

Digital Video and Audio Signal Isolators



Summary:

- Eliminates noise and hum from digital video and audio signals
- Protect sensitive equipment from ground voltage damage
- Support for all 3G/HD/SD-SDI, ASI, MADI and AES3 formats
- 1kV breakdown voltage
- High performance design
- Passive device.
- Ultra compact units in standalone or 1RU rack mountable versions

Application:

- Noise reduction
- Equipment protection
- Outside broadcast truck ground protection

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Digital Video and Audio Signal Isolators

Description:

The Digital Video and Audio Isolation Transformers provide a solution to the reduction and elimination of hum and noise that can interfere with serial digital video and digital audio transmission, caused by differences in ground potential, especially those above 20 volts, or induced currents in long cable runs.

This common mode noise results in the degradation of the absolute bit timing of high speed digital signals leading to bit errors. These bit errors will at -first reduce the quality of the data content within the transmission signal but since digital signals do not degrade gracefully but suffer from a cliff effect, the digital signal can be lost altogether. However, the singular most common symptoms of hum in digital signals is intermittent horizontal black streaks in video and click and pops in audio.

Also, these isolators provide crucial protection to data circuits where ground potential differences exist between equipment.

The Isolation Transformer range of products support all 3G, HD, SD and ASI video standards as well AES3, AES3i and MAD1 digital audio. Provision must be made for any DC signals, such as camera controls, which isolation transformers will block.

The units may be used standalone, or incorporated in to a 19" rack using the RPIT16 Universal Rack Mounting Unit.

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Specification:

Model		DAIT1110	DAIT1075	HVIT1075	3VIT1075
Connector		XLR	BNC		
Impedance	(typ)	110Ω	75Ω		
Data Rate	(min)	1Mb/s	1Mb/s	100Mb/s	100Mb/s
	(max)	175Mb/s	175Mb/s	1.5Gb/s	3Gb/s
Compatibility		AES3	AES3i		
			MADI		
				ASI	ASI
				SD-SDI	SD-SDI
				HD-SDI	HD-SDI
				3G-SDI	
Power	(typ)	0.5W	0.5W	0.5W	0.5W
Return Loss	(max)	-19.5dB	-19.4dB	-12.2dB	-8.4dB
Insertion Loss	(max)	4.6dB	4.6dB	4.9dB	4.9dB
Channel Isolation	(standalone)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	(rack mount)	85.4dB	85.4dB	83.1dB	78dB
Size	(standalone)	75x30x25mm	58mm x 22mm x 22mm		
		(3 x 1.18 x 1")	(2.28" x 0.87" x 0.87")		
	(rack mount)	75x30x25mm	58mm x 30mm x 25mm		
		(3 x 1.18 x 1")	(2.28" x 1.18" x 1.00")		
Weight	(standalone)	45g (1.59oz)	31.5g (1.11oz)		
	(rack mount)	45g (1.59oz)	33g (1.16oz)		
Environmental		-25 to +55 deg C [-13 to 131 deg F], 5%-95% non-condensing			
		EN55103-1, EN55103, EN6095, FCC part 15			

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Ordering Information:

- DAIT1110XS:** AES3 Digital Audio Isolation Transformer, XLR, standalone and rack-mountable using RPIT16.
- DAIT1075BS:** AES3i and MADI Digital Audio Isolation Transformer, BNC, standalone.
- DAIT1075BR:** AES3i and MADI Digital Audio Isolation Transformer BNC, 19" rack mountable using RPIT16.
- HVIT1075BS:** HD/SD-SDI and ASI Digital Video Isolation Transformer, BNC, standalone.
- HVIT1075BR:** HD/SD-SDI and ASI Digital Video Isolation Transformer, BNC, 19" rack mountable using RPIT16.
- 3VIT1075BS:** 3G/HD/SD-SDI and ASI Digital Video Isolation Transformer, BNC, standalone.
- 3VIT1075BR:** 3G/HD/SD-SDI and ASI Digital Video Isolation Transformer, BNC, 19" rack mountable using RPIT16.
- RPIT16:** 19" rack panel for up to 16 DAIT111XS, DAIT175BR, HVIT175BR and 3VIT175BR devices. Different devices can be mixed in the same panel.

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