
Specifications

The "supplemental information" and "typical" entries, in the following specifications are not warranted, but provide useful information about the functions and performance of the instruments.

The following specifications data is specified at 23 ± 5 °C and 50 % relative humidity.

■ Function

The HP 16440A switches either a SMU or PGU to the associated output port. You can expand to 4 channels by adding an additional HP 16440A. The channel 1 PGU port provides "PGU OPEN" function, which can disconnect the PGU by opening a semiconductor relay. The HP 16440A can not work without two pulse generator units of 41501 (SMU and Pulse Generator Expander).

- Channel configuration: 2 channels (CH1 and CH2). Can add additional 2 channels (CH3 and CH4) by adding another 16440A (selector expander).

	Input	Output
Channel 1 (CH 1)	2 (SMU and PGU)	1
Channel 2 (CH 2)	2 (SMU and PGU)	1
Channel 3 (CH 3) ¹	2 (SMU and PGU)	1
Channel 4 (CH 4) ¹	2 (SMU and PGU)	1

¹ These channels are available when an HP 16440A SMU/PG selector expander is installed.

■ Voltage and current range

Input port	Maximum Voltage	Maximum Current
SMU	200 V	1.0 A
PGU	40 V	0.2 A ¹

¹ This is peak-to-peak ac current.

■ Accessories (furnished). See Section 1 for details.

■ Option 001

- ┆ 1.5 m control cable (HP part number 04155-61612)
- ┆ 40 cm triaxial cable (HP part number 04155-61605)

□ Option 002

- ┆ 3.0 m control cable (HP part number 04155-61611)
- ┆ 40 cm triaxial cable (HP part number 04155-61605)

□ Option 003

- ┆ 40 cm control cable (HP part number 04155-61608) for connecting selector to selector expander
- ┆ 40 cm triaxial cable (HP part number 04155-61605)

┆ General specifications

□ Environment

Operating temperature 5° C to 40° C

Storage temperature –40° C to 70° C

Operating Humidity 5% to 80% relative humidity (at no condensation)

Storage Humidity 5% to 90% relative humidity at 65° C

□ Weight

Approximately 1.1 kg (2.43 lb)

Supplemental Information

The following reference data is specified at $23 \pm 5^{\circ} \text{ C}$ ($73 \pm 9^{\circ} \text{ F}$) and 50% relative humidity.

■ SMU channel

Leakage current	less than 100 fA at 100 V
Residual resistance	0.2 Ω typical
Stray capacitance (force \leftrightarrow common)	0.3 pF typical at 1 MHz
Stray capacitance (force \leftrightarrow guard)	15 pF typical at 1 MHz
Stray capacitance (guard \leftrightarrow common)	130 pF typical at 1 MHz

■ PGU channel

Residual resistance	3.4 Ω
Stray capacitance (relay off)	5 pF typical
Stray capacitance (open)	700 pF typical (at 1 MHz $V_{in} - V_{out} = 0 \text{ V}$)
Signal transfer characteristics	Overshoot < 5% of pulse amplitude (@ 20ns leading and trailing time, 50 Ω pulse generator source impedance, 50 pF 1 M Ω in parallel load)