

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

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CFC250 CDC250 CMC250 CMC251 Counters

Multifunction Counter for use in high frequency systems.

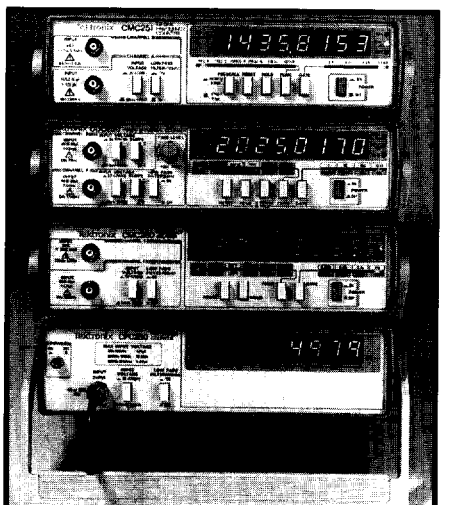
Universal Counter with temperature compensated time base to ensure performance in changing ambient temperature.

CMC251
- 1 Hz to 100 MHz (CH 1)
  80 MHz to 1.3 GHz (CH 2)
- ±1 ppm Time Base
- Period Average, Period, Frequency, Totalize, Self Test
- Display Hold
- Remote Start/Stop

CDC250
- 1 Hz to 175 MHz
- Frequency Ratio
- Time Interval
- ±1 ppm Time Base
- Period Average, Period, Frequency, Totalize, Self Test

CMC250
- 5 Hz to 100 MHz (CH 1)
  80 MHz to 1.3 GHz (CH 2)
- ±10 ppm Time Base
- Period Average, Period, Frequency, Totalize, Self Test
- Display Hold
- Remote Start/Stop

CFC250
- 5 Hz to 100 MHz
- Switchable Input Sensitivity
- 1 Hz Resolution



CMC251/CDC250/CMC250/CFC250

CMC251

The CMC251 1.3 GHz Multifunction Counter measures the frequency of sine, square, and triangle waves from 1 Hz to 1.3 GHz. The CMC251 also provides period, totalize, and pulse width measurements. The counter has two input channels. Channel A is a standard 1 MΩ input for frequency measurements up to 100 MHz. Channel B is a 50 Ω terminated input for use in high-frequency systems. This counter is of interest to radio amateurs because of its ability to measure high-frequency systems. The temperature-compensated, crystal-controlled time base is stable to ±1 part per million per year.

CDC250

The CDC250 175 MHz Universal Counter measures frequency of sine, square, and triangle waves from 1 Hz to 175 MHz at input levels from 20 mV to 42 V peak. The CDC250 also provides period measurements, frequency ratio, time interval, and totalize measurement functions. The CDC250 has a ±1 ppm/year, temperature-compensated time base to ensure consistent accuracy. Service technicians will find the CDC250 useful as a standard for calibrating other equipment.

CMC250

The CMC250 1.3 GHz Multifunction Counter measures the frequency of sine, square, and triangle waves from 5 Hz to 1.3 GHz. The CMC250 also provides period measurements and totalize functions. Channel A is a standard 1 MΩ input for frequency measurements up to 100 MHz. Channel B is a special 50 Ω terminated input, prescaled to 1.3 GHz for easy RF measurements. The time base stability is ±10 ppm/yr.

CFC250

The CFC250 100 MHz Frequency Counter measures the frequency of sine, square, and triangle waves from 5 Hz to 100 MHz at input levels from 30 mV to 42 V peak. Students will enjoy the simplicity of using the CFC250. Applications include adjustment, testing, and repair of electronic items, such as audio equipment, radios, televisions, computer clocks, and musical instruments.

Product(s) available through an Authorized Tektronix Distributor. See pages 590-595.

ISO 9001

Tektronix Measurement products are manufactured in ISO registered facilities.

ORDERING INFORMATION

CFC250
100 MHz Frequency Counter
Includes: Operator's Manual, US Power Cord, One Year Warranty.

CDC250
175 MHz Universal Counter
Includes: Operator's Manual, US Power Cord, One Year Warranty.

CMC250
1.3 GHz Frequency Counter
Includes: Operator's Manual, US Power Cord, One Year Warranty.

CMC251
1.3 GHz Frequency Counter with High Stability Time Base
Includes: Operator's Manual, US Power Cord, One Year Warranty.

AVAILABLE ACCESSORIES
10X Probe, 250 MHz. Order P6130

SERVICE ASSURANCE OPTIONS
These products covered by the following service assurance options:
REP4100 – Provides One Year of Post-Warranty Repair Protection
CAL4100 – Provides One Year of Calibration Services

Counters

CFC250 CDC250 CMC250 CMC251

KEY SPECIFICATIONS

	CMC251	CDC250	CMC250	CFC250
Channel A				
Frequency Range	1 Hz to 100 MHz	1 Hz to 175 MHz	1 Hz to 100 MHz	5 Hz to 100 MHz
Sensitivity	20 mV RMS, 1 Hz to 30 MHz; 50 mV RMS, 30 MHz to 100 MHz	kHz/ms mode: 20 mV RMS, 5 Hz to 10 MHz; MHz/µs mode: 50 mV RMS, 5 MHz to 125 MHz; 100 mV RMS, 125 MHz to 150 MHz; 150 mV RMS, 150 MHz to 175 MHz	20 mV RMS, 5 Hz to 30 MHz; 50 mV RMS, 30 MHz to 100 MHz	30 mV RMS, 5 Hz to 30 MHz; 50 mV RMS, 30 MHz to 70 MHz 80 mV RMS, 70 MHz to 100 MHz
Attenuation	3 V to 42 V (HI); 50 mV to 5 V (LO)	3 V to 42 V (HI); 50 mV to 5 V (LO)	3 V to 42 V (HI); 50 mV to 5 V (LO)	3 V to 42 V (HI); 50 mV to 5 V (LO)
Max Input Voltage	1 Hz to 5 MHz: 42 V pk; 5 MHz to 100 MHz: 4.9 V pk	1 Hz to 5 MHz: 42 V pk; 5 MHz to 175 MHz: 4.9 V pk	5 Hz to 5 MHz: 42 V pk; 5 MHz to 100 MHz: 4.9 V pk	5 Hz to 100 kHz: 42 V pk; 100 kHz to 10 MHz: 13.8 V pk; 10 MHz to 100 MHz: 5.4 V pk
Low Pass Filter	–3 dB at 100 kHz	–3 dB at 10 kHz	–3 dB at 100 kHz	100 kHz
Impedance	1.0 MΩ, paralleled by 40 pF	1.0 MΩ, paralleled by 40 pF	1.0 MΩ, paralleled by 40 pF	1.0 MΩ, paralleled by 40 pF
Channel B				
Frequency Range	80 MHz to 1.3 GHz	1 Hz to 2 MHz	80 MHz to 1.3 GHz	–
Sensitivity	5 mV RMS, 80 MHz to 600 MHz; 15 mV RMS, 600 MHz to 900 MHz; 35 mV RMS, 900 MHz to 1.3 GHz	30 mV RMS, 5 Hz to 2 MHz	10 mV RMS, 80 MHz to 600 MHz; 25 mV RMS, 600 MHz to 900 MHz; 50 mV RMS, 900 MHz to 1.3 GHz	–
Impedance	50 Ω	1.0 MΩ, paralleled by 40 pF	50 Ω	–
Max Input Voltage	1 V RMS	42 V pk	1 V RMS	–
Period				
Range	Direct: 0.4 µs to 1.0 s; Prescale: 0.04 µs to 1.0 s	0.5 µs to 0.2 s	0.4 µs to 0.2 s	–
Resolution	Direct: 100 ps to 100 ns; Prescale: 10 ps to 10 ns	100 ps to 100 ns	100 ps to 100 ns	–
Min Pulse Width	Direct: 0.2 µs; Prescale: 20 ns	250 ns	250 ns	–
Frequency Range	Direct: 1 Hz to 2.5 MHz; Prescale: 1 Hz to 25 MHz	1 Hz to 2 MHz	5 Hz to 2.5 MHz	–
Events Averaged (N)	1, 10, 100, 1000, 10,000 cycles	1, 10, 100, 1000 cycles	1, 10, 100, 1000 cycles	–
Totalize Range	0 to 99,999,999	0 to 99,999,999	0 to 99,999,999	–
Pulse Width				
Range	0.25 µs to 0.5 s	–	–	–
Period Range	100 ps to 100 ns	–	–	–
Events Averaged (N)	1, 10, 100, or 1000 cycles	–	–	–
Time Base Stability				
Temperature	<1 ppm from 0° to 40°C	<1 ppm from 0° to 40°C	<10 ppm from 0° to 40°C	<10 ppm from 0° to 40°C
10% Line Voltage Change	<0.4 ppm	<0.4 ppm	<1.0 ppm	<1.0 ppm
Accuracy				
Frequency	±(time base error + 1 count)	±(time base error + 1 count)	±(time base error + 1 count)	±(time base error + 1 count)
Period	±(time base error + 1 count + trigger error)	±(time base error + 1 count + trigger error)	±(time base error + 1 count + trigger error)	–
Pulse Width	±(time base error + 1 count + trigger error + 10 ns)	–	–	–
Plus				
Selectable Slope	No	Yes	No	No
Ratio CH A: CH B	No	Yes	No	No
Display Hold	Yes	Yes	Yes	No
Remote Start/Stop	Yes	Yes	Yes	No
Time Interval CH A: CH B	No	Yes	No	No
Safety Certification	ETL, CSA	UL , CSA	UL , CSA	UL , CSA

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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