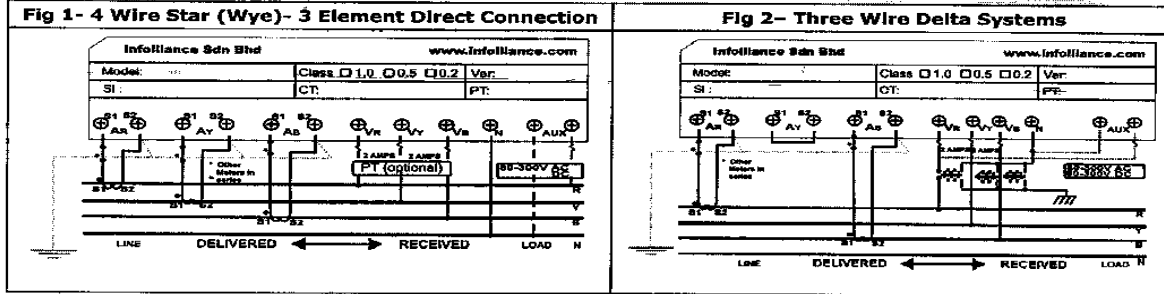


PROGRAMMING GUIDE FOR IM SERIES

1. UNIQUE FEATURES

- STAR (Wye)/ Delta / Single Phase Programmable.
- Universal Auxiliary (80 - 300V AC/DC) supply.
- PT ratio / CT ratio programmable
- "OLD" Register for storing Cleared Energy.
- User configurable (Editable) password
- Universal Voltage Input (80 - 550 VAC) and Current Secondary (5A-1A)
- Compact size and light Weight.

2. WIRING DIAGRAM



3. KEY FUNCTIONS

| Key | In SET (Programming) mode | In Measurement mode |
|---------|---|--|
| Right ▶ | To select the value and to accept the value | No action |
| Down ▼ | To edit the value/system type down-ward in edit mode and scroll through the parameters. | To scroll down the pages to look at different parameters |

4. ENTERING CONFIGURATION (SETUP) MODE

To configure the setup parameters in IM series of meters through front panel keys, the following steps can be followed.

| Step | Actions | Display Reads | Range/Options / comments |
|------|--|---|--|
| 1. | Press RIGHT and DOWN keys together to enter the setup | CLr.SET (setup/clear) | Press RIGHT and DOWN keys together |
| 2. | Press DOWN key | 0000 PS (Password) with first digit "0" blinking. | |
| 3. | Press DOWN key in order to increment first digit to "1". | PASSWORD = 1000 (default/factory set). | 0000 the corresponding digit blinks |
| 4. | Press RIGHT key four times to accept the password. | CLr I | This option is to clear the energy press right key to clear ,Press down key to enter SETUP |
| 5. | Press DOWN key to go to next page. | StAr. EL | StAr means STAR system. Meter would display the last set up value/ system. |
| 6. | Press RIGHT key to select other option | "StAr. El" blinking. Now other options can be chosen. | Options : StAr (Star/Wye), dELt (Delta) /1.ph (Single Phase) |
| 7. | Press DOWN key to change the system type | StAr / dELt /1.ph | |
| 8. | Press RIGHT key to memorize the system type required. | Blinking stops. Displays steady system type. | |
| 9. | Press DOWN key to go to next page. | xxxxP.P. (415.0 dcfault setup) | Indicates the value in first four digits & PT primary in last two digits. Programmable range : 100V to 99kV |
| 10. | RIGHT key to edit the value | Editable digit blinks. | |
| 11. | Press DOWN key to select the required value. | Changed digit blinks. | |
| 12. | Press RIGHT key to accept the changed value. | Blinking digit stabilizes. | Follow the same procedure to set the rest digits. |
| 13. | Press DOWN keys | Decimal point blinks | Set Kilo, while setting decimal point. Eg : To set 11.00kV., Set first 4 digits (1100) as explained above. Keep pressing DOWN key to place Decimal point at appropriate location |

| | | | |
|-----|---|--|--|
| | | | while Kilo LED should also come ON. |
| 14. | Press RIGHT key to accept set the value | 415.0V | |
| 15. | Press Down key to go to next parameter. | xxxxP.S (415.0 default setup) | PT secondary. Follow the procedure as explained in Sl. No. 9 to 11 to edit. Range : 50V to 550V |
| 16. | Press Down key to go to next parameter. | xxxxC.P (5.000 default setup) | CT primary. Follow the procedure as explained in Sl. No. 9 to 11 to edit. Range : 1A to 50kA |
| 17. | Press Down key to go to next parameter. | xxxxC.S (5.000 default setup) | CT secondary. Follow the procedure as explained in Sl. No. 9 to 11 to edit. Range : 1A -6A |
| 18. | Press Down key to go to next parameter. | no r.L | Reverse lock (blocks proportionate energy accumulation in case the CT polarity reverse Option : no (NO)/YES (default NO) Applicable for all meters accept LG 1100 |
| 19. | Press Down key to go to the next parameter. | ArthUA (Method of VA measurement). | Arithmetic (Arth)/ Vector harmonics (UEC.H)/ Vector (Uctr) can be selected using DOWN keys. Applicable for all meters accept LG 1100 |
| 20. | Press Down key to go to the next parameter. | xxxx.bA (9600- default setup) | Defines the baud rate. Option : 600, 1200, 2400, 4800, 9600, 19.20k (Communication speed) |
| 21. | Press Down key to go to the next parameter. | EUEnPr (Even Parity). | EUEn (even)/odd (odd)/no (no parity) (Internal communication error check) |
| 22. | Press Down key to go to the next parameter. | 1.000dU | Defines the (ID) communications identification number. Option: 1-247 |
| 23. | Press Down key to go to the next parameter. | ----PS. | Password user definable. Caution : If password other than the default is set, then Memorize it. Meter will reject programming if tried with wrong passwords. In such case meter need to be reset & recalibrated at factory only. |
| 24. | Press Down key to go to the next parameter. | SAVE Y - Follow the procedure as explained in Sl. No. 9 to 11 to edit. | To save the setting made. Option : Y (YES) / n (NO) |
| 25. | Press RIGHT key to memorize/store the changes done. | Display returns to run mode. | If "n"(no) is selected then Meter enters into RUN mode without secondary affecting any edited Values in the setup. |

Once the required parameter is programmed press the down key continuously up to it reaches SAVE page to reach , SAVE page directly.

5. CLEARING THE INTEGRATOR (Applicable for Meter, that measure Energy)

To Clear parameters of the iM series from the front panel, Press RIGHT and DOWN Keys together, and CLR.SET is displayed and press RIGHT Key again 'CLR' (Clear) is shown on the display. Enter the Password (default password is 1000 Setup and Clear have the same password) and it will display. "CLR.I" (clear integrator). Press right key and meter will prompt to YES or No. Press DOWN key for changing Yes or No and Press RIGHT key to do the operation. The cleared value is transferred to OLD register for future references. Performing the clear operation twice will clear the data in OLD register also

6. Enabling and disabling of Auto scrolling

Enabling auto scrolling: Press Down key continuously for 5 seconds or until display shows **EnbL.Au** for scrolling.

Disabling auto scrolling: Press any key (RIGHT/DOWN), display show **dSbL.Au** and returns to normal mode.

7. LED INDICATIONS

| LED status | Meaning |
|---------------------|---------------------|
| 'KILO' ON | Kilo |
| 'MEGA' ON | Mega |
| 'KILO' & 'MEGA' ON | Giga |
| 'KILO' & 'MEGA' OFF | Direct reading |
| 'OLD' | Last cleared Energy |

Note : Meter gives the indication of reversal of CT polarity, but do not affect the energy accumulation.

8. DISPLAY OF PARAMETERS

| | | | |
|-----|-------------------------|----|-----------------|
| LL | Voltage line to line | F | Current Average |
| rY | Voltage RY Phase | Fr | Current R Phase |
| Yb | Voltage YB Phase | FY | Current Y Phase |
| br | Voltage BR Phase | Fb | Current B Phase |
| Ln | Voltage line to Neutral | Wt | Watts Total |
| Ur | Voltage R to Neutral | Wr | Watts R Phase |
| Uy | Voltage Y to Neutral | Wy | Watts Y Phase |
| Ub | Voltage B to Neutral | Wb | Watts B Phase |
| CLR | CLEAR | F | FREQUENCY |

* Wh" is displayed with six digit resolution; no parameter name will be displayed.

Power Factor (PF) Optional: "or" - R Phase PF (similarly Y and b represents Y & B phase respectively.)