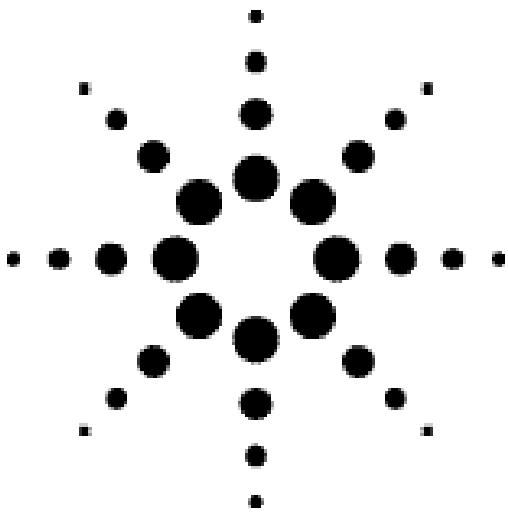




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E1420B

Data Sheet

Product Specifications

Functions

- Period: Yes
- Time interval: Yes
- Totalize: Yes
- Gated totalize: Yes
- Ratio: Yes
- Pulse width: Yes
- Rise/fall time: Yes
- Phase: Yes
- Vdc: Yes
- Vac: Yes
- Up/down counter: No

Measurements

- Frequency: 200 MHz (standard) 2.5 GHz (with option)
- Frequency 1,2,3:
 - Range: 0.001 Hz to 200 MHz, input 1; 0.001 Hz to 100 MHz, input 2; 90 MHz to 2.5 GHz, input 3 (Optional)
 - Resolution: 9 digits/s of measurement time + trigger error + system jitter (Frequency resolution is directly proportional to gate time. For example, resolution is 9 digits for a 1-second gate time and 8 digits for a 0.1-second gate time.)
- Period 1,2,3:
 - Range: 5 ns to 1,000 s, input 1; 10 ns to 100 s, input 2; 400 ps to 10 ns, input 3 (Optional)
 - Resolution: Same as Frequency
- Time interval (TI) 1 to 2:
 - Range: 1ns to 1,000 s (single-shot); 1ns to 10 s (averaging) (100-gate average)
 - Resolution: 2ns + trigger error, single-shot; 200 ps + trigger error, averaging
- Rise/fall time 1:.*
 - Range: 15 ns to 400 microsec (automatic); to 800 sec (manual)
 - Resolution: Same as TI
- Pulse width 1, 2:.*
 - Range: 5 ns to 1 ms
 - Resolution: Same as TI
- Phase 1 relative 2:.*



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- Range: 0.1 degree to 360 degrees
- Resolution: TI resolution x frequency x 360 degrees
- Ratio 1/2, 2/1, 3/1:
 - Range (1/2, 2/1): 0.001 Hz to 100 MHz
 - Range (3/1): 90 MHz to 2.5 GHz (Optional)
- Totalize 1, 1 by 2, 2 by 1:
 - Range: 0 to $(1 \times 1.0E12-1)$ events
- Min/max, ac voltage 1, 2:*
 - Range: 200 mVp-p to 10 Vp-p (x Atten.)
 - Resolution: 300 mV (x Atten.)
- Min/max, dc voltage 1:
 - Range: 30 mV to +/-10 V (x Atten.)
 - Resolution: 30 mV (x Atten.)

**Frequency range 1 kHz to 20 MHz.*

Input Characteristics for Channels 1,2

- Sinewave sensitivity: 35 mV rms
- Pulse sensitivity: 100 mVp-p (with minimum pulse width of 5 ns)
- Dynamic range: 100 mVp-p to 10 Vp-p (x Atten.)
- Attenuator: x1 (default) or x10
- Signal operating range: +/-10 V (x Atten.)(1 MOhm); +/-5 V (50 Ohm)
- Trigger level range: +/-10.2 V with step size of 2.5 mV (specified by V or % of signal)
- Trigger level accuracy: +/-30 mV (x Atten.) +/-1% of trigger level
- Coupling: AC/DC
- Impedance: 50 Ohm/1 MOhm (default programmable)
- Slopes: Positive or Negative
- Input: Separate or Common (1 routed to 2)

General Characteristics

- Gate time: 1 ms to 99.99s in 1 ms steps
- External arm: via front-panel BNC or VXI TTL TRIG lines
- Auto trigger:
 - Range: 1 kHz to 20 MHz (Single or Repetitive Range)
 - Minimum amplitude: 200 mVp-p (x Atten.)
- TI delay: (Inserts delay after start event before allowing stop event to occur)
 - Range: 1 ms to 99.99s in 1 ms steps
 - Measurement timeout: 0.1 s to 1,500 s
 - Gate output: VXI TTL TRIP lines
- Measurement throughput rate: Measured using Radisys EPC-2
 - Free-run: Up to 60 Measurements/s
 - Switching: Up to 40 Measurements/s
 - Shared memory (option 040): Up to 160 Measurements/s
 - Memory states: 10 setups can be stored and recalled (Volatile)

VXI Characteristics

- VXI device type: Message based
- Size: C
- Slots: 1
- Connectors: P1/P2
- Shared memory: Yes
- VXI busses: TTL Trigger Bus
- C-size compatibility: n/a

Instrument Drivers: See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

- Command module firmware: n/a
- Command module firmware revision: n/a
- I-SCPI Windows®3.1: n/a
- I-SCPI Series 700: n/a
- C-SCPI LynxOS: n/a
- C-SCPI Series 700: n/a
- Panel Drivers: Yes
- VXIplug&play Windows® Framework: Yes
- VXIplug&play Windows® 95/NT Framework: Yes
- VXIplug&play HP-UX Framework: No

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