VMIVME-4900



Dual-Channel Digital-to-Synchro/Resolver Converter Board

- 14-bit converter with an overall accuracy of ±4 arc minutes
- 3- or 4-wire output for driving synchros or resolvers, respectively
- Internal transformers
- Front panel fail LED
- AMP D-type connector (no. 206584-1) for front panel field connection
- 1.5, 4.5, and 5.0 VA outputs
- Nonprivileged or supervisory short I/O
- Supports real-time and off-line fault detection and isolation
- Compatible with VMIC's Intelligent I/O Controller product line
- Model VMIVME-4900-218R is directly compatible with high power synchro booster amplifiers
- Model VMIVME-4905 is also available with 5.0 VA outputs

FUNCTIONAL CHARACTERISTICS

Compliance: This product complies with the VMEbus specification Rev. C.1 with the following mnemonics: A16: D32, D16, D08 (EO): 29, 2D: Slave 6U form factor

Output Connector Type: AMP no. 2065841 (front panel)

Output Organization: Two ports, 16 bits wide. Addressable to any address within short supervisory or short nonprivileged I/O map.

Address Modifier Codes: Jumper-selectable for short supervisory or short nonprivileged I/O access. Factory configured for short supervisory I/O access.

Addressing Scheme: Two ports individually addressable. Address DIP switches provide unlimited short data I/O address map selection.

Fail LED: A front panel Fail LED (red) is provided for quick fault isolation. The LED is illuminated upon powerup clear (system reset) and is extinguished under program control.

PHYSICAL/ENVIRONMENTAL

Operating Temperature Range: 0 to 45 °C (5.0 VA options only) 0 to +55 °C (all other options)

Storage Temperature Range: -20 to +85 °C

Relative Humidity Range: 20 to 80 percent, noncondensing

Cooling: Convection



Ordering Options							
December 16, 1993 800-000101-000 C							
VMIVME-4900							
Dual or <u>Single</u>	Ref. Input ²	Output Voltage <u>RMS L-L)</u>	Freq. (<u>Hz)</u>	<u>VA</u> <u>3</u>	Board Output <u>Type</u>	Model No. <u>VMIVME-</u>	
Single	26 V	11.8 V	400	1.5	Synchro	4900-024	
Single	26 V	11.8 V	400	1.5	Resolver	4900-124	
Dual	26 V	11.8 V	400	1.5	Synchro	4900-224	
Dual	26 V	11.8 V	400	1.5	Resolver	4900-324	
Single	115 V	90.0 V	400	1.5	Synchro	4900-014	
Dual	115 V	90.0 V	400	1.5	Synchro	4900-214	
Single	115 V	90.0 V	400	4.5**	Synchro	4900-054**	
Dual	115 V	90.0 V	400	4.5**	Synchro	4900-254**	
Single	115 V	90.0 V	60	1.5**	Synchro	4900-016**	
Dual	115 V	90.0 V	60	1.5**	Synchro	4900-216**	
Dual	115 V	7.0 V	47-400	***	Resolver	4900-308***	
Single	26 V	11.8 V	400	5.0**	Synchro	4900-034**	
Dual	26 V	11.8 V	400	5.0 **	Synchro	4900-234**	

Built-in-Test requires one Synchro/Resolver-to-Digital Converter for wrap-back

Lesting of Digital-to-Synchro/Resolver. Refer to the VMIC Synchro/Resolver Configuration Guide (VMIC's Document No. 825-000000-004) for a detailed explanation Requires two VMEbus chassis slots (VMIC manufactures a 5.0 VA single-slot board VMIVME-4905)

Directly compatible with ILC Data Device Corporation's high power 25 VA Synchro Booster Amplifiers.

Notes

- 1. All Synchro/Resolver boards, except options 054, 254, 016, and 216, require external ±15 V power supplies. These four options acquire their power from the reference input via an efficient internal pulsating power supply. Refer to Power Requirements elsewhere in this specification. Power input connectors are available on VMIC's Synchro/Resolver Backplane (SRTbus).
- 2. ±10 percent maximum for specified accuracy; +20 percent absolute maximum without damage. The output voltage is linearly proportional to the reference input voltage. 3. Drive capability is proportional to the minimum load impedance

I/O Connector Data (Front Panel)					
Compatible Cable Connector Strain Relief Kit PC Board Header Connector	AMP 747322-2 Type D AMP 206584-1				
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 © January 1986 by VMIC Specifications subject to change without notice.					

VMIVME-4900



Power Requirements:

+5 V \pm 5 percent at 2 A +15 V \pm 10 percent at 600 mA per channel (typical) -15 V \pm 10 percent at 600 mA per channel (typical)

External ± 15 V power supply is required for all options except 154S, 254S, 116S, and 216S, which obtain their power from the reference input (via an efficient internal pulsating power supply) which draws a maximum of 50 mA plus 1 mA per mA of load.

BUILT-IN-TEST DESCRIPTION — The

VMIVME-4900 supports fault detection and isolation when used with the VMIC SRTbus[™] and the model VMIVME-4910 or -4911. The SRTbus is a Synchro/Resolver test bus that utilizes the user I/O pins on the P2 VMEbus connector. Programming the proper control bits in each output word of the VMIVME-4900 allows field disconnect and/or real-time testing via the SRTbus and the VMIVME-4910 or -4911. The user should refer to the VMIVME-4900 functional block diagram and the Synchro/Resolver Configuration Guide (VMIC's Document Number 825-000000-004) for a thorough understanding of the Built-in-Test operation.

TRADEMARKS

The SRTbus is a trademark and the VMIC logo is a registered trademark of VMIC. Other registered trademarks are the property of their respective owners.



Figure 1. VMIVME-4900 Digital-to-Synchro/Resolver Functional Block Diagram