde1psi]
9    [Sonde1_mm]
10   [Sonde2_Z]
11   [Sonde2psi]
12   [Sonde2_mm]
13   [Sonde3_Z]
14   [Sonde3psi]
15   [Sonde3_mm]
16   [Sonde4_Z]
17   [Sonde4psi]
18   [Sonde4_mm]
19 [diff]
20 -
21 -
22 -
23 -
24 [rain_mm]
25 [Cpt]
26 [CptTmp]
27 [CptTmp1]
28 [CmpTmp]