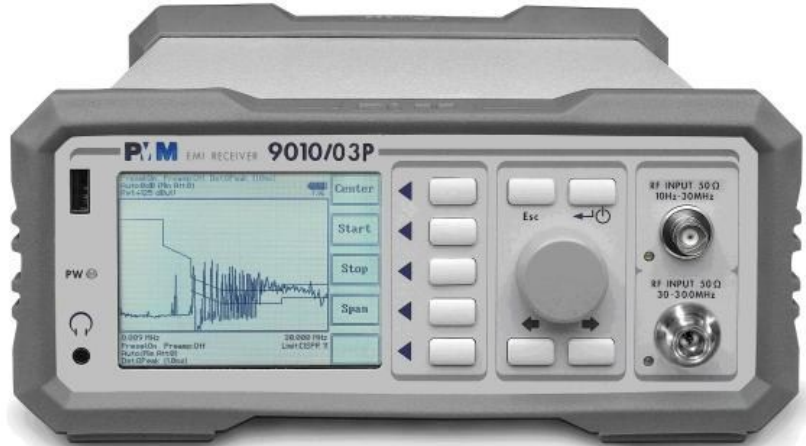




PMM 9010/03P

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

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 test time. Dual detector and limit function, insertion loss evaluation routine for faster CISPR/IEC 15 tests are available in the PES—PMM Emission Software, included.

RUGGED

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 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 Ω, BNC female	50 Ω, 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	137 dBμV – 1 W / 97 dBμV/MHz	
Sinewave AC / Pulse spectral 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	
	0,15 – 30 MHz	30 – 300 MHz
	RBW 9 kHz, QP <-4 dBμV	RBW 120 kHz, QP <8 dBμV
	RBW 9 kHz, Avg <-10 dBμV	RBW 120 kHz, Avg <4 dBμV
Spurious response	<0 dBμV; < 10 dBμV over 150 kHz	< 15 dBμV
Detectors (CISPR 16-1-1) (simultaneous on PMM Emission Suite)	Peak, Quasi-Peak C-Average, Average RMS-Average (*), RMS APD (Amplitude Probability Distribution)	
Hold time	1 ms to 30 s	
Stand-alone display & measure functions	Marker; marker peak; marker to center; highest peaks Move peak to Analyzer & Manual modes Store & Load: - 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 Single pulse	Down to 10 Hz
Measuring units	dBm, dBμV	
Stand-alone		
PMM Emission Suite	dBμA, dBpW, dBμV/m, dBμA/m	
Displayed dynamic	80, 100, 120 dB selectable	
Measurement accuracy	S/N > 20 dB 10 Hz to 9 kHz ±1,0 dB 9 kHz to 30 MHz ±1,0 dB	S/N > 20 dB 30 to 300 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 (2)	
Dimensions	235x105x335 mm	
Weight (including battery option)	4,1 kg	

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

Ordering information

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

Including:

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

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