

## Description

The Z-D250CWA is a compact, dual-line, wall-mount customer premises equipment (CPE) filter designed to expedite the service delivery and improve the performance of digital subscriber line (DSL) and home phonenumber network (HPN) services over plain old telephone service (POTS). The Z-D250CWA filters all telephones, facsimile (fax) machines, answering machines, and other telephone equipment. Its filter design electronically isolates the high-speed DSL and HPN data streams from the voice-band POTS to provide premium voice quality and optimal DSL and HPN data rates.

The Z-D250CWA filters both line 1 and line 2 at a two-line wall jack to reduce crosstalk and interference that can occur between lines. The filter also provides a convenience jack for DSL or HPN connections. The wall-mount filter allows two-line filtering of both the wall phone and a second phone device, such as an answering or fax machine.

## Features

- Filters both lines at a two-line wall jack
- Provides filtered connections for up to two phone devices
- Isolate telephone equipment impedances from the xDSL and HPN systems
- Blocks xDSL and HPN signals from voice-band equipment
- Provides a DSL convenience jack for connecting a DSL modem or HPN device
- Compatible with all major xDSL standards including ADSL Full Rate (ITU-T G.992.1), ADSL G.Lite (ITU-T G.992.2), ADSL2 (ITU-T G.992.3 and .4), ADSL2+ (ITU-T G.992.5 in analog mode), ADSL2++, VDSL (ITU-TG.993.1), VDSL2; also V.90 and Metallic Loop Testing compatible
- UL / CSA 60950, FCC CFR 47 Part 68, and IC CS-03



*Front and back views of the Z-D250CWA. Note that in-line filter can be removed from wall-mount housing, giving subscribers without wall-mount phones an additional in-line filter.*

## Applications

Installation of the Z-D250CWA wall-mount filter is quick and easy. The DSL user simply removes and disconnects the wall phone, connects and aligns the Z-D250CWA filter with the mounting screws of the wall plate, pushes the locking tabs in place, and reconnects and attaches the wall phone.

The DSL user installs an Excelsus filter into each telephone line jack in the subscriber's premises that contains voice-band equipment devices, including 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-D250CWA dual-line wall-mount 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-BLOCKER Z-D250P2J Filter Specifications

Capacitance to Ground	<0.2nF
DC Resistance	
Network port at 20mA	<20 Ω
Tip and Ring to Ground at ≤ 100 Vdc	>500 MΩ
Tip and Ring to Ground at ≥ 100 Vdc and ≤ 200 Vdc	>500 MΩ
Operating Current	5 to 90 mA
Operating Voltages	
Network tip to ring	0 to -100 Vdc
Network ringing signals at 30 to 115 Vrms	-100 to +100 Vdc
On-hook Voice Band Insertion Loss at 1004Hz	
With 1 filter	-0.5dB to 2.2dB
With 3 filters	-1.0dB to 6.5dB
With 5 filters	-1.0dB to 6.5dB
On- or Off-hook Envelope Delay 300 Hz - 2800 Hz	<250μs
Off-hook Voice Band Insertion Loss at 1004Hz	
With 1 filter	-0.5dB to 0.5dB
With 3 filters	-1.0dB to 1.0dB
With 5 filters	-1.0dB to 1.0dB
Off-hook Voice Band Insertion Loss Distortion	
With 1 filter, 200 to 3400 Hz	-1.0dB to 0.5dB
With 3 filters, 200 to 3400 Hz	-1.5dB to 2.5dB
With 5 filters, 200 to 3400 Hz	-1.5dB to 2.5dB
With 1 filter, 3.4 to 4 kHz	-1.5dB to 1.0dB
With 3 filters, 3.4 to 4 kHz	-2.0dB to 3.5dB
With 5 filters, 3.4 to 4 kHz	-2.0dB to 3.5dB
Off-hook impedance distortion (5 filters)	
Phone Port      SRL Low	≥13 dB
ERL	≥6.5 dB
SRL High	≥1 dB
Network Port   SRL Low	≥12 dB
ERL	≥10 dB
SRL High	≥5 dB
Inter-Modulation Distortion Second and Third order products	≥57 dB and ≥60 dB, respectively
Off-hook High Band Stopband Attenuation (1 filter)	
25 kHz to 50 kHz, between 20 and 90 mA	≥17 dB
50 kHz to 12 MHz, between 20 and 90 mA	≥25 dB
Bridging Loss	
With 1 filter, 25 kHz to 1.2 MHz	≤0.5 dB
With 5 filters, 25 kHz to 1.2 MHz	≤1.25 dB
With 1 filter, 1.2 to 12 MHz	≤3.0 dB
With 5 filters, 1.2 to 12 MHz	≤4.0 dB
Connectors: Two RJ11 jacks for Phone connections, One RJ11 jack for DSL/HPN connection, and one RJ11 plug on a 4' cord for Line connection	
Dimensions: Height = 4.5in (114mm), Width = 3.0in (76.2mm), Depth = 0.91in (23.1mm)	
Weight: approx. 80g	
UL / CSA 60950, FCC CFR 47 Part 68, and IC CS-03	