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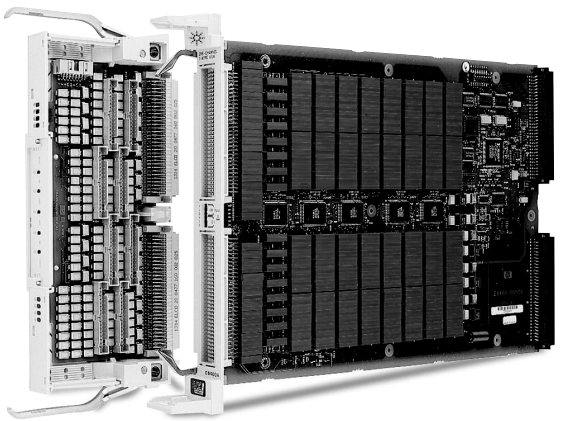
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Find the *Keysight / Agilent E8462A* at our website: ***Click HERE***

Agilent E8460A
256-Channel Reed Relay Multiplexer

Data Sheet

- **1-slot, C-size, register based**
- **High-density, low-cost multiplexer**
- **Fast scanning rate**
- **Flexible reconfiguration**
- **Contact protection for reliable operation**
- **Three different easy-to-use terminal blocks available as options**



Agilent E8460A with Opt. 014

Description

The Agilent Technologies E8460A High-Density Reed Relay Multiplexer is a **C-size, 1-slot, register-based VXI module**. This 256-channel multiplexer, using reed relay switches, offers a fast, reconfigurable, high point-count switching topology. It is designed for applications requiring fast scanning rates by the use of fast action reed relays. This single-slot multiplexer extends the choices of multiplexers available to the system engineer.

The E8460A can be programmed into individual topologies; some common examples are shown in the table below. Many other combinations of these topologies are supported (in addition to those shown in the table). Two-wire, three-wire, and four-wire measurements can be configured.

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

Common Multiplexer Configurations

One 256 x 1	Four 64 x 1
One 128 x 2	Two 32 x 4
One 64 x 3	Sixteen 16 x 1
•	•
•	•
•	•

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Accessories

A terminal block does not come with the module. Three different terminal blocks are available as options: one for crimp-and-insert connectors, one for ribbon cable connectors, and the other for fault-tolerant protection of DUT inputs, where each channel has a positive temperature coefficient resistor that behaves like a resettable fuse and will increase impedance when excessive current is flowing in a channel.

One 2.5-in. analog bus cable (E1400-61605) is included to connect the analog busses of multiple slot-adjacent E8460A modules or a slot-adjacent E1411B multimeter module. The analog bus cable, easily installed at the faceplate of the component card, lets you connect the E8460A with the E1411B DMM.

Product Specifications

Input

Note: These limits apply only if no connection is made to power mains.

Maximum Input

	With Opt. 012 Terminal Card	With Opt. 014 or Opt. 015 Terminal Card	Analog Bus
Maximum dc voltage:	200 V	60 V	60 V
Max. ACrms voltage:	140 V	50 V*	30 V
Max. ACpeak voltage:	200 V	70.7 V	42 V
Max. current per channel:			
Switching:	300 mA	100 mA	n/a
Carry:	500 mA	100 mA	n/a

Maximum power per channel: 5 VA
Maximum power (resistive load):
Per channel: 5 VA
Per common output: 5 VA
Per module: 60 VA

*Rating reduced to 30 Vac-rms, 42 Vac-peak for exposed conductors.

dc Performance

Typical thermal offset (per channel): ± 50 µV
Closed channel resistance: <3 Ω with output protection resistor shorted, protection resistor adds 100 Ω

ac Performance

Bandwidth, 50 Ω Source/Load

Configuration	100 Ω Protection Resistor Shorted
256 x 1:	4.5 MHz
64 x 1:	12.0 MHz
16 x 1:	30.0 MHz

Closed Channel Capacitance

Configuration	To Chassis	To Open Channel
256 x 1:	1400 pF	70 pF
64 x 1:	460 pF	70 pF
16 x 1:	140 pF	70 pF

Open channel to either open channel or to chassis capacitance: 70 pF

Hi-to-Low Capacitance (2-Wire Mode)

Configuration	Capacitance
256 x 1:	400 pF
64 x 1:	230 pF
16 x 1:	80 pF

Crosstalk

Configuration	10 kHz	100 kHz	1 MHz	10 MHz
256 x 1 (channel to chassis):	–84 dB	–64 dB	–44 dB	–30 dB
64 x 1:	–84 dB	–64 dB	–44 dB	–27 dB
16 x 1:	–83 dB	–64 dB	–44 dB	–24 dB

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General Characteristics

Relays:	Reed relays
Open/close time:	0.5 ms max.
Minimum relay life:	
No load:	500 M operations
Rated load:	10 M operations (Max. rated resistive load)
Power up/down state:	All open

General Specifications

VXI Characteristics

VXI device type:	Register based
Data transfer bus:	A16, slave only
Size:	C
Slots:	1
Connectors:	P1/P2
Shared memory:	None
VXI buses:	None

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.08
I-SCPI Win 3.1:	No
I-SCPI Series 700:	No
C-SCPI LynxOS:	No
C-SCPI Series 700:	No
Panel Drivers:	No
VXI*plug&play* Win Framework:	No
VXI*plug&play* Win 95/NT Framework:	Yes
VXI*plug&play* HP-UX Framework:	No

Module Current

	I_{PM} (A)	I_{DM} (A)
+5 V:	1.7	0.4
+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:	8.5
ΔP mm H_2O:	0.05
Air Flow liter/s:	0.7

Ordering Information

Description	Product No.
256-Channel Reed Relay Multiplexer	E8460A*
Crimp and Insert Connector Terminal Block	E8460A 012**
Fault Tolerant Terminal Block	E8460A 014***
Ribbon Cable Connector Terminal Block	E8460A 015***
Service Manual	E8460A 0B3
3 yr. retn. to Agilent to 1 yr. OnSite warr.	E8460A W01

Notes:
* Standard unit does not include terminal block. One of the terminal block options must be ordered.
** Crimp-and-Insert Contacts are not included. See the Interconnect and Wiring section for information on ordering Crimp-and-Insert Contacts.
*** Ribbon cables and mating connectors are not included. See ordering details below:

Recommended 3M Mating Socket and Cable

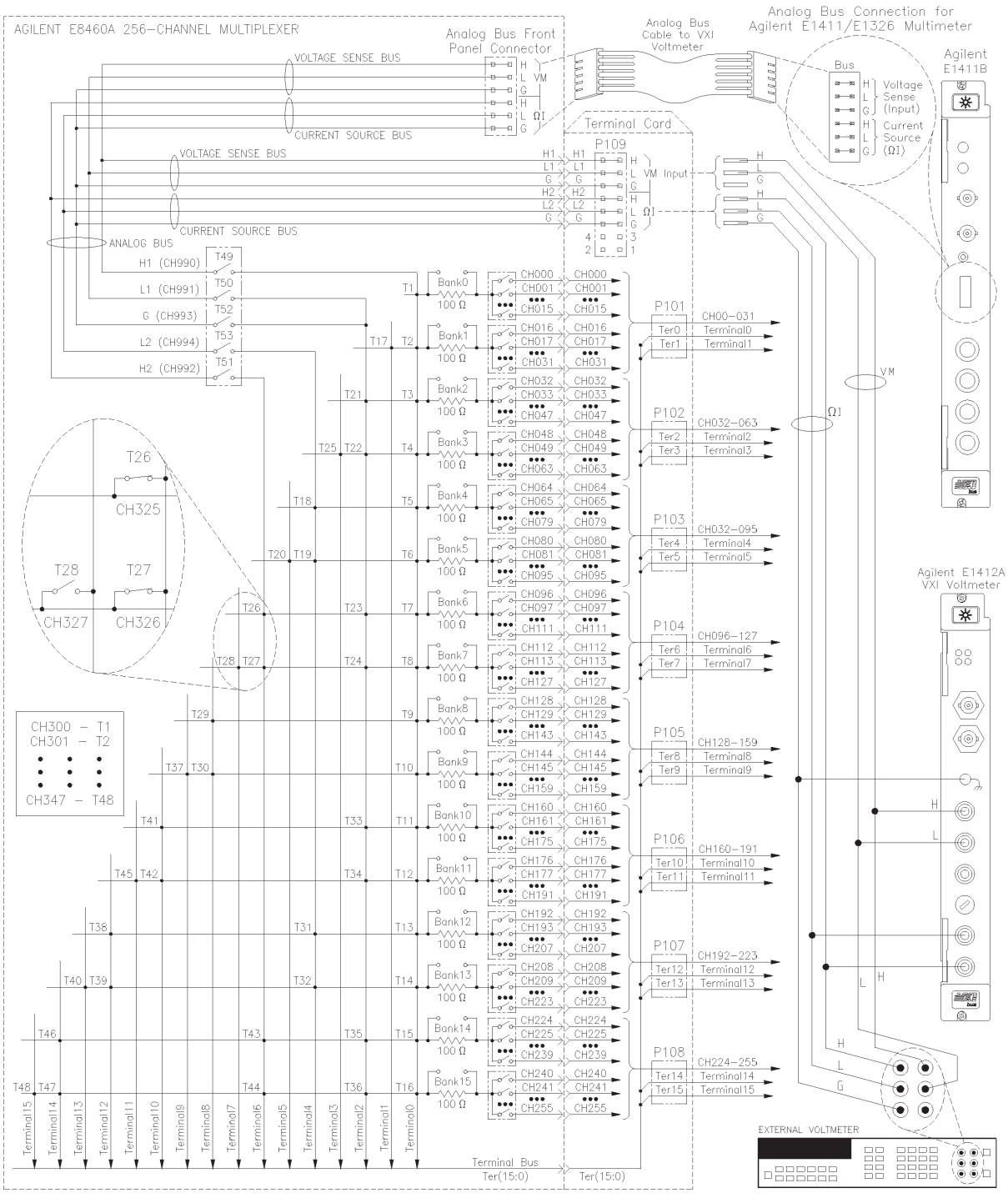
Part Description	Qty Required per Terminal Card	3M Part Number
Socket (without strain relief)	8 sockets either with or without strain relief	3414-6600
Socket * (with strain relief)	8 sockets either with or without strain relief	3414-6606
Metal strain relief *(low profile)	8 *	3448-2034
Flat cable (34 conductor)	Length as needed	3365/34

* Required only for socket with strain relief.

Manufacturer Ordering Information

3M Electronic Products Division
6801 River Place Blvd.
Austin, TX 78726-9000
Phone 800-225-5373

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Agilent E8460A Simplified Schematic

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