

MULTI-FUNCTION POWER METERS

CT1700



FEATURES

- Harmonic distortion measurement THD-V & THD-A (31st)
- Up to 21st harmonic analysis of V and A
- LCD back-light display
- 2-alarm input (DI)
- 2-alarm output (DO) V, A, W or Demand
- Demand time base 15/30/60 min selectable
- Measurement of zero-phase current
- Precision True-RMS measurement
- RS485/232 communication interface
- PT and CT scaling
- 10-year memory for all setup and energy data
- Auto calibration from computer
- Max, Min and Hold function
- 96 X 96 X 158mm DIN case

The CT1700 is an instrument that measures, calculates and displays all main electrical parameters, including Power demand. Zero-phase current and Harmonic analysis, at any electrical network (balance or not). The measuring is true RMS value, through three AC voltage inputs and three AC current inputs (from Current Transformers ---/5A).

It was designed according to EMC and electrical safety standards, and manufactured under the ISO 9001 quality control. It is featured by its high measuring accuracy, its reduced size, and easy assembly mode and a yet economical price. It can be integrated into a communication network through its built-in-RS485/232 output by just using Modbus standard protocol. In addition, it provides two relay outputs (DO) and two alarm inputs (DI) fro detection.

Specifications

Display:	4 digits (9999) LCD back-light (V, A, W, VAR, PF, Hz) 5 digits (99999) LCD back-light (WH, VARH)	Phase voltage range:	15V ~ 404V
Accuracy:	(at 23 ± 5°C sine wave)	Current range:	20mA ~ 6A
Voltage:	± 0.1% of reading ± 0.15% of range	Power factor range:	± 0.5 ~ ± 1
Current:	± 0.1% of reading ± 0.15% of range	Frequency range:	45 ~ 65Hz
VA:	± 0.2% of reading ± 0.3% of range	CT, PT scaling factors:	1 ~ 9999
Watt:	± 0.2% of reading ± 0.3% of range	CT, PT scaling trim:	0.001 ~ 1.000
Var:	± 0.2% of reading ± 0.3% of range	Operating temp:	0 ~ 60°C
Power Factor	± 0.5% of range	Storage temp.:	-10 ~ 70°C
Watt Hour:	± 0.25% of reading ± 1 count	Temp. coefficient:	≤100PPM/°C (≤60PPM/°C, 25 ± 10°C)
Var Hour:	± 0.4% of reading ± 1 count	Max. relative humidity:	95%
Hz:	± 0.1% of reading	Dielectric strength:	AC 2KV/1min. (input / output / power) AC 2.8KV/1min. (input / output / power / case)
Harmonic:	± 0.2% of fundamental	Surge test:	4KV/1.2 x 50 μ S, IEC 255-4
Demand:	± 0.4% of reading ± 0.2% of range	Dimension:	96 x 96 x 158mm
Max. input over capacity:	Amp. 10A continuous 50A for 5 sec. Volt. 750V continuous	Mounting:	Panel mounting
Conversion rate:	about 1/sec.	Protocol:	Modbus, RTU
Input burden:	Volt. input ≤ 0.2 VA/phase Amp. Input ≤ 0.2 VA/phase	Baud rate:	9600/19200/38400
Input over indication:	"OL"	Address range:	1 ~ 255
Lime voltage range:	26V ~ 700V	Watt-hour data back-up time:	10 years
		Aux. power:	AC 90 ~ 260V, 50/60Hz DC 24V, 48V, 110V ± 20% (option)
		Power consumption:	AC 6VA, DC 5W
		Weight (about):	760g

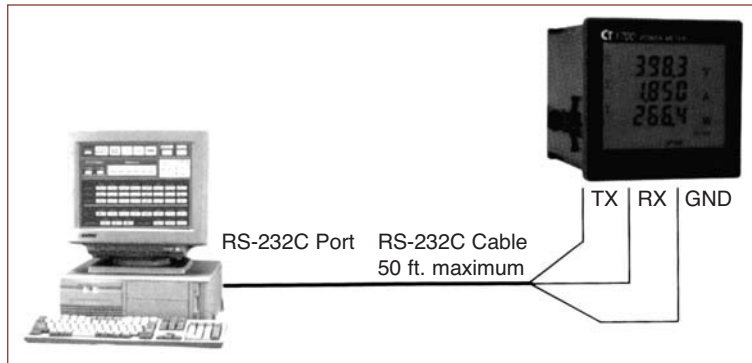
Measuring & Indication

Parameter	Symbol	L1	L2	L3	Total	Display
Voltage (phase-phase)	V _{L-L}	V ₁₂	V ₂₃	V ₁₃	∑ V	0.0V ~ 9999KV
Voltage (phase-neutral)	V _{L-N}	V ₁	V ₂	V ₃		0.0V ~ 9999KV
Current	A	A ₁	A ₂	A ₃	∑ A	0.000A ~ 9999KA
Active power (for/rev)	± W	W ₁	W ₂	W ₃	∑ W	±0.0W ~ 99.99MW
Reactive power (L/C)	± VAR	VAR ₁	VAR ₂	VAR ₃	∑ VAR	±0.0VAR ~ 99.99MVAR
Power factor (L/C)	±PF	PF ₁	PF ₂	PF ₃	∑ PF	-0.500 ~ +0.500
Active energy (for/rev)	± WH	WH ₁	WH ₂	WH ₃	∑ WH	+0.0KWH ~ 99999MWH
Reactive energy (for, L/C)	± VARH	VARH ₁	VARH ₂	VARH ₃	∑ VARH	+0.0KVARH ~ 99999MVARH
Apparent Power	VA	VA ₁	VA ₂	VA ₃	∑ VA	0.0VA ~ 99.99MVA
Frequency	HZ				∑ HZ	0.00HZ ~ 65.00HZ
Zero-phase Current	A				I ₀	0.000A ~ 9999KA
Power Demand	DW				∑ DW	0.0W ~ 99.99MW
Voltage THD (31)	%	V ₁	V ₂	V ₃		0.00 ~ 100.00%
Current THD (31)	%	A ₁	A ₂	A ₃		0.00 ~ 100.00%
Harmonic V (1 ~ 21)	% / V	V ₁	V ₂	V ₃		100.00% / 0.0V ~ 9999KV
Harmonic A (1~21)	% / A	A ₁	A ₂	A ₃		100.00% / 0.000A ~ 9999KA

*-KWH / -KVARH Display: -9999 (4 digits) MWH /MVARH

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Communication Connection

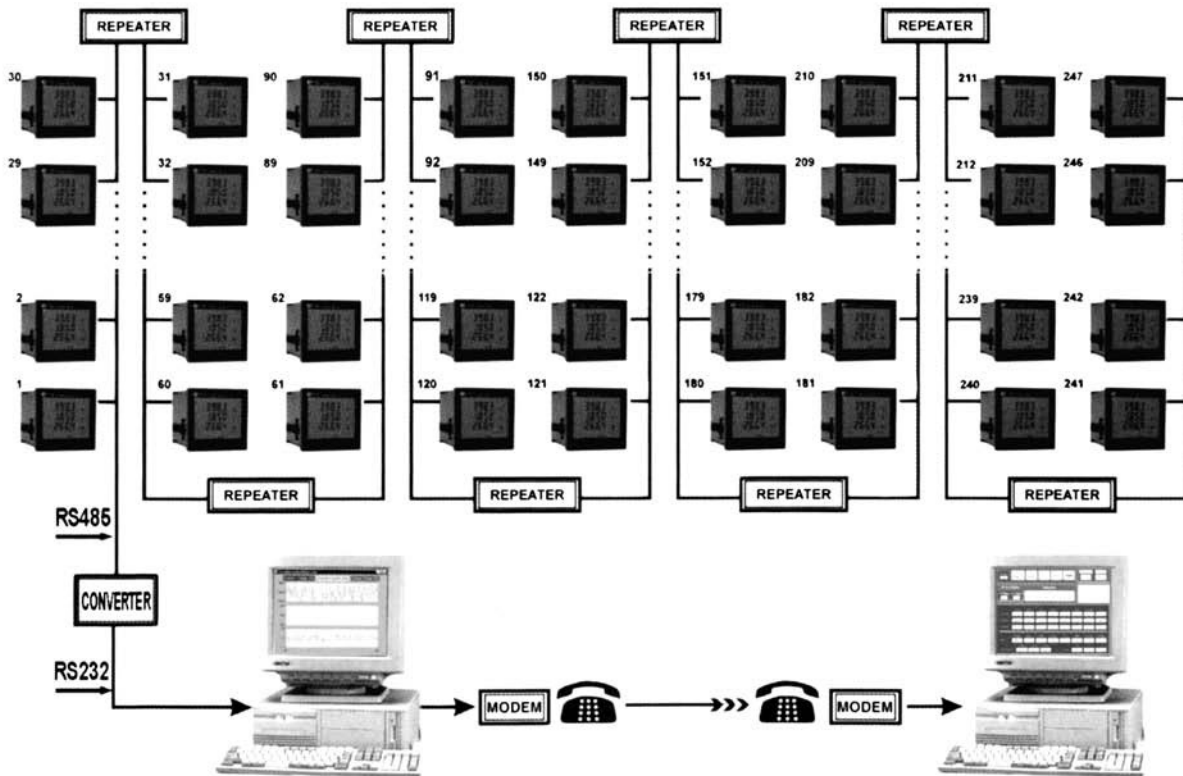


RS-232C CONNECTION

The figure below illustrates the wiring requirements for connecting the CT 1700 using RS-232C communications. This can include a local direct connecting the CT1700 using RS-232C communications. This can include a local direct connection to a computer or other device. The RS-232C standard allows only a single point-to-point communication connection. Using this method, only one RS-232C equipped device may be connected to the serial port of the computer, or other device. The cable used between the computers is a standard RS-232C communication cable with a maximum length of 50 feet (15.2m).

RS-485 CONNECTION

RS-485 communication allows multiple devices to be connected on the same bus. Up to 30 devices can be connected on a single RS-485 bus, which consists of a shield twisted pair cable. The overall length of the RS-485 cable connecting all devices can't exceed 4000 feet (1219m).



Ordering Information

CT1700 -

NO.	INPUT	NO.	OUTPUT 1	NO.	AUX. POWER	NO.	DI
A	600V/346V, 5A	A	RS-485	A	AC 90 ~ 260V, 50/60Hz	A	DI 1 + DI 2
Y	OPTION	B	RS-232	Y	OPTION	Y	OPTION

