



## OPERATING INSTRUCTIONS Model : EMS-18

OPI No : OPI/132

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### Front Panel Layout:

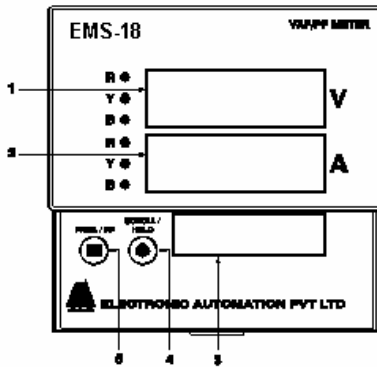


Fig 1

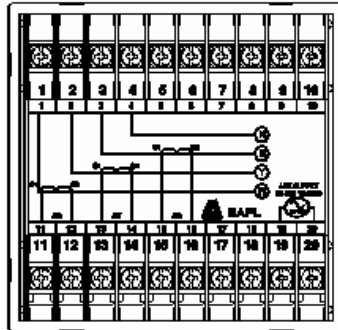


Fig 2

### Terminal Details

19,20 : Source Voltage ( 85 – 270V AC/DC )

1 : R Phase |

2 : Y Phase | Voltage

3 : B Phase |

4 : Neutral

11, 12 : AR |

13, 14 : AY | To be connected to CT S1 & S2

15, 16 : AB |

### Description

- 1) **Display 1:** Scrolls through RN, YN, BN, RY, YB, BR Voltage parameter.
- 2) **Display 2:** Scrolls through RN, YN, BN current parameter.
- 3) **Display 3:** Shows the Frequency / PF parameter.
- 4) **SCROLL/HOLD:** By pressing this button either display can be made to scroll or display can be held in selected parameter for display1 and display2.
- 5) **FREQ./ PF :** To Change parameter to view either Frequency or Power factor.
- 6) **LEDs:** Required Led will glow to show the corresponding input in the first 2 display windows

### Function:

EMS-02 is an electronic instrument capable of measuring voltage, current, frequency and PF. This meter has a 4 digit seven segment display to indicate the value and 6 LEDs to indicate the input which is being displayed.

### How to Operate

- 1) Connect 3 phase 4 wire voltage and current circuit as per the diagram given on the back panel.(fig.2 )
- 2) Connect rated auxiliary supply at terminal 19 & 20.
- 3) When rated voltage is applied on auxiliary terminal, display starts showing parameter one by one in auto scrolling mode.

### Following are the parameters displayed.

- a) Phase voltages for 3phases ( R-V, Y-V, B-V) ← **Display 1**
- b) Line –to-line Voltages (RY-V, YB-V, BR-V) ← **Display 1**
- c) Phase current for 3 phases (R-A, Y-A, B-A) → **Display 2**
- d) Phase frequency or Power Factor → **Display 3**

- 1) When “SCROLL/HOLD” button is pressed scrolling will stop (hold mode) & by again pressing the same scrolling will continue from where it stopped (scrolling mode).

### **How to program CT Ratio?**

1. By pressing both Freq/Pf and Scroll/Hold buttons simultaneously, The top display shows CT-PRI & Middle Display shows previously set value with MSD Blinking
2. Use Scroll/hold button to Change the value of the blinking digit.
3. Use Freq/PF Button to shift the blinking to the next digits
4. Similarly set all the digits to get the required CT-PRI

After setting all digits press Freq/PF button to come out of the program menu.

### **Note:**

1. Value can be set for CT-PRI is from 5- 6000
2. CT-SEC by default is 5. This is factory set and does not get displayed.

### **Caution:**

- Since it is a high voltage device, while connecting and operating, precautions are a must and only licensed people should handle it.
- For any operation including taking it out, the power should also completely switched off.
- EAPL is not responsible for any consequential damages arising out of use of our products, though the technology is cautiously chosen & implemented like any other well designed good electric meter.
- Ensure that MCB protection is available between input bus bar and the unit for avoiding damage to the unit.
- Ensure that CT ratio is inline with the CT name plate provided on the CT used.
- Ensure that in 3 phase 4 wire system CT's that are not connected to the unit should be shorted. S1 & S2 of the unused phase in the unit need not to be shorted.
- Ensure that all terminals are tightened securely.
- Blinking of display could indicate over voltage cut off. Switch off the unit for 20 seconds to reset the resettable fuse and switch on the unit.