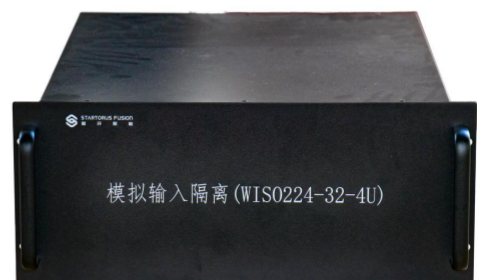


WISO224-32-4U Isolation Amplifier

Introduction

The WISO224-32-4U Isolation Amplifier is an analog signal isolation device developed by Startorus Fusion for fusion plasma experiment applications and similar scenarios. The isolation amplifier supports $\pm 5V$ input with a bandwidth of DC to 100 kHz and an isolation voltage of up to 3000 VDC. Its 1 M Ω input impedance minimizes errors introduced by the signal source internal resistance, and an internal low-pass filter is designed to suppress output signal noise. The isolation amplifier is housed in a standard 4U chassis with 32 channels in a fixed form factor and features a PCI-1713U interface.



Parameters

Parameter	Specification
Number of Channels	32
Input Signal Type	Analog Voltage Signal
Output Signal Type	Analog Voltage Signal
Input Voltage Range	± 5 V
Output Voltage Range	± 5 V
Gain	1
Signal Polarity	Non-inverting Output
Isolation Withstand Voltage	≥ 3 kV DC (1 min)
Bandwidth	100 kHz
Gain Error	$< 0.3\%$
Nonlinearity	$< \pm 0.5\%$ FSR
Output Noise	≤ 20 mVpp
Input Impedance	1 M Ω
Power Supply Voltage	220 V AC (Mains)
Interface Type	BNC (Input Signal), DB37 (Output Signal), IEC power inlet (power supply input)
Inter-Channel Crosstalk	< 10 mV

Applications

The WISO224-32-4U Isolation Amplifier is primarily designed for fusion plasma experimental scenarios, suitable for multi-channel analog signal acquisition and isolation in high-voltage environments such as Tokamak devices and magnetically confined fusion experimental platforms. The 3000 VDC isolation withstand voltage effectively protects downstream acquisition equipment from strong electromagnetic interference (EMI) and high common-mode voltage transients. With 32 channels integrated into a standard 4U chassis and support for direct interfacing with the PCI-1713U data acquisition card, the device is well-suited for rack-mounted integration in experimental control rooms.

Additionally, this product is applicable to other scientific and industrial measurement and control scenarios requiring high isolation and wide-bandwidth analog signal transmission, such as high-voltage pulsed power supply monitoring and precision sensor signal conditioning.