

Table 1–2. Specifications

**OUTPUT CHARACTERISTICS****Pulse Amplitude**

0.3V to 100V into 50 ohm. 5 ranges with calibrated vernier providing continuous adjustment within ranges.

**Vernier Accuracy:**  $\pm 10\%$  of setting.

**Source Impedance**

Fixed 50 ohm nominal on ranges up to 10V. Selectable 50 ohm nominal or high impedance on 10–30V and 30–100V ranges. (Note: with 50 ohm source and load impedance, 10–30V and 30–100V ranges reduce to 5–15V and 15–50V respectively).

**Polarity:** Positive or negative, switch selectable.

**Preshoot, Overshoot and Ringing:**  $\leq \pm 5\%$  of pulse amplitude.

**Pulse Top Perturbations:**  $\leq \pm 5\%$  of pulse amplitude.

**Transition Times:**  $\leq 15\text{ns}$  for leading and trailing edges.

**TIMING****Repetition Rate**

10 Hz to 10 MHz in 6 decade ranges. In 30V–100V amplitude range, maximum repetition rate is 4 MHz. Calibrated vernier provides continuous adjustment within ranges.

**Vernier Accuracy:**  $\pm (10\%$  of setting +  $1\%$  of full scale).

**Period Jitter:**  $\leq 0.1\% + 300\text{ps}$ .

**Pulse Position****Pulse Delay**

Pulse can be delayed with respect to the Trigger Output from +10ns [ + fixed delay ] to +10ms. [Fixed delay is 45ns  $\pm$  5ns ] .

**Pulse Advance**

Pulse can be delayed with respect to the Trigger Output from +10ns [ – fixed delay ] to +10ms. [Fixed delay is 45ns  $\pm$  5ns ] .

**Controls**

5 decade ranges with calibrated vernier providing continuous adjustment within ranges.

**Vernier Accuracy:**  $\pm (10\%$  of setting +  $1\%$  of full scale) + fixed delay.

**Maximum Pulse Position Duty Cycle:**  $\geq 50\%$ .

**Position Jitter:**  $\leq 0.1\% + 500\text{ps}$ .

**Pulse Width**

25ns to 10ms in 6 decade ranges. Calibrated vernier provides continuous adjustment within ranges.

**Vernier Accuracy:**  $\pm (10\%$  of setting +  $1\%$  of full scale) + 5ns.

**Width Jitter:**  $\leq 0.1\% + 500\text{ps}$ .

**Maximum Duty Cycle**

$\geq 10\%$  for 30–100V amplitude range.

$\geq 50\%$  for all other ranges.

**Constant Duty Cycle Mode (Disabled in External Trigger Mode)**

Duty cycle of output pulse (hence output power) remains constant when the pulse period is changed. In this mode the duty cycle limits are:

Typically      8% fixed for 10M – 1 MHz frequency range  
                   2.5% to 10% for 1 M – .1 MHz frequency range  
                   .25% to 10% for .1 MHz – 10 kHz frequency range  
                   0.1% to 10% for all other frequency ranges

Calibrated vernier provides continuous adjustment within duty cycle ranges.

**Vernier Accuracy:**  $\pm (15\%$  of setting +  $1\%$  of full scale).

**Double Pulse**

5 MHz maximum in all ranges except 30V–100V range. In 30V–100V range, the maximum frequency is 2 MHz. Minimum separation is 100ns.

**Trigger Output**

**Amplitude:**  $\geq + 5\text{V}$  (from 50 ohm into open circuit).

**Pulse Width:** 10ns typical.

**Source Impedance:** 50 ohm nominal.

**EXTERNALLY CONTROLLED OPERATION**

**External Trigger Mode :** An output pulse is generated for each input pulse.

**Gate Mode**

Gating signal turns on repetition rate generator. First pulse occurs after start of gate signal, and last pulse is always completed even if gate ends during generation of last pulse.

**Burst Mode (Optional)**

Preselected number of pulses generated on receipt of trigger signal.

Number of Pulses: 1 to 9999.

Minimum Spacing between Bursts: 200ns.

**External Input**

**Repetition Rate :** DC to 10 MHz.

**Sensitivity:** 500mV peak to peak, dc coupled.

**Slope:** Positive or negative.

**Trigger Level:** Continuously adjustable from –5V to +5V.

**Maximum Input Level:**  $\pm 100\text{V}$ .

**Trigger Pulse Width:**  $\geq 10\text{ns}$ .

**Input Impedance:** 10k ohm nominal.

**Manual**

Pushbutton can be used for:

- triggering single pulses (EXT TRIGGER Mode)
- generating gate signals (GATE Mode)
- triggering pulse bursts (BURST Mode)

**GENERAL**

**Environmental :** Instrument operates within 0°C to 55°C.

**Power Requirements**

100V, 120V, 220V or 240V, +5%, –10%. 48 Hz to 66 Hz, 360VA max.

**Weight :** Net 13.6 kg (30.1 lb), shipping 15.6 kg (34.3 lb).

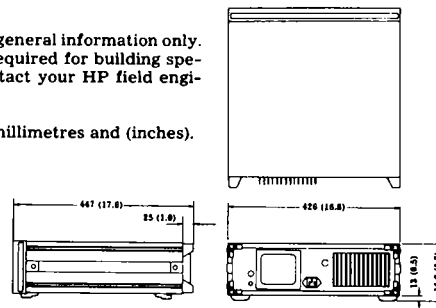
**Dimensions**

133mm high, 426mm wide, 422mm deep (5.2 x 16.8 x 16.6 inches).

**NOTES**

1. Dimensions are for general information only. If dimensions are required for building special enclosures, contact your HP field engineer.

2. Dimensions are in millimetres and (inches).

**OPTIONS****Option 001**

Burst. Preselected number of pulses generated on receipt of trigger signal. Number of Pulses: 1 to 9999.

**Option 907**

Front Handle Kit, part number 5061–0089.

**Option 908**

Rack Mounting Kit, part number 5061–0079.

**Option 909**

Combined Front Handle and Rack Mounting Kit, part number 5061–0083.

**Option 910**

Additional Operating and Service Manual.