



CT-TCS100A *Time Tester*

Datasheet

CT-TCS100A Time Tester is a comprehensive test instrument with high precision time signal measurement analysis and time synchronization functions. It can accurately measure the accuracy of multiple input time signals, meets the time measuring demand of various industrial user. It can be used in electric power, telecommunications, transportations and finance areas etc.



CT-TCS100A Time Tester front panel



CT-TCS100A Time Tester rear panel

Functions

- ✓ Internal precision time-keeping via Rubidium atomic clock
- ✓ Multi-format input signal testing: PTP, NTP, IRIG-B, Pulse, Serial
- ✓ Support relative and absolute time precision measurement (dual channels input)
- ✓ Receive standard time signal via GPS or BD satellite, Nanosecond time accuracy to UTC
- ✓ Can be treated as a local standard time frequency source, supports high precision time signal and 10MHz frequency outputs
- ✓ Built-in lithium battery keeps continuous measuring at least 2 hours when failure of power supply
- ✓ Provide statistical data analysis and conclusion

Features

- ✓ Adopt Linux operation system, easy for management
- ✓ User-friendly touch control LCD screen, convenient for operation
- ✓ Simple and portable industrial design, meets various testing demands
- ✓ Provide network and USB interface, convenient for online upgrade, remote management and data downloads

Specifications

Time Reference	BD B1, GPS L1		
Time Accuracy	$\leq 100\text{ns}$ (RMS)		
Holdover Accuracy	$\leq 300\text{ns}/24\text{hr}$ (After 24 hours locked)		
Frequency Source	Rubidium atomic clock		
Frequency Accuracy	$1\text{E-}12/\text{day}$ (After 24 hours tamed)		
Starting Features	When satellite signal in good condition, the time from electricity boot to normal measurement is less than 30 mins.		
Frequency Drift	$\leq 2\text{E-}12/\text{day}$		
Measurement capability and resolution	Signal Type	Measurement Accuracy	Measurement Resolution
	1PPS/1PPM/1PPH	50ns	0.1ns
	IRIG-B DC	50ns	0.1ns
	IRIG-B AC	1 μ s	100ns
	Serial (Start bit)	1 μ s	10ns
	PTP	100ns	20ns
	NTP/SNTP	100 μ s	1 μ s
	Frequency Measurement (optional)	0.001Hz	0.0001Hz
	GOOSE、SV	100ns	20ns
Output signal time accuracy	Output Signal Type	Time Accuracy	
	1PPS/1PPM/1PPH (TTL、RS422/485、Optical Fiber)	50 ns	
	1PPS/1PPM/1PPH (idle contact)	50 ns	
	IRIG-B (DC)	50 ns	
	IRIG-B (AC)	5 μ s	
	NTP/SNTP	100 ns	
	PTP	100 ns	