

ANRITSU

S331L

The Anritsu S331L Site Master is an all-in-one handheld cable and antenna analyzer designed for field technicians, installers, and wireless service providers. Operating from 2 MHz to 4.0 GHz, the S331L features a built-in InstaCal™ calibration module, an internal power meter, and a ruggedized design optimized for harsh outdoor environments.

SPECIFICATIONS

General

Interfaces	2x USB 2.0 Type A, 1x USB 2.0 Mini-B
Display	7-inch TFT color touchscreen, 800 x 480 resolution
User Interface Languages	English, French, German, Spanish, Chinese, Japanese, Korean, Italian, Russian

Physical

Power Supply	100-240 VAC, 50-60 Hz (AC/DC Adapter), 12 VDC, 3 A max input
Operating Temperature	-10 to 55 °C °C
Dimensions (W×H×D)	250 mm × 177 mm × 61 mm mm
Weight	< 2.0 kg (4.4 lb) kg

Frequency and Sweep Specifications

Frequency Range	2 MHz to 4.0 GHz
Frequency Accuracy	±2.5 ppm @ 25 °C
Frequency Resolution	1 kHz
Number of Sweep Points	137, 275, 551, 1102, 2204
Sweep Speed	1.5 ms per data point (typical)

Cable and Antenna Analyzer Measurements

Measurement Modes	Return Loss, VSWR, Cable Loss, Distance-to-Fault (DTF) Return Loss, Distance-to-Fault (DTF) VSWR, 1-Port Phase, Smith Chart (50/75 Ω)
Return Loss Measurement Range	0 to 60 dB
Return Loss Resolution	0.01 dB
VSWR Measurement Range	1 to 65
Cable Loss Measurement Range	0 to 30 dB
Distance-to-Fault (DTF) Maximum Range	Up to 1500 m (4921 ft) depending on cable loss

System Performance and Accuracy

Corrected Directivity	> 42 dB (typical directivity after calibration)
Source Match	> 30 dB
System Impedance	50 Ω

Internal Power Meter (Standard)

Power Meter Frequency Range	50 MHz to 4.0 GHz
Power Display Range	-100 dBm to +110 dBm
Amplitude Accuracy	±0.5 dB (at calibrated frequency)

RF Port and Connection Interfaces

RF Out Port Connector	Type N, female, 50 Ω
RF Out Port Damage Level	+26 dBm peak, ±50 VDC

Compliance, Standards, and Calibration

Internal Calibration	Built-in InstaCal™ module (2 MHz to 4.0 GHz)
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Data Storage and Trace Management

Internal Memory Storage Capacity	8 GB internal flash (stores > 1000 traces and setups)
External Memory Support	USB flash drive compatible
Markers	8 markers, with delta, peak, and valley search options
Limit Lines	Upper, Lower, Single, Multi-segment (limit envelope)
PC Analysis Software Compatibility	Line Sweep Tools (LST)

Power and Battery Management

Battery Chemistry	Lithium-Ion
Battery Operational Runtime	> 4.0 hours (typical, continuous use)

Physical and Environmental Specifications

Storage Temperature Range	-40 °C to +71 °C
Maximum Relative Humidity	95% non-condensing
Maximum Operating Altitude	4600 m (15092 ft)

Capabilities

External Power Sensor Compatibility	Anritsu MA24105A, MA24106A, MA24108A, MA24118A, MA24126A, MA24208A, MA24218A, MA24330A, MA24340A, MA24350A
GPS Receiver Option	Option 0031 (requires external antenna)

Performance

On-Channel Interference Immunity	+17 dBm
On-Frequency Interference Immunity	+17 dBm

Power

Battery Charging Time	4 hours typical (instrument off)
AC Adapter Input	100 to 240 V AC, 50 to 60 Hz, 1.5 A max
AC Adapter Output	12 VDC, 5.0 A
Battery Capacity	3.1 Ah (34.4 Wh)
Battery Voltage	11.1 V

Data Storage

Supported File Export Formats	.stp, .dat, .vna, .png, .pdf, .txt, .csv
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Environmental & Compliance

Ruggedness Compliance	MIL-PRF-28800F Class 2
EMC Compliance	EU Directive 2014/30/EU, EN 61326-1, C-Tick EN55011
Safety Compliance	EN 61010-1

Frequency

Frequency Aging	±1.0 ppm/year
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Display

Display Resolution	800 x 480 pixels (WVGA)
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Calibration

Supported Calibration Methods	OSL, FlexCal™
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Measurements

Cable Loss Resolution	0.01 dB
VSWR Resolution	0.01

GPS Option

GPS Antenna Connector	SMA, female (with GPS Option 0031)
GPS Satellites Tracked	Up to 12 satellites

Environmental

Storage Altitude	Up to 15,240 m (50,000 ft)
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TECHNOLOGY

Cable and Antenna Analysis

APPLICATIONS

Cellular, wireless, broadcast, and defense antenna system testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.