

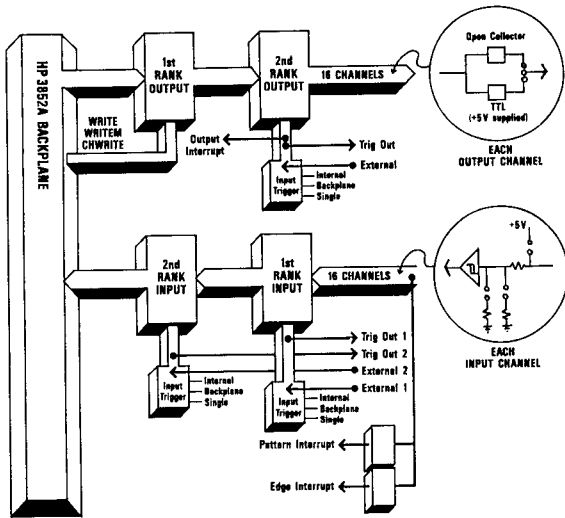
**32-Channel High-Speed Digital Sense/Control
-HP 44723A**

Directly Provides:

- High-speed Digital Input and Output
- Triggered Input and Output
- Interrupts
- Output Handshaking

Benefit

- Input 16 channels or output 16 channels over 150,000 times per second.
- Capture and load 16-bit patterns with external triggers.
- Interrupt on any input channel on any transition or on a user-specified 16-bit pattern.



High-Speed Digital Sense/Control

16-Channel Digital Output — HP 44724A

Directly Provides:

- Open Drain Digital Outputs

Benefit

- Conveniently control DC devices or logic levels:
 - Open drain outputs are used to control DC devices with up to 55 V, or drive TTL logic levels. An external power supply and external pull-up resistors are required.

Characteristics

Max Input Voltage:

Between High and Low Terminal of Each Channel — 55 V DC
 Between Channels or Between Any Terminal and Chassis — 354 V peak or 250 V DC

Max Sink Current: 500 mA DC per channel (1 A fuse protection)

Max Reverse Polarity Current: 500 mA DC per channel

TTL Compatibility: 200 mA per channel with $V_{out} \leq 0.4$ volts

Switching — HP 44725A/44728A/44729A

Directly Switches:

- Voltage
- Current
- Power

Benefit

- **Reliability switch the voltage, current, or power you need:**
 - Both the HP 44725A and 44728A use single-pole double-throw (SPDT) Form-C relays that return to their normally

closed positions at power down. The HP 44725A 16-channel general purpose relays are for switching low-level power or moderate voltages and currents in an experiment while minimizing errors due to cross talk and thermal DC offsets. More DC or AC power can be switched with the HP 444728A 8-channel relay actuator.

- The HP 44729A 8-channel AC power controller distributes AC power. It switches “on” at the zero voltage crossing and “off” at the zero current crossing for long device life and low transient generation. Each channel has a relay and solid state switch in parallel to provide an exceptional combination of switch life and low on-resistance.

Characteristics

	Module		
	HP 44725A	HP 44728A	HP 44729A
Max Input Voltage (V_{max}) Per Channel	30 V DC or RMS, 42 V peak	300 V DC, 250 V RMS	— 250 V RMS, 354 V peak
Max Input Current Per Channel	1.5 A DC, 1.5 A RMS	2 A DC, 3 A RMS (5 A fuse protection)	2.5 A RMS (3 A RMS if module is limited to 16 A RMS total; 4 A fuse protection per channel)
Max Sum of the Squared RMS Currents In Each Channel (per module; for any load type)	24 A ²	26 A ²	—
Max On Resistance	175 mΩ	200 mΩ	125 mΩ @ 3 A RMS; 200 mΩ @ 100 mA RMS
Switch Life (on/off cycles) Full Load	10 ⁶ (<=2 switches per second)	10 ⁵	5*10 ⁴
Min Load	10 ⁶ (<=2 switches per second)	—	—
Max Wire Size	16 AWG	14 AWG	12 AWG (power in terminals); 14 AWG (power distribution terminals)

New HP 3852A Accessories in 1988

- **Arbitrary Waveform Digital-to-Analog Converter—HP 44726A**
 - Two channels
 - Waveforms stored in on-board memory
 - Repetitive or single-shot output
- **Track/Hold Multiplexer with Signal Conditioning—HP 44730A**
 - Four channels
 - Three selectable gains
 - Triggerable for simultaneous sampling
- **Dynamic Strain Gage Multiplexers - HP 44732A (120 ohm) HP 44733A (350 ohm)**
 - Four channels
 - Select 1/4, 1/2, or full bridge configurations
 - Electronic nulling