

FU2200A

DIGITAL ETHERNET POWER METER WITH DATA LOGGER

FU2200A digital ethernet power meter with data logger is a three-phase multifunction power and energy meter manufactured by GFUVE. It provides excellent value for monitoring power and energy management systems. It may be used as data gathering devices for intelligent power distribution or plant automation systems. All monitored data is available via a 10/100M ethernet port and a standard digital RS485 communication port, which is based on the Modbus RTU protocol and TCP/IP protocol. FU2200A ethernet power meter has the PC software and the data logger function, which can set by end users from 1min to 60min intervals to record all kinds of electrical parameter - voltage/current/active power/reactive power/apparent power/kWh/power factor/frequency/phase angle/max/min/harmonics/unballance etc. You can read the data through a PC. Also, you can share the data in the Internet LAN. By the way, it can measure the harmonics from 2nd to 63rd. With a wide range of models to choose from, the FU2200A power meter offers unparalleled value and functionality.

Application

1. Power plant;
2. Data logging;
3. Load analysis;
4. Power quality analysis;
5. Power monitoring system;
6. Low voltage distribution cabinet;
7. Electric energy metering cabinet;
8. High voltage distribution cabinet;
9. Mobile communication company;
10. Medium and low voltage systems;
11. Energy consumption monitoring system;
12. Commercial, industrial, power electricity utility;
13. Electric energy metering of photovoltaic power station;
14. Metering of distribution feeders, transformers, generators, capacitor banks and motors;



Features

1. 4 quadrant energy;
2. Three years warranty;
3. Power quality analysis;
4. With load curve function;
5. Unbalance & phase angles;
6. Web browse data function;
7. Max/Min log with timestamp;
8. With PC management software;
9. Demands and Multi-tariff energy;
10. True-RMS measuring parameters;
11. Standard panel 96*96 installation;
12. TOU, 4 Tariffs, 6 Seasons, 6 Schedules;

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| 13. ANSI and IEC 0.2 or 0.5S accuracy class;
15. 2MB onboard memory, Extended to 16M;
17. High precision active energy meter function;
19. Support RTU-Modbus, TCP/IP, SNMP protocol; | 14. Data logging for all electrical parameters;
16. High-speed RS485, 10/100M Ethernet port;
18. Time interval set from 1minute to 60minutes;
20. Measure individual harmonics from 2nd to 63rd; |
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Parameters

Electrical parameters	
Power supply (AC/DC)	AC 85-400V / DC 85-330V Power consumption: <4VA
Accuracy class	0.5s
Measurement parameters	Voltage (Ph-N); Voltage (Ph-Ph); Current; Frequency; PF; Phase angle; Active power(W); Reactive power(Q); Apparent power(S),
Harmonics	Total harmonics ratio of phase-voltage Total harmonics ratio of current 2nd to 63rd harmonics ratio of phase-voltage 2nd to 63rd harmonics ratio of current
Maximum value & minimum value	Voltage, current, frequency, active power, reactive power, apparent power,demandP,demandQ, demands.
Computation	Forward active power energy Reverse active power energy Forward active power energy Reverse reactive power energy
Measuring range	0-480V(P-N), 0-800V(P-P), 0-10A, 45-65Hz, -1 ~ 0 ~ 1
Measuring accuracy	Voltage: 0.5%RD±0.05%FS Current: 0.5%RD±0.05%FS Active power: 0.5%RD±0.05%FS Reactive power: 1.5%RD +0.05%FS Apparent power: 0.5%RD +0.1%FS Power factor: 0.5%RD Frequency: 0.05%RD Active energy: 0.5S, 0.5% , 1%
Maximum demand	Ia, Ib, Ic, ΣPtotal, ΣQtotal, ΣStotal, 15 minutes
Data logger interval time	1minute - 60 minutes can be set
Data logger	U1,U2,U3, U12,U23,U31, I1,I2,I3, F, P,Q,S, demand, Ep Eq, Es, Phase,Unbalance,EPrate, EQrate, ESrate
Load recorder or curve	Yes

Electrical parameters - continued

Display	Blue back-lit LCD Display 5 display figures 4 operation keys
Communication	Support RS-485 interface port, 32 (128) Networking RTU-ModBus-TCP/IP, SNMP communication protocol Ethernet 10/100M port (RJ45)
Memory	2M onboard memory, can be extended to 16M. Data logger interval can set by end users from 1min to 60min. The default is 15min. You can read the data through a PC, also you can select the data to display and store from software.
Programmable	Measuring system: 3P4W/3P3W etc Transformation Ratio: PT 1-10000; CT 1-10000
Energy pulse	Provides active & reactive energy pulse output Pulse parameters can be choosed Pulse constant range: 0.1-10000kWh/kvarh Pulse constant can be programmable Dry contact output (1Ax100V)
Input every voltage/current compsumption	0.5VA/channel
Tariffs	4
Seasons	6
Schedules	6
Connection mode	3P4W, 3P4W BAL, 3P3W, 3P3W BAL, 1P3W, 1P2W
Clock	Yes
Baud	1200-57600, Standard 38400
Web browser	Yes
PC management software	Yes, download data to excel file
Standard	
Standard	IEC 62053-21,22, 23, 24; ANSI C12.20; IEC 62052-11; IEC 62586-2; IEC 61326-1; IEC 61000-4-30: class S; IEEE 519: 2014; EN 50160: 2010; IEC 61557-12; EN61010-2-030:2010; EN61326-1:2013; EN61000-3-2:2014; EN61000-3-3:2013; IEC61557-12; IEC60068-2-1/2/30
Safety	
Isolation protection	IEC 61010-1:2001
Measurement Category	300 V CAT III, 600 V CAT II
Degree of protection	IP42
Declaration of conformity	CE & CNAS certified

Mechanical parameters

Dimensions (L x W x H) (mm)	96 x 96 x 14
Net Weight	550g
Mounting	Panel mounting Trepanning: 92x92mm The thickness of installation: 84mm DIN mounting (optional)

Environmental conditions

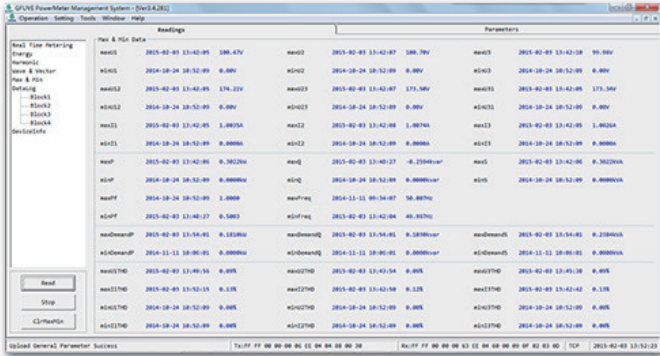
Temperature	-5 to +50 °C
Humidity	20%-95%RH, without condensation
Warranty	Three years warranty

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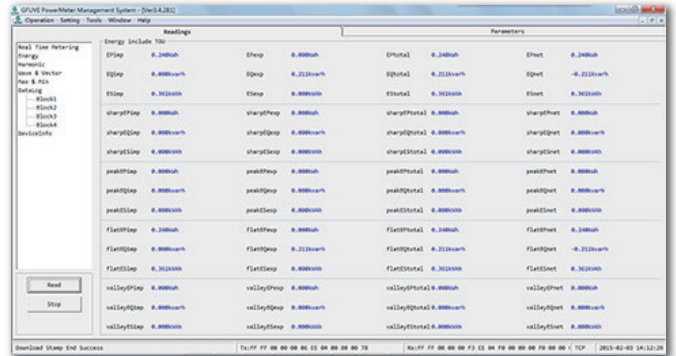
Parameters	Accuracy	Resolution	Measuring range	Show on the display
Voltage	0.2%	0.01V	0-400V	0.5-500kV
Current	0.2%	0.01mA	0-6.5A	1mA-50000A
Active power	0.5%	0.2W	0-2400W/phase	-9999MW to +9999MW
Reactive power	2%	0.2var	0-2400var/phase	-9999Mvar to +9999Mvar
Apparent power	0.5%	0.2VA	0-2400VA/phase	0-9999MVA
Active demand	0.5%	0.2W	0-2400W/phase	-9999MW to +9999MW
Reactive demand	2%	0.2var	0-2400var/phase	-9999Mvar to +9999Mvar
Apparent demand	0.5%	0.2VA	0-2400VA/phase	0 to 9999MVA
Power factor	0.005	0.0001	-1.000 - 0 - 1.000	-1.000 - 0 - 1.000
Frequency	0.01Hz	0.01Hz	45.000-65.000Hz	45.000-65.000Hz
Active energy	0.5S, 0.5%, 0.2%	0.001kWh	0-999999.999kWh	0-99999999.9kWh
Reactive energy	2%	0.001kvarh	0-999999.999kvarh	0-99999999.9kvarh
Apparent energy	0.5%	0.001VAh	0-999999.999kVAh	0-99999999.9kVAh
Phase angle	0.1°	0.01°	0-359.99°	0-359.99°
Unbalance	2%	0.01%	0-300.00%	0-300.00%
PT ratio		1		1-10000
CT ratio		1		1-10000
Address code		1		1-253
IP Address(default)	192.168.1.16		IP address can be modified	

Software Interface From FU2200A

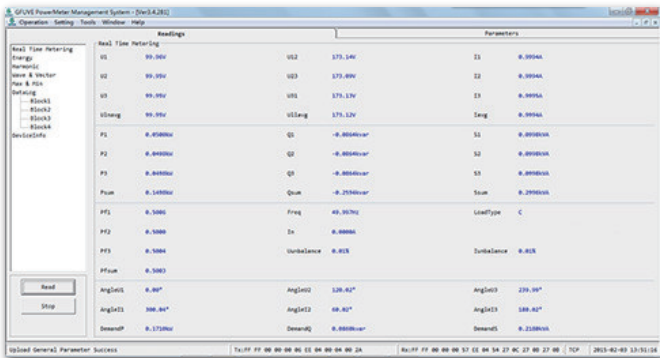
Max & Min data



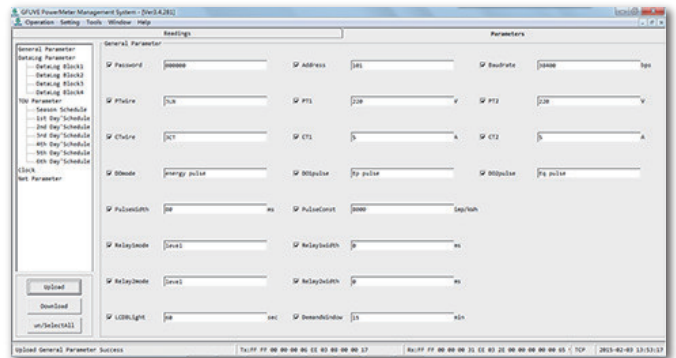
Energy include TOU



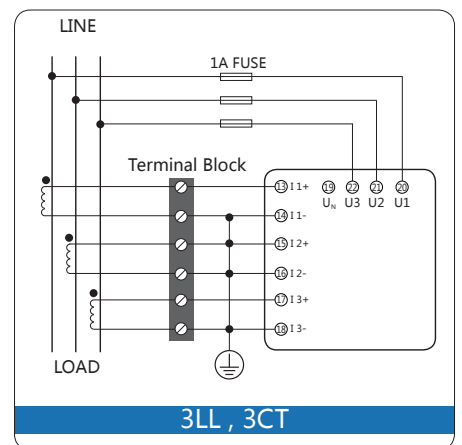
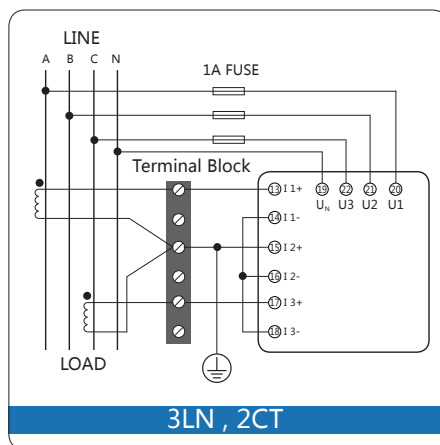
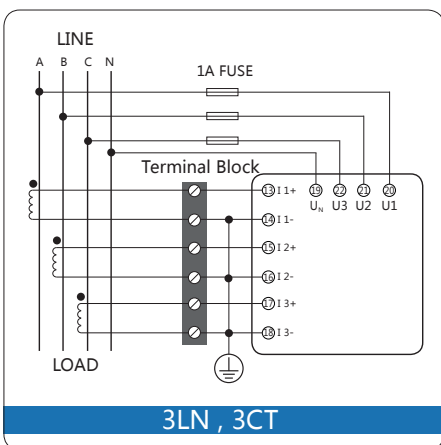
Real time metering



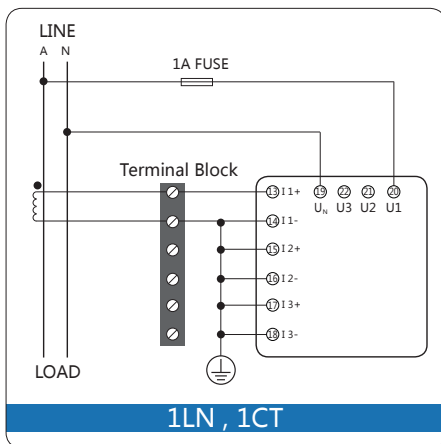
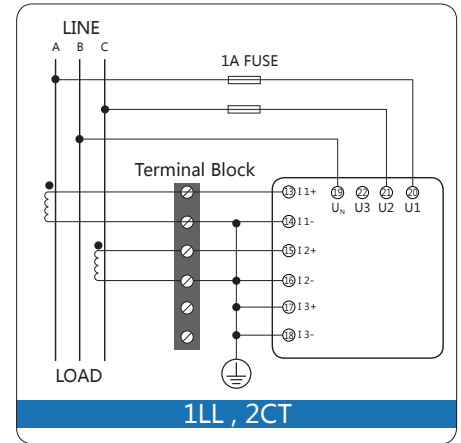
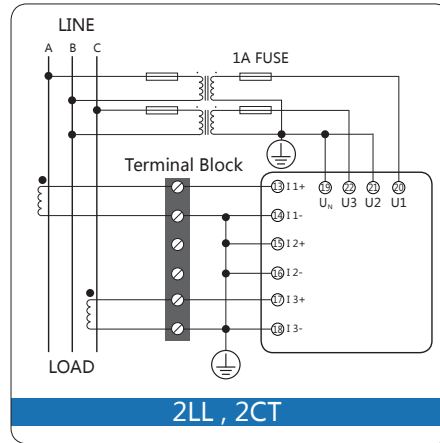
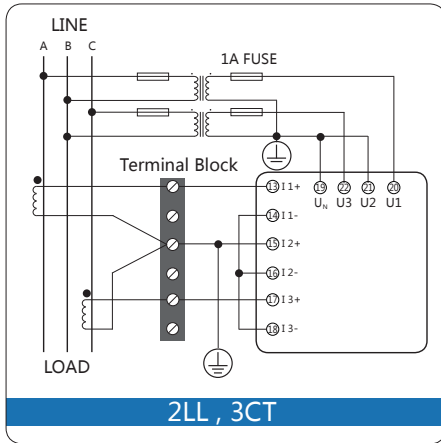
General parameter



Wiring Diagram



SWiring Diagram



Related Current Transformer (C.T)

Model	Primary rated current	Rated load	Aperture (mm)	Description (mm)	Weight (kg)	Material	Type & Waterproof
LZCK-55	100-1000A	≤10VA	φ55	180×138×52	2	PC	outdoor, IP67
LZCK-80	300-2000A	≤15VA	φ80	172×164×85.5	2.5	PC	outdoor, IP67
LMCK185-10	300-5000A	≤25VA	φ185	350×283×55	4.5	PC	outdoor, IP67
P50	200-1000A	≤5VA	φ50	φ50 x φ110 x 32	0.55	ABS	indoor, IP42
LZCK322-10	30-1000A	≤10VA	φ50	φ50 x φ110 x 52	1.6	Resin	outdoor, IP65
LZCG530-10	30-1000A	≤20VA	φ45	φ45 x φ120 x 65	2.5	Resin	Indoor



LZCK-55



LMCK-80



LMCK185-10



P50



LZCK322-10



LZCG530-10