

7010

EMI Receiver with built in LISN



Main Features

- 7010 Opt.00: 150 kHz to 1 GHz frequency range
- 7010 Opt.01: 9 kHz to 1 GHz frequency range
- 7010 Opt.02: 9 kHz to 30 MHz frequency range
- Precompliance CISPR 16-1-1 Standard
- Conducted and radiated emission tests
- Built-in 16 A two Lines Impedance Stabilization Network (LISN)
- User Port for driving external LISNs
- Free PES Emission Suite Software with Smart Detector function (*)
- Direct Analog to Digital conversion up to 30 MHz
- Robust, compact construction
- 2 W (140 dB μ V) maximum input level without damage

7010 EMI Receiver is an easy-to-use, very flexible equipment suitable for conducted and radiated measurements from 9 kHz up to 1 GHz. Thanks to its built-in 16 A Line Impedance Stabilization Network (LISN), 7010 allows complete conducted emission measurements and characterization of EUTs with no external or additional equipment. The compact and rugged construction makes the 7010 a perfect companion on the workbench of products designers, for in-situ testing, and for laboratory preliminary EMI emission measurements. The 7010 EMI Receiver design is based on an innovative philosophy made possible by using of the latest technology components. It features a fully digital architecture that follows the analogue RF front-end required by the CISPR standards, and exhibits the superior precision and accuracy of a numerical approach with the flexibility and user friendly characteristics typical of a modern instrument.

The receiver can be ordered with 3 different frequency ranges: 150 kHz to 1 GHz (7010 opt.00), 9 kHz to 1 GHz (7010 opt.01) and 9 kHz to 30 MHz (7010 opt.02). The upgrade from one version to another can be done at any time.

(*) The Smart Detector is an innovative special function implemented in the PMM receivers with the purpose of reducing the test time and increasing the productivity of the lab.

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SPECIFICATIONS

Frequency range	150 kHz to 1 GHz (Opt.00) 9 kHz to 1 GHz (Opt.01) 9 kHz to 30 MHz (Opt.02)
Resolution	10 Hz
Frequency accuracy	< 3 ppm
RF Input	Zin 50 Ω, N fem.
VSWR 10 dB RF att.	< 1.2
0 dB RF att.	< 1.2; <1.4 over 30 MHz
Attenuator	0 dB to 35 dB (5dB steps) 0 dB to 50 dB (2dB steps) over 30 MHz
Pulse Limiter	Built in
Max input level (without equipment damage)	
Sinewave AC Voltage	140 dBμV (2 W)
Pulse spectral density	100 dBμV/MHz
IF bandwidth	
6dB bandwidth	1 (Opt.01 & 02), 3, 10, 30, 100, 300 kHz
CISPR 16-1-1 bandwidth (6 dB)	200 Hz (Opt.01 & 02), 9 kHz and 120 kHz
Noise level (hold time 1 s)	
0.009 to 0.15 MHz (200 Hz RBW)	< 0 dBμV (QP); < -3 dBμV (AV)
0.15 to 30 MHz (9 kHz RBW)	< 14 dBμV (QP); < 7 dBμV (AV)
30 to 1000 MHz (120 kHz RBW)	< 14 dBμV (QP); < 7 dBμV (AV)
Spurious response (Pk 10 ms)	< 20 dBμV
Measuring Detectors	Peak, Quasi-Peak, Average, RMS, RMS-Avg, C-Avg, Smart Detector function
Level measuring time (hold time)	0.2 ms to 120 s (CISPR 16-1-1 as default)
Measurement accuracy	
S/N > 20 dB	± 1.0 dB
Main measure functions (With free of charge PMM Emission Suite SW)	<ul style="list-style-type: none">• Marker, marker peak, marker to centre, highest peaks, move peak to Analyzer or Manual modes, automatic test report.• 80 to 200 dB selectable dynamic range.• Display unit: dBm, dBμV, dBμA, dBμV/m, dBpT, dBμA/m, dBpW.• Store-Load: traces, panels, conversion factors, limits.
CISPR 16-1-1 conformity	Full compliant QP detector down to 20 Hz PRF
Demodulation	Built-in AM and FM demodulators (internal loudspeaker)
I/O Interface (protocol available for software developers)	USB 2.0; RS-232; User Port (drives LISNs and accessories)
Operating temperature	-5° to 45°C
Power Supply	12 Volt DC, 0.8A (AC universal adapter)
Built-in LISN	
Frequency range	9 kHz to 30 MHz
Continuous rated output current	16A
Max permissible operating voltage	250 Vac – 350 Vdc
EUT Supply frequency range	DC to 60 Hz
CISPR equivalent circuit	50 Ω // (5 Ω + 50 μH)
EUT Power connector	Schuko 2P+E
Dimensions	235 x 105 x 335 mm
Weight	5.0 kg



mem

mem – mechanic & electronic measurement
Freundgasse 8 A – 1040 VIENNA
Tel.: +43 1 943 42 54
Fax.: +43 1 943 42 51
Mobile: +43 699 1 943 42 55
e-mail: office@mem-vienna.com
www.mem-vienna.eu

Ordering Information:

7010 EMI Receiver: 7010 Option 00, 7010 Option 01, 7010 Option 02.
Includes: LISN mains cable, RS232 cable, USB-RS232 serial converter, USB cable, N-m to BNC-f adapter, AC/DC power adapter, PES Emission Suite Software, soft carrying case, operating manual, standard calibration certificate.

Optional accessories:

Options: 9010/RAV RMS-Avg detector, 9010-RMA Rack Mount Adapter for Rack 19"
Upgrades: 7010/UP/01, 7010/00/UP/01, 7010/02/UP/01

Related Products

Receivers

- 9010: EMI Receiver 10 Hz to 30 MHz
- 9010F: EMI Receiver 10 Hz to 30 MHz
- 9010/03P: EMI Receiver 10 Hz to 300 MHz
- 9010/30P: EMI Receiver 10 Hz to 3 GHz
- 9010/60P: EMI Receiver 10 Hz to 6 GHz
- 9030: EMI Receiver 30 MHz to 3 GHz
- 9060: EMI Receiver 30 MHz to 6 GHz
- 9180: EMI Receiver 6 GHz to 18 GHz

Antennas

- BC-01: Biconical Antenna 30 to 200 MHz
- DR-01: Double-ridged horn antenna 6 to 18 GHz
- LP-02: Log Periodic Antenna 200 MHz to 3 GHz
- LP-03: Log Periodic Antenna 800 MHz to 6 GHz
- VDH-01: Van der Hoofden test-head 20 kHz to 10 MHz
- TR-01: Antenna Tripod
- Antenna Set AS-02 (BC01+LP02+TR01)
- Antenna Set AS-03 (BC01+LP02+LP03+TR01)
- RA01: Rod Antenna 9 kHz to 30 MHz
- RA01-HV: Rod Antenna 150 kHz to 30 MHz
- RA01-MIL: Rod Antenna 9 kHz to 30 MHz

LISN

- L2-16B: single phase AMN, 16 A
- L3-32: 4 lines, 3-phase AMN, 32 A
- L3-64: 4 lines, 3-phase AMN, 63 A
- L3-64/690V: 4 lines, 3-phase AMN, 63 A
- L3-100: 4 lines, 3-phase AMN, 100 A
- L1-150M: single-path, 50 Ohm AMN, 150 A
- L1-150M1: single-path, 50 Ohm AMN, 150 A
- L1-500: single phase AMN, 500 A
- L3-500: 4 lines, 3-phase AMN, 500 A
- L2-D: Delta LISN for telecom, 2 A, 150 Ω
- SBRF4: RF Switching Box
- SHC-1/1000: Voltage probe, 1000 Vac, 35 dB
- SHC-2/1000: Voltage probe, 1000 Vac, 30 dB

PMM
A BRAND OF

narda
Safety Test Solutions®
an IS Communications Company

Sales Office:
Via Leonardo da Vinci, 21/23
20090 Segrate (Milano) - ITALY
Phone: +39 02 2699871
Fax: +39 02 26998700

E-Mail: nardait.support@L-3com.com
Internet: www.narda-sts.it

Headquarter:
Via Benesse, 29/B
17035 Cisano sul Neva (SV) - ITALY
Phone: +39 0182 58641
Fax: +39 0182 586400