

SHIVAKI

µC Based PID, BOD, ON/OFF Controller_LCD

MODEL NO: (LT-HC)

Features:-

- Microcontroller based, 16x2 LCD display
- Supply 220 V Ac
- Input J - K Sensor or RTD selection
- Output: 1. Relay Contact or SSR, 2. Alarm contact or Buzzer
- PID Control or ON-OFF
- Alarm -25.0 to 25.0 (RTD)or -25 to 25(J-K) as per range adjustable
- Ct 1 to 60 for ssr output & 10 to 120 second for Relay output adjustable
- Auto tuning require for pb, It & dt value
- Auto tuning Hysteresis adjustable.
- Hysteresis 0.2 to 25.0 adjustable as per range selection for RTD
- Hysteresis 2 to 25c adjustable as per range selection for J & K Type
- Delay 0 to 250 second adjustable for cooling control
- Open display if Sensor break & -revs display if connections reverse.
- Relay trip if sensor breaks, connection open or connection reverse.
- Calibration Error correction by front key switch (No preset setting)
- Real Time clock Indication.
- Delay start as per RTC setting (with Enable/Disable)
- Online/Offline data logging selection
- Off line data logging time 0 to 250 Minute settable
- RS485 Output Enable/Disable function
- Off Line data storage up to 2047 Data

Key Function

- You can go in set mode by SET key
- You can change setting in set mode by Increment & Decrement key
- Enter key to store all set value in memory
- Mute key to mute Alarm

Setting : Mode Selection

You can change **All value** by Increment & Decrement key

Press Enter key to exit & save from any step else go to next step

- Press **SET** key to set Mode = Set Temperature
- Press Increment Key
- Press Increment key for Mode = Set Alarm
- Press Increment key for Mode= Alarm hy

Press **SET** key for 5 second

- Press Increment key for Mode= Control Para
- Press Increment key for Mode= Delay Start Time
- Press Increment key for Mode= Data Logging
- Press Increment key for Mode= RTC

You can go back to select any mode by pressing Decrement key

You can select any mode by pressing set key

Setting : Mode : Set Temperature

You can change **All value** by Increment & Decrement key

Press Enter key to exit & save from any step else go to next step

- Press **SET** key to Set Temperature
Display Mode = **Set Heat**
Press **SET** key =Cooling Band

Press enter key to save & Exit

Setting : Mode : Set Alarm

You can change **All value** by Increment & Decrement key
Press Enter key to exit & save from any step else go to next step

- Press **SET** key to Set Alarm
Display = **Alarm** & Last set value
- Press **SET** key to Set Alarm Hy
- Press set key to repeat or Press enter key to save & Exit

Setting : Mode : Control Parameter

You can change **All value** by Increment & Decrement key
Press Enter key to exit & save from any step else go to next step

- Press **SET** key to Set Cycle Time (For PID Control Action)
Display = **Cycle Time** & Last set value (1 for SSR & 15 for Relay default)
- Press **SET** key to Select Auto Tune function (For PID Control Action)
Display = **Auto Tune** & No (You can select Yes By Pressing Increment Key)
- Press **SET** key to Correct C-Error
Display = C-Error. & Last set value
- Press **SET** key to Set Auto tune Hysteresis (4.0 default)
Display = **Auto tune Hy** & Last set value
- Press **SET** key to Set Proportional Band (4.0 default)
Display = **Proportional Band** & Last set value
- Press **SET** key to Set Integral Time
Display = **Integral Time** & Last set value (180 sec default)
- Press **SET** key to Set Derivative Time
Display = **Derivative Time** & Last set value (60 sec default)
- Press **SET** key to set Cooling Delay Time
Display = Cool Delay Time & Last set value
Press **SET** key to cooling hy
Display = **Cool Hy**
- Repeat above up to last step else press enter key to save & Exit

Setting : Mode : Delay Start Time

You can change **All value** by Increment & Decrement key
Press Enter key to exit & save from any step else go to next step

- Press **SET** key to Select Delay start time function
Display = **Auto Start** & No
- Press **SET** key to Set Process start Date
Display = **Process Start** & Dt
- Press **SET** key to Set Process start Time Hour
- Press **SET** key to Set Process start Time Minute
- Press **SET** key to Select Delay start time function
Display = **Auto Start** & No
- Press Increment key to enable delay start function
Display = **Auto Start** & Yes
- Press enter key to save
- Press enter key to start
- Press Enter key for 2 second to stop delay function

Setting : Mode : Data Logging

You can change **All value** by Increment & Decrement key
Press Enter key to exit & save from any step else go to next step

- Press **SET** key to Select On line/Off line Data logging
Display = **Data Logging** & Last selection
- Press **SET** key to Select Off line Logging Time
Display = **Logging Time** & Last selection
- Press **SET** key to See total number of Off line data Log
Display = **Log No Of Data** & Value

- Press **SET** key to select Erase function for Logged Data
Display = **Erase Log Data** & No

Note : If memory full shows on screen then by using **UP Key** Set this Function to **YES** & then press **ENT Key** To Erase the memory.

- Press **SET** key to Set Slave ID No
Display = **Slave ID NO** & Last setting
- Repeat above up to last step else press enter key to save & Exit

Setting : Mode : RTC

You can change **All value** by Increment & Decrement key

Press Enter key to exit & save from any step else go to next step

- Press **SET** Key : Hour (Change value by Increment or Decrement key)
- Press **SET** Key : Minute (Change value by Increment or Decrement key)
- Press **SET** Key : Day (Change value by Increment or Decrement key)
- Press **SET** Key : Date (Change value by Increment or Decrement key)
- Press **SET** Key : Month (Change value by Increment or Decrement key)
- Press **SET** Key : Year (Change value by Increment or Decrement key)
- Press **SET** Key to Repeat or Press Enter Key to Save & Exit

• **Configure Mode**

Selection of control & sensor type

- **Short config link** (Back side terminal)
- **Press Increment + Enter key**

(D)

Display = **Senser J-T/C**

Press decrement key

Display = **Senser K-T/C**

Press decrement key

Display = **Senser RTD**

Press decrement key

Display = **Senser RTD .1**

Press set key

Display = **Range low**

Press set key

Display = **Range high**

Press set key

Display = **Control PID**

Press decrement key

Display =Control ON/OFF

Press **SET** Key

Display =Defrost On (minute)

Display =Defrost OFF (minute)

Press **SET** Key

Display =Alarm Enable

Press decrement key

Display =Alarm Disable

Press **SET** Key

Display =Mute Alarm Enable

Press decrement key

Display =Mute Disable

Press Enter key to save & exit else press set key to repeat above from step (D)

Note:

Software:

- Online data logging with time selection
- Off line data down loading from instrument
- Off line data erase by computer
- Off line data: Date- DD:MM:YY, Time- HH:MM & Temperature Value.

DEFAULT TABLE

Pb	4.0
It	180
Dt	30
Hy	2
Ct	1