FU2200A
Multifunction Power Meter with Data Logger

FU2200A 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 FU2200A power meter offers unparalleled value and functionality.

Features

1. True-RMS measuring parameters
2. ANSI and IEC 0.2 accuracy class
3. Power quality qnalysis
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

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	0-400V (0-800V is optional), 0-6A, 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 choosed 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)	96 x 96 x 12.8
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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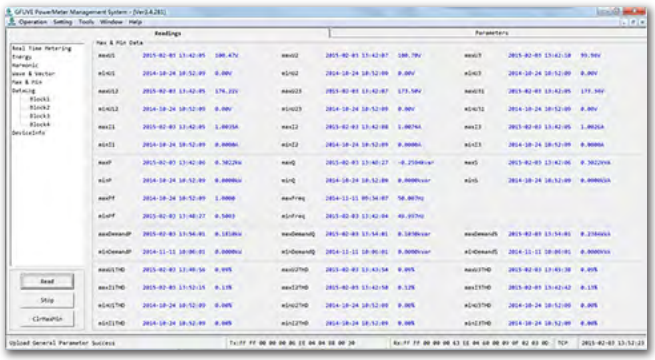
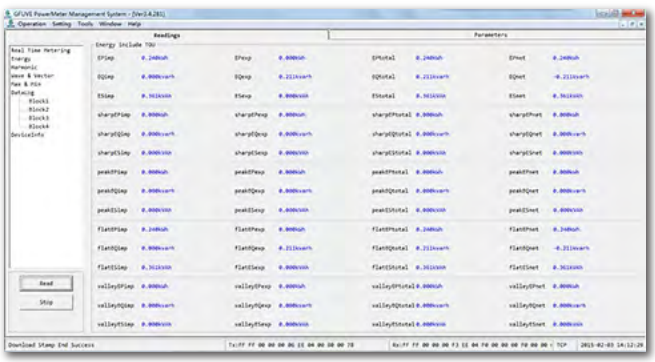
Parameters	Accuracy	Resolution	Measuring range	Show on the display
Voltage	0.20%	0.01V	0-400V	0.5-500kV
Current	0.20%	0.01mA	0-6.5A	5mA-50000A
Active power	0.50%	0.2W	0-2400W/phase	-9999MW to +9999MW
Reactive power	2%	0.2var	0-2400var/phase	-9999Mvar to +9999Mvar
Apparent power	0.50%	0.2VA	0-2400VA/phase	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 FU2200A

Max & Min data



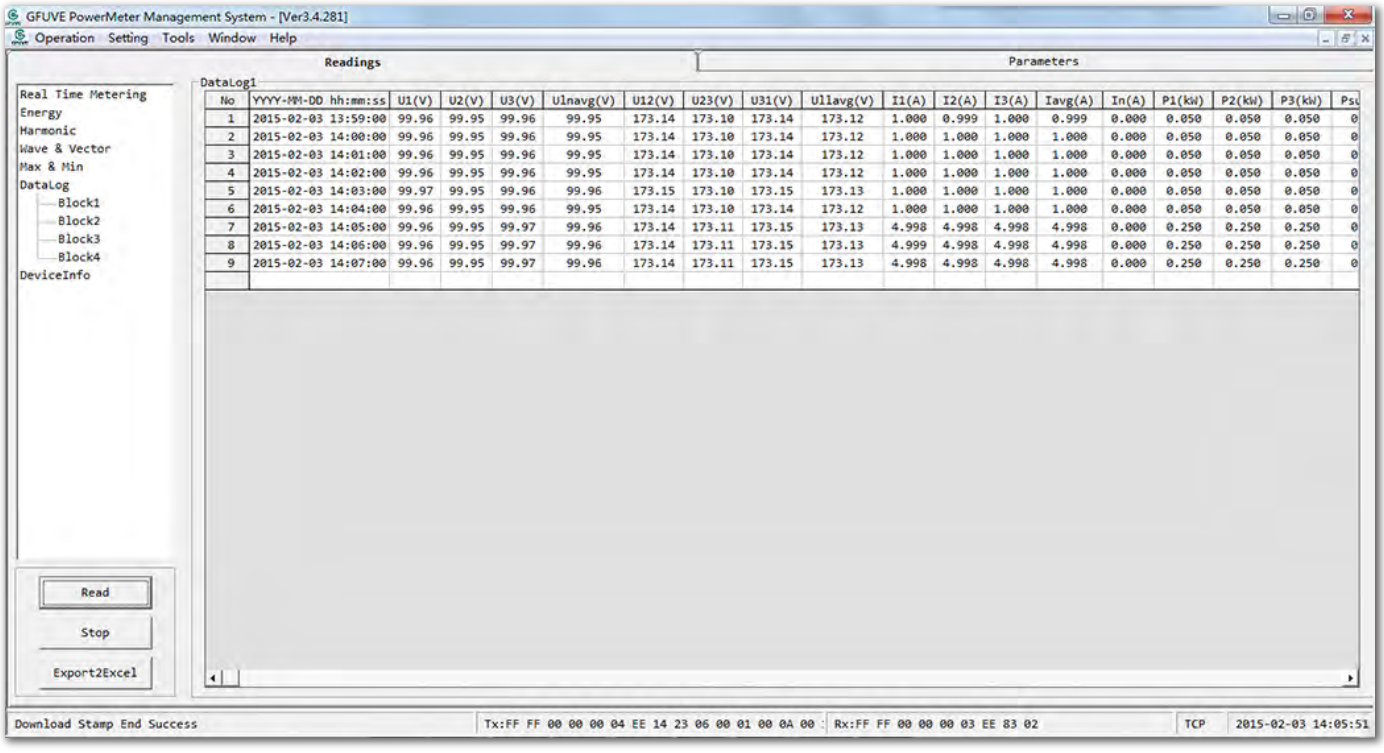
Energy include TOU



Real time metering

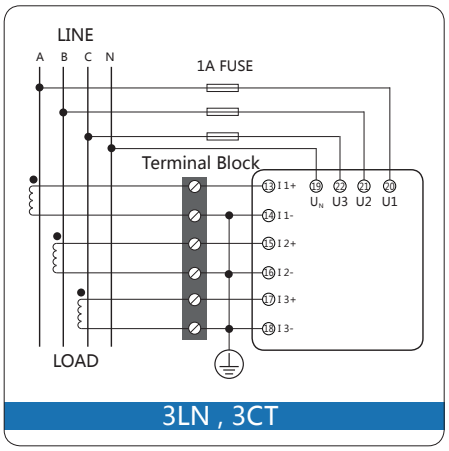
General parameter

Data Logging From FU2200A

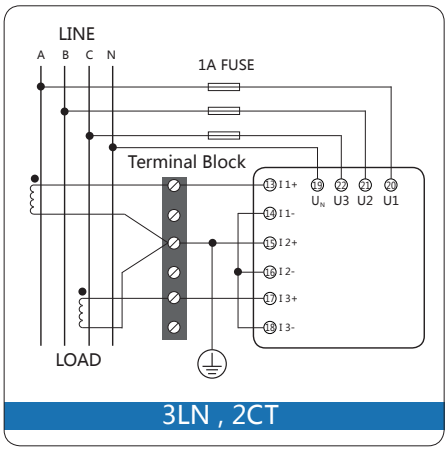


No	YYYY-MM-DD hh:mm:ss	U1(V)	U2(V)	U3(V)	Ulnavg(V)	U12(V)	U23(V)	U31(V)	Ullavg(V)	I1(A)	I2(A)	I3(A)	Iavg(A)	In(A)	P1(kW)	P2(kW)	P3(kW)	Ps
1	2015-02-03 13:59:00	99.96	99.95	99.96	99.95	173.14	173.10	173.14	173.12	1.000	0.999	1.000	0.999	0.000	0.050	0.050	0.050	0
2	2015-02-03 14:00:00	99.96	99.95	99.96	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

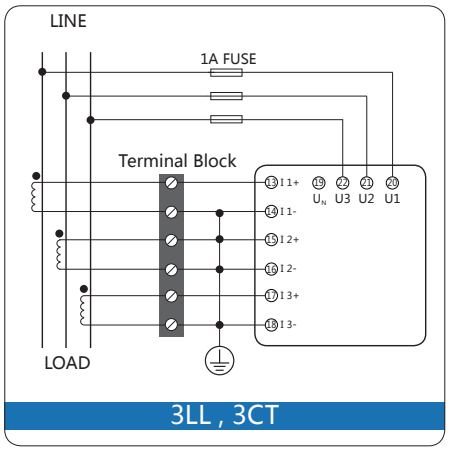
Wiring Diagram



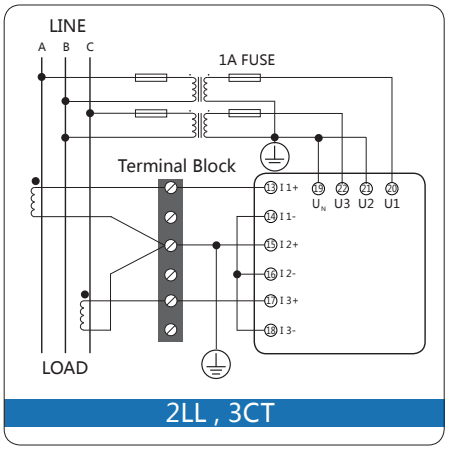
3LN , 3CT



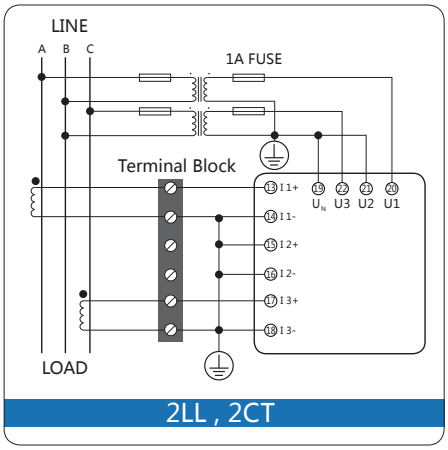
3LN , 2CT



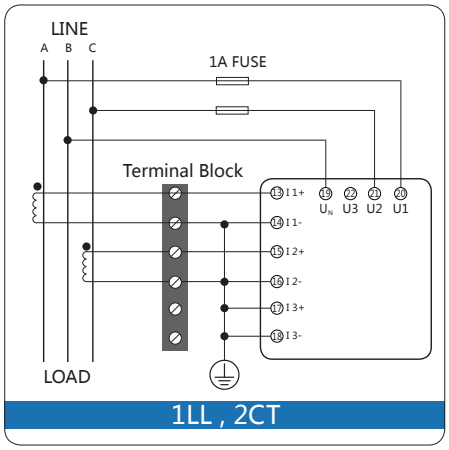
3LL , 3CT



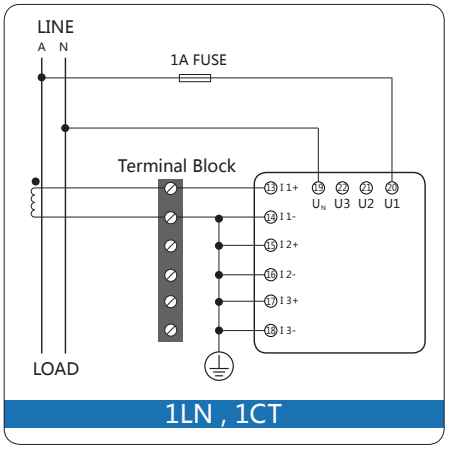
2LL , 3CT



2LL , 2CT



1LL , 2CT



1LN , 1CT

Ralated Current Transformer (C.T)

Model	Primary rated current	Rated load	Aperture (mm)	Description (mm)	Weight (kg)	Material	Water-proof
LMCK055-10	300-1200A	≤10VA	ϕ55	180×138×52	2	PC	IP65
LMCK185-10	300-3000A	≤25VA	ϕ185	350×283×55	4.5	PC	IP65
LZCK310-10	300-600A	≤10VA	ϕ50	ϕ50 x ϕ110 x 32	1	Resin	silicon case (option)
LZCK322-10	30-600A	≤10VA	ϕ50	ϕ50 x ϕ110 x 52	1.6	Resin	silicon case (option)
LZCK350-10	20-600A	≤25VA	ϕ50	ϕ50 x ϕ110 x 105	3.1	Resin	silicon case (option)
LZCG530-10	30-600A	≤20VA	ϕ45	ϕ45 x ϕ120 x 65	5	Resin	silicon case (option)

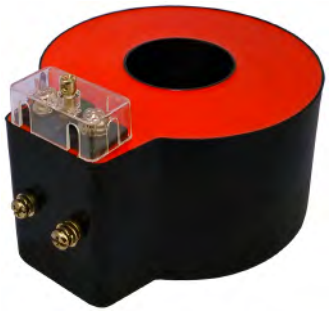
LMCK055-10

LMCK185-10

LZCK310-10

LZCK322-10

LZCK350-10



LZCG530-10