

FU2200B

0-800V Ethernet Power Meter with Data Logger

FU2200B is a three-phase multifunction power and energy meter manufactured by GFUVE. The meter provide 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 standard digital RS485 communication port running the Modbus RTU protocol. It has the PC software and the data logger function, which can set by end users from 1min to 60min intervals to record. 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. With a wide range of models to choose from, the FU2200B power meter offers unparalleled value and functionality.



Features

1. True-RMS measuring parameters
2. ANSI and IEC 0.2 accuracy class
3. Power quality analysis
4. 4 quadrant energy
5. 2MB onboard memory, can be extended to 16M
6. Data logging
7. High-speed RS485, Ethernet port (option)
8. Measure individual harmonics from 2nd to 49th (option)
9. TOU, 4 Tariffs, 6 Seasons, 6 Schedules
10. Class leading warranty
11. With PC management software; web browse data

Applications

1. Metering of distribution feeders, transformers, generators, capacitor banks and motors
3. Medium and low voltage systems
4. Commercial, industrial, utility
5. Power quality analysis
6. Data logging
7. Monitoring system



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Россия (495)268-04-70

Казахстан (772)734-952-31

Parameters

Electrical parameters

Power Supply (AC/DC)	AC85-400V / DC85-330V Power consumption: <4VA
Measurement Parameters	Voltage (Ph-N); Voltage (Ph-Ph); Current; Frequency; PF; Active Power(W); Reactive Power(Q); Apparent Power(S), 2nd to 49th harmonics(option)
Harmonics	Total harmonics ratio of phase-voltage Total harmonics ratio of current 2nd to 49th harmonics ratio of phase-voltage 2nd to 49th 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	0-800V, 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: 0.5%
Maximum Demand	Ia, Ib, Ic, ΣPtotal, ΣQtotal, ΣStotal, 15 minutes
Display	Blue back-lit LCD Display 5 display figures 4 operation keys
Communication	Support RS-485 interface port, 32 (128) Networking ModBus-TCP/IP, SNMP communication protocol Ethernet 10/100M port (RJ45)
Memory	2M onboard memory,can be extended to 16M. Data looger 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 diaplay and store from software.
Programmable	Measuring system: 3P4W/3P3W etc Transformation Ratio: PT 1-10000; CT 1-10000

Electrical parameters - continued

Energy pulse	Provides active & reactive energy pulse output Pulse parameters can be chosen Range: 0.1-10000kWh/kvarh Dry contact output (1Ax100V)
Connection mode	3P4W, 3P4W BAL, 3P3W, 3P3W BAL, 1P3W, 1P2W
Baud	1200-57600, Standard 38400

Mechanical parameters

Dimensions (L x W x H) (mm)	96x96x12.8
Mounting	Panel mounting Trepanning: 92x92mm The thickness of installation: 51mm

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	0.20%	0.01V	0-800V	0.5-500kV
Current	0.20%	0.01mA	0-10A	5mA-50000A
Active power	0.50%	0.2W	0-2400W/phase	-9999MW to +9999MW
Reactive power	2%	0.2var	0-2400var/phase	-9999Mvar to +9999Mvar
Apparent power	0.50%	0.2VA	0-2400VA/phase	0-9999MVA
Active demand	0.50%	0.2W	0-2400W/phase	-9999MW to +9999MW
Reactive demand	2%	0.2var	0-2400var/phase	-9999Mvar to +9999Mvar
Apparent demand	0.50%	0.2VA	0-2400VA/phase	0 to 9999MVA
Power factor	0.005	0.0001	-2	-2
Frequency	0.01Hz	0.01Hz	45.000-65.000Hz	45.000-65.000Hz
Active energy	0.5%,0.2% (Option)	0.001kWh	0-999999.999kWh	0-99999999.9kWh
Reactive energy	2%	0.001kvarh	0-999999.999kvarh	0-99999999.9kvarh
Apparent energy	0.50%	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

Software Interface From FU2200B

Max & Min data

Max & Min Data	Readings	Parameters
Real Time Metering	Max 2015-02-03 13:42:05 196.47V	Min 2015-02-03 13:42:07 188.79V
Energy	Max 2015-02-03 13:42:05 0.000kWh	Min 2015-02-03 13:42:07 0.000kWh
Harmonic	Max 2015-02-03 13:42:05 174.25V	Min 2015-02-03 13:42:07 173.10V
Wave & Vector	Max 2015-02-03 13:42:05 0.000V	Min 2015-02-03 13:42:07 0.000V
Peak & Rise	Max 2015-02-03 13:42:05 1.000V	Min 2015-02-03 13:42:07 0.000V
Defective	Max 2015-02-03 13:42:05 0.000kWh	Min 2015-02-03 13:42:07 0.000kWh

Energy include TOU

Energy include TOU	Readings	Parameters
EP1	0.240kWh	EP1Total 0.240kWh EP1net 0.240kWh
EP2	0.000kWh	EP2Total 0.211kWh EP2net 0.211kWh
EP3	0.000kWh	EP3Total 0.000kWh EP3net 0.000kWh
EP4	0.000kWh	EP4Total 0.000kWh EP4net 0.000kWh
EP5	0.000kWh	EP5Total 0.000kWh EP5net 0.000kWh
EP6	0.000kWh	EP6Total 0.000kWh EP6net 0.000kWh
EP7	0.000kWh	EP7Total 0.000kWh EP7net 0.000kWh
EP8	0.000kWh	EP8Total 0.000kWh EP8net 0.000kWh
EP9	0.000kWh	EP9Total 0.000kWh EP9net 0.000kWh
EP10	0.000kWh	EP10Total 0.000kWh EP10net 0.000kWh
EP11	0.000kWh	EP11Total 0.000kWh EP11net 0.000kWh
EP12	0.000kWh	EP12Total 0.000kWh EP12net 0.000kWh
EP13	0.000kWh	EP13Total 0.000kWh EP13net 0.000kWh
EP14	0.000kWh	EP14Total 0.000kWh EP14net 0.000kWh
EP15	0.000kWh	EP15Total 0.000kWh EP15net 0.000kWh
EP16	0.000kWh	EP16Total 0.000kWh EP16net 0.000kWh
EP17	0.000kWh	EP17Total 0.000kWh EP17net 0.000kWh
EP18	0.000kWh	EP18Total 0.000kWh EP18net 0.000kWh
EP19	0.000kWh	EP19Total 0.000kWh EP19net 0.000kWh
EP20	0.000kWh	EP20Total 0.000kWh EP20net 0.000kWh
EP21	0.000kWh	EP21Total 0.000kWh EP21net 0.000kWh
EP22	0.000kWh	EP22Total 0.000kWh EP22net 0.000kWh
EP23	0.000kWh	EP23Total 0.000kWh EP23net 0.000kWh
EP24	0.000kWh	EP24Total 0.000kWh EP24net 0.000kWh
EP25	0.000kWh	EP25Total 0.000kWh EP25net 0.000kWh
EP26	0.000kWh	EP26Total 0.000kWh EP26net 0.000kWh
EP27	0.000kWh	EP27Total 0.000kWh EP27net 0.000kWh
EP28	0.000kWh	EP28Total 0.000kWh EP28net 0.000kWh
EP29	0.000kWh	EP29Total 0.000kWh EP29net 0.000kWh
EP30	0.000kWh	EP30Total 0.000kWh EP30net 0.000kWh

Real time metering

Real Time Metering	Readings	Parameters
Energy	0.000kWh	0.000kWh
Harmonic	173.14V	173.14V
Wave & Vector	173.14V	173.14V
Peak & Rise	173.14V	173.14V
Defective	173.14V	173.14V
Block1	0.000kWh	0.000kWh
Block2	0.000kWh	0.000kWh
Block3	0.000kWh	0.000kWh
Block4	0.000kWh	0.000kWh
DeviceInfo	0.000kWh	0.000kWh

General parameter

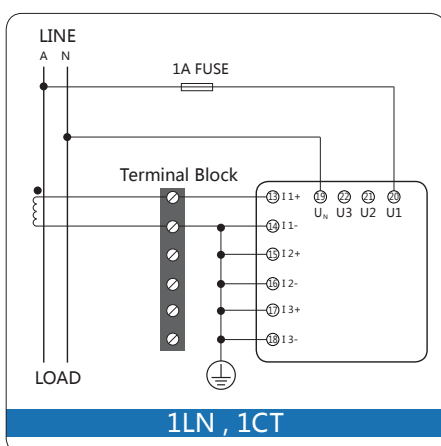
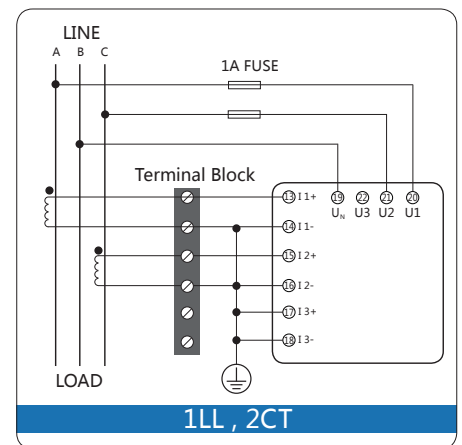
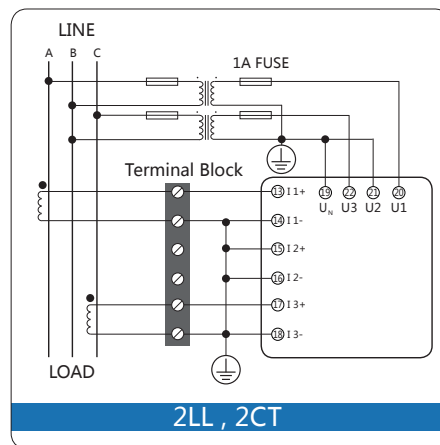
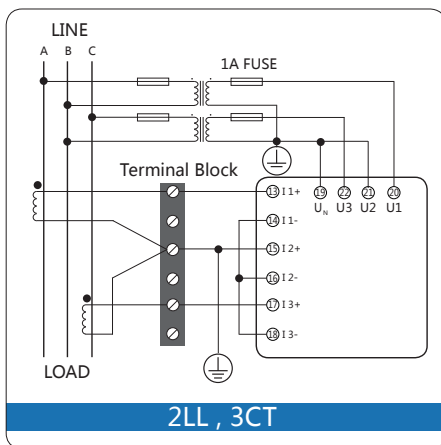
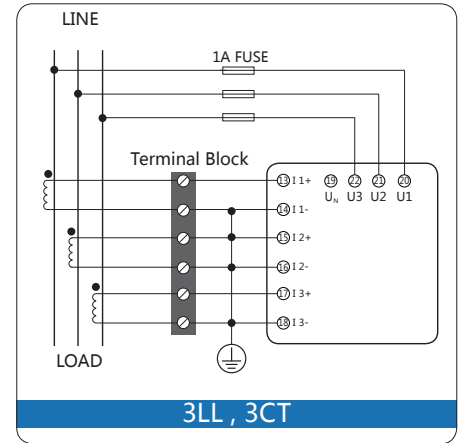
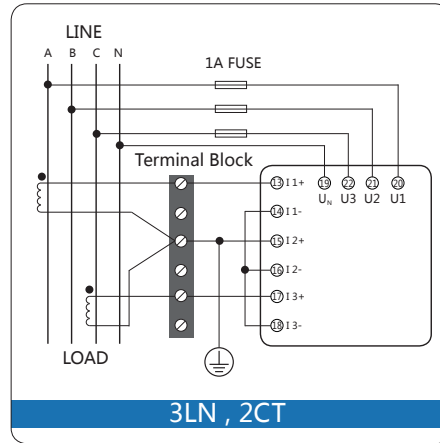
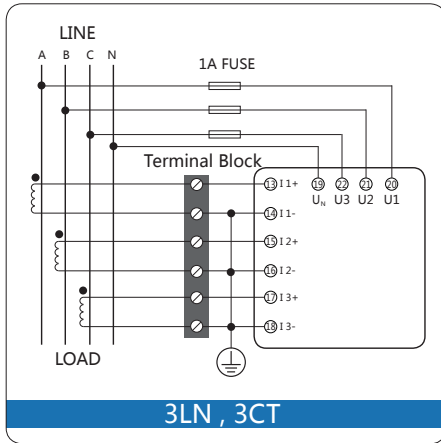
General Parameter Configuration Form

Parameters: IP Address, IP Port, IP Subnet, IP Mask, IP Gateway, IP DNS, IP NTP, IP SNTP, IP TFTP, IP SFTP, IP SCP, IP SSH, IP Telnet, IP Modem, IP Relay, IP Relay2, IP Relay3, IP Relay4, IP Relay5, IP Relay6, IP Relay7, IP Relay8, IP Relay9, IP Relay10, IP Relay11, IP Relay12, IP Relay13, IP Relay14, IP Relay15, IP Relay16, IP Relay17, IP Relay18, IP Relay19, IP Relay20.

Data Logging From FU2200B

No	YYYY-MM-DD hh:mm:ss	U1(V)	U2(V)	U3(V)	Ulnavg(V)	U12(V)	U23(V)	U31(V)	Ullavg(V)	I1(A)	I2(A)	I3(A)	Iavg(A)	In(A)	P1(kW)	P2(kW)	P3(kW)	Pst
1	2015-02-03 13:59:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	0.999	1.000	0.999	0.000	0.050	0.050	0.050	0
2	2015-02-03 14:00:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	1.000	1.000	1.000	0.000	0.050	0.050	0.050	0
3	2015-02-03 14:01:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	1.000	1.000	1.000	0.000	0.050	0.050	0.050	0
4	2015-02-03 14:02:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	1.000	1.000	1.000	0.000	0.050	0.050	0.050	0
5	2015-02-03 14:03:00	99.97	99.95	99.96	99.96	173.15	173.10	173.15	173.13	1.000	1.000	1.000	1.000	0.000	0.050	0.050	0.050	0
6	2015-02-03 14:04:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	1.000	1.000	1.000	0.000	0.050	0.050	0.050	0
7	2015-02-03 14:05:00	99.96	99.95	99.97	99.96	173.14	173.11	173.15	173.13	4.998	4.998	4.998	4.998	0.000	0.250	0.250	0.250	0
8	2015-02-03 14:06:00	99.96	99.95	99.97	99.96	173.14	173.11	173.15	173.13	4.999	4.998	4.998	4.998	0.000	0.250	0.250	0.250	0
9	2015-02-03 14:07:00	99.96	99.95	99.97	99.96	173.14	173.11	173.15	173.13	4.998	4.998	4.998	4.998	0.000	0.250	0.250	0.250	0

Wiring Diagram



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