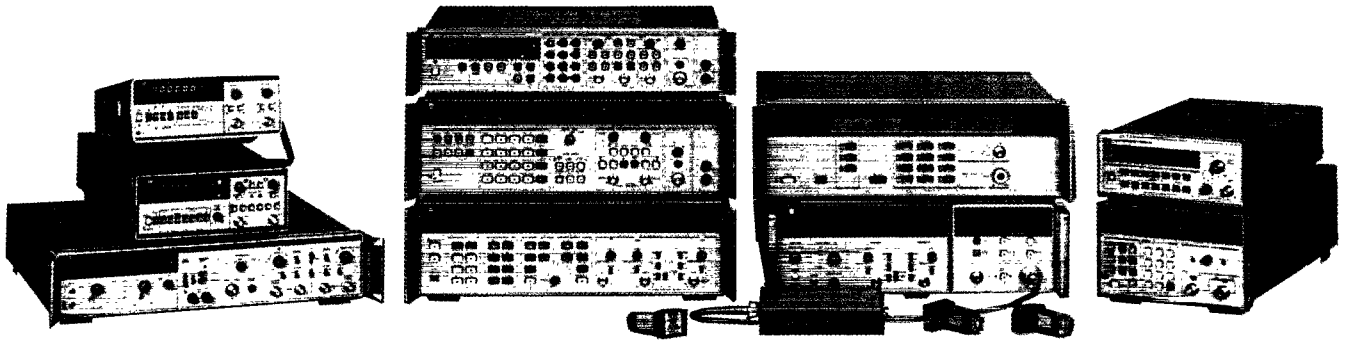


ELECTRONIC COUNTERS

General Information



The Hewlett-Packard counter family includes a broad selection of frequency and time-interval measurement options and a selection of Modulation Domain Analyzers for advanced measurement and analysis requirements.

Electronic Counters

Hewlett-Packard offers the industry's broadest line of electronic counters and counter/timers: 29 models. Starting with the first frequency-measurement projects in the 1940s, Hewlett-Packard has pioneered the major technologies enabling today's electronic counters and modulation domain analyzers.

Electronic counter/timers are used throughout most technical industries for measuring and analyzing frequency, phase, and time-interval signal characteristics. The breadth of the HP offering allows the best product to be selected for each application. An ideal functional and performance fit delivers the greatest value: the best and most cost-effective solution.

HP counter/timers offer:

- High measurement accuracy
- Fast system throughput/HP-IB capability
- Low cost of ownership
- Ease of use
- Data reduction on many models
- Triggering simplicity

Product Line Additions

Following a tradition of technology innovations, HP adds to the counter/timer product line each year. This year, customers can take advantage of two new modulation domain analyzers.

The HP 53310A combines ease of use and attractive pricing to bring frequency and time measurement capabilities to an expanding range of applications.

The HP 5373A Modulation Domain Pulse Analyzer is tuned for complex signal modulations, especially pulsed and non-repetitive signals. To minimize design and testing efforts for military, air traffic, marine, weather, and space-based radar systems, the HP 5373A analyzes agile carriers, staggered PRI, chirp, phase coding, and similar modulations.

In addition to the new products, an enhanced HP 5372A offers Fast Fourier Transform (FFT) capability. The new HP 5372A option eliminates computer-aided processing to perform these complex tasks.

For more information on the modulation domain analyzer products, see the section starting on page 184.

Counter Products

Basic and High-Performance Universal Counters

Universal counters, also called counter/timers, offer the ability to measure frequency and time intervals. Many models measure period, ratio, statistics, voltage, and totalize. Higher-performance products provide complete, automatic characterization of rise time, pulse width, and other signal parameters. Many options, such as frequency extension, voltage measurement, portable battery operation, higher performance timebases, and systems capability (HP-IB), are also available to customize the product to your specific needs.

- **HP 5314A:** An affordable portable.
- **HP 5315A:** The high-performance portable.
- **HP 5316B:** The low-cost systems counter.
- **HP 5334B:** High performance at a moderate price.
- **HP 5335A:** Top performance in universal counters.

Precision Time Interval Counter

The HP 5370B universal time interval counter is optimized for precision time-interval measurements and offers time-interval resolution of 100 ps rms. It measures frequency and period (with increased accuracy per unit time compared to other counters) from dc to 100 MHz. Statistics, external trigger, systems interface (HP-IB), and other features are all standard.

- **HP 5370B:** The standard for precision time-interval measurements.

Basic RF Frequency Counters

These low-cost products provide frequency measurements dc to 3 GHz for bench and systems. HP-IB is standard. The reciprocal (high-accuracy) measurement technique is used; battery and extended-accuracy time-base are available.

- **HP 5384A:** The economical counter for systems and field service.
- **HP 5385A:** The medium-frequency, affordable, systems and field service counter.
- **HP 5386A:** The high-end (3 GHz) compact RF counter.

Microwave and Millimeter-Wave Frequency Counters

These products provide fundamental high-performance frequency measurements, dc to 110 GHz. Many enhancements—power measurement, battery operation, systems interface (HP-IB), and high-accuracy time bases—are available standard or as options.

Pulse counters add the capability to automatically measure and profile burst or pulsed microwave or millimeter-wave signals.

- **HP 5361B:** Profiles pulsed/CW microwave frequencies.
- **HP 5347A/5348A:** Portable CW microwave counter plus power meter for telecommunications service.
- **HP 5350B/5351B/5352B:** CW microwave, 10 Hz to 46 GHz.

Mature Products

For information on the mature HP counter products see pages 208 and 209.