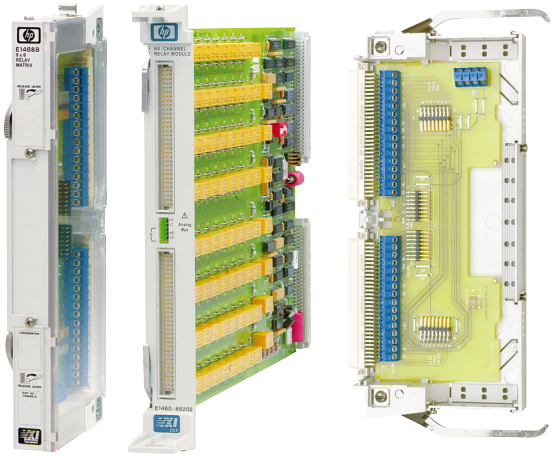
8x8 Relay Matrix Switch HPE1468A

Technical Specifications

- **Connect multiple inputs to multiple outputs**
- **8x8 and 4x16 two-wire switching**
- **Guard or shield available for each row and column**
- **Includes HP QUIC easy-to-use terminal block**
- **Latching relays**



Description

The HP E1468A matrix module is a **C-size, 1-slot, register-based VXI module.** This module consists of a 64-channel, 2-wire relay component card (uses the same component card as the HP E1460A). A terminal block, that provides 8x8 matrix topology, is included. The HP E1468A matrix switches both high and low on each crosspoint.

Multiple modules can easily be interconnected with the HP E1468-80002 daisy-chain cable. The HP E1468-80002 daisy-chain cable allows quick connect and disconnect of one module from another and is easily attached to expansion connectors on the HP E1468A terminal blocks. For applications requiring more than 64 crosspoints, the HP E1465/66/67A relay matrixes are recommended unless your application requires the high voltage/power capability and superior crosstalk performance of the HP E1468A matrix.

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

Configuration

The HP E1468-80002 daisy-chain cable allows quick connect and disconnect of one module from another and is easily attached to expansion connectors on the HP E1468/69A terminal blocks. For a 4x48 matrix, order three daisy-chain cables to interconnect three HP E1469As. For a 16x16 matrix, order eight daisy-chain cables to interconnect four HP E1468As. Similarly, to interconnect three HP E1468As into an 8x24 matrix, order four daisy-chain cables. Check to see whether the higher density HP E1465/66/67A family is a better fit for your application.

Specifications

Input

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

DC:	220 V
AC rms:	250 V
Peak:	n/a

Maximum current (per channel common, non-inductive):
1 Adc or ac rms
(V<30 Vdc/rms),
0.3 Adc or ac rms
(V<220 Vdc/rms)

Maximum power:

Per channel:	n/a
Per module:	40 VA

DC

Maximum thermal offset per channel, differential Hi-Lo: 7 μV

Closed channel resistance (per channel):

Initial:	<1.5 Ω (initially)
End of life:	<3.5 Ω

Insulation resistance (between any two points):

≤40 °C, 95% RH:	5x10E8 Ω
≤40 °C, 65% RH:	n/a
≤25 °C, ≤40% RH:	5x10E8 Ω

AC

Minimum bandwidth (−3 dB, Z_L=Z_X= 50 Ω):	10 MHz, 25 MHz (typical)

Crosstalk (dB, channel-to-channel typical):

<10 kHz:	<−90
<100 kHz:	n/a
<1 MHz:	n/a
<10 MHz:	n/a

Closed Channel Capacitance

Hi-Lo:	650 pF
Lo-Chassis:	700 pF

Note: *Crosstalk, insulation resistance, and bandwidth specifications are for a single matrix module only. Matrix expansion will degrade these specifications.*

General

Minimum relay life:	
No Load	4x10E6 operations
Screw terminal wire size:	18 to 26 AWG (1.2, 0.9, 0.75, 0.6, 0.5 mm)
Bias current:	<0.5 nA/Volt *(at 25 °C, 25 %RH) (From HI or LO to chassis, per group of 16 channels)*

VXI Characteristics

VXI device type:	Register-based, A16, slave only
Size:	C
Slots:	1
Connectors:	P1/2
Shared memory:	None
VXI busses:	TTL trigger bus
C-size compatibility:	n/a

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.04
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
HP VEE Drivers:	Yes
VXI*plug&play* Win Framework:	Yes
VXI*plug&play* Win95/NT Framework:	Yes
VXI*plug&play* HP-UX Framework:	No (not available at time of publication)

Module Current

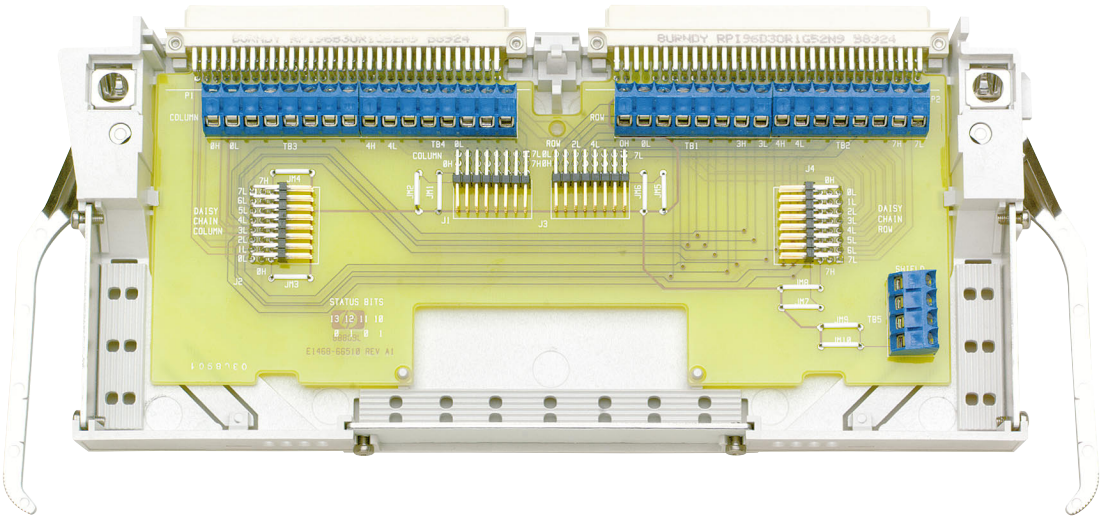
	I_{PM}	I_{DM}
+5 V:	0.1	0.1
+12 V:	0	0
−12 V:	0	0
+24 V:	0	0
−24 V:	0	0
−5.2 V:	0	0
−2 V:	0	0

Cooling/Slot

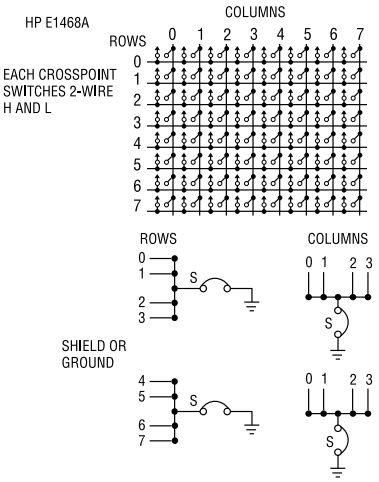
Watts/slot:	5.00
ΔP mm H_2O:	0.08
Air Flow liter/s:	0.42

Ordering Information

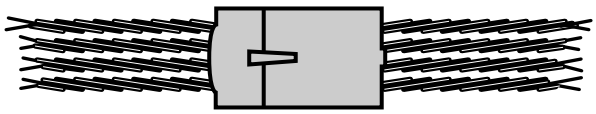
Description	Product No.
8x8 relay matrix switch	HP E1468A
Service manual	HP E1468A 0B3
3 yr. retn. to HP to 1 yr. OnSite warr.	HP E1468A W01
Extra terminal block for the HP E1468A	HP E1468-80001



HP E1468A Terminal Block



HP E1468A Matrix Diagram



Daisy Chain Cable: HP E1468-80002

5965-5594E