

Coaxial SPD for Analog Video Surveillance Systems  
**RayCox BNC Series**  
**C1 • C2 • C3**



IEC/EN Category: C1/C2/C3  
 Protection: Impedance Matched  
 Voltages: 10, 24 VDC  
 Maximum Operating Voltage: 12, 24 VDC  
 Frequency Range: 100 MHz  
 Surge Discharge Ratings:  $I_n$ : 10 kA,  $I_{max}$ : 20 kA  
 Series Load Current: 100 mA  
 Enclosure: In-line Installation  
 Termination: BNC Connectors  
 Housing: Shielded Enclosure  
 Compliance: IEC/EN 61643-21

The RayCox BNC Series is intended to protect Arcnet computer networks and CCTV coaxial video signals.

Both coarse and fine protection is provided in a shielded, impedance matched, compact in-line enclosure.

Protection is provided by core-shield and shield-protective ground.

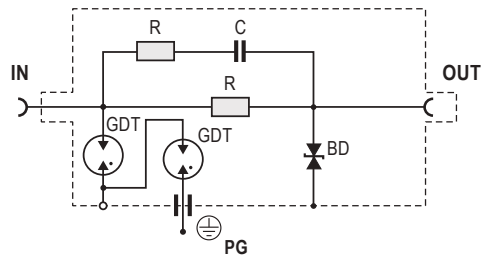
The design ensures minimum of capacitance loading, thereby ensuring a high operating bandwidth while providing efficient clamping against transient voltages.

**Technical Data**

BNC		BNC 5	BNC 12
<b>Electrical</b>			
Nominal Operating Voltage (DC)	$U_n$	10V	24V
Maximum Continuous Operating Voltage (DC)	$U_c$	12V	28V
Rated Operating Current at 25°C	$I_L$		100 mA
C2 Nominal Discharge Current (8/20 μs)	$I_n$		10 kA
Maximum Discharge Current (8/20 μs)	$I_{max}$		20 kA
Residual Voltage at 5 kA (8/20 μs)	(Wire-Shield) $U_{res}$	< 35V	< 65V
Rated Spark Overvoltage	(Wire-Shield)	13.5V – 16.5V	30V – 36V
	(Shield-Ground)	72V – 108V	72V – 108V
Response Time Overvoltage Protection	(Wire-Shield) $t_A$		< 10 ns
	(Shield-Ground)		< 100 ns
Insulation Resistance of Protection	(Wire-Shield) $R_{iso}$	≥ 10 MΩ	≥ 28 MΩ
	(Shield-Ground)		≥ 1 GΩ
Serial Resistance per Path	R		9 – 11 Ω
Transverse Capacitance	(Wire-Shield) C		30 pF
	(Shield-Ground)		1 pF
Cut-off Frequency	$f_G$		100 MHz
Transmission Rate			16 Mbit/s
<b>Mechanical</b>			
Temperature Range			-40 °C to +80 °C
Connection			BNC Connector
Degree of Protection IEC/EN 60529			IP 20
Housing Material			Metal
<b>Order Information</b>			
Order Code		<b>BNC 5</b>	<b>BNC 12</b>
BNC xx		7050.22	7050.13

## RayCox BNC Series

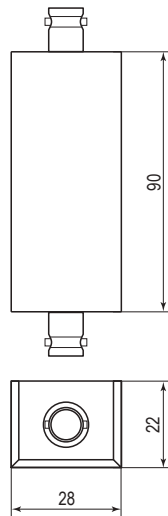
### Internal Configuration



#### Legend

- BD Bi-directional TVS Diode
- C Capacitor
- D Diode
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor

### Dimensions & Packaging



BNC	BNC 5	BNC 12
<b>Dimensions</b>		
Weight per Unit	58 g	
Packaging Dimensions (Single Unit)	140 × 200	