

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

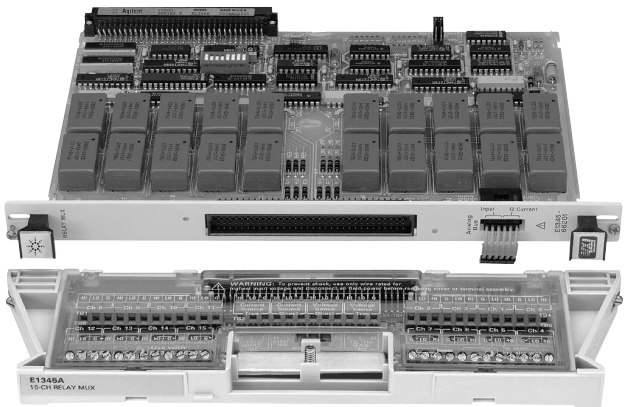
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

Agilent E1345A
16-Channel Low-Offset Relay Multiplexer

Data Sheet

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



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. Tree-switched 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.

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.

Agilent Technologies
Innovating the HP Way

STEP Dionysos Job: 210%XXX5510-0001 5965-5601E Comp: 04-28-00 Time: 11:20 OP: NN

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Product Specifications

Input

DC:

Maximum voltage (any terminal to any other terminal or chassis):	120 Vdc

AC rms:

Maximum voltage (any terminal to any other terminal or chassis):	120 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:	4 μV
Closed channel resistance:	100 Ω ± 10%
Insulation resistance (between any two points):	10E9 Ω
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 dB
10 MHz:	–20 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
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:	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
***plug&play* Win 95/NT Framework:**	Yes
VXI*plug&play* HP-UX Framework:	No

STEP Dionysos Job: 210%XXX5511-0002 5965-5601E Comp: 04-28-00 Time: 11:20 OP: NN

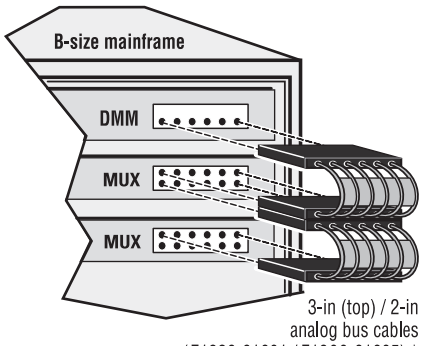
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

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

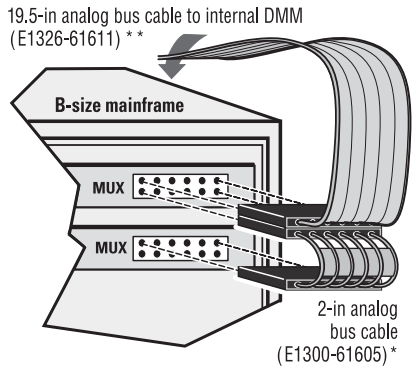
Watts/slot:	1.00
ΔP mm H_2O:	0.02
Air Flow liter/s:	0.10



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

Ordering Information

Description	Product No.
16-Channel Low-Offset Relay Multiplexer	E1345A
Service Manual	E1345A 0B3
Japan - Japanese Localization	E1345A ABJ
3 Yr. Retn. to Agilent to 1 Yr. OnSite Warr.	E1345A W01
Extra terminal block for the E1345A	E1345-80001



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

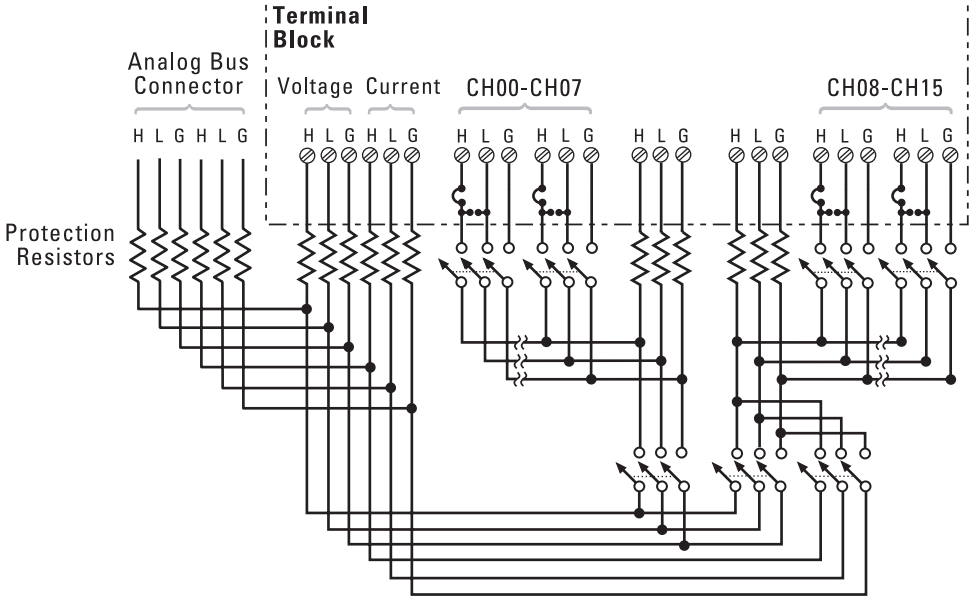
** 19.5-in analog bus cable is provided with purchase of E1300/01B Series B mainframe with internal DMM option.

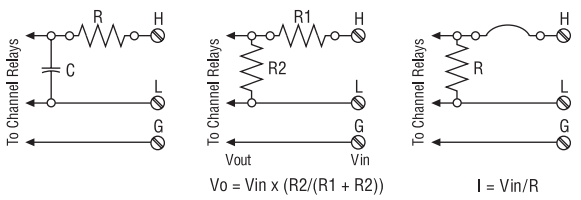
Analog bus cables for MUX-to-MUX and MUX-to-multimeter connections

STEP Dionysos Job: 210%XXXX5512-0003 5965-5601E Comp: 04-28-00 Time: 11:20 OP: NN

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

E1345A Circuit Diagram





Low Pass Filter Configuration **Attenuator Configuration** **Current Sensing Configuration**

Signal Conditioning Components/Current Shunt

STEP Dionysos Job: 210%XXX5513-0004 5965-5601E Comp: 04-28-00 Time: 11:20 OP: NN

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

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.

Agilent Technologies' test and measurement service/support commitment

Agilent strives to maximize the value our test and measurement products give you, while minimizing your risk and service/support problems. We work to ensure that each product is realistically described in the literature, meets its stated performance and functionality, has a clearly stated global warranty, and is supported at least five years beyond its production life. Our extensive self-help tools include many online resources (www.agilent.com).

Experienced Agilent test engineers throughout the world offer practical recommendations for product evaluation and selection. After you purchase an Agilent product, they can provide no-charge assistance with operation verification and basic measurement setups for advertised capabilities. To enhance the features, performance, and flexibility of your test and measurement products—and to help you solve application challenges—Agilent offers free or extra-cost product options and upgrades, and sell expert engineering, calibration, and other consulting services.

Phone and fax
United States:
Agilent Technologies
(tel) 1 800 452 4844

Canada:
Agilent Technologies Canada Inc.
(tel) 1 877 894 4414

Europe:
Agilent Technologies
Test & Measurement
European Marketing Organisation
(tel) (31 20) 547 2000

Japan:
Agilent Technologies Japan Ltd.
(tel) (81) 426 56 7832
(fax) (81) 426 56 7840

Latin America:
Agilent Technologies
Latin American Region Headquarters, U.S.A.
(tel) (305) 267 4245
(fax) (305) 267 4286

Australia/New Zealand:
Agilent Technologies Australia Pty Ltd.
(tel) 1 800 629 485 (Australia)
(fax) (61 3) 9272 0749
(tel) 0 800 738 378 (New Zealand)
(fax) (64 4) 802 6881

Asia Pacific:
Agilent Technologies, Hong Kong
(tel) (852) 3197-7777
(fax) (852) 2506-9284

Data Subject to Change
© Agilent Technologies 2000
Printed in the U.S.A. 04/2000
Publication No.: 5965-5601E

Agilent Technologies
Innovating the HP Way

STEP Dionysos Job: 210%XXX5514-0005 5965-5601E Comp: 04-28-00 Time: 11:20 OP: NN

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP