

PMM 9010/03P

EMI Receiver & Analyzer, 10 Hz - 300 MHz

Technical Data Sheet



PMM 9010/03P High-performance EMI receiver and analyzer based on latest digital technology for superior

characteristics, operability, durability and expandability.

For optimal performance respect to the different measurement requirements, the frequency range

is divided in two separate sections and RF inputs:

10 Hz - 30 MHz: conducted disturbances in CISPR bands A (9-150 kHz), B (0,15-30 MHz)

30 – 300 MHz: conducted and radiated disturbances in CISPR band C

APPLICATIONS Measurement of radiated and conducted disturbances, insertion loss, induced current density:

CISPR/IEC 15 - EN 55015 - EN62493, Lighting equipment

Measurement of conducted disturbances:

CISPR/IEC 11 - EN 55011, Industrial, scientific and medical

CISPR/IEC 13 – EN 55013, Sound and television CISPR/IEC 22 – EN 55022, Information technology CISPR/IEC 25 – EN 55025, Vehicles and boats

 $\label{lem:measurement} \mbox{Measurement of conducted disturbances, continuous and discontinuous (Clicks):}$

CISPR/IEC 14 - EN 55014, Household appliances, electric tools

FOUR OPERATING MODES Automatic Scanning receiver

Manual tuning receiver

Spectrum analyzer

Scalar network analyzer 10 Hz—30 MHz (internal tracking generator is standard)

SPEED PMM 9010/03P is based on the same fast digital hardware of the other PMM EMI receivers

(mod. 9010, 9010/30P) and utilizes the same concept of Smart Detector mode for reducing the

Dual detector and limit function, insertion loss evaluation routine for faster CISPR/IEC 15 tests are

available in the PES—PMM Emission Software, included.

Superior characteristics of protection of the RF inputs to transients and overloads. Exceptionally compact, solid structure

PORTABLE Plug-in rechargeable battery and 12 VDC input as standard.

Lightweight, small size, low power consumption.

FREQUENCY RANGE UPGRADE To 3 GHz (same functions and specifications of model 9010/30P).

To 6 and 18 GHz, by external units.

FIRMWARE UPDATE User-updatable from our web page as soon as there are changes in standards.

Valuable optional functions: Click, MIL-STD filters, etc. can be added any time by the user.

PMM EMISSION SUITE Powerful PC Software for remote control, analysis, reporting: included.

DOCUMENTATION Exhaustive User's Manual; detailed Calibration and Conformity certificates.

ACCESSORIES AND

RUGGED

ANCILLARY EQUIPMENT LISN, Antennas, Large Loop Antenna, Voltage probes, RF switch... please see at www.narda-sts.it



Technical specifications

| | 10 Hz – 30 MHz RF Input | 30 – 300 MHz RF Input |
|-----------------------------------|--|--|
| Frequency range | 10 Hz to 30 MHz | 30 to 300 MHz |
| Resolution & Accuracy | 0,1 Hz; <1 ppm | 100 Hz; <2 ppm |
| RF input | 50 ? , BNC female | 50 ? , N-F |
| VSWR | <1,2 (10 dB RF att.) | <1,2; <2 over 1 GHz |
| Attenuator | 0 to 35 dB, 5 dB step | 0 to 50 dB, 2 dB step |
| Pulse limiter | Built-in, selectable | n.a. |
| Preamplifier | 20 dB | n.a. |
| Max input level without damage | ' | |
| Sinewave AC / Pulse spectral | 137 dBμV – 1 W / 97 dBμV/MHz | |
| density | | |
| Preselector | 1 x LP; 6 x BP filters | n.a. |
| IF RBW | | |
| Normal | (3 dB BW) 3, 10, 30, 100, 300 kHz | (6 dB BW) 3, 10, 30, 100, 300 kHz, 1 MHz |
| CISPR-16-1-1 | 200 Hz; 9 kHz | 9 kHz, 120 kHz, 1 MHz |
| MIL-STD-461 (option) | 10, 100 Hz; 1, 10 kHz | 100 kHz, 1 MHz |
| Noise level | (Preamplifier ON) | |
| | 9 – 150 kHz | |
| | RBW 200 Hz, QP <-8 dBμV | |
| | RBW 200 Hz, Avg <-15 dBμV | 30 – 300 MHz |
| | | RBW 120 kHz, QP <8 dBμV |
| | 0,15 – 30 MHz | RBW 120 kHz, Avg <4 dBµV |
| | RBW 9 kHz, QP <-4 dBµV | |
| | RBW 9 kHz, Avg <-10 dBμV | |
| Spurious response | <0 dBμV; < 10 dBμV over 150 kHz < 15 dBμV | |
| Detectors (CISPR 16-1-1) | Peak, Quasi-Peak | |
| (simultaneous on PMM Emission | C-Average, Average | |
| Suite) | RMS-Average (*), RMS APD (Amplitude Probability Distribution) | |
| Hold time | 1 ms to 30 s | |
| Hold time Stand-alone display & | Marker; marker peak; marker to center; highest peaks | |
| measure functions | Move peak to Analyzer & Manual modes | |
| measure runctions | Store & Load: | es |
| | - up to 11 traces (sweep mode) | |
| | - two panels | |
| | - 4 presettable conversion factors and limits | |
| | Click functions (option required) | |
| Pulse response (CISPR 16-1-1) | Down to 1 Hz | Down to 10 Hz |
| 1 disc response (615) it 10 1 1, | Single pulse | 201111 10 10 112 |
| Measuring units | amgra paras | |
| Stand-alone | dBm, dBμV | |
| PMM Emission Suite | dΒμΑ, dΒpW, dΒμV/m, dΒμΑ/m | |
| Displayed dynamic | 80, 100, 120 dB selectable | |
| Measurement accuracy | S/N > 20 dB | S/N > 20 dB |
| , | 10 Hz to 9 kHz ±1,0 dB | 30 to 300 MHz ±1,0 dB |
| | 9 kHz to 30 MHz ±1,0 dB | · |
| Autocalibration (1) | Internal reference source | n.a. |
| Demodulation | AM with variable volume | |
| I/O Interface | USB; RS-232 | |
| | High Speed Optical User Port (drives PMM LISNs/accessories) | |
| | Bluetooth (optional) | |
| RF output, rear panel | 50 Ω, BNC fem. | |
| Frequency range | CW: 10 Hz to 50 MHz; Tracking mode: 10 Hz – 30 MHz | |
| Level | 60 to 90 dBμV (0.1 dB step) | |
| Level accuracy (10 Hz to 30 MHz) | ± 0,5 dB | |
| Operating temperature | 0° to 40°C | |
| Power supply | AC universal adapter/charger | |
| | External 10 - 15 Vdc, 2.5A | |
| | Li-Ion rechargeable plug-in battery (Option) | |
| Battery operation time (typical) | | 3 h <mark>(2)</mark> |
| Dimensions | 235x105x335 mm | |
| Weight (including battery option) | 4,1 kg | |

- (1) (2) Used for RF front-end only: digital RBW filters and detectors don't require any re-calibration, any time.
- Minimum value; may be longer in relation with selected operating mode.

Ordering information

EMI receiver, 10 Hz—30 MHz; 30—300 MHz 9010-03P

Including:

- internal tracking generator 10 Hz 30 MHz AC adapter (mod. 9010/AC) PC software PMM Emission Suite - RS232/USB adapter (for FW upgrades)
- N-BNC adapter Control cables (USB, RS-232), BNC-BNC cable
- Standard Calibration Certificate

Optional accessories and functions: see Brochure PMM 9010/30P





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