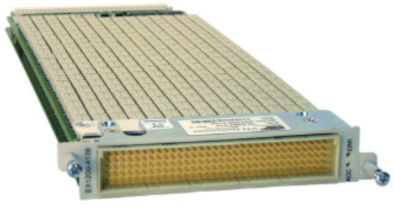
DATA SHEET



EX1200-4128

128 X 4 SINGLE-POLE MATRIX

FEATURES

4 x 128 1-wire configuration

Capable of switching 250 VAC/220 VDC, 1 A - highest in its class at this density

Connect rows to internal analog bus to construct larger matrices without external cabling

Crosspoint architecture enables multiple testpoints to share instrument I/O

Stub-breaking relays increase overall system performance

VTI Instruments
www.vtiinstruments.com

RELIABLE DATA FIRST TIME EVERY TIME

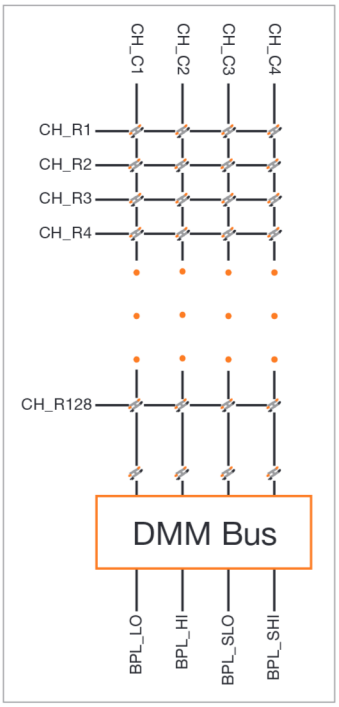
OVERVIEW

The EX1200-4128 is an ultra high-density matrix module that allows the user to connect any input row to any output column with an SPST relay at every row/column crosspoint. This architecture provides the framework for flexible switch system designs where multiple test instruments need to be connected to common test points. The one-wire architecture allows for any of the 128 row inputs to be connected to any of the 4 column outputs.

The four output columns can be routed to the EX1200 series internal analog backplane to build large matrices or to connect to the optional 6.5 digit DMM, which also limits the amount of external cabling required. A (4 x 512) 1-wire matrix can be accommodated in only four slots of an EX1200 series mainframe, as an example.

Stub-breaking relays can remove a matrix module from the backplane to increase signal integrity of measurements being made on other modules. All relays are failsafe which ensures that no undesired signals are present at the user interface in the case of power interruption.

BLOCK DIAGRAM



General Specifications

CHANNEL COUNT	4 x 128 one-wire cross-point matrix
MAXIMUM SWITCHING VOLTAGE	250 V AC, 220 V DC
MAXIMUM SWITCHING CURRENT	1 A
MAXIMUM SWITCHING POWER[1]	60 W, 62.5 VAv
MINIMUM CONTACT RATING	100 µV
RATED SWITCH OPERATIONS	
Mechanical	1×10^8
Electrical	1×10^5 at full load
SWITCHING TIME	5 ms typical
PATH RESISTANCE	< 1 Ω
INSULATION RESISTANCE	> 1 X 10^9 Ω
MAXIMUM THERMAL OFFSET PER CHANNEL (HI-LO)	< 10 µV
BANDWIDTH (-3 dB)	3 MHz (typical)
CROSSTALK (TYPICAL)	
1 MHz	< -55 dB
10 MHz	< -30 dB
ISOLATION (TYPICAL)	
1 MHz	< -60 dB
10 MHz	< -30 dB
CONNECTOR TYPE	160-pin

Notes:

1. Maximum switched power is derated non-linearly as voltage is increased.

Ordering Information

EX1200-4128	128 x 4 single-pole matrix
ACCESSORIES AND TOOLS	
70-0363-504	Strain relief bracket (includes connector, recommended accessory)
70-0363-503	Strain relief bracket kit (without connector)
52-0109-000	Crimp pin (includes 100 crimp pins)
27-0088-160	Mating connector (one per board)
46-0010-000	Crimp tool (DIN)
46-0011-000	Extraction tool (DIN)
70-0363-505	160-pin, unterminated cable assembly, 3 ft
70-0367-005	EX1200-TB160SE terminal block, single-ended module