



**FREQUENCY
DEVICES™, INC.**

Model VM32FF

Fixed Frequency VME Filter Board

32 Channel

Description

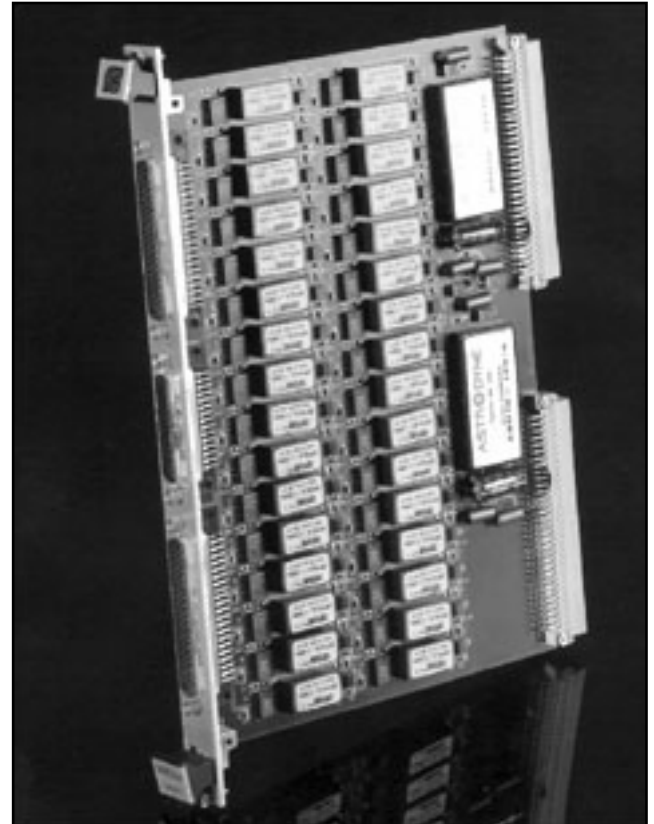
Frequency Devices model VM32FF comprises a family of VMEbus filter boards offering 32 channels of fixed frequency, linear analog filtering in a single width B-sized (6U) form factor. VM32FF boards receive up to 32 high level differential signal inputs through a shielded front panel connector and provide signal buffering and unity gain for each channel (optional - customer specified gain). Boards may be configured with 2-pole D72 or 4-pole D74 filters from 1.0 Hz to 100.0 kHz, and with high-pass or low-pass (anti-alias) transfer functions allowing user to externally cascade filters into band-pass configurations. Each channel provides low harmonic distortion and wide signal-to-noise ratio to 12 bit resolution.

Features/Benefits:

- Simultaneous access over 32 channels offers a low cost, versatile and convenient way to provide amplification and filtering.
- Interchannel crosstalk <-80 dB provides precision performance solutions to design engineers, system integrators and OEM's.
- 2- and 4-pole Butterworth or Bessel transfer functions with a broad range of corner frequencies are offered to meet a wide range of applications.
- High channel count density without sacrificing performance maximizes chassis utilization.

Signal conditioning applications include:

- Industrial process control
- Engine test and simulation
- Acoustic, vibration analysis & control
- Satellite and telecommunications
- Automatic test equipment (ATE)
- Aerospace, navigation & sonar
- Automotive test cells



LOW-PASS FILTER OPTIONS

2-pole	D72, DP72
4-pole	D74, DP74

HIGH-PASS FILTER OPTIONS

2-pole	D72
4-pole	D74



Specifications

(@ 25°C and rated Power Input)

Fixed Frequency VME Filter Board

32 CHANNEL VME SIGNAL CONDITIONING BOARD

Analog Input

- | | |
|----------------------------|--------------------|
| 1. Impedance | 1 GΩ//15pF |
| 2. Maximum Input | ±10V pk linear |
| 3. Over Voltage Protection | ±60 V |
| 4. Common Mode Rejection | 75 dB min. @ 60 Hz |

Analog Output

- | | |
|--|---------------------|
| 5. Impedance | 0.1Ω typ., 1.0Ω max |
| 6. Linear Operating Range | ±10V pk |
| 7. Channel to Channel Crosstalk | <-80 dB @ 10 kHz |
| 8. Maximum Current | ±2.0mA |
| 9. Offset Voltage | ±10mV max. |
| 10. Offset Temp. Coeff. | 20 μV/°C |
| 11. Short Circuit Protection | Short to Ground |
| 12. Peak Distortion @ 1 kHz, 3.54 Vrms | 80dBc max. |
| 13. In-band Spectral Noise, Gain of X500 | 230nV/√ Hz |

Filter Characteristics

- | | |
|--|--------------------------------------|
| 14. See D72 or D74 Series Specifications | |
| 15. Cut-off Frequency f_c (-3dB) | Fixed frequency from 1 Hz to 100 kHz |

Gain

- | | |
|-------------------------|--|
| 16. Nominal Gain | 1X |
| 17. Accuracy (optional) | ± 1.0%
10X, 100X, 1000X, Contact factory for other gain options |

Power Supply

- | | |
|------------------------|---|
| 18. From VME Backplane | +12V and -12V, ±5%, 0.9A max. each, no load |
| 19. Isolation | Analog ground may be isolated from VME and chassis ground by jumper |

Environmental

- | | |
|---------------|------------------------|
| 20. Operating | 0°C to +70°C |
| 21. Storage | -25°C to +85°C |
| 22. Humidity | 0 - 95% non-condensing |

Mechanical

- | | |
|----------------------------|---|
| 23. Card Size | VMEbus 6U single slot 9.17 x 6.3 inches, (233 x 160 mm) |
| 24. No. of Input Channels | 32 Differential - DC coupled Two groups of 16 |
| 25. No. of Output Channels | 32 Single Ended - DC coupled |
| 26. Mating Connectors | Input: Female high density 62-pin D-sub
Output: Male high density 44-pin D-sub |
| 27. Weight | 1.5 LB2., (681 grams) |

Ordering Information

		Optional Gain
VM32FF-32-D74L4B-100 kHz - 100		10, 100, 1000
8, 16 or 32 Channels	Filter Type and Corner Frequency	
	D72, DP72, D74, DP74	

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