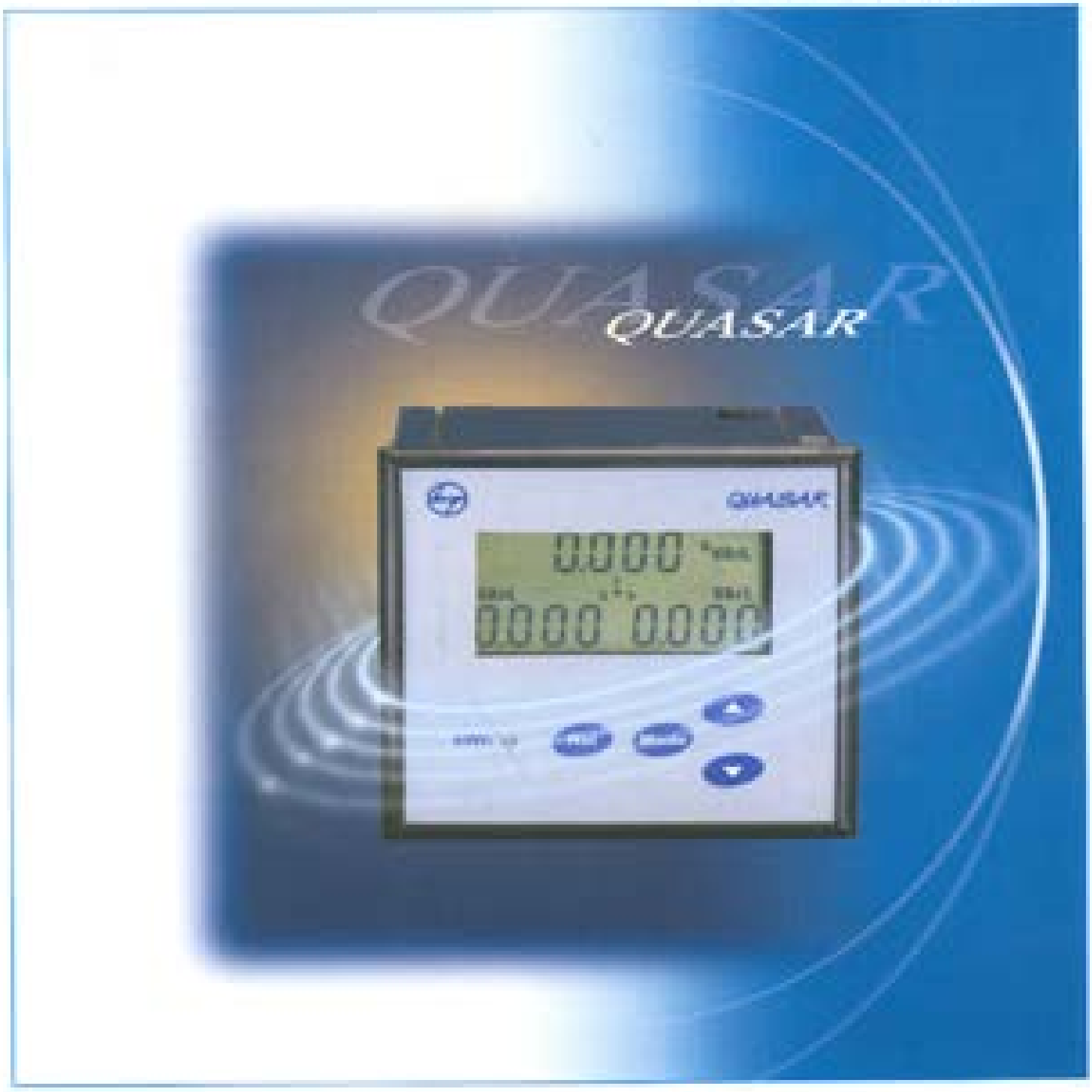
SWITCHGEAR

Intelligent Panel Meter

- GREATER ACCURACY
- ENHANCED DATA
- ECONOMY
- SAVINGS IN PANEL SPACE
- REMOTE ACCESS



LARSEN & TOUBRO LIMITED

SWITCHGEAR

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

- Instantaneous Cumulative values
- 96 x 96 mm package
- Display of 3 parameters per screen
- 21 screens of measured Values
- Class 1.0 accuracy
- 3 ph 3 wire / 3 ph 4 wire
- Max / Min values
- RS485 communication

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

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

TECHNOLOGY

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

COMMUNICATION INTERFACE (OPTIONAL)

- RS485 Port
- Modbus RTU protocol
- Memory map provided

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 the measurements are direct reading, without the need for scaling.

TECHNICAL SPECIFICATIONS

Accuracy	For Power Class 1.0 (IEC 61036 / Is13779) For Voltage 0.5% of reading (+/- 2 digits) For current 0.5% of reading (+/- 2 digits)
Voltage input Vn	
3ph 4W	415 V ac (-40% to +20%) 110 V ac (-40% to +20%)
3ph 3W	110 V ac (-40% to +20%)
Current input In	5A or 1A
Starting Current	0.2% In (Class 1.0)
Frequency	50Hz+/- 10%
Load Characteristics	
Potential circuit	< 8 VA
Current circuit	< 0.5 VA
Short time over current	40 times In for 500 ms
Case Material	Plastic moulded Protected to IP51
Display	Backlit LCD, 10mm height digits
Temperature	Zero to 60 degrees C for operation -20 to +70 degrees C for storage
Humidity	95% RH non condensing
Dimension (mm)	96 W x 96 H x 105 D
Weight	< 600 gms

ORDERING INFORMATION

a) Type of connection
3 phase 3 wire or 3 ph 4 wire

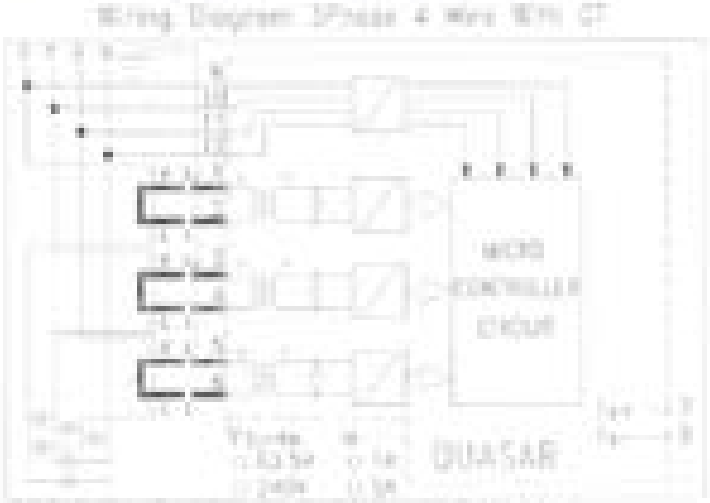
b) PT input : 415 V / 110 V

c) CT input : 1A / 5 A

d) with / without RS 485 communication

DIMENSIONS

TYPICAL WIRING DIAGRAM



Note : Please refer operating manual for more information