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Agilent E1345A

Description

The Agilent E1345A General-Purpose Reed Relay Multiplexer is a **B-size**, **1-slot**, **register-based VXI module** that switches 16 channels of high, low, and guard each. The multiplexer has low thermal offset performance. This module consists of a B-size component card (labeled E1345-66201) and a screw terminal block that plugs onto the component card. The E1345A is functionally similar to the E1347A.

The E1345A 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. Treeswitched common high, low, and guard screw terminals and analog bus connections provide access to all 16 channels. The module may be programmed as either a single 1x16 three-wire multiplexer, two independent 1x8 three-wire multiplexers (for four-wire Ω), or a 1x8 six-wire multiplexer.

Agilent E1345A

16-Channel Low-Offset Relay Multiplexer

Data Sheet

- 1-Slot, B-size, register based
- General purpose, low-offset relay multiplexer
- \bullet Low thermal offset reed relays, <4 μ V
- 16-channel 3-wire or 8-channel 4-wire multiplexer
- Shunt/series signal conditioning elements
- Channel scanning with Agilent DMMs

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

Configuration

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, Agilent E1300B or E1301B, use the analog bus cable shipped with the E1326B DMM to connect it to the multiplexer(s).

C-size Adapter

For installing the E1345A in a C-size mainframe, the E1403C active adapter is recommended.



Product Specifications

Input

DC:

Maximum voltage (any terminal to any other terminal or

120 Vdc

AC rms:

Maximum voltage (any terminal to any other terminal or

120 V rms

Maximum current (per channel common, non-

inductive): 50 mA 1 VA Maximum power per channel:

4 μV

DC

Maximum thermal offset per channel, differential

Hi-Lo:

Closed channel resistance: $100 \Omega \pm 10\%$

Insulation resistance

(between any two points): $10E9 \Omega$

Insulation resistance

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

AC

Minimum bandwidth

(-3 dB, 50 Ω source/load): 10 MHz (protection resistors shorted)

Crosstalk (channel-to-

channel):

100 kHz: -70 dB10 MHz: -20 dB Both:

Closed channel <150 pF Hi-Lo, <150 pF Lo-Guard, <2000 pF

capacitance: **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

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

Scanning rate: 600 channels/s typ.

General Specifications

VXI Characteristics

VXI device type: Register based, A16, slave only

Size: Slots: 1 Р1 **Connectors: 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.

Yes

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

plug&play Win 95/NT

Framework: VXIplug&play HP-UX

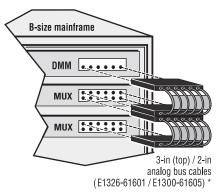
Framework: No

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	

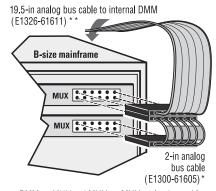
Cooling/Slot

Watts/slot:1.00 $\Delta P \text{ mm H}_2 0$:0.02Air Flow liter/s:0.10

Ordering Information			
Description	Product No.		
16-Channel Low-Offset Relay Multiplexer Service Manual Japan - Japanese Localization Extra terminal block for the E1345A	E1345A E1345A 0B3 E1345A ABJ E1345-80001		



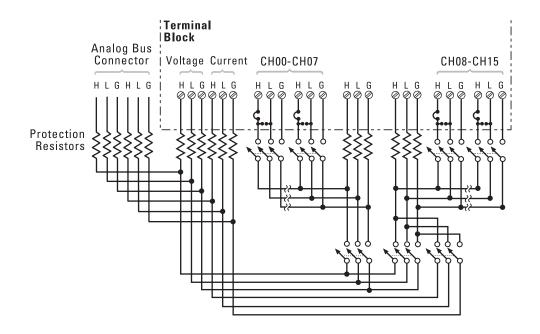
Analog bus cables for MUX-to-MUX and MUX-to-multimeter connections

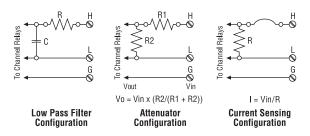


- * DMM-to-MUX and MUX-to-MUX analog bus cables are provided with the purchase of the DMM and MUX modules respectively.
- ** 19.5-in analog bus cable is provided with purchase of E1300/01B Series B mainframe with internal DMM option.

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

E1345A Circuit Diagram





Signal Conditioning Components/Current Shunt

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 www.agilent.com/find/inst_drivers

Agilent Technologies Electronics Manufacturing Test Solutions www.agilent.com/go/manufacturing

Get assistance with all your test and measurement needs at www.agilent.com/find/assist or check your local phone book for the Agilent office near you.

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Phone or Fax

United States:

(tel) 1 800 829 4444

Canada:

(tel) 1 877 894 4414 (fax) (905) 282 6495

China:

(tel) 800 810 0189 (fax) 800 820 2816

Europe

(tel) (31 20) 547 2323 (fax) (31 20) 547 2390

Janan

(tel) (81) 426 56 7832 (fax) (81) 426 56 7840

Koros

(tel) (82 2) 2004 5004 (fax) (82 2) 2004 5115

Latin America:

(tel) (305) 269 7500 (fax) (305) 269 7599

Taiwan:

(tel) 0800 047 866 (fax) 0800 286 331

Other Asia Pacific Countries:

(tel) (65) 6375 8100 (fax) (65) 6836 0252 (e-mail) tm_asia@agilent.com

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