



Trivector Meter

-ER300P

FEATURES

- 0.2S / 0.5S / 1.0 Class accuracy
- Multi Tariff Capability with programmable TOD
- 3 Programmable Maximum demand (MD) registers
- Tamper / failure detection and record capability
- Communication interface via Optical port conforming to IEC 1107 protocol.
- Configurable Load survey recorders
- Back lit LCD display
- 3 Display modes for easy data access
- Support of Phasor viewing on MRI
- Battery back-up for Data collection
- Periodic self diagnostic checks

TECHNICAL SPECIFICATIONS

Accuracy	Class 1.0 Class 1.0 for active energy - As per IEC 1036 / IS 13779 Class 2.0 for reactive energy Class 0.5 Class 0.5 for active energy - As per IEC 687 / IS 14697 Class 1.0 for reactive energy Class 0.2 Class 0.2 for active energy - As per IEC 687 / IS 14697 Class 0.5 for reactive energy
Voltage (Vn)	3Ph 4W - 415 V AC (-40% to +20%) 110 V AC (-40% to +20%) 3Ph 3W - 110 V AC (-40% to +20%)
Current (In)	5 A or 1 A (to 200%)
Starting current	0.2% In (Class 1.0) 0.1% In (Class 0.5S / 0.2S)
Power factor	4 quadrant operation
Frequency	50 Hz \pm 10%
Load characteristics	< 5 VA in potential circuit < 0.5 VA in current circuit
Field configurable features	Meter configuration - Uni or Bi-directional Method of kvah calculation - Lead as lead - or Lead as UPF External CT / PT ratios MD settings - Max. 3 out of 8 parameters TOD settings Reset modes - Manual, Auto monthly, Auto daily, Auto monthly and manual. Load survey settings - No. of days and parameters. Real Time Clock setting 3 Display modes Mode 1 / 2 / 3
Electromagnetic compatibility	IEC 1036 / IS 13779 (Class 1.0) IEC 687 / IS 14697 / CBIP - 88 (Class 0.5S / 0.2S)
Case material	Plastic molded with transparent cover Protected to - IP 51 - IEC 1036 / IS 13779 (Class 1.0) IP 51 - IEC 687 / CBIP - 88 (Class 0.5S / 0.2S)
Insulation properties & HV insulation resistance	IEC 1036 / IS 13779 (Class 1.0) IEC 687 / CBIP - 88 (Class 0.5S / 0.2S)
Temperature	-5°C to 60°C for operation -20°C to 70°C for storage
Humidity	95% RH Condensing
Dimension	327 x 179 B x 104 D (base mounting) \pm 1mm 247 x 180 B x 108 D (Flush mounting) \pm 1mm
Weight	< 2.5kg

INTRODUCTION

Electronic Trivector meter, ER300P - PRIDE is a multi-purpose unit which integrate several functions and replace various equipments for metering energy parameters. It is light, compact and highly reliable.

L&T has indigenously designed and developed the same at its state-of-the-art manufacturing facility at Mysore. It is well suited for Indian transmission and distribution network and can be used for uni directional or bi-directional metering, TOD metering, and for energy management. It is available for both HT and LT applications.

DISPLAY PARAMETERS

Meter can be programmed to display maximum 350 parameters that include PF, per phase RMS voltages and currents, Frequency, Phase sequence, real time clock, kW, kVA, kVA_r, kWh, kVA_h, kVA_rh⁺, kVA_rh⁻, MDs', Rising demand with elapsed time, high resolution energies, tamper details, etc.

DISPLAY MODES

Three display modes Mode1, Mode2 and Mode3 are available.

KVA_h / MD kVA CALCULATION METHODS

Method of kVA_h / MD kVA calculation can be configured for lead to be treated as upf or lead to be treated as lead itself.

BILLING REGISTERS

8 billing registers are available for recording 8 type of energies - kWh, kVA_h, kVA_rh⁺, kVA_rh⁻ (both forward / reverse). The last 12 readings for record / analysis. Average PF for each reset is available.

MAXIMUM DEMAND (MD) REGISTERS

3 MDs out of 8 energy types can be selected and programmed for separate integration period ranging from 1 minute to 60 minutes. MD1 can be configured for Block / Sliding window method. Reset MD (12 readings) and cumulative MD are also available.

LOAD SURVEY RECORDERS

Registers for load survey data record upto 4 energy parameters. The integration period and number of days are programmable.

TAMPER / FAILURE RECORDING

Meter detects and records various tamper / failure conditions such as voltage failure, current failure, voltage unbalance, current unbalance, current bypass, current reversal and power failure. For above conditions, Tamper count, Duration, Occurrence date / time and present status is recorded by sequence storage or Block storage method.

CONTROL KEYS

Two control keys are located on the front panel of the meter for manual scrolling mode, various display parameters can be displayed using the same. Manual reset can be performed from key on front panel.

RESET

Meter can be configured for one of the reset modes such as Manual reset, Auto monthly reset, Auto daily reset, Auto monthly & manual reset. 12 reset backups are provided.

TIME-OF-DAY (TOD)

The meter offers a flexible tariff structure. During different times of the day for different seasons, different tariff structure can be programmed. A real time clock with a lithium battery has a built-in 100 years calendar. It is used for time keeping. A day can be divided into 10 defined slots (11 undefined slots). Upto 8 tariffs registers programmable. Supports upto 4 profiles, 4 seasons and 4 special days.

LED PULSE OUTPUT

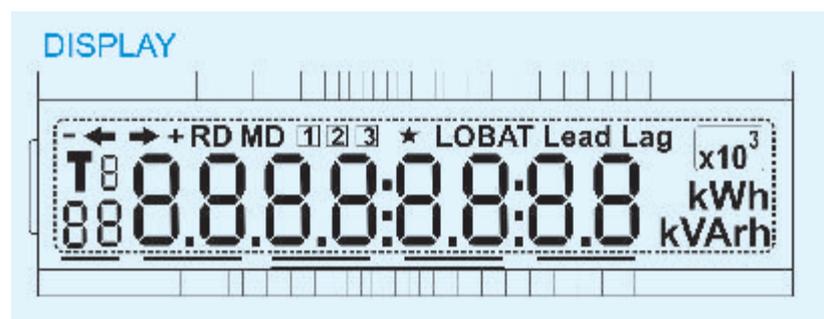
ER300P incorporates two LEDs on the front panel of the meter for accuracy check of kWh and kVA_rh.

BATTERY OPERATION

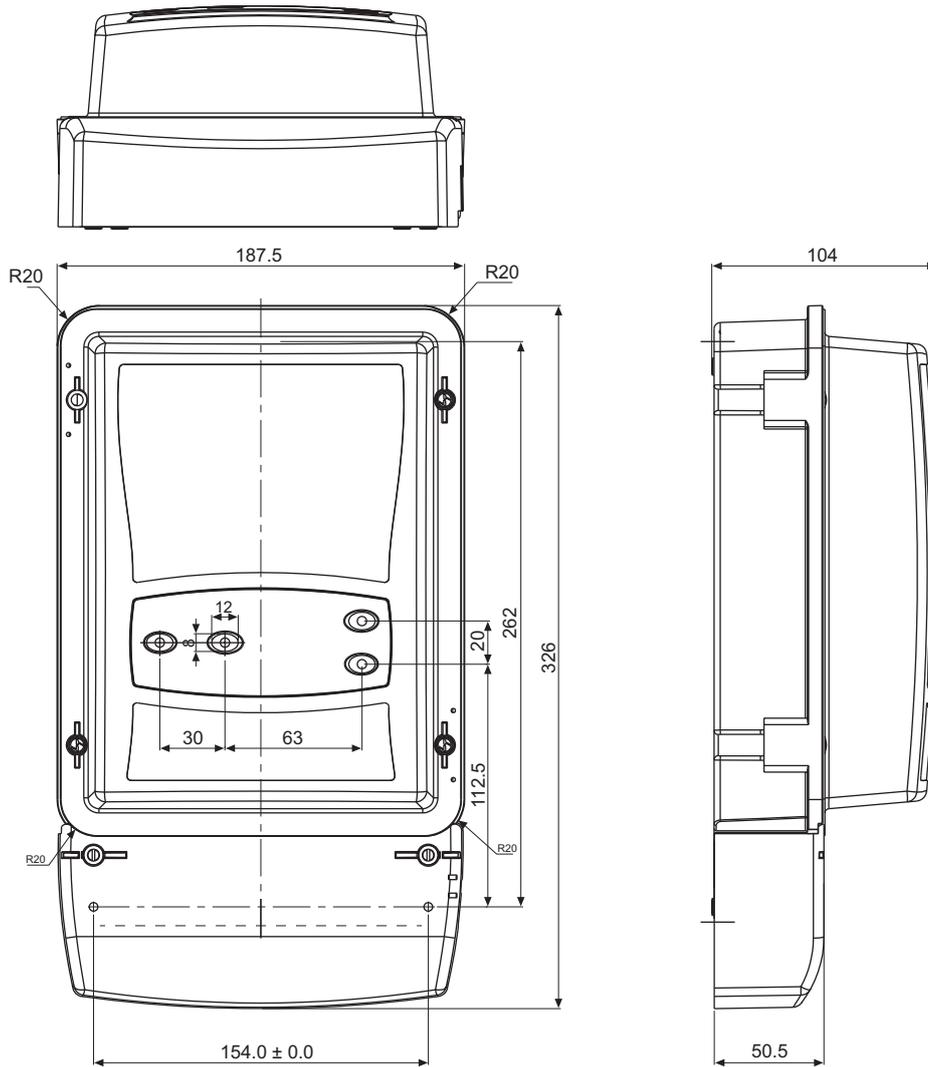
A Push button on the front panel enables data collection, viewing data on LCD and resetting data during power failure.

COMMUNICATION INTERFACE

ER300P incorporates an infra-red optical port6 interface on the front panel as per IEC 1107 standard. An optical port and a standard RS232C port on the PC/MRI side.



DIMENSIONAL DETAILS OF TRIVECTOR METER (BASE MOUNTING)



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Electrical Standard Products
 Larsen & Toubro Limited
 Powai Campus, Mumbai 400 072
 Tel: 022-6705 0505
 Fax: 022-6705 1746
 E-mail: ebg-esp@LNTEBG.com
 Website: www.LNTEBG.com

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