

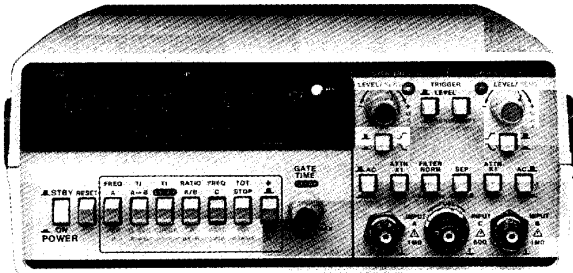


170

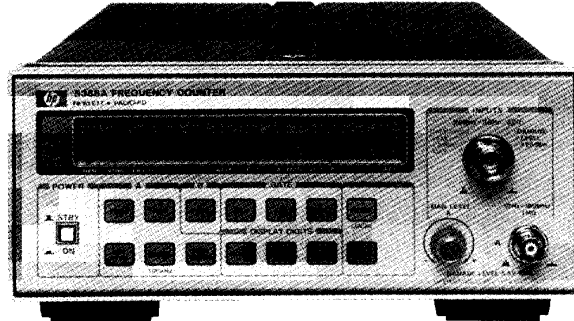
## ELECTRONIC COUNTERS

Mature Products

HP 5315A, 5316B, 5384A, 5385A, 5386A



HP 5315A



HP 5386A



### Universal Counters (continued)

#### HP 5315A and HP 5316B Universal Counters

Hewlett-Packard's economical HP 5315A and HP 5316B counters include a custom circuit called the MRC (Multiple Register Counter). Reciprocal counting techniques provide frequency resolution of 7 digits per second even at low frequencies. The continuously adjustable gate time allows automatic selection of sample size for easy trade-offs between measurement time and resolution.

The MRC counters measure frequency to 100 MHz—up to 1.0 GHz with the optional Channel C—for CW and pulsed RF signals as narrow as 60 ms. Three time-interval measurements are possible: single-shot (100 ns to 100,000 s), averaging (down to 10 ps resolution), and time-interval delay. The MRC counters also measure/perform: Period A, Ratio A/B, A By B (totalizes A input between two events on B), and Totalize (manually gated mode).

Both channels offer input signal conditioning controls:  $\pm$  slope,  $\pm 2.5$  Vdc trigger level, and ac/dc coupling. A separate/common switch and 100-kHz low-pass filter for Channel A are included.

#### A Choice of Portable or System Models

The HP 5315A, a portable, lightweight unit, includes a carrying handle and optional battery power for up to 4 hours continuous operation. The HP 5316A offers the measurement capabilities of the HP 5315A in a rack-and-stack metal case, built-in HP-IB capabilities, and front-panel access to Channel A and B trigger levels for easy measurement with a DVM.

#### RF Counters

##### HP 5384A/5385A/5386A Frequency Counters

The HP 5384A/5385A/5386A provide outstanding measurement performance for bench, field, and systems applications. The half-rack-width package makes the HP 5384A/5385A/5386A portable and saves rack or bench space.

#### Versatile Display

The 12-digit liquid-crystal display's large characters are easy to read in sunlight. The added feature of remote display extends the usefulness of these counters beyond that of simply making and displaying frequency measurements. User-friendly messages, prompts, and measurement units are easily displayed.

#### Performance

If your frequency measurement needs are below 3 GHz, HP RF counters provide the basic performance of traditional microwave counters. The HP 5386A measures frequencies from 10 Hz to 3 GHz with only two input ports, instead of the three ports found with other counters. The high-frequency input measures frequencies from 100 MHz to 3 GHz with  $-23.5$  dBm sensitivity (15 mV rms). In addition, prescaling techniques offer peak-to-peak FM tolerance of at least 100 MHz for your communications applications. You can select the number of digits displayed from 3-to-11 to blank meaningless

digits from an unstable digital source. The HP RF counters also solve systems problems with full remote programmability (via HP-IB standard feature) and remote display capabilities. The high-stability timebase option will lengthen the required calibration period (for kHz accuracy at 3 GHz) from six months to a full year.

#### Ordering Information

HP 5315A Universal Counter \$2,000  
HP 5316B Universal Counter \$2,530

#### Options (for HP 5315A and HP 5316B)

Opt 001 TCXO Timebase + \$200  
Opt 002 Battery Pack (HP 5315A only) + \$485  
Opt 003 C Channel (1.0 GHz) + \$500  
Opt 004 High-Stability Timebase + \$700  
Opt W30 Extended Repair Service (see page 663) + \$45  
Opt W32 Calibration Service (see page 663) + \$595

#### HP 5315A Power Options (one option must be selected)

Opt 100 90 to 105 Vac  
Opt 120 108 to 126 Vac  
Opt 220 198 to 231 Vac  
Opt 240 216 to 252 Vac

HP 5384A Frequency Counter 225 MHz \$2,125  
HP 5385A Frequency Counter 1.0 GHz \$2,625  
HP 5386A Frequency Counter 3.0 GHz \$4,775

#### Options for HP 5384A, 5385A, 5386A:

Opt 004 High-Stability Oven Timebase + \$650  
Opt W30 Extended Repair Service (see page 663)  
HP 5384-5385A + \$50  
HP 5386A + \$85  
Opt W32 Calibration Service (see page 663) + \$715

#### HP 5384A/5385A only:

Opt 001 High-Stability TCXO (HP 5384A only; standard with HP 5385A/5386A). + \$180  
Opt 005 Battery Pack + \$425  
Side Handle Kit HP 5061-1171 \$55  
Rack Mount Kit (single): HP 5060-0173 \$95  
Rack Mount Kit (dual): HP 5060-0174 \$85  
Vinyl Carrying/Operating Case: HP 34110A \$90

#### HP 5386A only:

Front Handle Kit: HP 5062-3988 \$55  
Rack Mount Kit (single): HP 5062-3972 \$60  
Rack Mount Kit (dual): HP 5062-3974 and 5061-9694 \$45