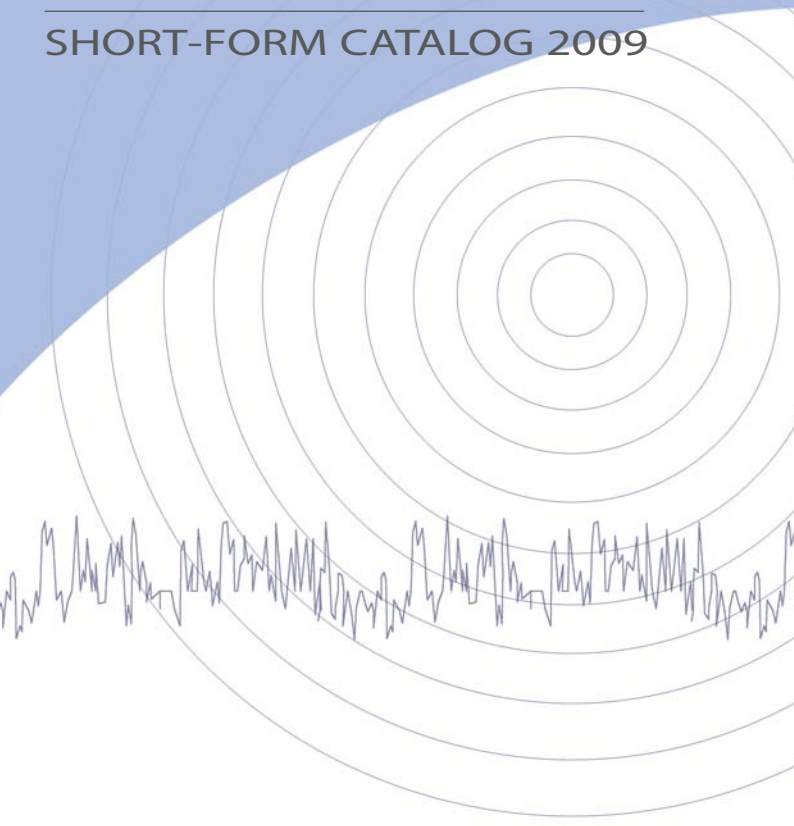


# EMC/EMI MEASURING INSTRUMENTS & ACCESSORIES

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SHORT-FORM CATALOG 2009



**PIM**



Our trek started in a small laboratory over 25 years ago. Since then, we've been focused on making EMC measurements easier and the measuring instruments friendly.

We've learned. We've innovated. For over 25 years, we've worked to develop perfect EMI/EMC equipment - maybe to the point of obsession.

We adapt new technologies and apply proven engineering principles to create value-added solutions for our customers. Combined with our global network of independent representatives and distributors, we can support your requirements all around the world.

ISO 9001:2000 certified Quality Management System. Accredited as EMC "Notified Body" (2004/108/EC directive) and SIT Calibration Center Nr. 08, traceable to national and international accreditation schemes (ISO 17025).

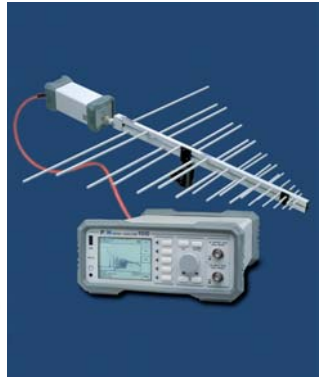
# Fully CISPR 16-1-1 Compliant Digital EMC/EMI Receivers 10 Hz - 6 GHz

PMM 9010 EMI Receiver  
10 Hz - 30 MHz



PMM 9010 EMI Receiver  
with fiber optic link to:

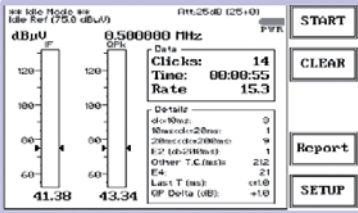
- PMM 9030: 30 MHz - 3 GHz
- PMM 9060: 30 MHz - 6 GHz



- Modular approach for all budgets
- Eliminates long coax cables
- Built-in automatic test routines
- Spectrum analyzer mode for debugging
- Mostly maintenance and calibration-free
- Compact, lightweight, battery operated
- Ready for future standards
- Powerful PC software included
- Compatible with most common EMC Software
- Accredited calibration
- Ideal for tests according to CISPR 11, 12, 13, 14-1, 15, 22, 25; EN 55011, 55012, 55013, 55014-1, 55015, 55022, 55025; MIL-STD



# Discontinuous Disturbance (Click) - Analyzer System



Real-time display

## Automatic Test Report

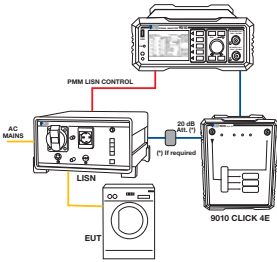
Worst Line Search										
Line	Limit	10ms	20ms	0.2s	E4	o.t.c	Total	Time	N	Worst
LS-1	75.0	3	1	5	0	1203	9	1.0	9.1	X
LS-2	75.0	2	0	0	0	241	3	0.2	17.2	.
LS-3	75.0	1	0	0	0	0	1	0.1	30.0	.
LS-N	75.0	0	0	0	0	0	0	0.4	29.1	.

Lq Calculation										
Freq	Limit	10ms	20ms	0.2s	E4	o.t.c	Total	Time	N	+Lq
0.15	75.0	0	0	4	0	335	5	0.4	12.2	7.6
0.50	75.0	0	0	2	0	0	0	0.5	15.5	5.7

Final Test Report										
Freq	Lq	10ms	20ms	0.2s	E4	o.t.c	Total	Time	Max	P/F
0.15	82.8	0	0	0	0	0	0	0.4	1	Pass
0.50	80.7	0	0	0	0	212	1	0.5	2	Pass
140	80.7	0	0	0	0	0	0	0.5	2	Pass
30.00	80.7	0	0	0	0	0	0	0.5	2	Pass



Measurement of discontinuous disturbances on four channels (frequencies) simultaneously



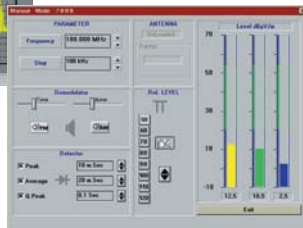
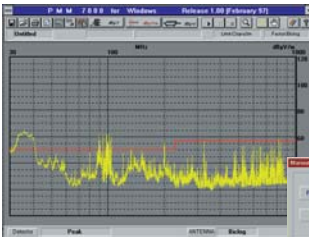
- Powerful calibration-free digital design
- Exclusive functions to improve test speed
- Fully compliant to latest CISPR 16-1-2, CISPR 14-1, CISPR 11, CISPR 22, EN 55011 55022 55014-1
- Basic version embedded in PMM 9010 EMI Receiver
- Upgradable at any time

# CISPR Pre-compliant EMC/EMI Receiver 9 kHz – 1 GHz



PMM 7000

One single click and the test immediately starts! Small, light and affordable by everyone, the PMM 7000 precompliance Receiver is the ideal tool for debugging and testing.



- User-friendly, cost-effective
- Controls and measurements on PC
- Ideal for conducted & radiated pre-compliance tests
- Built-in 16 A LISN
- Spectrum analyzer mode for debugging
- Worst points function
- Three simultaneous detectors (PK, QP, AVE)



## RF Generators

PMM 3000  
10 kHz - 1 GHz



PMM 3030  
10 kHz - 3 GHz

- Robust design for EMC applications
- Easy to use
- High output power, +10 dBm
- Internal & external AM and Pulse modulations
- USB & IEEE-488 (mod. PMM 3030)
- Optional rechargeable battery (mod. PMM 3030)
- Accredited calibration

## RF Power Meter



- 100 nW - 1 W (-40 to +30 dBm) input range
- True RMS response for accurate CW and modulated power measurements
- Internal Reference Calibrator
- Lightweight, convenient and easy to use with desktop and laptop PC
- USB connection
- Accredited calibration

## Field Probes



- PMM EP-600: 0.15 to 90 V/m
- PMM EP-601: 1 to 300 V/m
- Excellent isotropy - 0.3 dB typ.
- 40 m Optic Fibre
- 40-hours continuous operation
- Optical to RS232/USB adapters
- Direct measurement reading on PC
- Lightweight: 25 g only
- Accredited calibration
- Ideal for TEM-GTEM cells

Other PMM RF probes with OR-03  
Optical Repeater



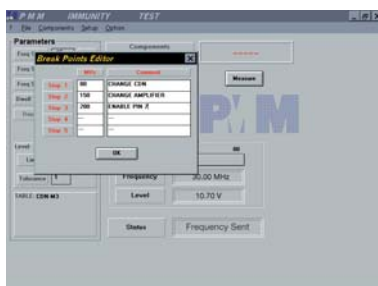
- Wide range of Electric and Magnetic Field Probes
- Frequency ranges from 100 kHz to 40 GHz
- Levels up to 1000 V/m - 20 A/m
- PMM OR-03 Optical Repeater to connect to PC
- Up to 80 m Optic Fibre
- Optical to RS232/USB adapters
- Compatible with most common EMC Software
- Accredited calibration



# Conducted Immunity System



PMM 6000S/10  
9 kHz - 230 MHz



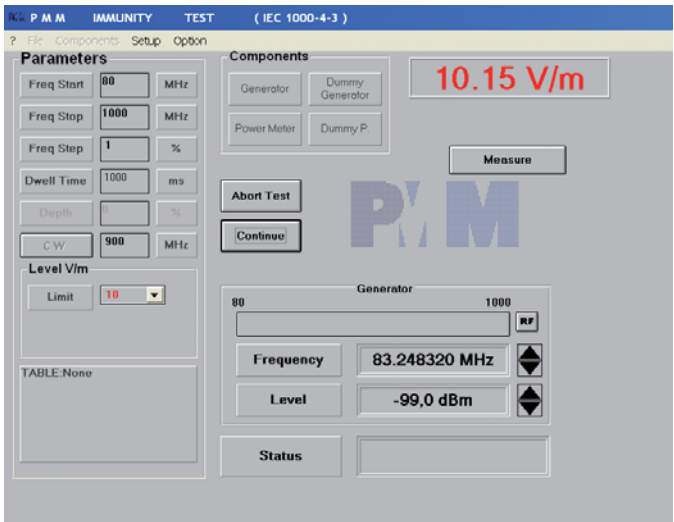
User-friendly  
PMM SW-06  
PC Software

- Fully automatic tests according to IEC / EN 61000-4-6
- Tests up to 10 V with any CDN
- Multi-scan and calibration routines
- PMM Power meter and Current probe supported
- Report form included
- All included:
  - PMM SW-06 PC software
  - RF Generator PMM 3000
  - RF Amplifier PMM 6000N (10 /15 W)
  - Single-phase 230 V/16 A CDN M3-16A (\*)
  - Attenuator 25W
  - Cables kit
  - Calibration curves 1, 3, 10V

(\*) Other CDNs, Injection clamps and Calibration kits are available separately.



# Radiated Immunity System



PMM SW-03 PC Software

The PMM Radiated Immunity System is based on the PMM SW-03 software. It controls the following equipments, to select according to the application e.g. TEM, GTEM, Anechoic chamber:

- RF Generator: PMM 3000 (1 GHz); PMM 3030 (3 GHz)
- Field probes: PMM OR-03; PMM EP-600
- RF Power Meter: PMM 6630 (3 GHz)

Other application-specific required equipments:

- RF Amplifier, selected according the required power
- One or more antennas
- Directional coupler

PMM SW-03 software highlights:

- Automatic tests according to IEC / EN 61000-4-3
- Report form included
- Multi-scan and calibration routines
- User-friendly



# LISN - Line Impedance Stabilization Networks

PMM L2-16A  
Single-phase, 230 V/16 A



PMM L3-32  
3-phase 4-wires,  
400 V/32 A

PMM L3-64, 3-ph.  
4-wires, 400 V/64 A



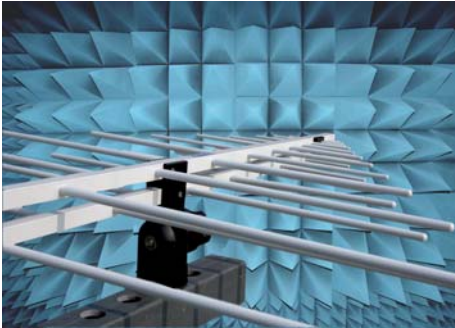
PMM L3-100, 3-ph.  
4-wires, 400 V/64 A



PMM L1-150  
250 VAC/600 VDC, 150 A

- Automatic line switching in conjunction with PMM 9010 EMI Receiver
- CISPR 16-1-2 Compliance
- Single and three-phase models
- Line currents up to 350 A

## Antennas



PMM LP-02  
Log Periodic  
Antenna  
200 - 2700 MHz



PMM BC-01  
Biconical Antenna 30 - 200MHz

- Excellent price/performance ratio
- Reduced size
- Convenient carrying case included

PMM RA-01  
Active Rod Antenna  
9 kHz - 30 MHz

- Excellent price/performance ratio
- Built-in rechargeable battery
- High rejection to 50 Hz E-field





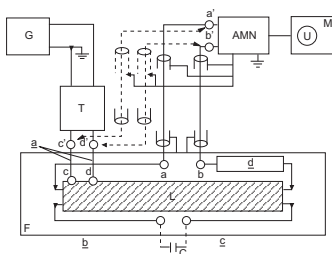
## Application to EN 55014

Radiated power measurements of cables take great advantages by installing the PMM 9030 EMI Receiver Unit directly on the absorbing clamp:

- Dramatic reduction of RF cable length and loss
- Over four hours of continuous operation by battery
- Digital Fiber optic link with Main Unit PMM 9010
- No ground loops
- Noise reduction



## Accessories for EN 55015



A complete solution for measurement of radio frequency disturbances of electrical lighting equipment according to EN 55015:

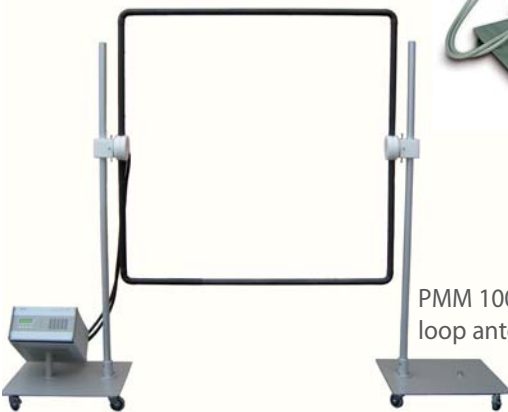
- Dummy lamps
- Large loop antenna
- PMM TRF1 Balanced to unbalanced transformer
- PMM 9010/9030 EMI Receiver

## Magnetic Immunity Test System

PMM 1008 with 1x1 m loop antenna



PMM 1008 with 2x2 m loop antenna



Integrated system for tests according to IEC / EN 61000-4-8:

- Programmable 1200 A current generator with output feedback
- Standard, custom and ramp tests
- Autocalibration
- Safety interlock and protections
- 360° coil rotation angle
- Square loop antennas of 1 - 1,5 - 2 m
- Rectangular loop antenna 2,6 x 1 m



## Calibrations and Services



- Narda Safety Test Solutions S.r.l. is accredited as EMC "Notified Body" number NB 2050 and SIT Calibration Center traceable to national and international standards for the electrical quantities:
  - Frequency
  - RF power up to 18 GHz
  - Electromagnetic Field Strength up to 18 GHz
- Narda STS offers services of calibration for:
  - EMI receivers and Spectrum Analyzers
  - Absorbing Clamps, Current Probes
  - R.F. Generators and Power Meters
  - ESD, Burst/Fast Transient and Surge
  - Magnetic and Electric field sensors
  - Antennas in O.A.T.S. (Open Area Test Site)

## Accessories

Voltage probes SHC  
for CISPR 16-1-2



PL-01 Pulse Limiter suitable for  
analog receivers,  
9 kHz—30 MHz



Wooden tripods  
for antennas  
and field probes



**PMM** a brand of



**Narda Safety Test Solutions srl**

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