

This section gives you all the information necessary to help you monitor and operate your controller including an Operator Interface overview, an explanation of the Displays, keys, LEDs, Mode access, and Operation Modes.

FRONT PANEL



FEATURES	PROTECTION	PROTECTION
User Selectable Trip Time	Over/Under Voltage	Unbalance
Auto/Manual/ Reset Function	Over/Under Current	Phase Loss
True RMS Measurement	Over/Under Frequency	Lock Rotor Point
	Single Phase Prevention	Phase Sequence
	Short Circuit	Neutral Loss

KEY OPERATION:

Keys	Functions
	To be set Value And Move To The next Step.
	To Increment Parameter Value.
	To Decrement Parameter Value.
	To Enter Parameters + Save and Exit.

TECHNICAL SPECIFICATION

INPUT Voltage AC	Direct Voltage AC Burden	30 to 300V(L - N), 50 to 520V(L - L) < 0.2VA
INPUT Current AC	Primary CT Ratio Secondary Current AC Burden Overload	5 to 2000 Amp Selectable 0.1 to 5 Amp. < 0.2VA Up to 6A Continuous
INPUT Display and Dimension	Display Size (mm) Panel Cutout (mm)	3 Digit, 3 Line 7 Seg 0.56", RED LED 96 (H) X 96 (W) X 53 (D) mm 92 (H) X 92 (W) mm
Network Selection		3 Phase - 4 Wire, 3 Phase - 3 Wire
Trip Setting	Under Current Over Current Under Voltage Over Voltage Short Circuit Lock Rotor Point Unbalance	0.00 to CTR 0.00 to CTR 50 to 520V For 3Ø - 3W, 30 to 300V For 3Ø - 4W 50 to 550V For 3Ø - 3W, 30 to 330V For 3Ø - 4W 1 - 9 Scale 0.5 to 9.0 Scale 5 - 60%
Time Parameter	Power On Delay Initial Time Delay Trip Delay Time (Voltage, Current, Frequency, SSP, Unbalance) Scrolling Time Reset Time	0 to 99 Sec. 0 to 99 Sec. 0 to 999 Sec. 1 to 99 Sec. 0 to 99 Sec.
Output Specification	Relay Relay Type Rating	1 Nos 1st Relay (NO - C - NC) 1st Relay 10Amp., 250V AC
Auxiliary Supply	Supply Voltage Power Consumption	230V AC, ±10%, 50Hz 4VA @ 230 AC MAX
Environmental Condition	Working Temperature Storage Temperature Relative Humidity Protection Level (As Per Request)	0 to 55°C 0 to 55°C 95% RH Non-Condensing IP-65 (Front Side As Per IS/IEC 60529 : 2001)

Warranty and Application Considerations

Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your venex representative if you have any questions or comments.

Warranty and Limitations of Liability

WARRANTY

(12 Months, unless agreed otherwise by us) We undertake to replace or repair at our option any defective product that needs replacement or repair, by reason of defective workmanship or defective materials, brought to our notice within the period specified below as "Warranty Period" after delivery to the buyer, providing also that it we so require, the part in respect of which a complaint is made must, before liability can be entertained under this clause, be sent at buyer's expense to our works or our office, as we may determine. Under no circumstances do we undertake liability for indirect or consequential loss or damage of any nature. This guarantee is given in lieu of and excludes every other condition or warranty whether statutory or otherwise.

LIMITATIONS OF LIABILITY

VAPL Shall Not Be Responsible For Special, Indirect, Or Consequential Damages, Loss Of Profits, Or Commercial Loss In Any Way Connected With The Products, Whether Such Claim Is Based On Contract, Warranty, Negligence, Or Strict Liability.

In no event shall the responsibility of VAPL for any act exceed the individual price of the product on which liability is asserted

In No Event Shall VAPL Be Responsible For Warranty, Repair, Or Other Claims Regarding The Products Unless VAPL's Analysis Confirms That The Products Were Properly Handled, Stored, Installed, And Maintained And Not Subject To Contamination, Abuse, Misuse, Or Inappropriate Modification Or Repair.

Application Considerations

SUITABILITY FOR USE

VAPL shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used.

Know and observe all prohibitions of use applicable to this product.

Never Use The Products For An Application Involving Serious Risk To Life Or Property Without Ensuring That The System As A Whole Has Been Designed To Address The Risks, And That The VAPL Products Are Properly Rated And Installed For The Intended Use Within The Overall Equipment Or System.

DISCLAIMERS

PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of VAPL's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the VAPL Warranty and Limitations of Liability.

CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons. Consult with your VAPL representative at any time to confirm actual specifications of purchased product.

DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

SAFETY PRECAUTIONS

Do not touch the terminals while power is being supplied. Doing so may occasionally result in minor injury due to electric shock.



Do not allow pieces of metal, wire clippings, or fine metallic shavings or filings from installation to enter the product. Doing so may occasionally result in electric shock, fire, or malfunction.



Do not use the product where subject to flammable or explosive gas. Otherwise, minor injury from explosion may occasionally occur.



Never disassemble, modify, or repair the product or touch any of the internal parts. Minor electric shock, fire, or malfunction may occasionally occur



If the output relays are used past their life expectancy, contact fusing or burning may occasionally occur. Always consider the application conditions and use the output relays within their rated load and electrical life expectancy. The life expectancy of output relays varies considerably with the output load and switching conditions



Tighten the terminal screws to between 0.74 and 0.90 N-m. Loose screws may occasionally result in fire.



Set the parameters of the product so that they are suitable for the system being controlled. If they are not suitable, unexpected operation may occasionally result in property damage or accidents.



A malfunction in the Temperature Controller may occasionally make control operations impossible or prevent alarm outputs, resulting in property damage. To maintain safety in the event of malfunction of the Temperature Controller, take appropriate safety measures, such as installing a monitoring device on a separate line.



PRECAUTIONS FOR SAFE USE

Be sure to observe the following precautions to prevent operation failure, malfunction, or adverse effects on the performance and functions of the product. Not doing so may occasionally result in unexpected events.

- The product is designed for indoor use only. Do not use the product outdoors or in any of the following locations.
 - Places directly subject to heat radiated from heating equipment.
 - Places subject to splashing liquid or oil atmosphere.
 - Places subject to direct sunlight.
 - Places subject to dust or corrosive gas (in particular, sulfide gas and ammonia gas).
 - Places subject to intense temperature change.
 - Places subject to icing and condensation.
 - Places subject to vibration and large shocks.
- Use/store within the rated temperature and humidity ranges. Provide forced-cooling if required.
- To allow heat to escape, do not block the area around the product. Do not block the ventilation holes on the product.
- Be sure to wire properly with correct polarity of terminals.
- Use specified size (M3.5, width 7.2 mm or less) crimped terminals for wiring. To connect bare wires to the terminal block, use copper braided or solid wires with a rated temperature of over 70 °C and a gauge of AWG24 to AWG14 (equal to a cross-sectional area of 0.205 to 2.081 mm²). (The stripping length is 5 to 6 mm.) Up to two wires of same size and type, or two crimped terminals can be inserted into a single terminal.
- Do not wire the terminals which are not used.
- Allow as much space as possible between the controller and devices that generate a powerful high-frequency or surge. Separate the high-voltage or large-current power lines from other lines, and avoid parallel or common wiring with the power lines when you are wiring to the terminals.
- Use this product within the rated load and power supply.
- Make sure that the rated voltage is attained within two seconds of turning ON the power using a switch or relay contact. If the voltage is applied gradually, the power may not be reset or output malfunctions may occur. into consideration when performing control.
- Make sure that the Controller has 30 minutes or more to warm up after turning ON the power before starting actual control operations to ensure the correct temperature display.
- A switch or circuit breaker should be provided close to this unit. The switch or circuit breaker should be within easy reach of the operator, and must be marked as a disconnecting means for this unit.
- Do not use paint thinner or similar chemical to clean with. Us standard grade alcohol.
- Design system (control panel, etc) considering the 2 seconds of delay that the controller's output to be set after power ON.
- The output may turn OFF when shifting to certain levels. Take this into consideration when performing control.
- The number of non-volatile memory write operations is limited

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