



Model 6000DSL

Multi-Function Telephone Network Analyzer

FEATURES/KEY BENEFITS

- **Diagnostic and fault location functions in one instrument** – Integrated testing system enables the technician to diagnose and locate faults in POTS and DSL service with one easy to use, high quality instrument.
- **Diagnostic Test Package** – Identify conditions on the line that can adversely affect POTS and/or DSL service using the following diagnostic tools:
 - Multi-Meter** – Measure AC volts, DC volts, foreign battery, resistance and insulation resistance.
 - Pair Quality Tests** – Measure loop current, noise metallic, power influence and longitudinal balance.
 - Power Spectral Density** – Find signals causing interference on active/inactive DSL lines.
 - Insertion Loss** – Measure voice frequency and wideband signal loss using tones generated by the Model 6000DSL's remote device.
 - Crosstalk Tests** – Measure both NEXT and FEXT Crosstalk, selecting either a single frequency to test or a sweep of voice or wideband frequencies.
- **Fault Location Test Package** – Restore existing service quicker or reclaim unused lines for new service with accurate fault location tools:
 - Time Domain Reflectometer (TDR)** – Accurately locate opens, shorts, water in cable, bad splices and cable damage with the same full-function TDR found in Riser Bond's stand-alone instruments.
 - Resistance Fault Locator (RFL)** – Three test modes. Locate resistance faults on a pair or on a single conductor.
 - Stress TDR** – This exclusive feature enhances the instrument's ability to locate faults due to moisture in the cable.
 - Open/Capacitance Meter** – Measure capacitance to the end of the pair or locate fault caused by an open circuit.
- **Ease-of-Use Features** – The soft-key menu's intuitive left-to-right operation guides the technician through logical testing steps to diagnose and locate faults. Most tests are performed using the same connection to the line.



- **Auto-Test and Fault Analysis Functions** – Press the Auto-Test key to perform a series of basic diagnostic tests. The Fault Analysis function will then suggest the appropriate fault location tool to use to most effectively locate the problem.
- **SUPER-STORE Waveform Data Storage** – Analyze TDR waveforms in a more convenient time or place. The instrument also stores Auto-Test and Power Spectral Density records.
- **WAVE-VIEW Software** – View, manipulate, print and archive TDR waveforms on your computer. Document plant, certify new builds, and store waveforms for later comparisons.
- **Remote Device** – One unassisted technician working at a distance from the exchange can disconnect a customer's service, identify the cable pair, open and close the circuit, and reconnect the customer after desired tests are complete. Use up to three remotes simultaneously to test different sections of a line.
- **Large LCD Display** – Test results and interpretive information are presented in an easy to read format on a screen that is larger than those found on many competitive units.



Riser Bond

AN SPX BRAND

Model 6000DSL

Integrated test solution

Product Specifications

Physical Dimensions

Main instrument without carrying case & accessories:	
Height:	6.30 inches (160 mm)
Width:	9.45 inches (240 mm)
Depth:	2.36 inches (60 mm)
Weight:	3 pounds (1.3 kg)
Main instrument with carrying case and accessories:	
Height:	7.80 inches (198 mm)
Width:	11.0 inches (279 mm)
Depth:	6.50 inches (165 mm)
Weight:	6 pounds (2.6 kg)
Remote Device	
Height:	8.50 inches (216 mm)
Width:	3.94 inches (100 mm)
Depth:	1.58 inches (40 mm)
Weight:	1 pound (0.4 kg)
Oscillator/Far End Unit	
Height:	9.06 inches (230 mm)
Width:	1.38 inches (35 mm)
Depth:	0.98 inches (25 mm)
Weight:	7.41 ounces (210 g)

Power

Internal:	Rechargeable, 7.2 V Nickel metal hydride battery pack
External:	12 VAC or VDC, 1250mA power supply
Operating Time:	4.75 hours, continuous without backlight

Environment

Operating temperature:	0° C (+32° F) to +50° C (+122° F)
Storage temperature:	-20° C (-4° F) to +60° C (+140° F)
Humidity:	95% maximum relative humidity, non-condensing IEC 68-2-3
Vibration:	IEC 68-2-6
Shock (Bump):	IEC 68-2-29, 40g, 6ms, 1000 shocks in each axis
Drop:	IEC 68-2-27, 1m free fall, packaged in carry case
Moisture rating:	IP 54

Display

320 x 240 dot-matrix, liquid crystal display (LCD) with CCFL backlighting

Multi-Meter

DC Voltage:	0 to 400V
Resolution:	0.1V
Accuracy:	1%±0.1V
AC Voltage:	0 to 400V
Resolution:	0.1V
Accuracy:	2%±0.1V
Foreign Battery:	2 to 400V
Resolution:	0.1V
Accuracy:	1%±0.1V
Resistance:	
0 to 1999.9Ω	
Resolution:	0.1Ω
Accuracy:	0.2%±0.2Ω
2kΩ to 10kΩ	
Resolution:	1Ω
Accuracy:	0.2%±1Ω

Insulation Resistance

Voltages:	50V/100V/250V/500V
0Ω to 49.99MΩ	
Resolution:	0.01MΩ
Accuracy:	2%±0.01MΩ

50MΩ to 99.9MΩ	
Resolution:	0.1MΩ
Accuracy:	4%
100MΩ to 999MΩ	
Resolution:	1MΩ
Accuracy:	10%

Open/Capacitance Meter

0 to 1000 ft (0 to 100 m)	
Resolution:	1 ft (0.1 m)
Accuracy:	2% ±3 ft (1 m)
1000 ft to 10,000 ft (100 m to 1,000 m)	
Resolution:	10 ft (1 m)
Accuracy:	±3%
10,000 ft to 100,000 ft (1000 m to 10,000 m)	
Resolution:	100 ft (10 m)
Accuracy:	±5%
100,000 ft to 150,000 ft (10,000 m to 50,000 m)	
Resolution:	1000 ft (100 m)
Accuracy:	±8%

Pair Quality

Loop Current:	0 to 120mA
Resolution:	0.1mA
Accuracy:	5% ±0.2mA
Noise Metallic (POTS):	0 to 50 dBmC
Resolution:	1 dB
Accuracy:	±2 dB
Power Influence (POTS):	40 to 100dBmC
Resolution:	1 dB
Accuracy:	±2 dB
Longitudinal Balance (POTS):	40 to 62dB
Resolution:	1 dB
Accuracy:	±2 dB
Insertion Loss:	0 to 60 dB
Frequency Range:	50 Hz to 2 MHz
Resolution:	1 dB
Output Level:	0 and -10 dBm
Crosstalk (NEXT and FEXT):	0 dB to -40dB
Frequency Range:	50 Hz to 2 MHz
Resolution:	1 dB
Output Level:	0 and -10 dBm
Impedance:	100, 120, 135, 600, 900 Ω and TN12

Power Spectral Density

Wideband Dynamic Range	-20 dB/Hz to -140 dB/Hz
Frequency Range:	20 kHz to 2 MHz
Resolution:	10 kHz
Impedance:	100Ω, 120Ω and 135Ω

Time Domain Reflectometer (TDR)

loaded and non-loaded cable	
Maximum Ranges:	
Live waveform:	
63,700 feet (19,400 meters) at 99.0% VOP	
38,600 feet (11,700 meters) at 60.0% VOP	
Range varies with VOP. Maximum testable cable length varies with pulse width and cable type.	
Stored waveform:	
11,900 ft (3,600.0 m) at 99.0% VOP	
7,200 ft (2,200.0 m) at 60.0% VOP	
Range varies with VOP.	
Horizontal Resolution:	
Up to 2,000 ft (610 m):	<.25 ft (.07 m) at 99.0% VOP
	<.07 ft (.02 m) at 30.0% VOP
Over 2,000 ft (610 m)	1 ft (.1 m) at any VOP
Vertical Resolution:	14 bits with 137 dots displayed
Vertical Sensitivity:	Greater than 65 dB
Output Signal:	Pulse widths of 2ns, 25ns, 100ns, 500ns, 1.5µs, 4.4µs and 330µs
Output Balance:	Variable, from 80Ω to 120Ω

Velocity of Propagation:

Two user-selectable display formats.	
VOP (%):	Non-loaded cable: 30.0% to 99.0% Loaded cable: 0.8% to 20.0%
V/2:	Non-loaded cable: 147.5 to 486.9 ft/µs (45.0 to 148.4 m/µs) Loaded cable: 3.9 to 98.4 ft/µs (1.2 to 30.0 m/µs)
Input Protection:	400 VAC or VDC up to 60 Hz
Distance Accuracy:	Accuracy will vary with cable VOP and cable type. +/- .5 ft (.15 m) plus +/- .01% of reading
Software Noise Filters	
Standard:	8x, 50/60 Hz
Optional:	4x, 8x, 16x, 32x, 64x, 128x, 50/60 Hz

Resistance Fault Locator (RFL)

Location Range:	0 to 150 kft (0 to 45 km)
Resistance fault range:	0 to 50MΩ
Accuracy	
3-Wire Test:	±0.25% of DTS plus ±0.4Ω
4-Wire Test:	±0.25% of DTS plus ±0.25Ω
Kupfmuller Test:	±1.0% of DTS plus ±1Ω
Storage	
Standard:	8 Auto Test, Power Spectral Density, and TDR waveform records
Optional:	32 Auto Test, Power Spectral Density, and TDR waveform records

Riser Bond Remote and Optional Oscillator

Remote Device	
Communications for:	short pair, open pair, exchange connect, disconnect, send loss/crosstalk signals, set terminations, pair identification tone
Oscillator/Far End Unit	
Communications for:	short pair, open pair, exchange connect, disconnect, pair identification tone

Accessories:

Standard: Operator's Manual, 110V or 220V charger, nylon carry / accessory bag, shoulder strap, 2 sets telco connection leads plus ground lead, pair shorting strap, VOP card. Optional: Extended waveform storage, extended TDR noise filters, Extended Warranty.

Technological advances allow changes in specifications and/or components. Changes may be made without notification.

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