



## COAXIAL PROTECTOR

#### APPLICATIONS

- ✓ High Speed Video Camera
- Coaxial Ethernet
- ✔ High Speed Data Lines

#### IEC COMPATIBILITY (EN61000-4)

✓ 61000-4-5 (Surge): 24A, 8/20µs - Level 2(Line-Gnd) & Level 3(Line-Line)

#### FEATURES

- ✔ Meets IEC 1000-4-5 Industry Requirements
- BNC Connection
- ✓ Low Capacitance
- ✔ Completely Enclosed Aluminum Housing
- ✓ Low Clamping Voltage
- ✓ Nanosecond Response Time
- ✓ Long Life and Maintenance Free
- ✓ Finger Safe Connectors

### MECHANICAL CHARACTERISTICS

✔ Metal Package

- Weight 161 Grams (Approximate)
- ✔ Device Marking: Part Number, Logo

### DESCRIPTION

The CX12 series is a two stage, hybrid surge protector designed to protect interfacing equipment from induced lightning or switching transients. The multistage technique has proven to be the most cost effective and reliable method for protecting sensitive electronic equipment. Employing state-of-the-art avalanche junction diode technology, these devices provide superior performance for video, Ethernet, Token Ring or other LAN interface systems. They are in-line modules with easy interconnecting terminals. A completely enclosed aluminum housing provides EMC shielding to meet industry standard requirements. The enclosure has two female BNC type connections for easy installation. The case is ground for those installations that require external ground connections.





Figure 3 shows a comparison of capacitance between a industrial standard device (Top Line) and the ProTek Device CX12LC (Bottom Line). Due to the drastic change in the capacitance of the product (Top Line), signal distortion, loss of data or even access into the computer may be a problem.

FIGURE 4 PULSEWAVE FORM









Figure 1 and 2 are photographs of digitized waveforms showing a typical transient voltage and the clamping action of the CX12LC module. The device was subjected to a 2000A, 8/20µs impulse waveform in accordance with ANSI C62.36. The CX12 has an operating frequency range up to 10MHz and the CX12LC up to 100MHz.

# DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C		ELECTRICAL CHARACTERISTICS @ 25°C			
Peak Operating Line Voltage (V OP ) Operating Line Current (I O ) Maximum Transient Voltage Maximum Transient Current Maximum Leakage Current CX12 Frequency Responce -3 dB CX12LC Frequency Responce -3 dB Operating & Storage Temperature Response Time	±12 V 200mA 20kV 3000A (8/20μs) 5μA @ 30MHz @ 200MHz -40° to +85°C < 10 ns	PROTEK PART NUMBER	MAXIMUM CLAMPING VOLTAGE * Line-Ground 500A @ 8/20 ms V <sub>c</sub> VOLTS	MAXIMUM LINE THRUPUT RESISTANCE R OHMS	TYPICAL CAPACITANCE @ 0 V, 1 MHz C pF
		CX12 CX12LC	24 28	3 10	200 25

\* Other Voltages Available Consult Factory







## INSTALLATION

The CX12 series is designed with a female BNC type connector on both ends for easy installation. Disconnect the video or data line from the sensitive equipment. Insert the CX12 in the line near the AC power outlet of the equipment to be protected. Install a cable in between the CX12 and the equipment to be protected. Attach a ground wire between the case of the CX12 and the equipment AC power ground, or to the coax shield as required.



