Embedded System Laboratories Pvt. Ltd.
(An ISO 9001:2008 certified company)

Model No.-0501-5001
Load Indicator with Peak Hold
Manual

INTRODUCTION

Embedded System Laboratories Pvt. Ltd. is a company which is involved in developments and manufacturing in the field of Embedded Systems and miscellaneous Sensors/Transducers.
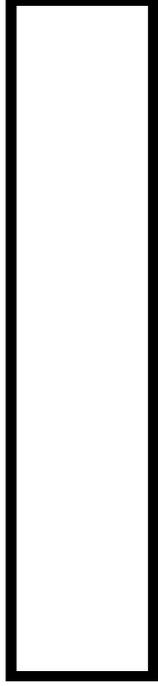
The company activities includes to serve the laboratories which are involved in Quality Controls either in measurments of various parameters or developing other process controls for the same.

Company's product includes Load cell, Pressure Transducer and their Indicators & Controller, SMS enabled security systems & Process Control Systems

All the devices of the company are designed for a user friendly operation. Special attention is given to the software for the devices to set the various parameters at the user end if they want to change any, like Calibration, Limits, other setting, of the device etc.

Providing high quality on low price.

LOAD INDICATOR

PEAK
HOLD

INC/
RESET

SHIFT

SETUP

ON/
OFF

FRONT PANEL

RS232   PRINTER PORT   NC   C   NO

220V AC/50Hz

-VE   +VE   SH.   -VE SIG.   +VE SIG.
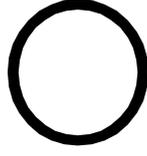
BACK PANEL

'PEAK HOLD'

To see the maximum value of load you have to **'ON'** the Peak Hold Switch. Indicator will hold the peak value even after removing the load. To reset 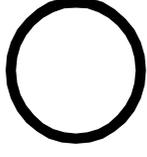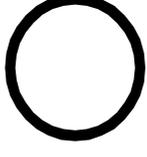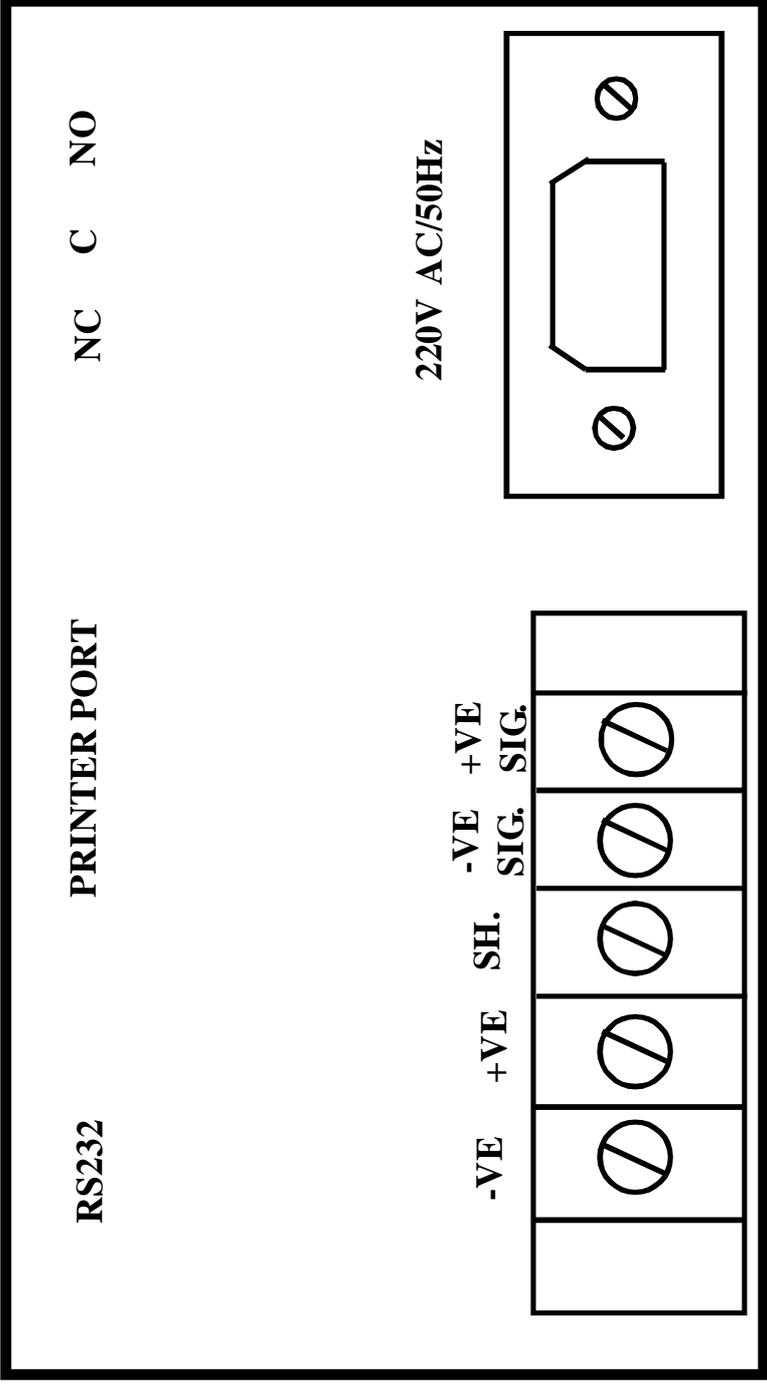for next cycle you have to press the reset key. Even if you have taken the previous test in normal mode (i.e. PEAK HOLD OFF), making the switch ON will show the peak value of the previous test.

Entering 'SETUP'

Press **setup** key for 3-5 sec., if you are using a modal having calibration lock you should make the lock open with its key.

Changing 'OverLoad' Point

While you go in setup, after 2 sec. it will automatically go to **'1. O.Load'** menu option. Again after 2 sec. the O.Load preset value will appear on display. Use **shift** & **inc.** keys to change the value or / then go to next option ie., Calibration Setting by pressing the setup key again.

Changing Calibration

There are two methods of calibration ie.,

1. by putting the known load on load cell.

when you select the 2nd menu option from the **setup** key, **'2 CAL.'** will appear on display. The display message will be changed within two seconds to **'SET 0'**. Now remove the load from the loadcell (although the load/weight of PAN will not be counted), if any, & press **inc.** key to read the zero load value. **'PUT L.'** will appear on display to indicate you to put a known load on the load cell. Now put some known load (25%-75% of the load cell capacity, for better results) on the load cell. Wait for at least 30 sec. to stabilize the load then press **inc.** key to read known load value. **'SET L.'** will appear on display. Again after 2 sec. set load preset value will appear on the display. Remove the known load from the load cell. Use **shift** & **inc.** keys to set the value equal to the value of the known load you have putted on the load cell and press **setup** key to go to next option ie., the dot point setting.

2. by changing the known load value for the previous calibration.

when you select the 2nd menu option from the **setup** key, **'2 CAL.'** will appear on display. The display message will be changed within two seconds to **'SET 0'**. Now press **shift** key to skip this option. **'SET L.'** will appear on display. Again after 2 sec. set load preset value will appear on the display. Use **shift** & **inc.** keys to set the value equal to the value of the known load you have putted earlier on the load cell or multiply / divide the value as per your requirment and press **setup** key to go to next option ie., the dot point setting.

Changing 'DOT' Point

The third menu option is **'3 DOT'** ie., dot (decimal) point setting. After 2 sec. the Dot preset value will appear on display. Use **inc.** key to change the value or / then go to next option ie., Least Count Setting by pressing the **setup** key again.

Changing 'Least Count' Setting

The fourth menu option is **'4 L.C.'** ie., Least Count setting. After 2 sec. the LC preset value will appear on display. Use **shift** & **inc.** keys to change the value or / then save and exit setup values by pressing the **setup** key again.

Select Tension / Compression mode

Fix your S-type load cell so that it gives you +ve readings on tension load. Now if you want the +ve value at compression load just change the **"5 CO"** i.e. Compression setting's value from "0" to "1". Use **inc key** for selection and **Setup key** to select next menu option.

Enable / Disable Autostop

Whenever there is a sample break condition i.e. Peak Load value is higher and load value is near to Zero the output will be generated to stop the machine. This is called **Autostop on sample break**. If you don't want this feature simply change the **"6 AS"** value from "1" to "0". Use **inc key** for selection and **setup key** to select next menu option.

Show / Hide -ve Sign

If you want to hide the -ve sign simply change the "7 SS" i.e Show Sign option value from "0" to "1". Use **inc key** for selection and **setup key** to save & exit from setup.

NOTE :

1. The calibration can be done only in the mode where +ve values appear. Otherwise you will face "Fix Zero" error, If so, just make a hardware reset. (See notes)

2. If +ve values are coming on applying tension load and you want to calibrate the device in compression mode, simply set "5 CO" to "1" and calibrate in compression mode. After calibration you may again change "5 CO" setting to "0".

Relay Output

Three potential free relay points (i.e. NO, Common, NC) is given at the back panel of the indiacator. The relay will work on overload limit or on sample break.

Hardware Reset

Switch off the device, press setup and inc. key simultaneously then switch on the device. After 15 sec. release all keys. If you are using a model having calibration lock you should make the lock open with its key.

ADC Values

Switch off the device, press setup key and switch on the device. The device will show the ADC values until you release all the keys. If you are using a model having calibration lock you should make the lock open with its key.

Calibration Preparation

Before doing the calibration test please check that the load cell should be connected with the device in such a way that on loading the weight on the load cell, ADC value should rise up. Otherwise you may face fixed zero error ie., after calibration reading will be fixed at zero even if you rise the load on the load cell.

```
┌─────────────────────┐
│      'SETUP'        │
└─────────────────────┘
   │
   │          ┌────────────────────┐  *
   │─────────▶│   '1.   O.LOAD'    │
   │          │   (Over Load limit)│
   │          └────────────────────┘
   │
   │          ┌────────────────────┐  *
   │─────────▶│   '2.      CAL.'   │
   │          │   (Calibration)    │
   │          └────────────────────┘
   │                │        ┌────────────────────┐
   │                └───────▶│    'SET   0'       │──────┐
   │                         │  (Set Zero load ref.)│    │
   │                         └────────────────────┘     │  use shift key to skip
   │                              │  use inc. key to read│
   │                         ┌────────────────────┐      │
   │                         │    'PUT   L.'      │      │
   │                         │  (Pu known Load ref.)│    │
   │                         └────────────────────┘      │
   │                              │  use inc. key to read│
   │                         ┌────────────────────┐  *   │
   │                         │    'SET   L.'      │◀─────┘
   │                         │ (Set known Load ref. value)│
   │                         └────────────────────┘
   │          ┌────────────────────┐  *
   │─────────▶│   '3.      DOT'    │
   │          │   (Decimal point)  │
   │          └────────────────────┘
   │          ┌────────────────────┐  *
   │─────────▶│   '4.      L.C.'   │
   │          │   (Least Count)    │
   │          └────────────────────┘
   │          ┌────────────────────┐  *  (+ve reading at the time of
   │─────────▶│   '5.      CO'     │      Compression Mode)
   │          │   (Compression)    │
   │          └────────────────────┘
   │          ┌────────────────────┐  * (1=Enable Autostop
   │─────────▶│   '6.      AS'     │    0=Disable Autostop)
   │          │   (Autostop)       │
   │          └────────────────────┘
   │          ┌────────────────────┐  * 1=Enable (Show Sign)
   │─────────▶│   '7.      SS'     │    0=Disable (Show Sign)
   │          │   (Show Sign)      │
   │          └────────────────────┘
   │
   ▼
SAVE & EXIT
```

use setup key for next menu option

(*use shift / inc. keys to change preset value)

(if you don't want to save new settings, switch
off the device anywhere inbetween the 'setup'
before 'save & exit')