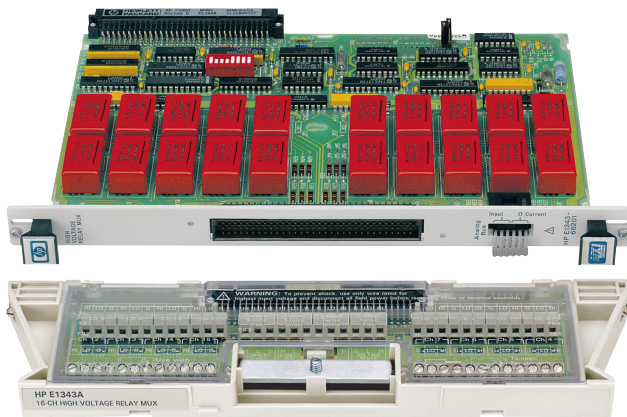

16-Ch GP High Voltage Relay Multiplexer HP E1343A

Technical Specifications

- General purpose, High voltage relay multiplexer
- High-voltage measurements up to 250 V
- 16-channel 3-wire or 8-channel 4-wire multiplexer
- Shunt /series signal conditioning elements
- Channel scanning with HP DMMs



Description

The HP E1343A general-purpose reed relay multiplexer is a **B-size, 1-slot, register-based VXI module with high voltage capability**. It switches 16 channels of high, low, and guard each. This multiplexer consists of a B-size component card (labeled E1343-66201) and a screw terminal block that plugs onto the component card. The HP E1343A is functionally similar to the HP E1344A.

Tree-switched common high, low, and guard screw terminals and analog bus connections provide access to all 16 channels. This module can operate as either a single 1x16 3-wire multiplexer, two independent 1x8 3-wire multiplexers (for 4-wire ohm), or a 1x8 6-wire multiplexer.

Refer to the HP Website for instrument driver availability and downloading instructions.

Configuration

The multiplexer is arranged into two banks of eight switches, each having its own common high, low, and guard screw terminals accessible on the terminal block. Tree-switched common high, low, and guard screw terminals and analog bus connections provide access to all 16 channels. Closing the channel switches and tree switches using the SCPI command [ROUTe]:CLOSe operates the module as either a single 1x16 3-wire multiplexer, two independent 1x8 3-wire multiplexers (for 4-wire Ohm), or a 1x8 6-wire multiplexer. The HP E1343A component card is also used in the HP E1344A.

One analog bus cable is shipped with each module, making it easy to connect common outputs together for slot-adjacent modules. If you are using a B-size mainframe, HP E1300A or HP E1301A, use the analog bus cable shipped with the HP E1326B DMM to connect it to the multiplexer(s).

C-size Adapter

For installing the HP E1343A in a C-size mainframe, the HP E1403B active adapter is recommended.

Specifications

Input

DC:

Maximum voltage (any terminal to any other terminal or chassis): 250 Vdc

AC rms:

Maximum voltage (any terminal to any other terminal or chassis): 250 V rms

Maximum current (per channel common, non-inductive): 50 mA

Maximum power per channel: 1 VA

DC

Maximum Thermal Offset per channel, differential Hi-Lo: 10 μ V

Closed Channel Resistance: 100 Ohm $\pm$ 10%

Insulation Resistance (between any two points): 10E9 Ohm

Insulation Resistance (Hi to Lo, power off): n/a

AC

Minimum bandwidth (–3 dB, 50 Ohm source/load): 10 MHz (protection resistors shorted)

Crosstalk (channel-to-channel):

100 kHz: –80 dB

10 MHz: –40 dB

Both: n/a

Closed channel capacitance: <150 pF Hi-Lo, <150 pF Lo-Guard, <2000 pF Guard-Chassis

General Characteristics

Relays: Reed relays
Break-before-make
Relays open on power down
Relays open on power up

Minimum relay life:

No load: 10E8 operations

Rated load: 10E7 operations

Reference junction measurement accuracy (18 to 28 °C operating): n/a

Strain gage excitation: n/a

Screw terminal wire size: 16 to 26 AWG (1.5, 1.2, 0.9, 0.75, 0.5 mm)

Scanning rate: 350 channels/s typ.

VXI Characteristics

VXI device type: Register-based, A16, slave only

Size: B

Slots: 1

Connectors: P1

Shared memory: None

VXI busses: None

C-size compatibility: Requires E1403B

Instrument Drivers

See the HP Website (http://www.hp.com/go/inst_drivers) for driver availability and downloading.

Command module firmware: ROM

Command module firmware rev: A.06

I-SCPI Win 3.1: Yes

I-SCPI Series 700: Yes

C-SCPI LynxOS: Yes

C-SCPI Series 700: Yes

HP VEE Drivers: Yes

VXIplug&play Win Framework: Yes

VXIplug&play Win95/NT Framework: Yes

VXIplug&play HP-UX Framework: No (not available at time of publication)

Module Current

	I_{PM}	I_{DM}
+5 V:	0.2	0.01
+12 V:	0.13	0.01
–12 V:	0	0
+24 V:	0	0
–24 V:	0	0
–5.2 V:	0	0
–2 V:	0	0

Cooling/Slot

Watts/slot: 1.00

ΔP mm H₂O: 0.02

Air Flow liter/s: 0.10

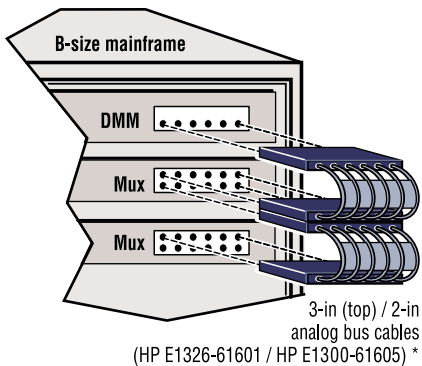
Ordering Information

Description

16-CHANNEL HIGH VOLTAGE RELAY MUX
Service manual
3 yr. retn. to HP to 1 yr. OnSite warr.
E1343A SCREW TERMINAL MODULE

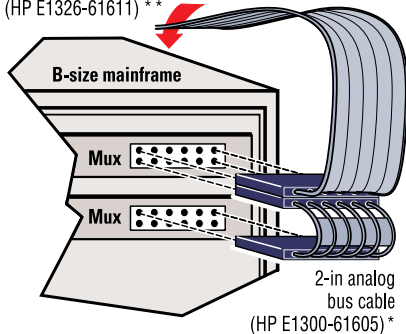
Product No.

HP E1343A
HP E1343A 0B3
HP E1343A W01
HP E1343-80001



Analog bus cables for Mux-to-Mux and Mux-to-multimeter connections

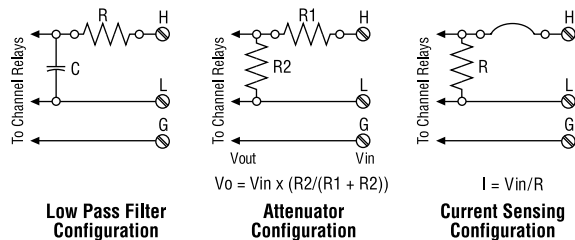
19.5-in analog bus cable to internal DMM
(HP E1326-61611) **



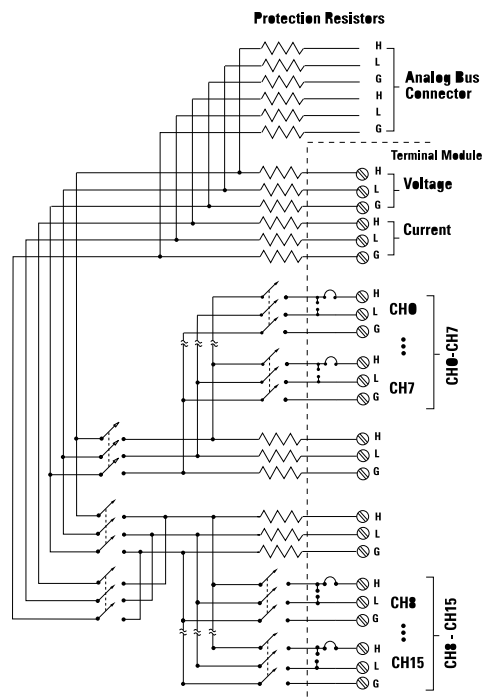
* DMM-to-Mux and Mux-to-Mux analog bus cables are provided with the purchase of the DMM and Mux modules respectively.

** 19.5-in analog bus cable is provided with purchase of HP E1300/01A Series B mainframe with internal DMM option.

Analog bus cables for Mux-to-Mux and Mux-to-multimeter connections



Signal Conditioning Components/Current Shunt



HP E1343A/E1345A

Data Subject to Change
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