



# QUASAR

## Intelligent Panel Meter





## ELECTRICAL STANDARD PRODUCTS

L&T's Electrical Standard Products offer a wide range of low voltage switchgear components, metering & protection systems, reactive power management solutions, signalling & control devices etc.

All the products are designed to serve customers having varying application needs. Customer requirements are met by appropriate design adaptations to with stand adverse factors like corrosive atmosphere, wide voltage fluctuations, excessive humidity, dust, high ambient temperature and different skill levels.

Many of our products have won the prestigious Good Industrial Design award at the Hannover Fair in Germany.

L&T offers multi parameter Intelligent Panel Meter which can efficiently monitor healthiness of the power system with many user friendly features. This multi-faceted meter can also be used in Energy Management System.

## APPLICATION

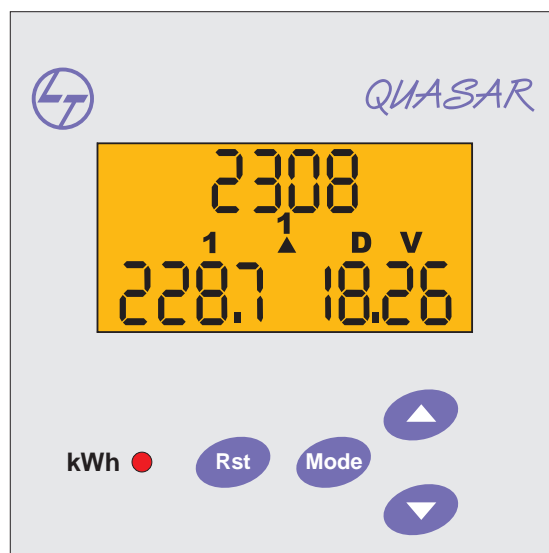
Comprehensive measuring device for all electrical parameters

- Control & Relay panels
- MCCs / PCCs
- Distribution Boards
- Test benches
- Test equipments
- Machine tools
- Building automation
- Power management systems
- Reactive power compensation systems

## FEATURES

- Dimension: 96 x 96 mm - saves panel space.
- Display of 3 parameters per screen
- 21 screens of measured values
- Class 1.0 accuracy
- 3 ph 3 wire / 3 ph 4 wire measurement
- Instantaneous & Cumulative values of parameter
- Max / Min values of critical parameters
- Remote Metering Feature - RS 485 communication - optional.
- Economical

## FRONT PANEL CONTROLS



- Up / Dn push buttons for scrolling
- Mode selector push button for feeder parameters programming
- Reset push button for resetting the integrated values

## PARAMETERS MEASURED

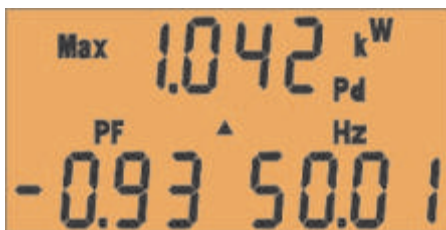
Screen	1	V, A, kW
Screen	2	R-Y-B Voltages
Screen	3	R-Y-B Currents
Screen	4	R-Y-B kW
Screen	5	R-Y-B kVAr
Screen	6	R-Y-B kVA
Screen	7	R-Y-B pF
Screen	8	R-Y-B Volt angles
Screen	9	R-Y-B Phase angles
Screen	10	kW + kVAr + kVA
Screen	11	Pd + pF + F
Screen	12	kWh
Screen	13	kVArh (L)
Screen	14	kVArh (C)
Screen	15	kVAh
Screen	16	R ph. Voltage - Harmonics
Screen	17	Y ph. Voltage - Harmonics
Screen	18	B ph. Voltage - Harmonics
Screen	19	R ph. Current - Harmonics
Screen	20	Y ph. Current - Harmonics
Screen	21	B ph. Current - Harmonics

## TECHNOLOGY

- DSP based design
- Custom built LCD display
- Low power consumption
- Class 1.0 accuracy
- Direct reading
- EMI / EMC compliant
- Programable input parameters

## COMMUNICATION INTERFACE (OPTIONAL)

- RS 485 Port
- Modbus – RTU protocol
- Memory map – provided



## TECHNICAL SPECIFICATIONS

<b>Accuracy</b>	Class 1.0s for Active energy as per IS 13779
<b>Voltage input Vn</b>	
3 ph 4 W	415 V ac (-40% to +20%) (P-P) 110 V ac (-40% to +20%) (P-P)
3 ph 3 W	110 V ac (-40% to +20%) (P-P)
<b>Current Input In</b>	5 A or 1 A
<b>Starting Current</b>	0.2% In (Class 1.0)
<b>Frequency</b>	50 Hz +/- 10%
<b>Load Characteristics</b>	
Potential circuit	< 8 VA
Current circuit	< 0.5 VA
<b>Short time over current</b>	40 times In for 500 ms
<b>Case Material</b>	Plastic moulded Protected to IP 51
<b>Display</b>	Backlit LCD, 10 mm height digits
<b>Temperature</b>	0°C to 60°C for operation -20°C to + 70°C for storage
<b>Humidity</b>	95% RH non condensing
<b>Dimension (mm)</b>	96 W x 96 H x 105 D
<b>Weight</b>	< 600 gms

## MEASURING INPUTS

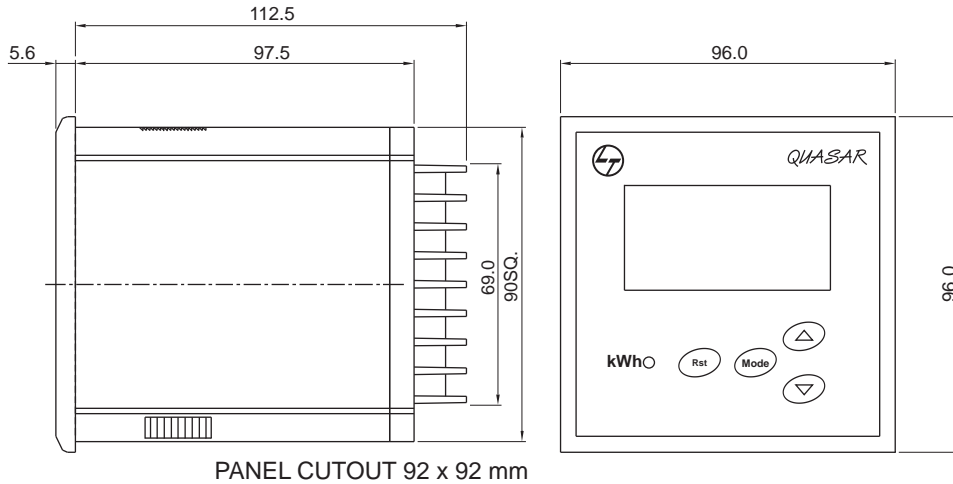
QUASAR can be used in both HT and LT applications. In case of LT, the meter can be connected to 415 V line to line voltage directly. In case of HT, the meter receives inputs from external CTs and PTs. The CT / PT ratios can be programmed in the meter so that the measurements are direct reading, without the need for scaling.

## ORDERING INFORMATION

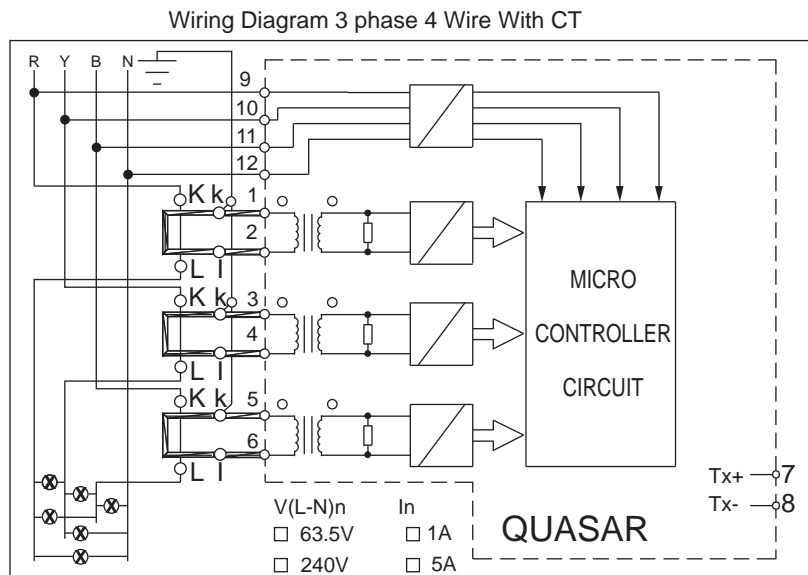
Type of connection : 3 phase 3 wire OR 3 ph 4 wire  
PT input : 415 V / 110 V

CT input : 1 A / 5 A  
With / without RS 485 communication

## OVER ALL DIMENSIONS



## TYPICAL WIRING DIAGRAM



Ahmedabad Tel : (079)66304007  
Bangalore Tel : (080)25583613  
Chandigarh Tel : (0172)4646841  
Chennai Tel : (044)28462072

Fax : (079)26580491  
Fax : (080)25580525  
Fax : (0172)4646802  
Fax : (044)28462102

Hyderabad Tel : (040)23296468  
Kolkata Tel : (033)44002301  
Mumbai Tel : (022)67050505  
New Delhi Tel : (011)41419515  
Pune Tel : (020)66033395

Fax : (040)23242356  
Fax : (033)22821025  
Fax : (022)67051112  
Fax : (011)41419600  
Fax : (020)26129586

Product improvement is a continuous process. For the latest information and special applications, please contact any of our offices listed here.



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

