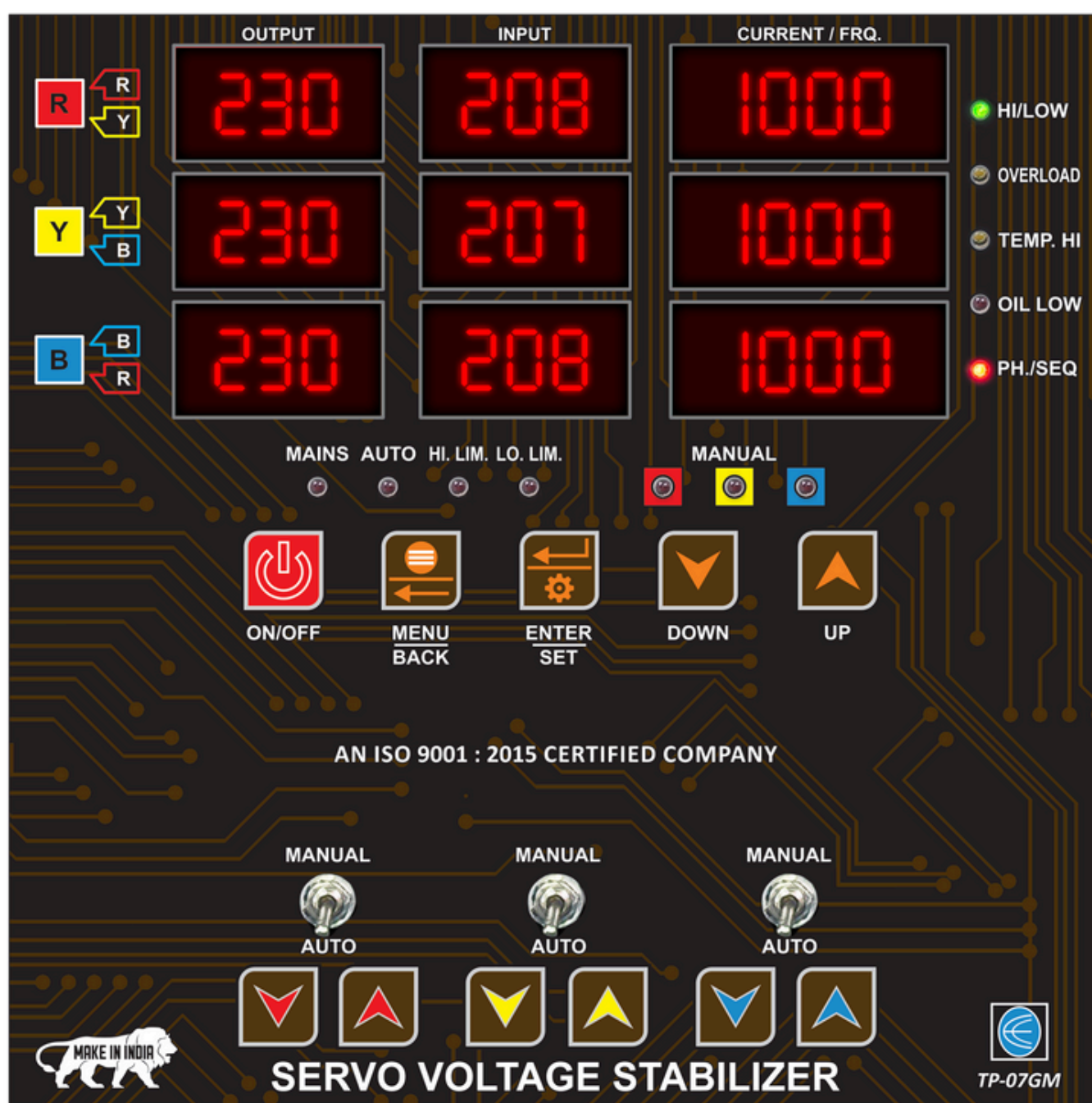


USER MANUAL

ADVANCE SERVO CONTROL CARD TP-07GM

BASED ON ARM 32 BIT CORTEX M0 PROCESSOR



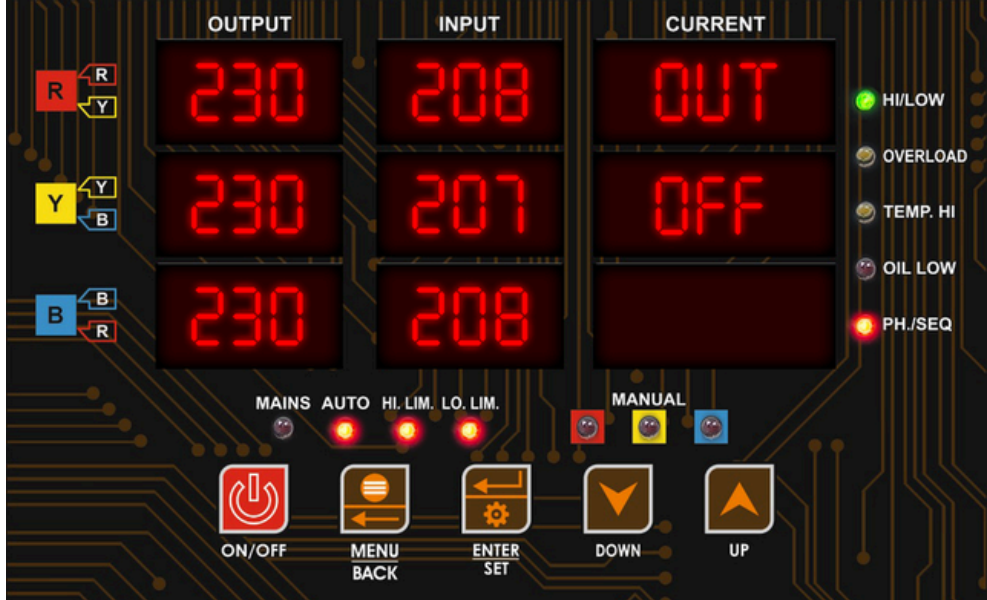
Features:-

1. True RMS Metering - Voltage, Current, Frequency.
2. TRIAC based controlled voltage for enhanced life of Servo Motor.
3. Over Load Protection with settable Cut-off Time & also with respect to intensity of occurred fault.
4. Over Voltage, Under Voltage protection with settable Cut-off Voltage & Time.
5. Password Protection & Software Calibration.
6. No external card required for MCCB.
7. Reverse Phase Protection or Correction.
8. Over Temperature Cut-Off and Oil Level Indicator.

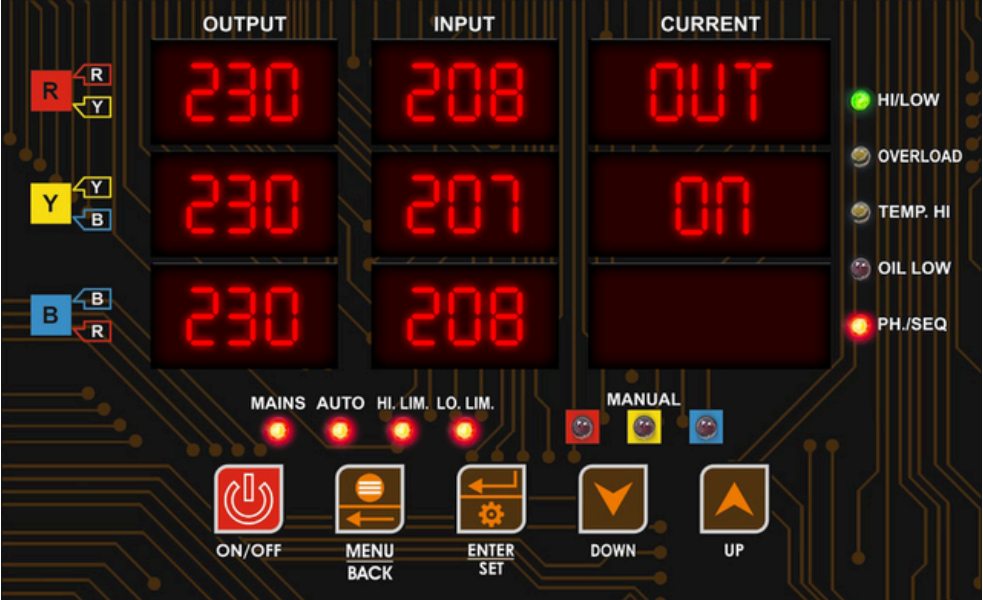
Single card for all ranges (90v)

Normal Running Mode:-

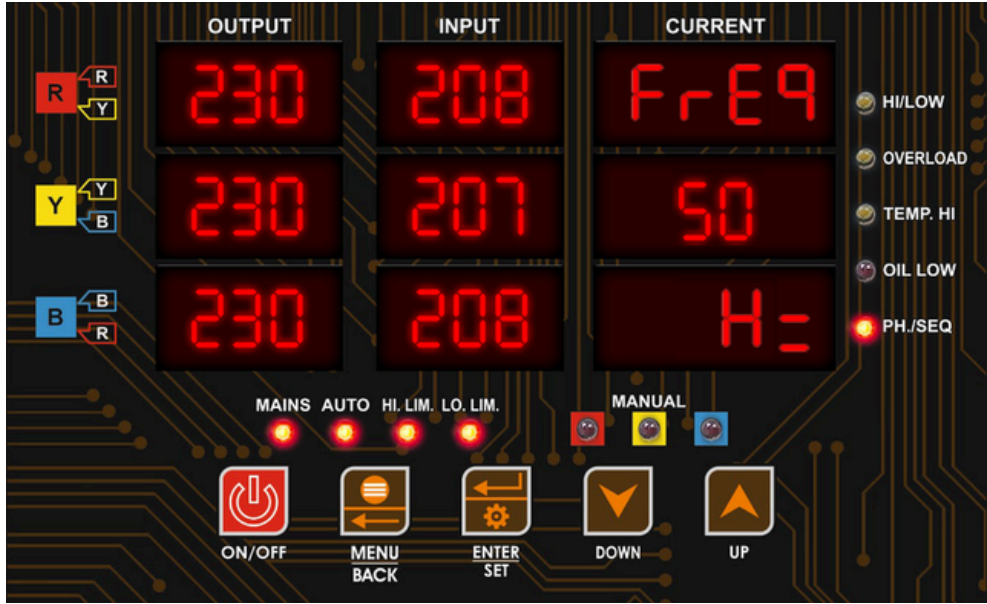
OUTPUT OFF



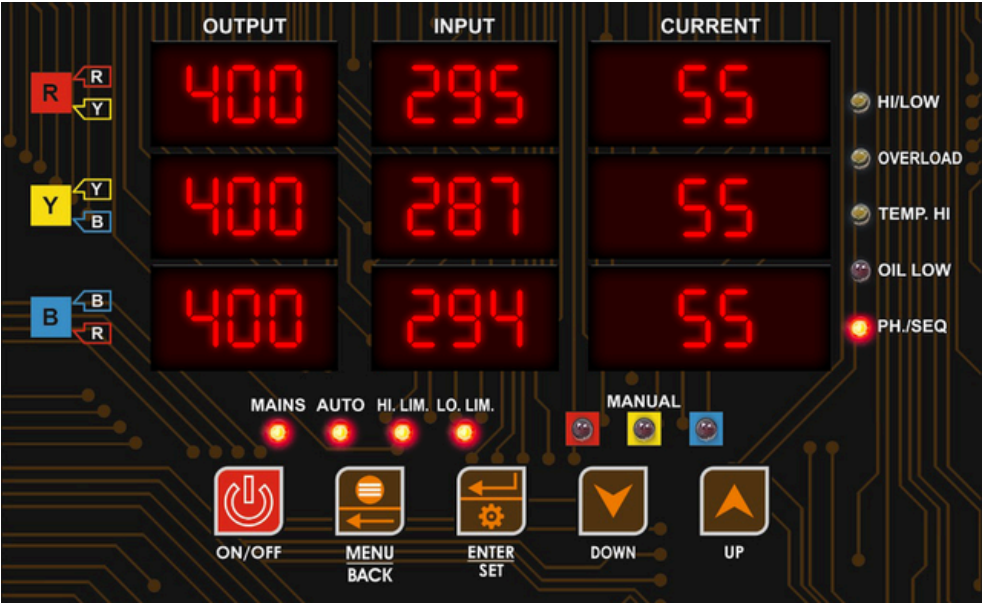
OUTPUT ON



VOLTAGE & FREQUENCY

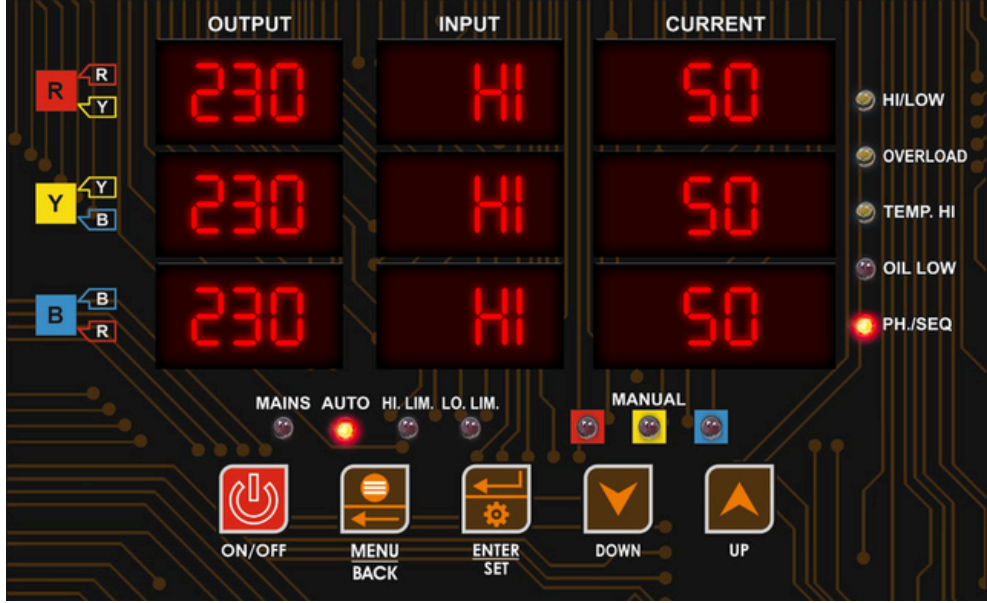


PHASE-PHASE VOLTAGE & CURRENT

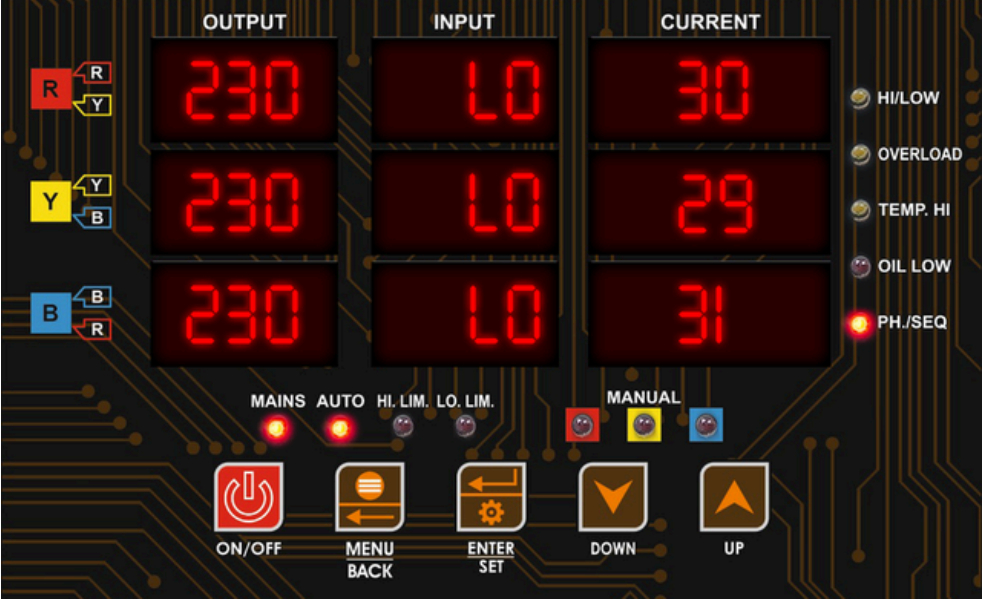


Fault Conditions:-

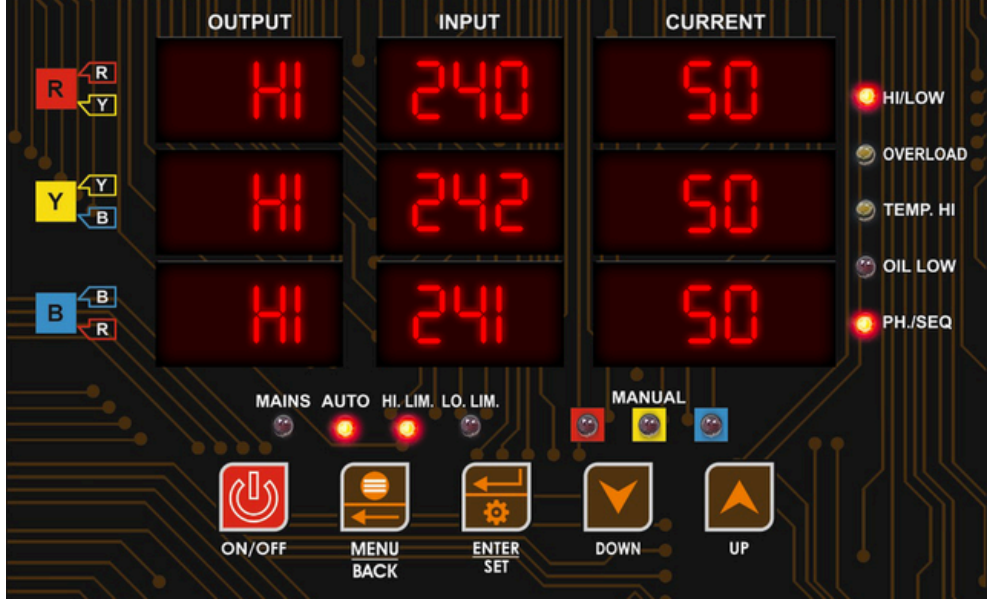
INPUT HIGH



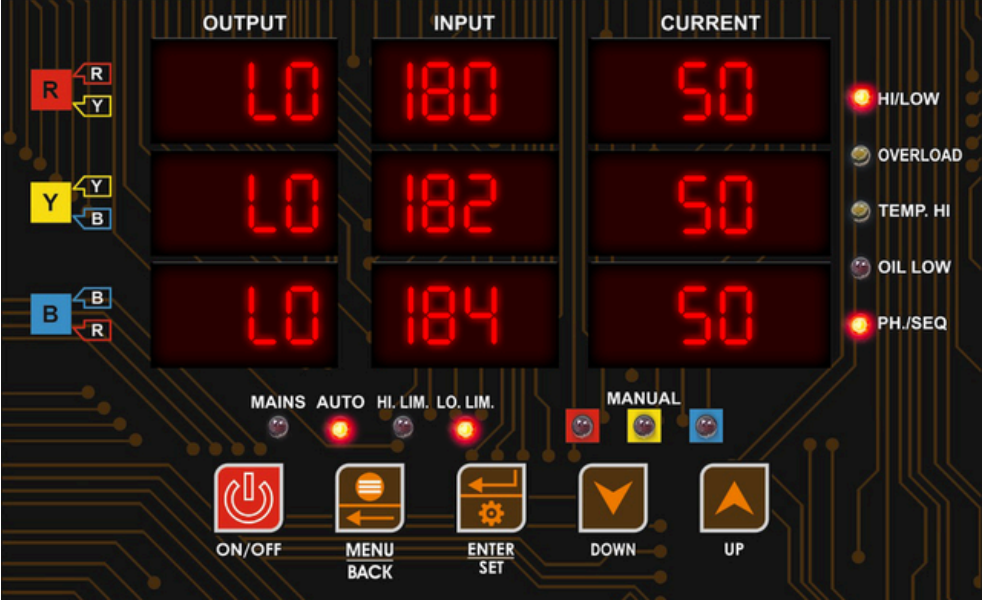
INPUT LOW



OUTPUT HIGH

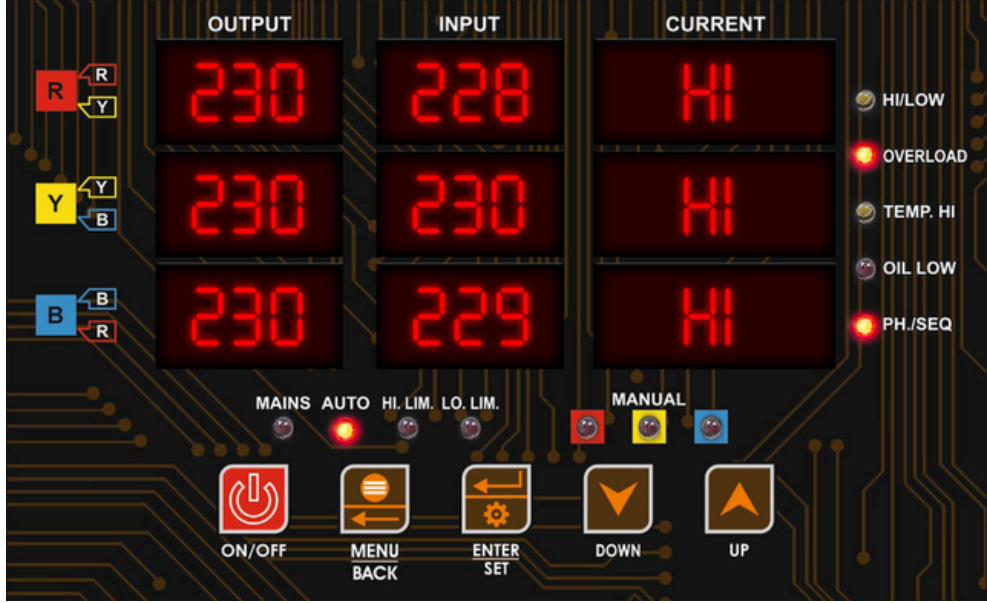


OUTPUT LOW

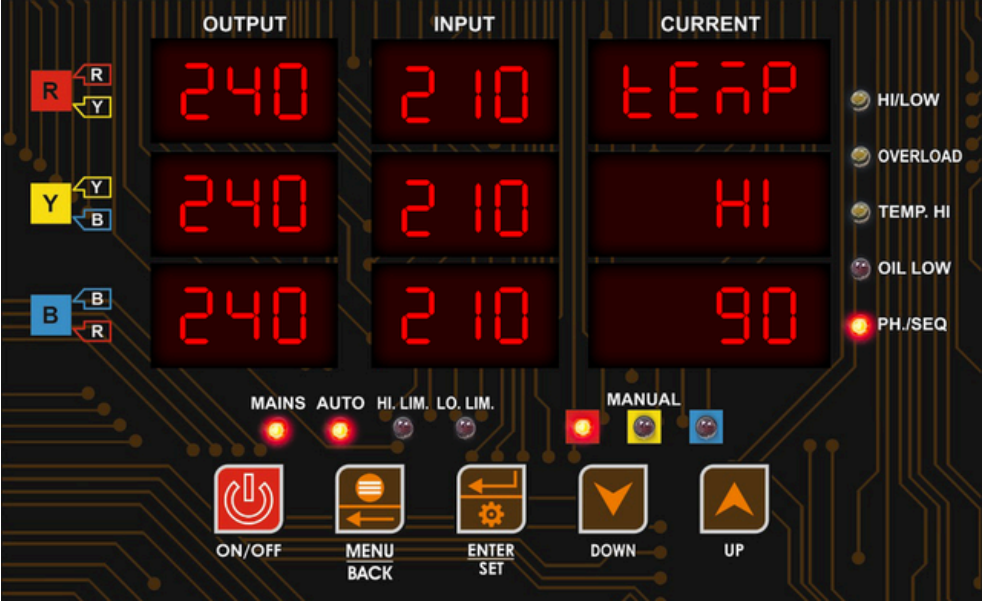


Fault Conditions:-

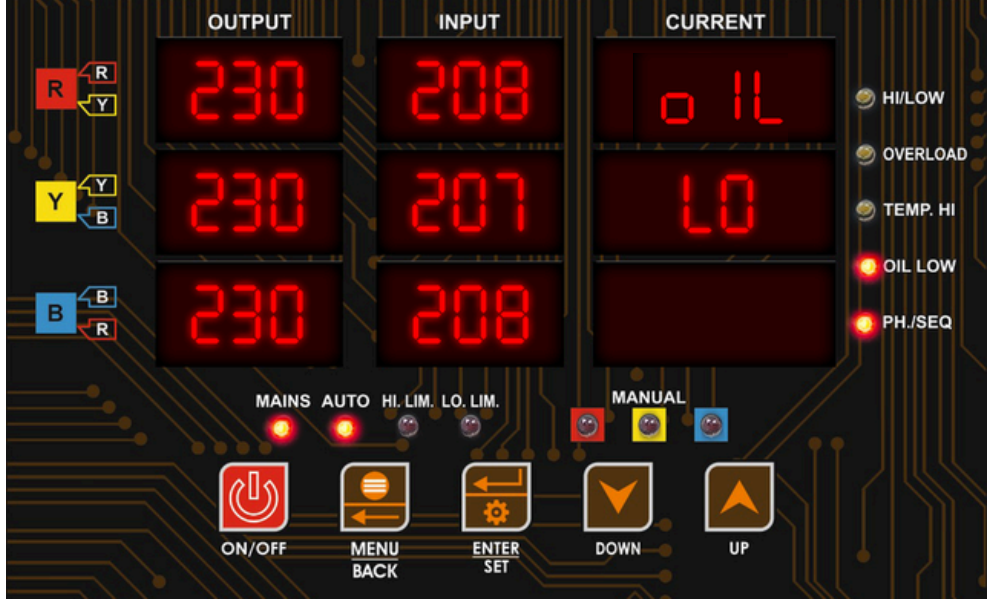
CURRENT HIGH (OVERLOAD)



TEMPERATURE HIGH

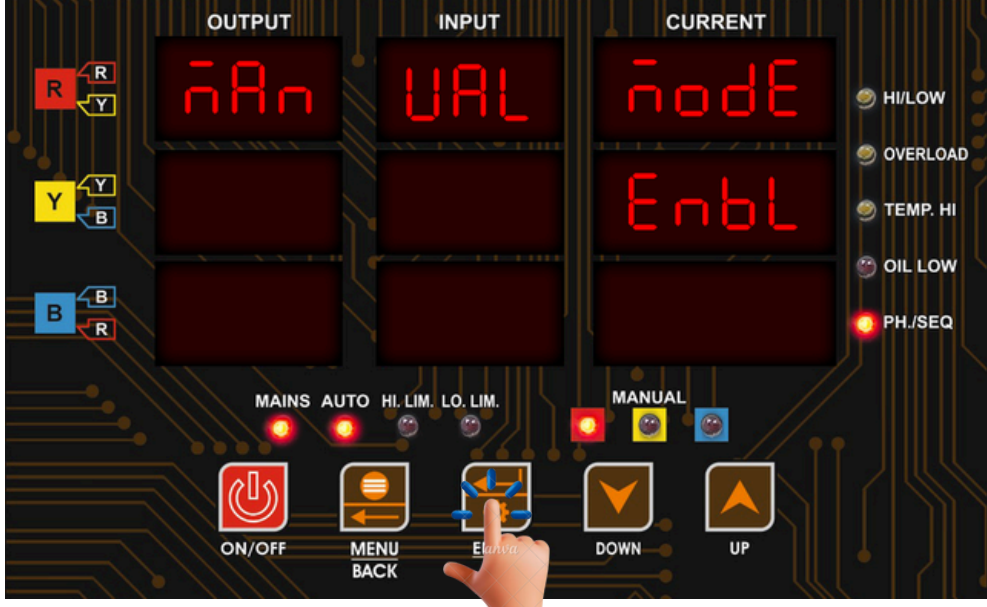


OIL LEVEL LOW

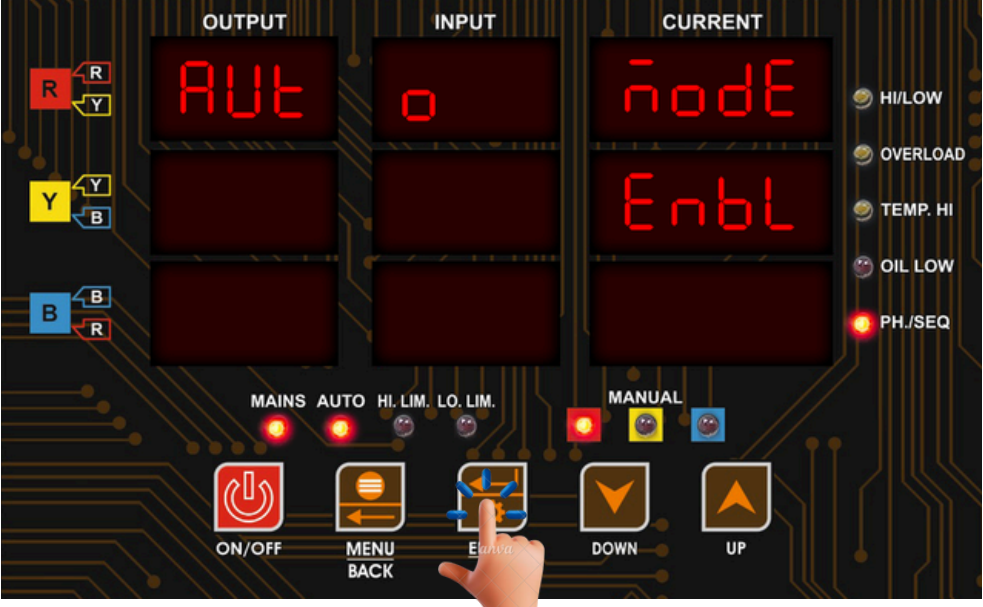


Auto & Manual Mode:-

SWITCHING TO MANUAL MODE



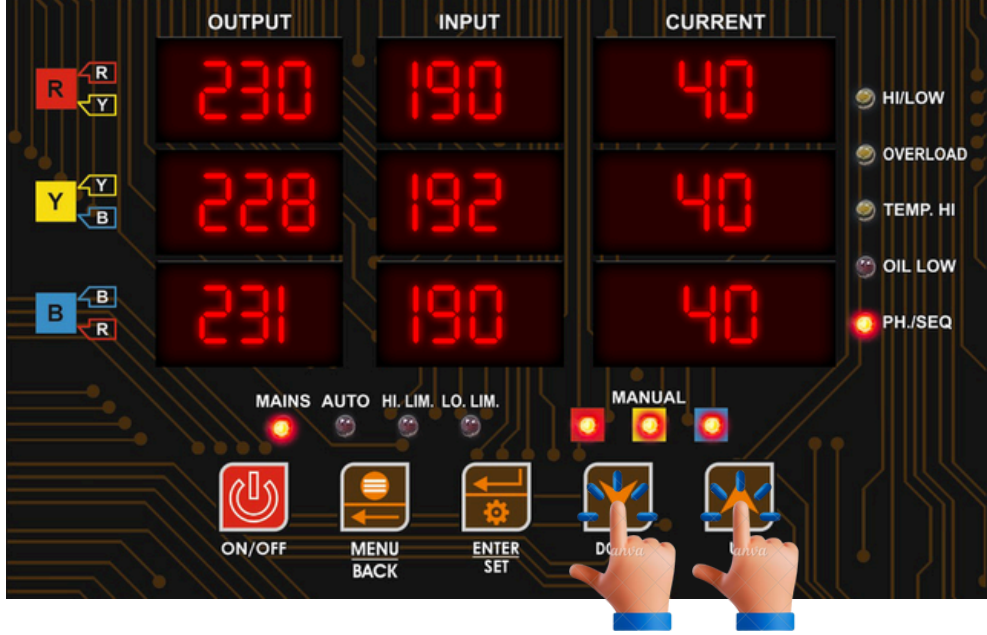
SWITCHING TO AUTO MODE



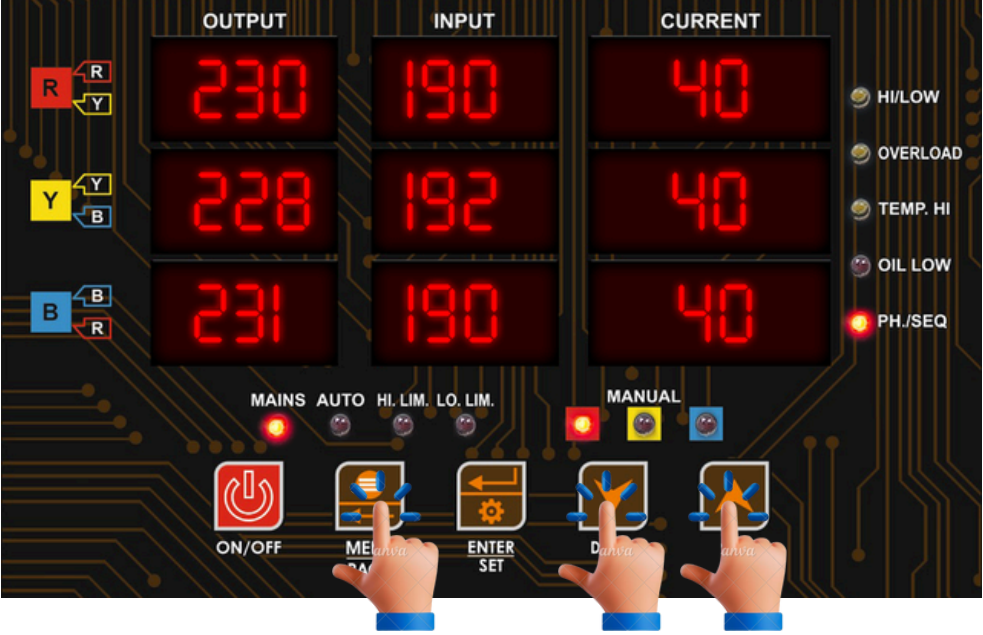
- Press and hold “ENTER/SET” button for 3 seconds.

- Press and hold “ENTER/SET” button for 3 seconds.

ALL PHASE CONTROL (MANUAL)



INDIVIDUAL PHASE CONTROL (MANUAL)



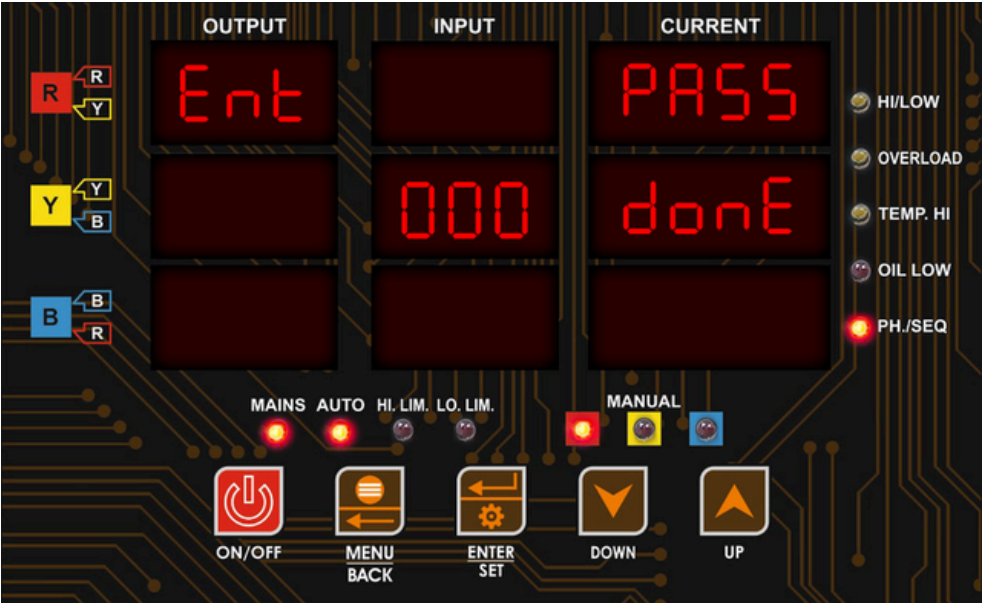
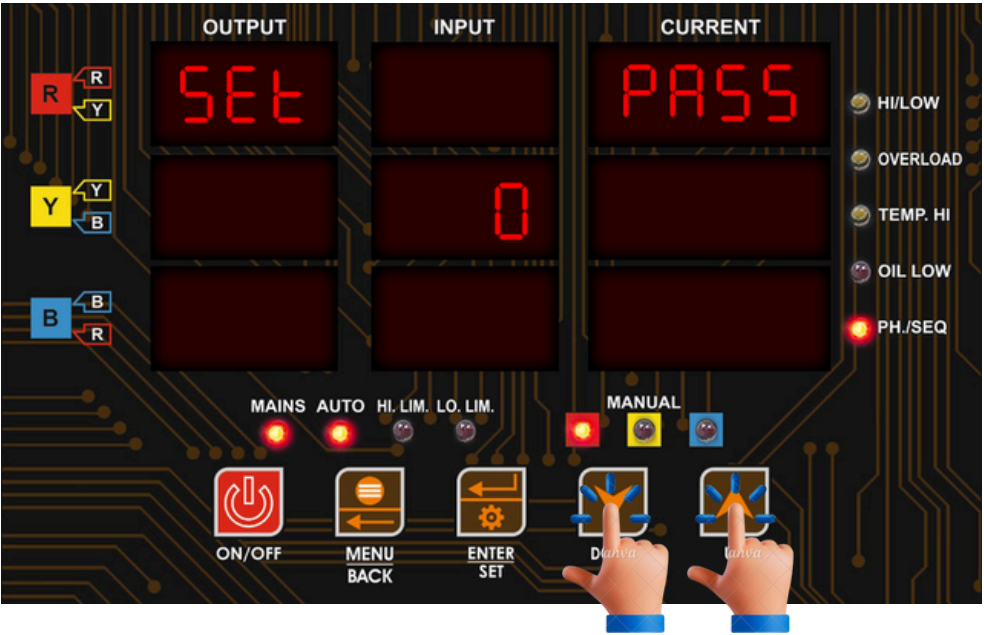
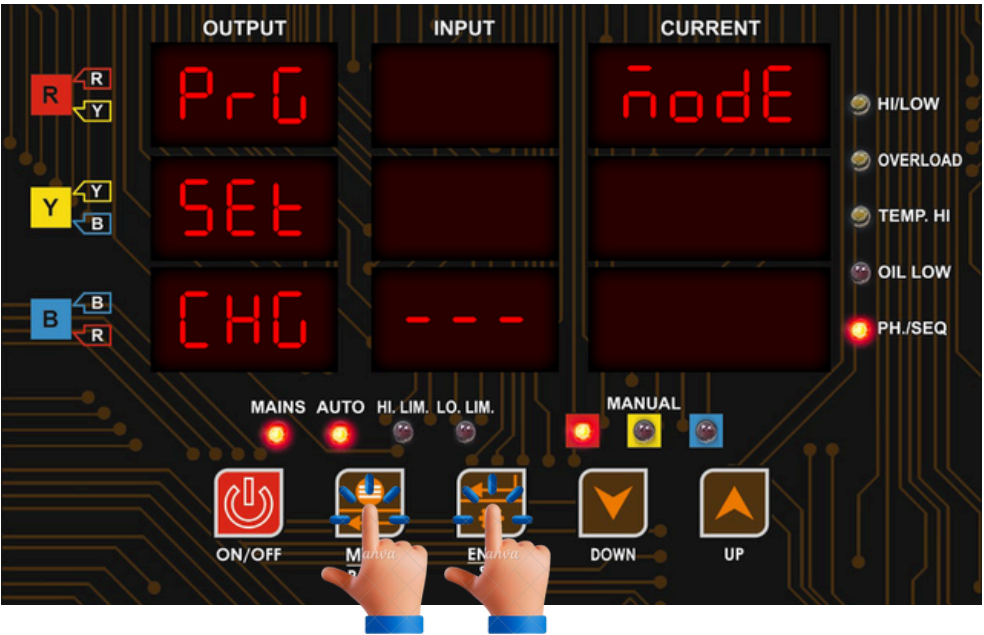
- Use “UP/DOWN” button to set desired output voltage.

- Press “MENU/BACK” button to select desired phase indicated by the marked LEDs and use “UP/DOWN” button to set desired output voltage.

Programming Mode:-

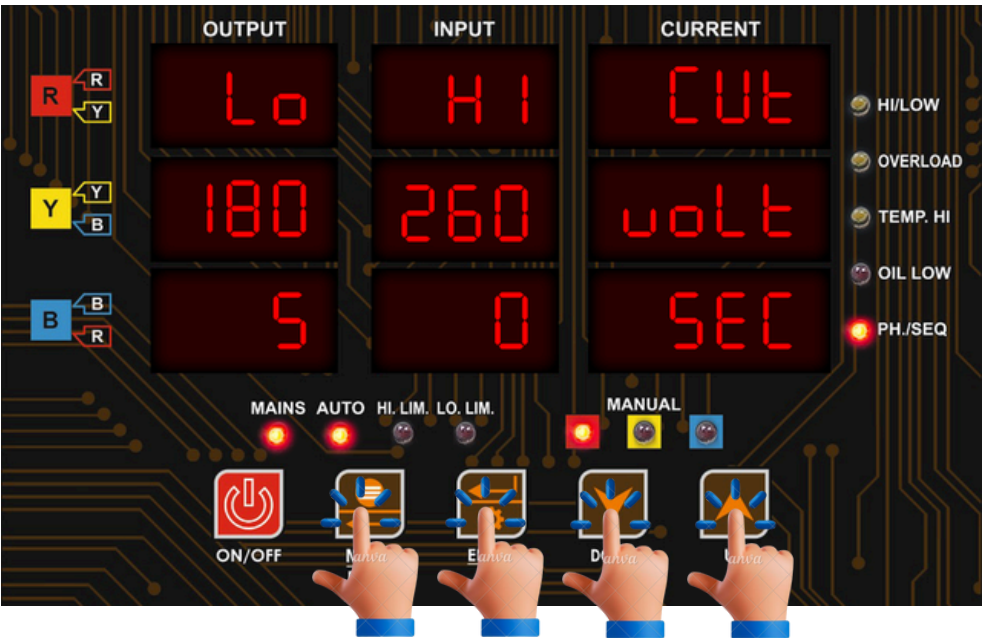
ENTERING PROGRAMMING MODE

- Press “MENU” + “ENTER” button together and select “CHG”.
- Enter your passcode using “UP/DOWN” buttons and press “ENTER” to confirm.
- Default passcode is “000”, upon entering the right passcode you will enter programming mode.
- Use “UP/DOWN” key to change values.
- Use “ENTER” to move to next parameter and “BACK” for previous.



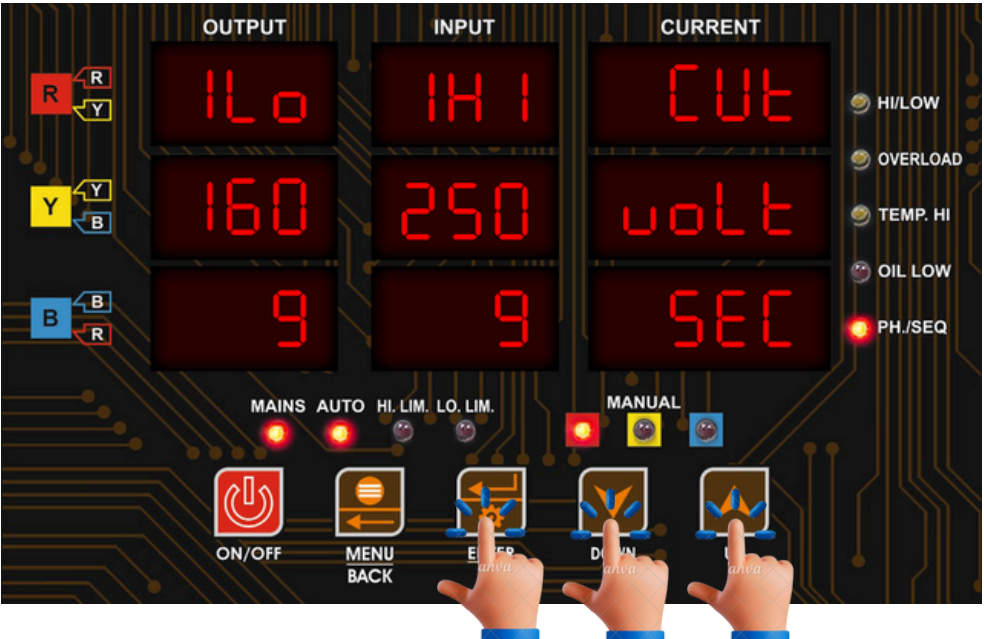
LOW AND HIGH CUT

- Set voltage and trip time for low cut and high cut.



INPUT LOW AND INPUT HIGH CUT

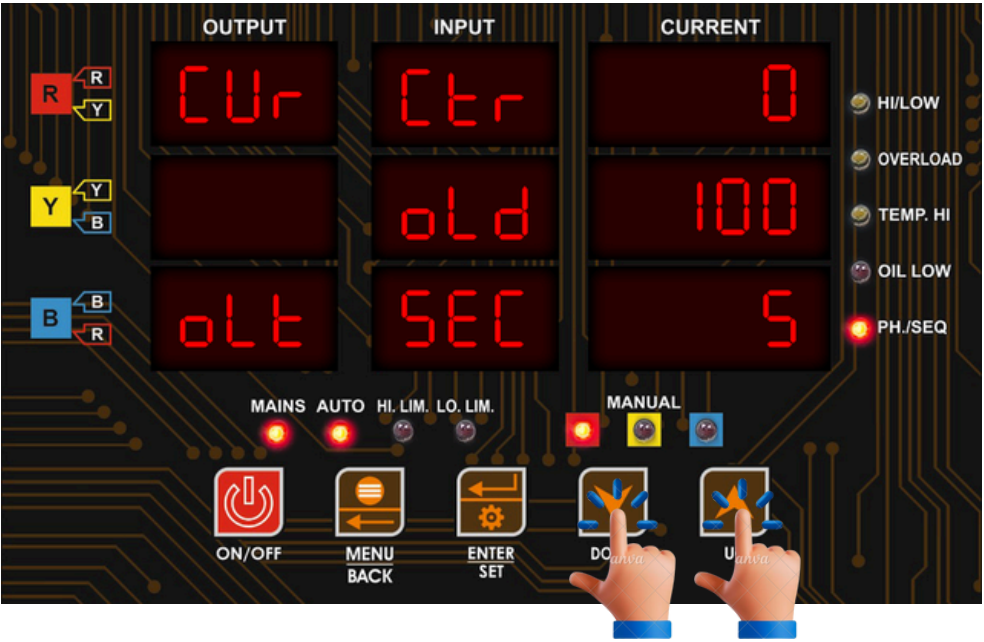
- Set voltage and trip time for input low cut and input high cut.



Programming Mode:-

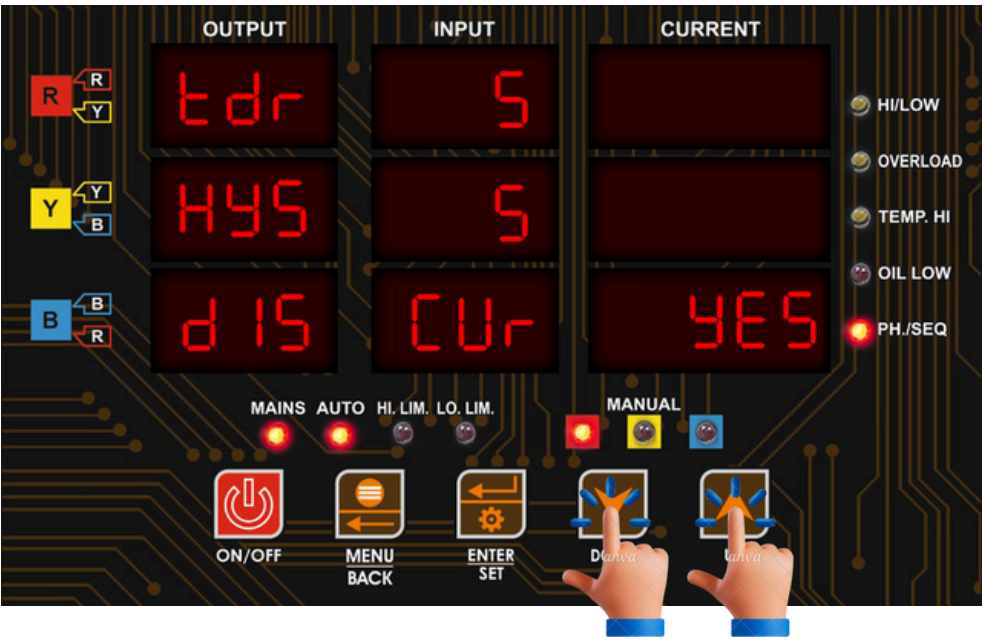
CT RATIO, OVERLOAD AND TRIP TIME

- Set CT ratio, overload (AMP) and overload trip time.
- Use 100 AMP CT for 0-100 AMP or sensing CT with external CT for current above 100 AMP.
- CTR for default 100 AMP CT is 000.
- CTR for external CT, if using 200/5 CT, divide and enter the value, i.e., 40.



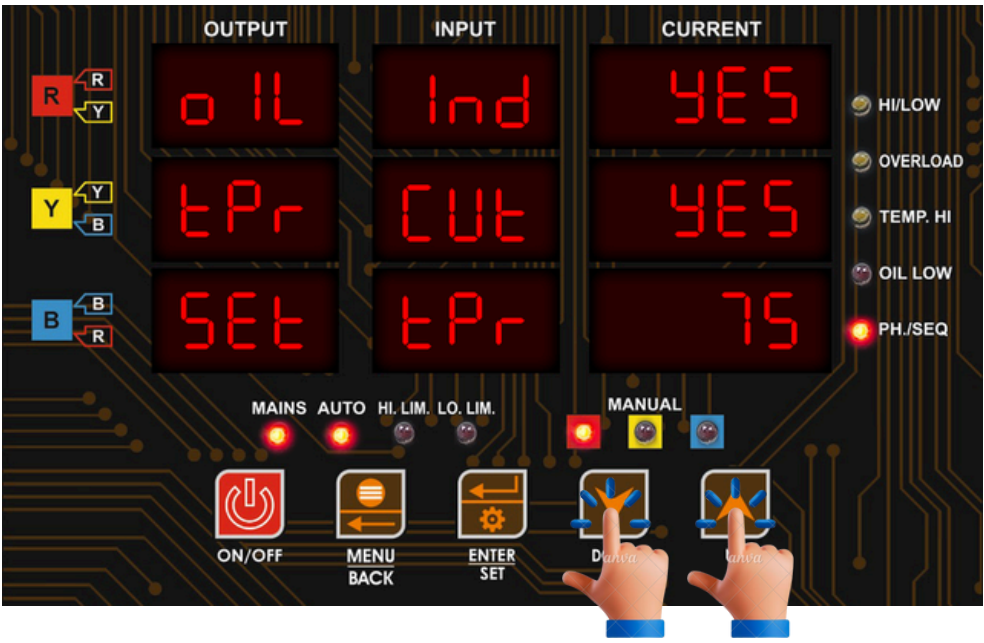
TDR, HYSTERISIS AND DISPLAY SCROLLING

- Set time delay relay, hysteresis and turn auto scrolling on or off.
- If selected no, current will not be visible in normal running mode.



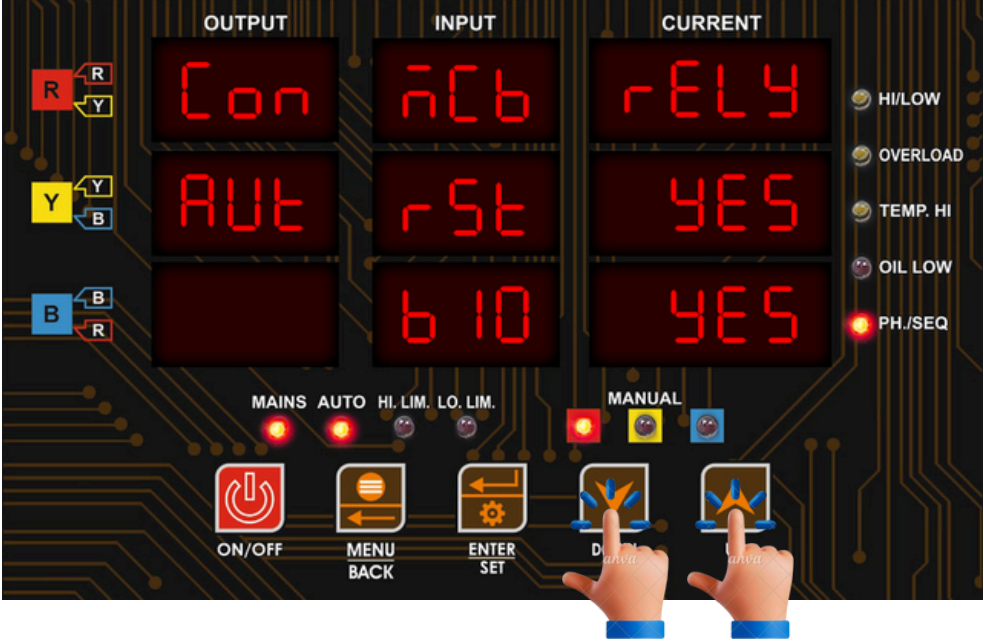
OIL LEVEL INDICATOR, TEMPERATURE CUT OFF

- Turn oil level indicator on or off. An additional “oil sensor” has to be plugged in for this feature.
- Turn on temperature cut off and set temperature in celsius. An additional “temperature sensor” has to be plugged in for this feature.



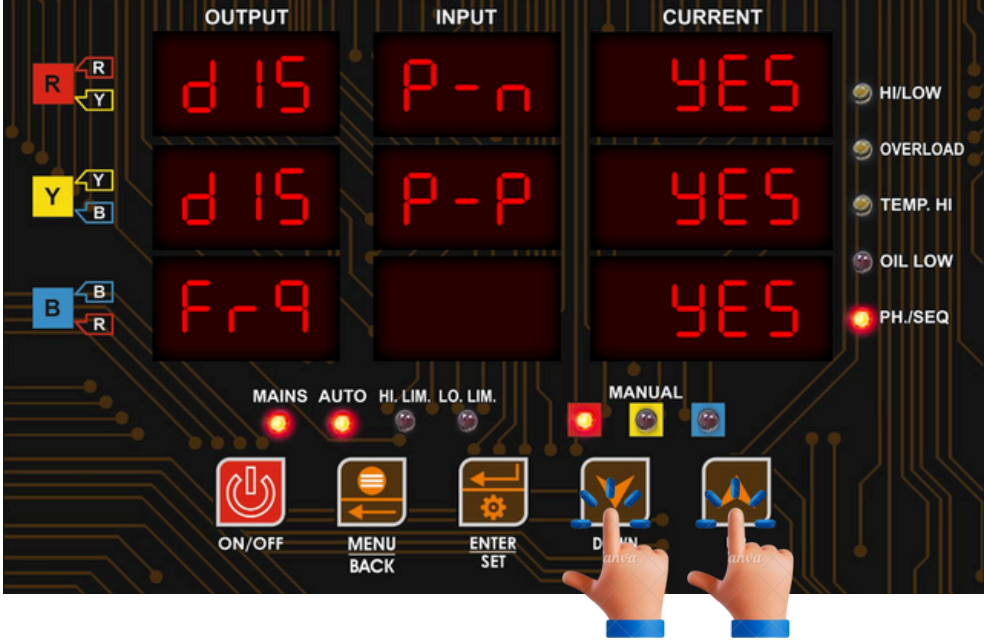
CONTACTOR/MCB/RELAY, AUTO RESET, BUZZER

- Select between contactor, MCCB and relay.
- Set auto reset on or off. When turned off, the user will have to turn on the card manually in case of power cut.
- Set buzzer on and off.



DISPLAY OPTIONS

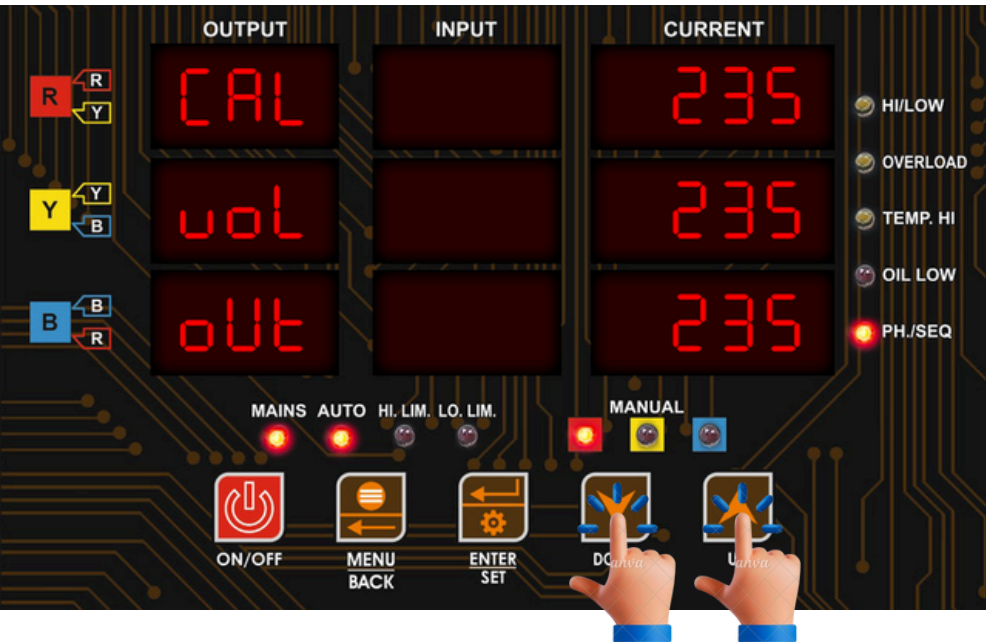
- If selected no, the parameter will not be visible in normal running mode.
- Phase to neutral voltage.
- Phase to phase voltage.
- Frequency and temperature.



Programming Mode:-

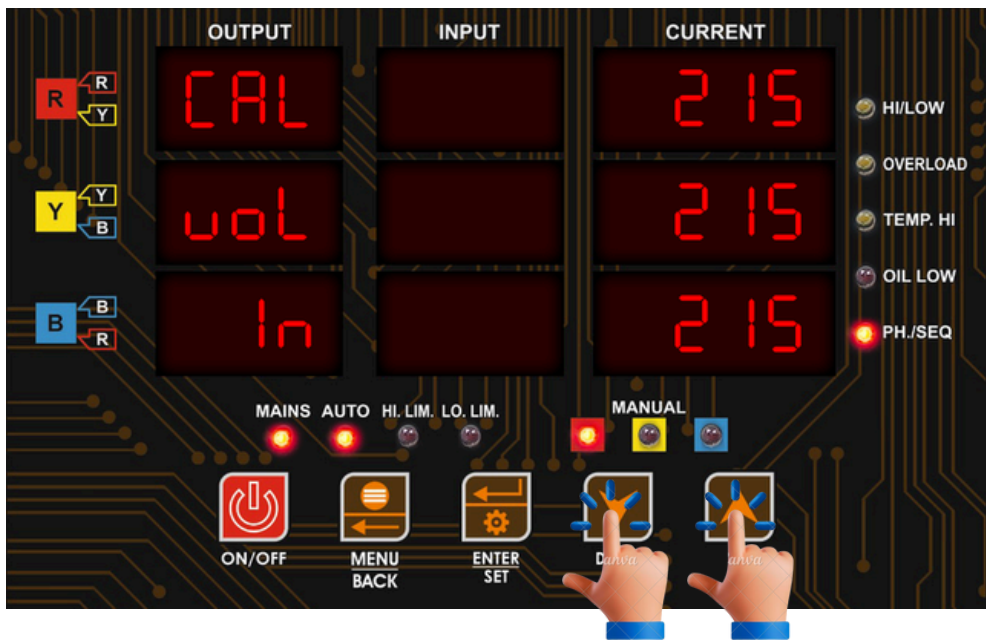
CALIBRATE OUTPUT VOLTAGE

- Use “UP/DOWN” button to match output voltage of each phase shown on the display with your meter.
(+ -18V)



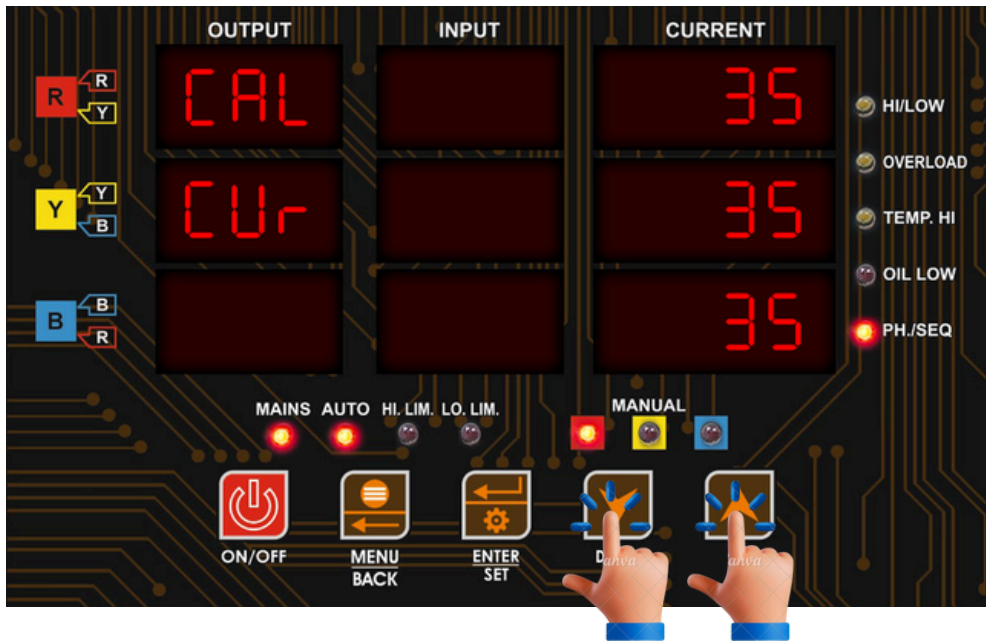
CALIBRATE INPUT VOLTAGE

- Use “UP/DOWN” button to match input voltage of each phase shown on the display with your meter. (+ -18V)



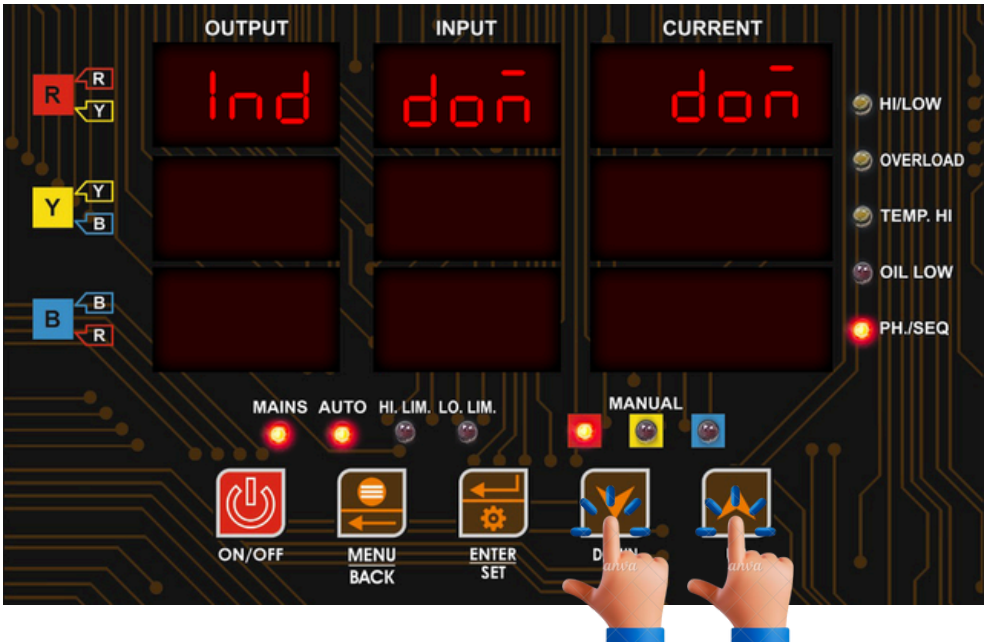
CALIBRATE CURRENT

- Use “UP/DOWN” button to match current (AMP) of each phase shown on the display with your meter.
(+ -18AMP)



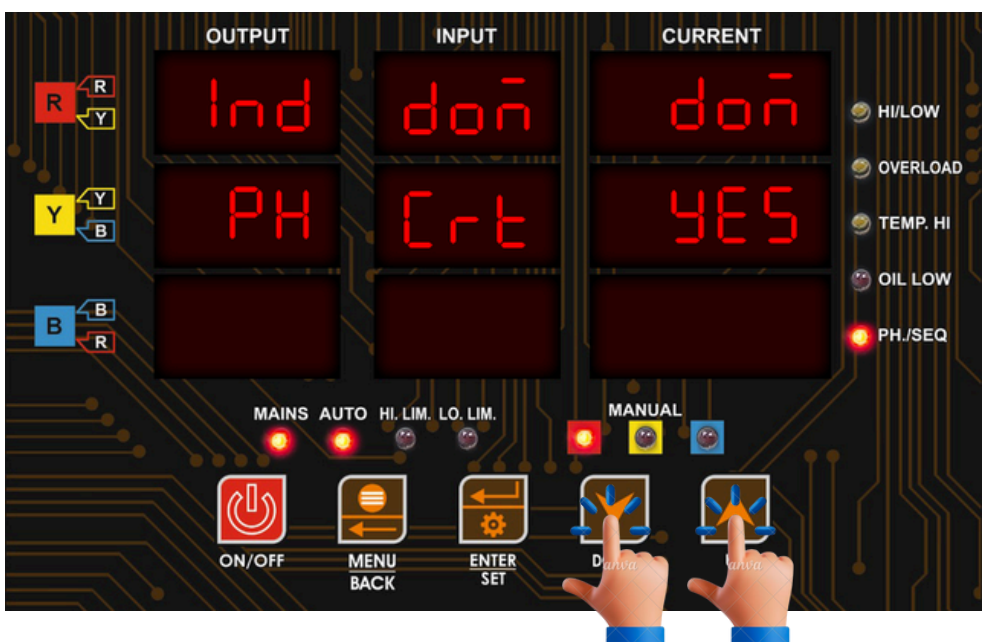
SELECT MODE: INDUSTRIAL OR DOMESTIC

- Choose domestic or industrial mode based on your preference. Industrial mode opens an option for phase correction as shown in next step.



PHASE CORRECTION ON OR OFF

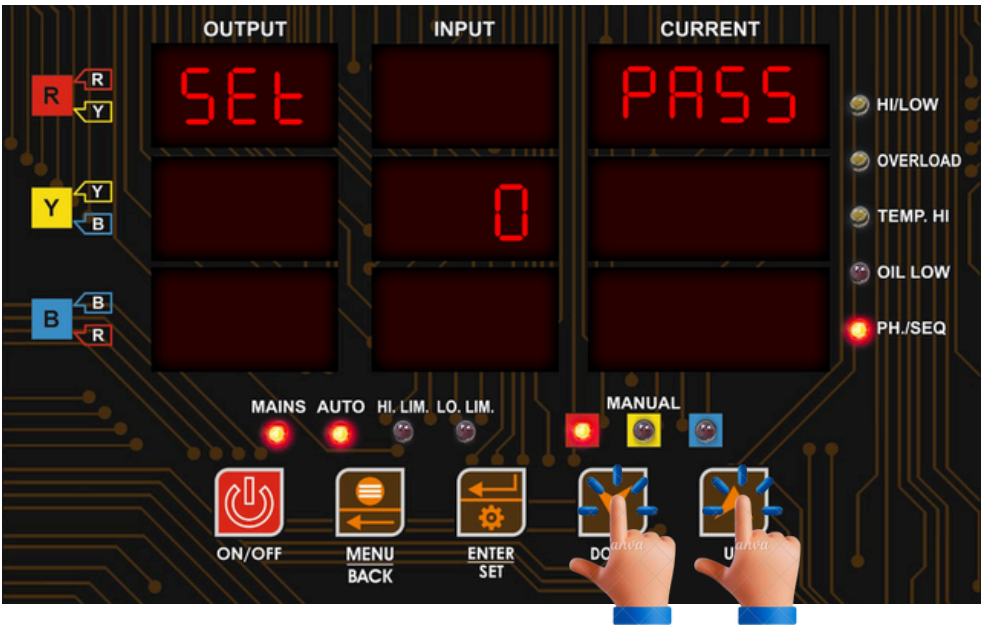
- When industrial mode is selected and phase correction is enabled, the user can use an extra contactor for phase correction.



Programming Mode:-

SET PASSCODE

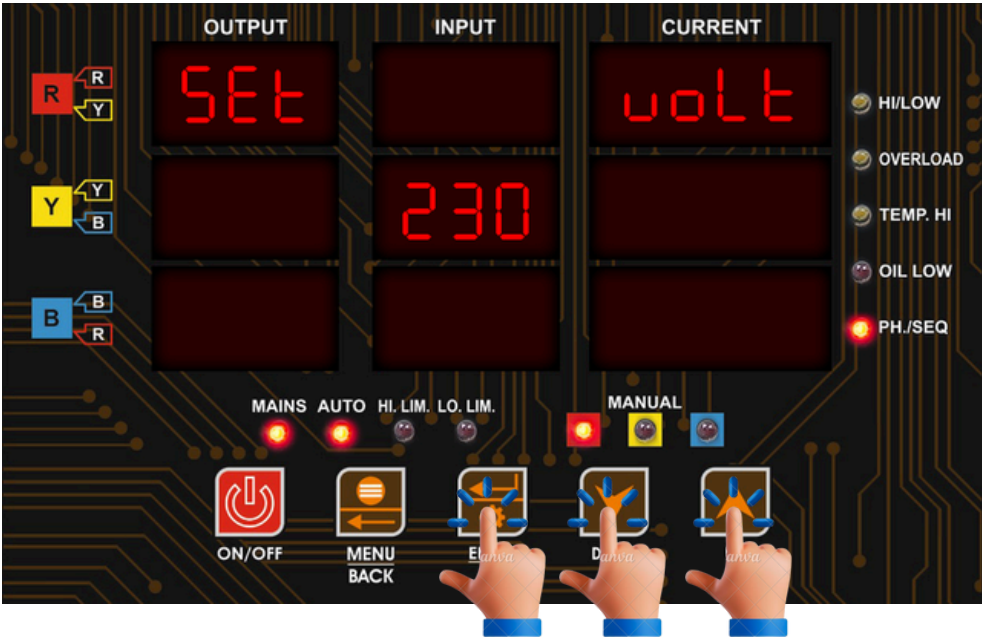
- Use “UP/DOWN” button to change passcode. Passcode can be set between a range of 000-999.
- In case the passcode is forgotten, user shall send back the product to us for re-writing the memory or contact our technical team for assistance.



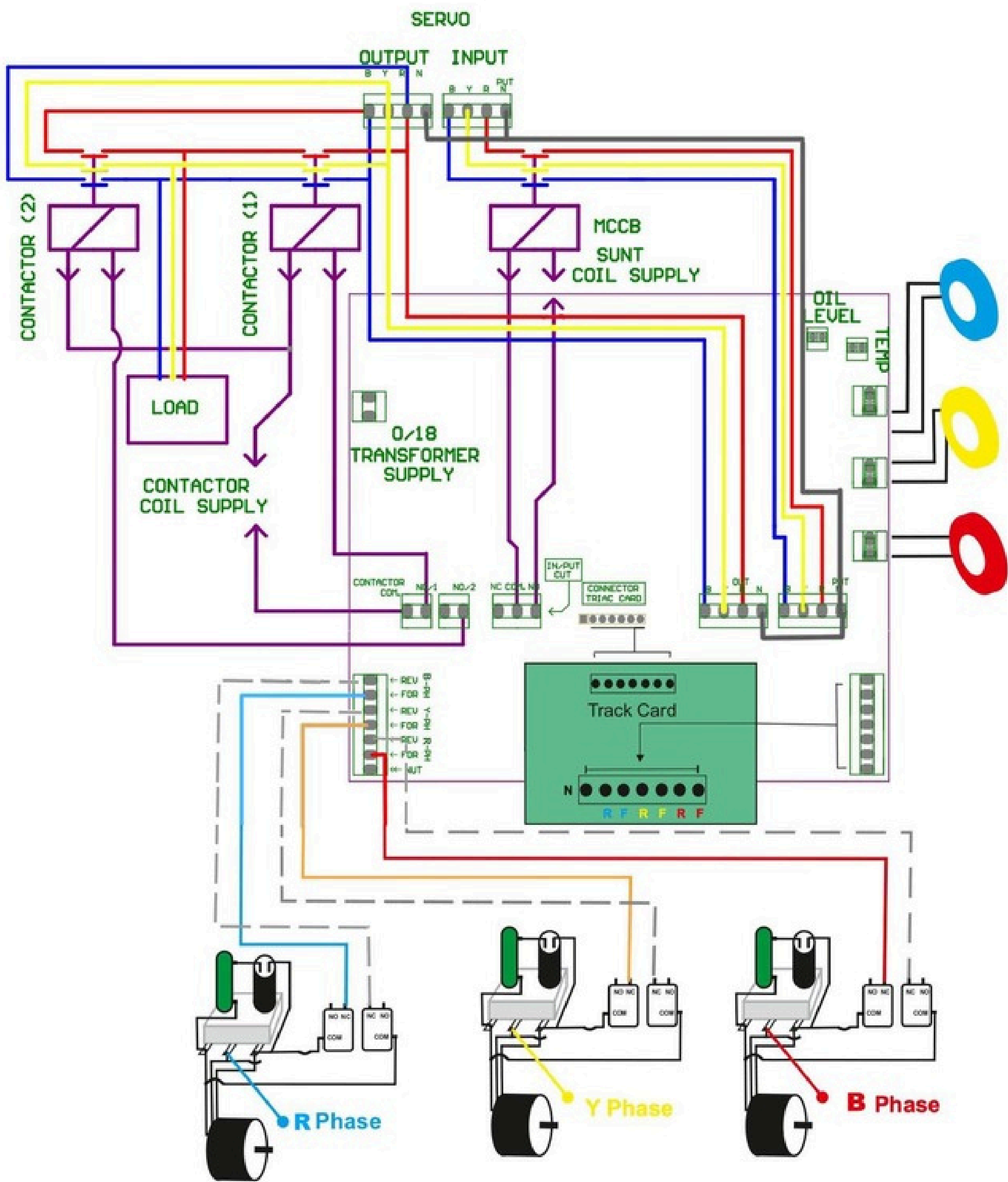
Set Output Voltage:-

SET OUTPUT VOLTAGE

- Press and hold “ENTER/SET” button for 3 seconds and use “UP/DOWN” button to set desired output voltage.



Wiring Diagram:-



Mounting Dimensions:-

