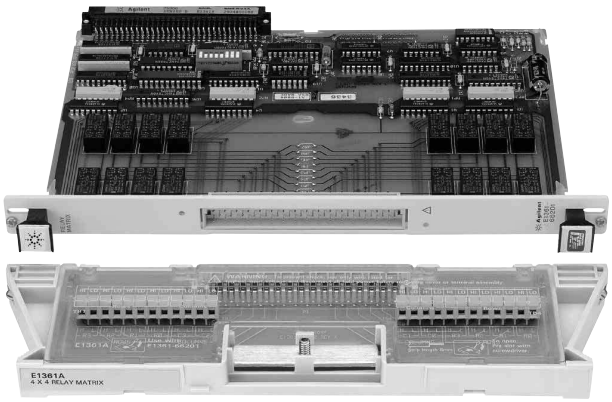
Agilent E1361A

2-Wire 4x4 Relay Matrix Switch

Data Sheet

- **1-Slot, B-size, register based**
- **Multiple inputs connect to multiple outputs**
- **Flexible dual 2x4 or single 4x4 2-wire matrix**
- **250 V, 1 A dc or ac signal switching, latching relays**
- **Modules connect for larger matrixes**
- **Each crosspoint switches two-wire, Hi and Lo**



Agilent E1361A

Description

The Agilent E1361A Relay Matrix Switch is a **B–size, 1–slot, register-based VXI module.** It consists of 16 latching relays arranged as a 4x4 matrix. The 4x4 matrix can be reconfigured as a dual 2x4 matrix by removing factory-installed jumpers. Capable of switching voltages up to 250 Vdc and 354 Vpk, the E1361A Relay Matrix Switch has the highest voltage rating of any Agilent matrix module.

All relays remain in their programmed state during power-down and are reset at power-on. After reset, all relays are open. Each crosspoint switches 2–wire, Hi and Lo. The E1361A can be reconfigured as an 8:1, 2–wire multiplexer.

Refer to the Agilent Technologies Website for instrument driver availability and downloading instructions, as well as for recent product updates, if applicable.

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Product Specifications

Input

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

DC:	250 V
AC rms:	250 V
Peak:	354 V
Maximum Current (per channel common, non–inductive):	n/a
Maximum power:	
Per channel:	40 W
Per module:	320 W, 960 VA

DC

Maximum thermal offset per channel, differential Hi-Lo:	14 μV

Closed channel resistance (per channel):

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

Insulation resistance (between any two points):

≤40 °C, ≤95% RH:	n/a
≤40 °C, ≤65% RH:	>10E7 Ω
≤25 °C, ≤40% RH:	>10E8 Ω
Minimum bandwidth (–3 dB, $Z_L = Z_X = 50$ Ω):	10 MHz

AC

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

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

<10 kHz:	n/a
<100 kHz:	<–80
<1 MHz:	n/a
<10 MHz:	<–30

Closed channel capacitance:

Hi-Lo:	<150 pF (All contacts closed)
Hi-Chassis:	<150 pF
Lo-Chassis:	<150 pF
Hi-Hi:	<20 pF
Insertion loss:	<0.1 dB @ ≤100 kHz <3 dB @ ≤10 MHz

General

Minimum relay life:	
No load:	10E6 operations
Screw terminal wire size:	16 AWG (15 mm) max

General Specifications

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 E1403C

Instrument Drivers

See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

Command module firmware:	Downloadable
Command module firmware rev:	A.01
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
Panel Drivers:	Yes
VXI*plug&play* Win Framework:	Yes
VXI*plug&play* Win 95/NT Framework:	Yes
VXI*plug&play* HP-UX Framework:	No

Module Current

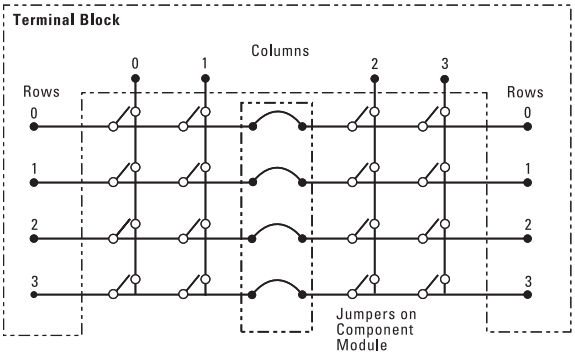
	I_{PM}	I_{DM}
+5 V:	0.1	0.01
+12 V:	0.24	0.01
–12 V:	0	0
+24 V:	0	0
–24 V:	0	0
–5.2 V:	0	0
–2 V:	0	0

Cooling/Slot

Watts/slot:	1.00
ΔP mm H_2O:	0.02
Air Flow liter/s:	0.10

Ordering Information

Description	Product No.
2-wire 4x4 relay Matrix	E1361A
Service Manual	E1361A 0B3
Japan - Japanese Localization	E1361A ABJ
Extra terminal block for the E1361A	E1361-80001



E1361A Each crosspoint switches 2-wire, Hi and Lo

Related Literature

2000 Test System and VXI Catalog CD-ROM,
Agilent Pub. No. 5980-0308E (detailed specifications for VXI products)

2000 Test System and VXI Catalog,
Agilent Pub. No. 5980-0307E (overview of VXI products)

1998 Test System and VXI Products Data Book,
Agilent Pub. No. 5966-2812E

Online

Internet access for Agilent product information, services and support
www.agilent.com/find/tmdir

VXI product information
www.agilent.com/find/vxi

Defense Electronics Applications
www.agilent.com/find/defense_ATE

Agilent Technologies VXI Channel Partners
www.agilent.com/find/vxichanpart

Agilent Technologies' HP VEE Application Website
www.agilent.com/find/vee

Agilent Technologies Data Acquisition and Control Website
www.agilent.com/find/data_acq

Agilent Technologies Instrument Driver Downloads
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Data Subject to Change

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