



VAF-2330



VAF-2310

Operator's Manual

VAF-23XX

Volts-Amps-Frequency Indicator

Please read the manual carefully before Installation/Configuration



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INTRODUCTION

PRODUCT OVERVIEW

PI-Series (PI-VAF3, PI-VAF1, PI-V1, PI-V3, PI-A1, PI-A3, PI-F) power indicators can be used to monitor Voltage, Current, Frequency and RPM of three phase and single phase two wire electrical system.

To get the best out of your investment, we suggest that you take a few moments to review this manual. Before use, please program the TYPE (measurement system configuration), PT Ratio and CT Ratio through the front panel keys. Otherwise, it will read your system incorrectly.

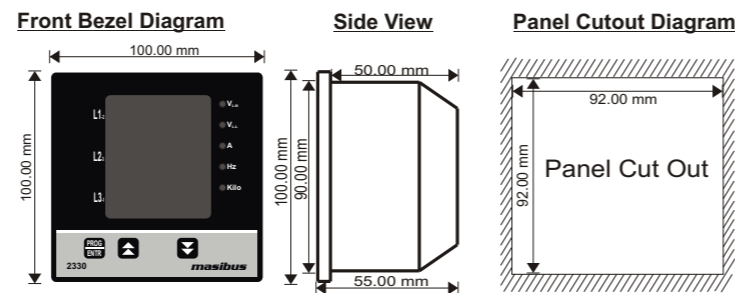
| Product Ordering Code | | | | | | |
|-----------------------|----------------|-------|-----------------------|----------------------------|------------------------|----------|
| Model | Display | Phase | Parameter | Current Input ³ | | |
| 23 | XX | X | X | X | X | X |
| | 10 Single Line | 1 | 1- Phase ¹ | 0 | F (Freq.) ² | N None |
| | 30 Three Line | 3 | 3- Phase | 1 | V(Volt) | 1 1 Amps |
| | | | | 2 | A(Amp) | 5 5 Amps |
| | | | | 3 | VAF | |

Note: -

- 1-Phase Voltage & Current are available in Single Line Selection Only
- 2 Frequency is available only on 1-phase & Single Line Selection Only
- 3 CT input is applicable while selecting A or VAF as a display

| List Of Accessories | | |
|---------------------|--------------------|----------|
| Sr. No. | Description | Quantity |
| 1 | Panel Mount Clamps | 02 |
| 2 | User Manual | 01 |

MECHANICAL GUIDELINE



INSTALLATION GUIDELINE

TERMINAL CONNECTION

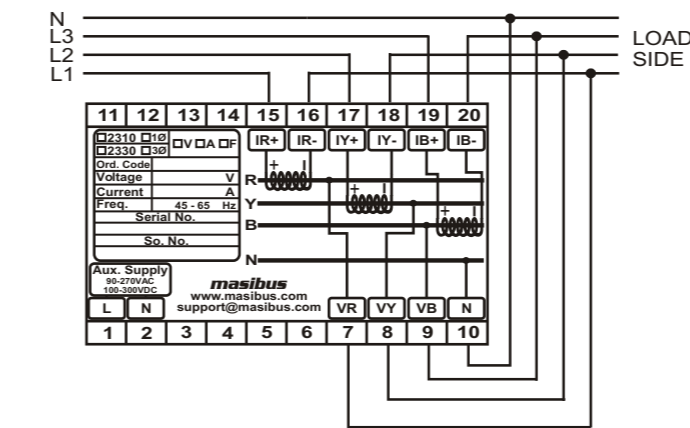
- 1- L = Phase of auxiliary AC supply.
- 2- N = Neutral of auxiliary AC supply.

- 7- VR = R phase voltage connection.
- 8- VY = Y phase voltage connection.
- 9- VB = B phase voltage connection.
- 10- VN = Neutral point for three phase four wire system.

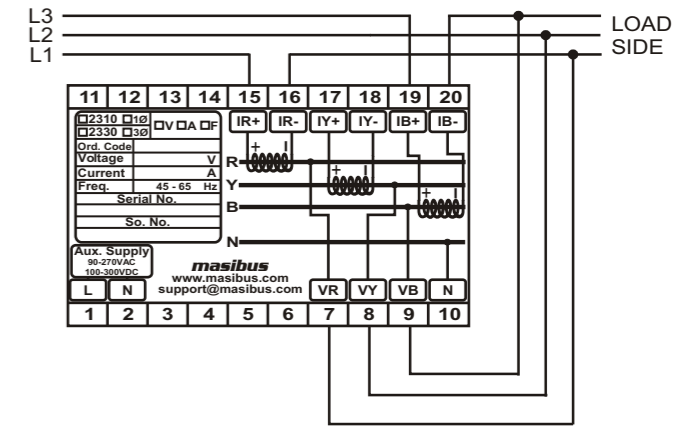
- 15- IR+ = Input terminal for R phase current connection.
- 16- IR- = Output terminal for R phase current connection.
- 17- IY+ = Input terminal for Y phase current connection.
- 18- IY- = Output terminal for Y phase current connection.
- 19- IB+ = Input terminal for B phase current connection.
- 20- IB- = Output terminal for B phase current connection.

Terminal Wiring Details

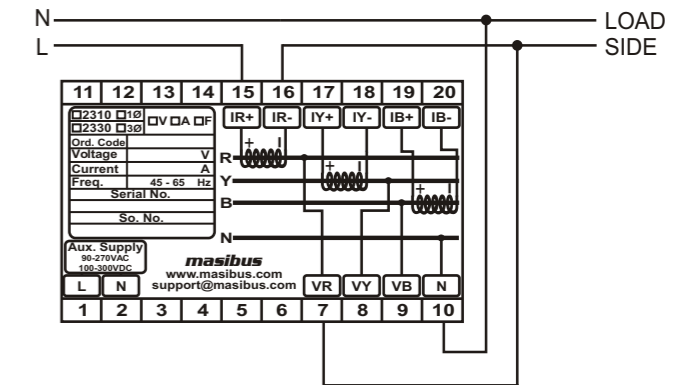
1. Three Phase Four Wire Wiring Configuration



2. Three Phase Three Wire Wiring Configuration



3. Single Phase Two Wire Wiring Configuration



SPECIFICATION

| Input | |
|-------------------------------|--|
| System Type | |
| Three Phase Four Wire (3P4W) | |
| Three Phase Three Wire (3P3W) | |
| Single Phase Two Wire (1P2W) | |
| Measurement Parameters | |
| Voltage | L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1, Max. Value |
| Current | All Phase Current, Max. Value |
| Frequency | System Frequency |
| RPM | Calculation Based RPM (Available in 3 line, 3 Phase model) |
| Hours | ON Hour, Run Hour (Available in 3 line, 3 Phase model) |
| Voltage | |
| Direct Voltage | 0 to 550V L-N |
| Measurement Method | True RMS |
| Burden | 0.5VA per phase |
| Wire gauge | 16AWG |
| PT Ratio | 1 to 9999 Programmable |
| Overload | 1.2 x Nominal Voltage (Continuous) |
| Current | |
| Secondary Current | 1A/5A (Factory Selectable) |
| Measurement Method | True RMS |
| Accuracy | Class 1.0 |
| Burden | 0.25VA per phase |
| Wire gauge | 16AWG |
| CT Ratio | 1 to 9999 Programmable |
| Overload | 1.2 x Nominal Voltage (Continuous) |
| Frequency | |
| Frequency | 45 to 65Hz |
| Display | |
| Display | 0.56" [14mm] height seven segment, RED colour 4 Digit, Three line Display (2330) 4 Digit, Single line Display (2310) |

| | |
|---|--|
| RPM | |
| Number of poles can be configured depending upon Application requirements | |
| Range | 0 to 100 poles [configurable] |
| ON Hour Run Hour | |
| Total Hours for unit ON condition | |
| Total Hours for unit with load condition | |
| Range | MAX. 999999 Hours 59 Minutes Resolution: 1 Minute |
| Accuracy | |
| Voltage | ± 0.5% of FS +/-1 Digit (20 -120% of Nominal Value) |
| Current | ± 0.3% of FS +/-1 Digit (1-120% of Nominal Value) |
| Frequency | ± 0.5% of Reading (>40V Input) |
| Auxiliary Power Supply | |
| Power Supply | 90-270VAC, 50/60Hz or 100-300VDC |
| Burden | Less than 3VA |
| Environmental | |
| Working temperature | 0 to 55°C |
| Storage temperature | -10 to 70°C |
| Relative humidity | 30-95% non-condensing |
| Isolation (Withstanding voltage) | |
| Between Field input [voltage & Current] terminals and Auxiliary power supply terminal | |
| At least 1500 V AC for 1 minute | |
| Insulation resistance: 20MΩ or more @ 500 V DC between field input [voltage & Current] terminals and Aux. power supply terminals | |
| Physical | |
| Mounting Type | Panel mount |
| Size (mm) | 100 x 100 x 55 mm |
| Front Bezel (mm) | 100 x 100 mm |
| Panel Cutout (mm) | 92 x 92 mm |
| Depth behind panel | 50 mm |
| Material | ABS |
| Accessory | 2 Panel mount clamps |
| Weight | 250 gms |
| Enclosure Protection Rating | Ip20 |

SAFETY / WARNING PRECAUTIONS

Safety precautions

Dangerous voltages capable of causing death are sometimes present in this instrument. Before installation or beginning of any troubleshooting procedures the power to all equipment must be switched off and isolated. Units suspected of being faulty must be disconnected and removed first and brought to a properly equipped workshop for testing and repair. Component replacement and interval adjustments must be made by a company person only.

Warning precautions

- Before wiring, verify the label for correct model number and options.
- Wiring must be carried out by personnel, who have basic electrical knowledge and practical experience.
- All wiring must confirm to appropriate standards of good practice and local codes and regulations. Wiring must be suitable for voltage, current, and temperature rating of the system.
- Beware not to over-tighten the terminal screws.
- Verify that the ratings of the output devices and the inputs as specified in this manual are not exceeded.
- Upon receipt of the shipment remove the unit from the carton and inspect the unit for shipping damage. If any damage due to transit, report and claim with the carrier. Write down the model number and serial number for future reference when corresponding with our Customer Support Division.
- Do not use this instrument in areas such as excessive shock, vibration, dirt, moisture, corrosive gases or rain. The ambient temperature of the areas should not exceed the maximum rating specified.

WARRANTY

Warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Masibus is not liable for special, indirect or consequential damages or for loss of profit or for expenses sustained as a result of a device malfunction, incorrect application or adjustment

Masibus' total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied

