

DATA ACQUISITION SYSTEMS

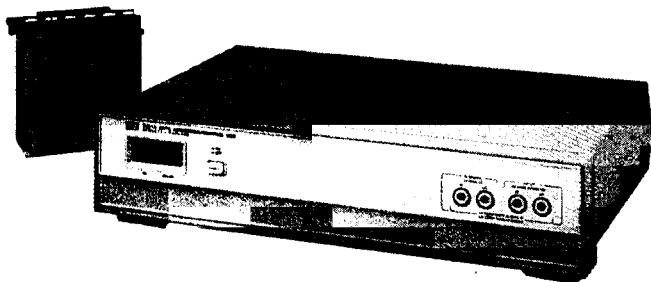
Instruments for Measurement and Control

HP 3421A

629

- Up to 30 differential channels, 56 single-ended channels
- Electronic calibration for repeatable answers
- Built-in 5½ digit A/D converter with 1-microvolt sensitivity
- HP-IL (standard) and HP-IB (optional) with rear panel switch
- Optional 12-volt remote charging adapter

- "Sleep mode" for extended battery life in remote locations
- Front terminals for convenient DCV, ACV, 2- and 4-wire ohms, frequency, and temperature
- Display shows channels closed, digital states, and self-test conditions



HP 3421A

HP 3421A Data Acquisition/Control Unit

If your measurement needs exceed the capabilities of plug-in cards but don't quite call for a top-of-the-line data acquisition unit, the HP 3421A is just what you are looking for. The HP 3421A is the instrument that beats the high cost of data logging. Use it for small data acquisition projects with the assurance that it will quickly pay its own way. The HP 3421A can be configured with several different computers into a variety of systems designed for low- to medium-size applications.

The Instrument

The HP 3421A scans up to 30 channels, measuring DCV, ACV, 2- and 4-wire ohms, frequency, and temperature. It also reads and writes digital information and stores up to 30 analog readings. The standard HP 3421A comes with an HP-IL interface for battery-powered flexibility or, optionally, an HP-IB for more computational power.

The HP 3421A is battery-powered with latching relays that will not change state when the ac line power is removed.

Up to three of the following assemblies may be added to the HP 3421A mainframe:

- 10-channel analog multiplexer/actuator assembly with thermocouple compensation
- 8-bit input/8-bit output digital assembly
- Breadboard assembly for custom circuitry

Measurement Integrity

With its 5½, 4½, 3½ digit A/D converter, the HP 3421A can resolve 1 µV out of 300 mV to monitor thermocouples and other low-level transducers. Or it can read higher-level signals by auto-ranging up to 300 volts dc.

HP 3421A Mainframe Specifications

The HP 3421A mainframe comes with:

- A 5½, 4½, and 3½ digit integrating A/D converter
- Built-in counter
- Thermocouple compensation
- Type T thermocouple linearization built in
- HP-IL
- 30-reading storage buffer
- LCD 30 channel display with power and error indicators
- Electronic calibration
- Rechargeable battery
- High-level command set

All specifications apply for relative humidity less than 85 percent at 30° C

dc voltage

Ranges: 300 mV, 3 V, 30 V, 300 V, Autorange

Basic accuracy: ± (.009% reading + 3 counts); 5½ digits

Reading rates: 2 to 35 readings/second

Ordering Information

HP 3421A Data Acquisition/Control Unit. **Price** \$2,550

Input and I/O Assembly Options

Opt 020 8-Channel Multiplexer/2-Channel Actuator Assembly. + \$570

Opt 021 9-Channel Multiplexer/1-Channel Actuator Assembly. + \$570

Opt 022 10-Channel Multiplexer Assembly. + \$570

Opt 040 Breadboard Assembly with connector block. + \$130

Opt 050 8 bit in, 8 bit out digital I/O assembly with connector block. + \$570

Opt 201 Add HP-IB interface. Allows use of either HP-IB or HP-IL controller. + \$460

Opt 214 Add 12 volt remote charging adapter. + \$600
Cannot be added if Opt 201 is specified.

Field Installation Kits*

HP 44461A: Add HP-IB interface. Allows use of either HP-IB or HP-IL controller (same as Opt 201). \$460

HP 44462A: 8-Channel Multiplexer/2-Channel Actuator Assembly with thermocouple compensation, connector block. (Same as Opt 020. Can be reconfigured to same as Opt 021 or Opt 022.) \$570

HP 44463A: Extra connector block for HP 44462A. \$70

HP 44464A: Breadboard Assembly with connector block (same as Opt 040). \$130

HP 44465A: 8 bit in, 8 bit out Digital I/O Assembly with connector block (same as Opt 050). \$570

HP 44466A: Extra connector block for digital or breadboard assembly. \$30

HP 44469A: Seven 10:1 dividers for measuring 300 Vac. \$30

Accessories

HP 11340A: 20-meter HP-IL Cable. \$140

HP 11340B: 50-meter HP-IL Cable. \$260

HP 11340C: 100-meter HP-IL Cable. \$510

* Field installation is recommended to be performed only by service trained personnel.