



VMIVME-3456

6-Channel 6U Form Factor Surge Protected Interface Board for the VMIVME-4150 Board

- Meets the ANSI/IEEE C37.90.1-1989 surge withstand capability (SWC)
- 6U form factor permits installing the board in a standard VMEbus chassis
- Cables directly to a VMIVME-4150 isolated analog output board

APPLICATIONS

- Data acquisition systems
- Nuclear power plant monitoring
- Control systems

INTRODUCTION — The VMIVME-3456 accepts discrete wire inputs via a Harting shell connector cable, provides Surge Withstand Capability (SWC) to each output, and provides an IDC mass-terminated cable to a VMIVME-4150 board.

Each channel is protected with a transient suppression diode capable of withstanding the 3,000 V decaying sine wave or the 5,000 V pulse stated in the SWC specification. Each channel common is also protected from the Surge Return by a 630 V spark gap. Figure 1 shows a typical channel on the surge protection board. The inputs from the field wiring comes into the board by the P3 discrete wire DIN connector provided on the front panel of the VMIVME-3456. Each channel is then routed to the surge protection circuitry and then to the output connector P4. P4 can be a mass-terminated IDC or a discrete wire DIN connector. When P4 is connected to the output connector of the VMIVME-4150, the VMIVME-4150 board will have the SWC added to its outputs.

FUNCTIONAL CHARACTERISTICS

VMEbus Compliance: This board has no electrical connection to the VMEbus backplane.

ELECTRICAL CHARACTERISTICS

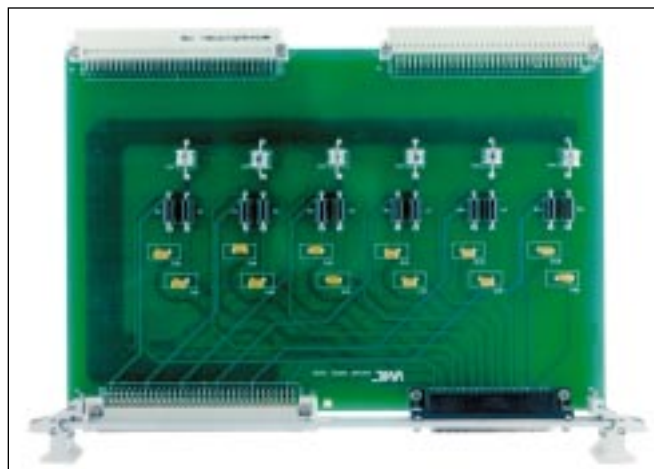
(At +25 °C and rated power supplies unless otherwise noted.)

Inputs: Six; differential

Surge Withstand Capability: Meets the ANSI/IEEE C37.90.1-1989 Surge Withstand Capability (SWC).

Oscillatory: This specification uses a 3,000 Vpk 1 to 1.5 MHz decaying sine wave. The sine wave is 1/2 of its initial voltage within 6 μ s. This burst is repeated every 20 ms for a period of 2 seconds. The output impedance of the source is 150 to 200 Ω .

Pulse: This specification uses a 5,000 Vpk pulse with a 10 ns rise time decaying to 1/2 of its initial voltage within 200 ns. This pulse is repeated every 20 ms for a period of 2 seconds. The output impedance of the source is 80 Ω during the initial rise time.



Interchannel Crosstalk Rejection: 80 dB minimum at 1 kHz, $R_{source} = 1,000 \Omega$

PHYSICAL/ENVIRONMENTAL

Dimensions: Standard VME double height board (160 x 233.5 mm)

Temperature: 0 to +65 °C, operating range
-25 to +85 °C, storage range

Relative Humidity: 20 to 80 percent, noncondensing

Cooling: Normal VMEbus chassis forced air circulation

Power Requirements: None

Altitude: Operation to 3,000 m

Weight (Mass): 0.7 kg maximum

Ordering Options							
March 1, 1994 800-003456-000 A	A	B	C	–	D	E	F
VMIVME-3456	–	0	0	–			
AB = 00 (Options reserved for future use)							
C = Output Type 0 = Voltage 1 = Current							
Connector Data							
Mass-Terminated IDC Connector Data							
PC Board Connector		Panduit No. 120-964-033A					
Cable Connector		Panduit No. 120-964-455E					
Connector Shell Housing		Harting No. 09 03 096 0501					
Discrete Wire Input Connector Data							
Mating Connector		AMP No. 925486-1					
Female Crimp Contacts*		AMP No. 530151-6					
Connector Shell Housing		Harting No. 09 03 096 0501					
PC Board Connector		Panduit No. 120-964-033A					
* An AMP crimp tool part number is 90301-2.							
For Ordering Information, Call: 1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859 E-mail: info@vmic.com Web Address: www.vmic.com Copyright © November 1993 by VMIC Specifications subject to change without notice.							

2

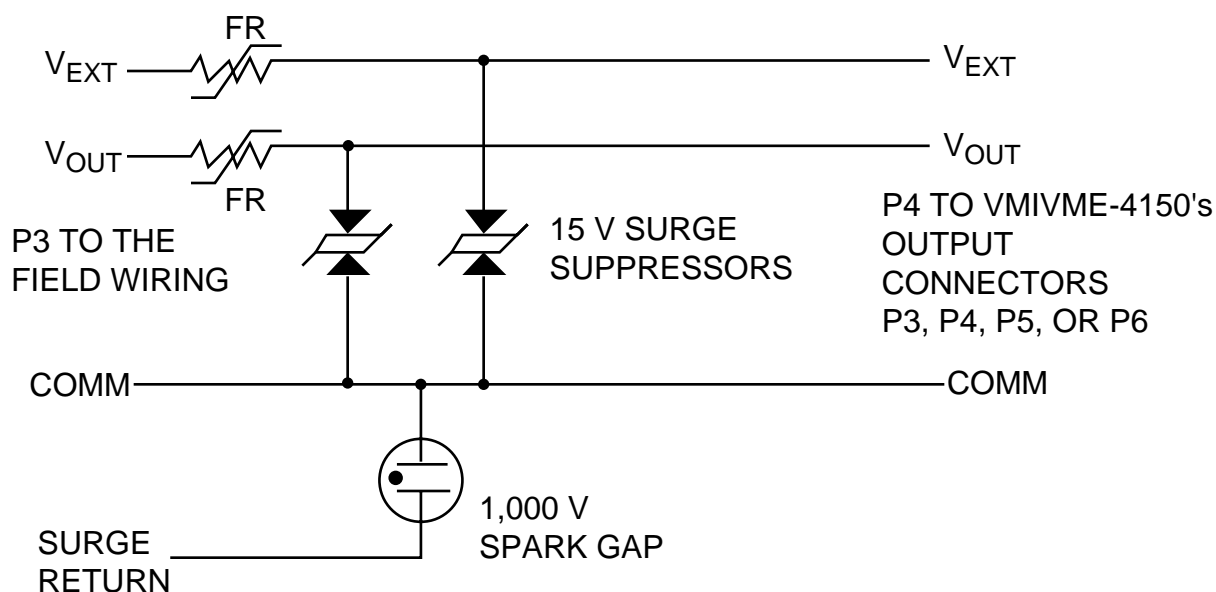


Figure 1. A Typical Channel

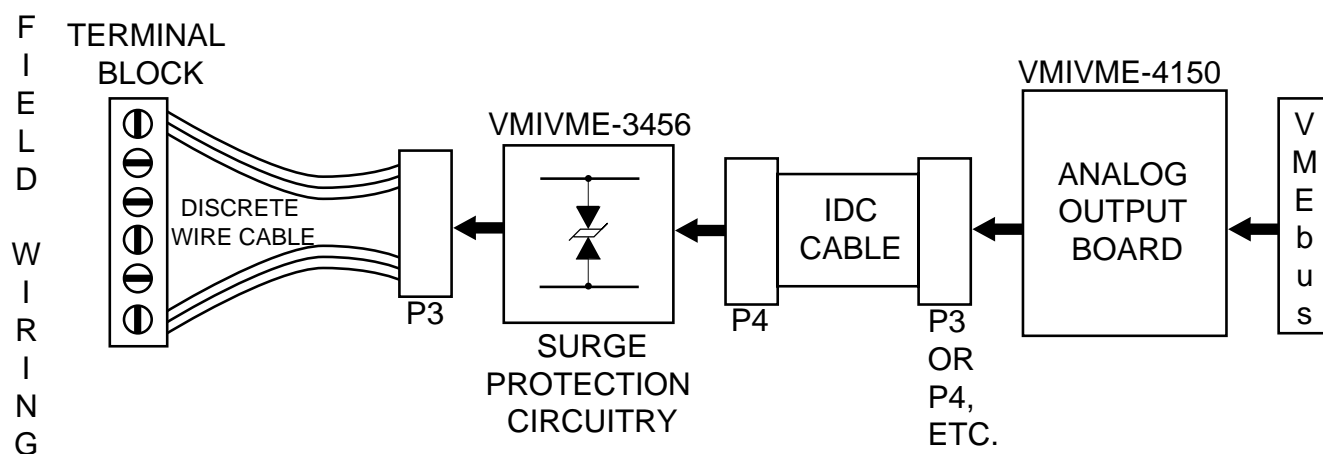


Figure 2. A Typical System