

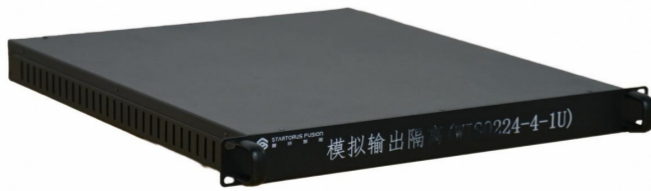
WISO Isolation Amplifier Series -- Product Specification

Introduction

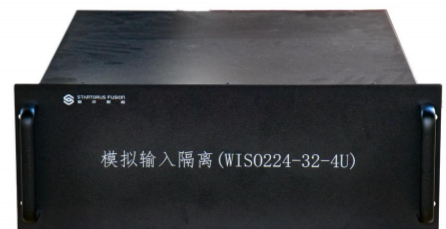
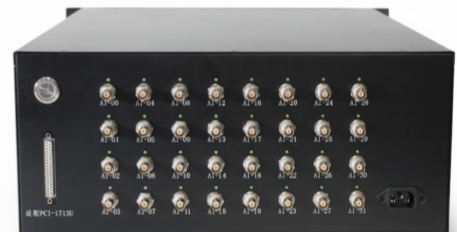
The WISO Isolation Amplifier series are analog signal isolation devices developed by Startorus Fusion for fusion plasma experiment applications and similar scenarios. The isolation amplifiers support ± 5 V input with a bandwidth of DC to 100 kHz and an isolation voltage of up to 3000 VDC. Their 1 M Ω 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 product line offers both 1U and 4U chassis configurations, supporting PCI-1720U and PCI-1713U interfaces respectively, to meet diverse channel requirement scenarios.

WISO224-4-1U Isolation Amplifier





WISO224-32-4U Isolation Amplifier



Parameters

Parameter	WISO224-4-1U	WISO224-32-4U
Number of Channels	4	32
Input Signal Type	Analog Voltage Signal	
Output Signal Type	Analog Voltage Signal	
Input Voltage Range	$\pm 5\text{ V}$	
Output Voltage Range	$\pm 5\text{ V}$	
Gain	1	
Signal Polarity	Non-inverting Output	
Isolation Withstand Voltage	$\geq 3\text{ kV DC (1 min)}$	
Bandwidth	100 kHz	
Gain Error	$< 0.3\%$	
Nonlinearity	$< \pm 0.5\% \text{ FSR}$	
Output Noise	$\leq 20\text{ mVpp}$	
Input Impedance	1 M Ω	
Power Supply Voltage	220V AC (Mains)	
Interface Type	DB37 (Input Signal), BNC (Output Signal), IEC power inlet (power supply input)	BNC (Input Signal), DB37 (Output Signal), IEC power inlet (power supply input)
Inter-Channel Crosstalk	$< 10\text{ mV}$	

应用场景

The WISO Isolation Amplifier series is primarily designed for fusion plasma experimental scenarios, suitable for 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.

The **WISO224-4-1U** features a compact design and supports direct interfacing with the PCI-1720U data acquisition card, facilitating flexible deployment within the experimental control room rack, making it ideal for applications with limited channel requirements or space constraints.

The **WISO224-32-4U** integrates 32 channels into a standard chassis with support for direct interfacing with the PCI-1713U data acquisition card, well-suited for large-scale rack-mounted integration in experimental control rooms.

Additionally, this product line is widely 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.