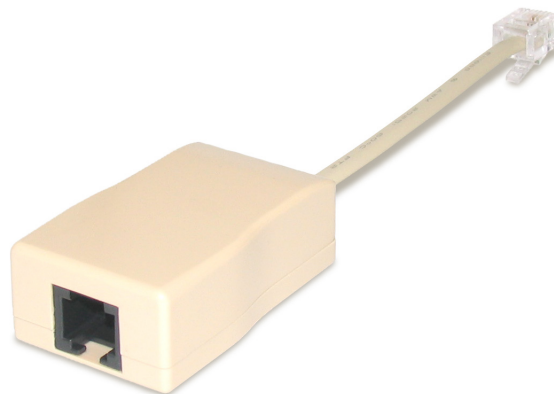


## Description

The Z-230PJ is a small in-line filter designed to expedite the service delivery and improve the performance of digital subscriber line (DSL) and home phoneline network (HPN) services. This model filters all telephone sets, facsimile machines, answering machines, etc individually or in groups on line 1 only. Our in-line DSL filter design electronically isolates the high-speed DSL and HPN data streams from the voice band plain old telephone service (POTS). This design effectively blocks the DSL, and HPN up to 30 Megahertz.



*Z-230PJ In-Line xDSL over POTS Filter*

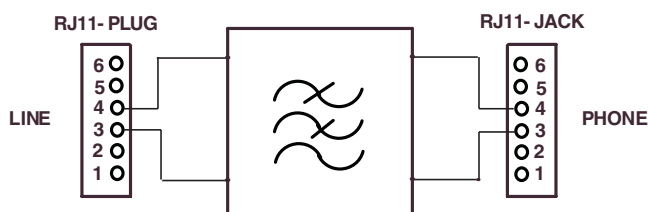
## Features

- Isolates telephone equipment impedances from the xDSL and HPN systems
- Attenuates xDSL & HPN signals to phone equipment to prevent conversion to voice band signals
- Attenuates xDSL & HPN signals to unbalanced phone equipment to prevent radiation into electronic equipment
- Minimizes voice band interference, transmission, signaling and supervision
- Compatible with all major xDSL standards
- RoHS Compliant
- Compliant and listed with UL 60950, FCC Part 68
- CE certified

## Applications

The Z-230PJ filters are used with other Z-BLOCKER® filters distributed throughout the subscribers' premises to isolate all voice band equipment devices such as corded/cordless telephones, answering machines, fax machines, 56Kb/s and lower rate modems, automatic dialers, recorder connectors and satellite television set-top boxes.

The Z-230PJ in-line DSL filter is one of many filters manufactured by Excelsus for subscriber installed digital services within homes, offices, and hotels. Excelsus is the number one selling brand of DSL filters worldwide.



*Z-230PJ Block Schematic*

**Z-BLOCKER Z-230PJ Filter Specifications**

Line side differential input blocking impedance		
At 20kHz		>2k
At 30kHz		>3k
From 5MHz to 10MHz		>2k
1kHz insertion loss between 600Ω resistive		
Single filter		<0.4
With 5 filters		<0.6
1kHz/2.8kHz slope between 600Ω resistive		
Single filter		<0.1
With 5 filters		<1.1
DC resistance in Ohms		
Tip to Tip, and Ring to Ring		<12
Tip to Ring		>10M
Longitudinal Balance per IEEE method		
From 200 - 1kHz		>58dB
From 1kHz - 3kHz		>53dB
Common mode rejection, 40kHz and 30MHz		>45dB
Low pass roll off (slope) between 600Ω and ADSL Transmission Unit - Remote		>26dB
Inter-Modulation Distortion First and Second order products		>60dB
Envelope Delay 300 Hz - 2800 Hz		<100μs
600Ω Return Loss into phone side with 600Ω line termination with ATU-R		
Single filter	SRL Low	>30dB
	ERL	>14dB
	SRL High	>17dB
+2 bridged filters	SRL Low	>36dB
	ERL	>23dB
	SRL High	>13dB
+4 bridged filters	SRL Low	>26dB
	ERL	>15dB
	SRL High	>8dB
Complex* Return Loss with ATU-R		
Single filter	SRL Low	>27dB
	ERL	>14dB
	SRL High	>6dB
+ 2 bridged filters	SRL Low	>19dB
	ERL	>14dB
	SRL High	>3dB
+ 4 bridged filters	SRL Low	>15dB
	ERL	>7dB
	SRL High	>2dB
*1330Ω in parallel with (100nfd in series with 348Ω)		
DC Loop Current - Meets specifications between 20 and 100 milliamps DC		
Connectors: RJ-11 Jack and RJ-11 Plug		
RJ11 pins have ≥50 micro-inches of gold plating over ≥100 micro-inches of nickel plating		
Dimensions: Length = 2.12in (54mm), Width = 1.21in (30.85mm), Height = 0.72in (18.34mm), Cable length = 3.78in (96mm)		
+/-1.0 mm on outline dimension. +/-10.0 mm on length of cable		
Compliant and listed with UL / CSA 60950, FCC CFR 47 Part 68		