

CMC Custom programmed logic unit

Web/ wire tension monitor PLC002

Designed to cause an alarm output if the current tension deviates from a preset level by a user-selectable percentage. The unit samples the running tension after a 30 second delay, logs 100 separate readings during the following 13 seconds and calculates, stores and displays that average tension. If the subsequent running tension drifts outside of the preset range a volt-free relay contact closes causing an operator alarm .

Power supply: 24V d.c. on terminals + & -

Input:

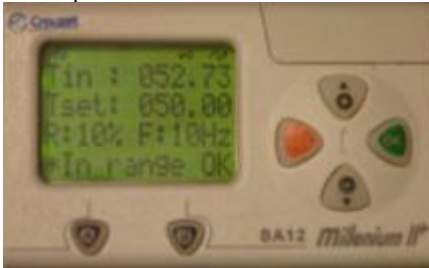
0-10Vd.c. signal on both terminals 15 & 16 with respect to 0V [terminal -]

24V d.c. to terminal 18 for +/- 25% range, default range: +/- 10% with 0V on terminal 18

Outputs:

1 NO volt-free relay contact on 01
1 NO volt-free relay contact on 02

Front panel LCD:



Row 1: Tin (Measured tension input) [0-10V] displayed as percentage

Row 2: Tset (Calculated average tension) displayed as a percentage after logging

Row 3: R: (range set), allowed deviation from Tset, F: (filter), selectable input filter, 10Hz or 'off'

Row 4: Monitor status

Operating Instructions:

On connection to a suitable 24V d.c. supply the unit will initially indicate Tin with a 39mV resolution and display that value as a percentage of 10V. The volt-free contact at 01 will be closed indicating system OK

Tset will indicate 0% until logging and calculations are complete

Use the B key to toggle between Filter off and Filter 10Hz depending on the stability of the incoming tension voltage

The logging sequence is initiated 30 seconds after power on , enabling the machine speed and tension to stabilise, indicated by line 4 on the LCD as *waiting

After the 30 second delay the unit will automatically sample the incoming 0-10V signal 100 times over 13 seconds, line 4 indicating *logging. The average tension will be calculated then displayed as Tset on line 2 as a percentage. The status line will now indicate *In range OK if the incoming tension does not drift outside of the set range

If the incoming tension voltage deviates from the Tset by more than the set range the volt-free alarm contact at 02 will close enabling a customer designed visual or audible alarm; the System OK volt-free contact at 01 will open. The monitor status on line 4 of the LCD will then display *Out of range. The alarm and monitor status will return to normal within 300mS of the incoming tension voltage returning to within the preset range

For a new tension value to be sampled and set, the 24V supply to the unit must be interrupted for 5 seconds to reset the monitor and the program

Front panel keys: A,+,-,ESC,OK inoperative

Doc. No: CMC PLC002 28th Feb 2006

