

# XPERT

## ELECTRICAL POWER METER



Compact 96X96X55 mm.

Graphical Display 128X64

Accuracy: Class 1.0 & Class 0.5 (Optionally).

Odd Harmonics up to 15th of individual Voltage and Current Waveform including THD.

Rs485 port for Communication with EM/PLC/SCADA (Optional).

Two Relays-individually programmable for Alarm/Trip(Optional).

Histogram & Tabular display of Harmonics content.

Wave shape display for all voltage & currents.

The electrical power meter, Xpert is a micro-controller based unit which measures various electrical parameters, and sequentially displays on a 128X64 backlit LCD.

The unit measures the three phase voltages, currents, frequency, power factors, individual Harmonic data as Histogram including Total Harmonic Distortion as well as individual current and voltage waveforms for all three phases.

The unit is fully solid state and will give years of trouble-free service once installed correctly.

## Comprehensive Measurement

- All readings are True RMS measurements.
- Measurement of three energies: KWh, KVAh, KVARh
- Odd Harmonics upto 15th of individual Voltage and Current Waveform including THD.
- KVA and KW Demand

## Installation and Connections

- Single Model Accepts 3P4W and 3P3W connections
- 1A and 5A CT secondary selectable
- User selectable CT and PT Ratio.

## Communication

Xpert has a communication port, RS485 for connection to SCADA/EMS.

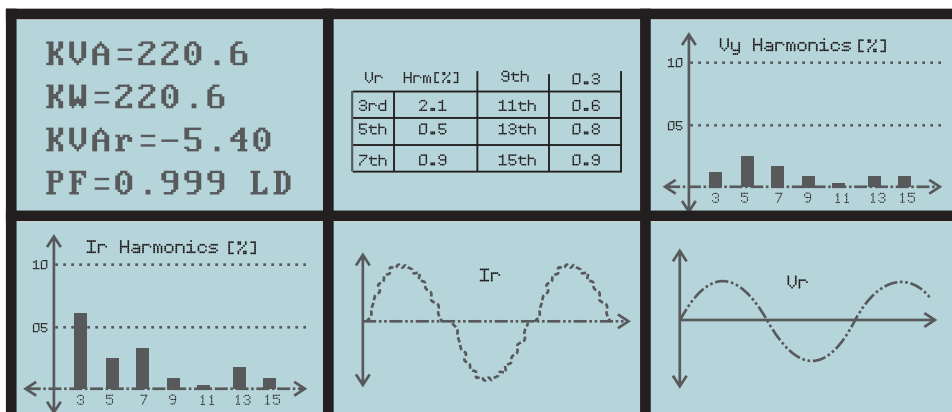
## Control

The unit has two relay contacts which are programmable to operate for Alarm/Trip functions with the following parameters including (Sliding) Demand powers (KW and KVA).

Sr No.	Alarm Parameters	Relays Switches on at	Relay Switches off at	Settable Time Delay
1.	Avg. Volts	>Set value	<95% of set value	005 to 180 sec
2.	Avg. Amps.	>Set value	<95% of set value	005 to 180 sec
3.	KVA	>Set value	<95% of set value	005 to 180 sec
4.	KW	>Set value	<95% of set value	005 to 180 sec
5.	KVAR	>Set value	<95% of set value	005 to 180 sec
6.	Demands	>Set value	<95% of set value	2 sec.(fixed)
7.	PF	<Set value	>Set value	005 to 180 sec.

## Other features

Graphical LC display of 128X64 monochrome (Black and white) makes it possible to display harmonic data in histogram waveforms of all voltage and currents.



# Technical Specifications

		Parameter		
Type	Name	Statistics		
INPUT	Supply	Three Phases and Neutral of a 3P4W system / Three Phases of a 3P3W system		
	Voltage	Direct Voltage Input : Up to 500V L-L, Up to 300V L-N PT Ratio : Site Selectable Burden : 0.5VA		
	Current	Secondary Current Input: 5A or 1A (Site Selectable) CT Ratio : Site Selectable Range of Reading : 5 – 5000A Burden : < 1.0VA Overload : 5A CT = 6A RMS Continuous 1A CT = 1.2A RMS Continuous		
	Power Supply	Auxiliary Supply: 90 - 480 VAC, 50-60 Hz.		
OUTPUT	Relay	Two. Individually Field Programmable. 5A@250 VAC. Resistive Load		
MEASUREMENT	True RMS Basic Parameters	Voltage (Volts L-N & L-L)	VL-N - Accuracy : 0.5% of Reading VL-L - Accuracy : 1.0% of Reading	
		Current (Amps IR, IY, IB)	Accuracy : 0.25% of Reading	
		Line Frequency	45 to 55 Hz, Accuracy: 0.3% of Reading	
	Power	Active Power (P)	Accuracy: 1% of Reading (For IPFI>0.5)	
		Reactive Power (Q)	Accuracy: 1.5% of Reading (Between 0.5 Lag to 0.8 Lead)	
		Apparent Power (S)	Accuracy: 1%% of Reading	
		Power Factor	For Individual phases and System Accuracy: 1.0% of Reading (IPFI≥0.5) Range of Reading: 0.05 to 1.00 Lag/Lead	
	Energy	Total Active Energy (KWh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.0S as per IS13779	
		Total Apparent Energy (KVAh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.0% of Reading	
		Total Apparent Energy (KVARh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.5% of Reading	
	Power Quality	Individual waveform for each voltage and current		
		THD for each voltage and current		
	Demand	KVA/ KWA Demand	Site Selectable. Demand Interval 15/30 Min. Also site selectable	
		Max. Demand	Max. Value reached only. No time & date stamp	
MISCELLANEOUS	Dimensions	Bezel	96 X 96 mm	
		Panel Cutout	92 X 92 mm	
		Depth of installation	55 mm	
	Display	128X64 LCD		
	Operating temp	10°C to 50°C		
	Weight	0.35 Kgs (Approx.)		
	Min. Operating Current	0.4% to 120% of CT primary		
	Comm.	RS485	Modbus-RTU protocol	

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