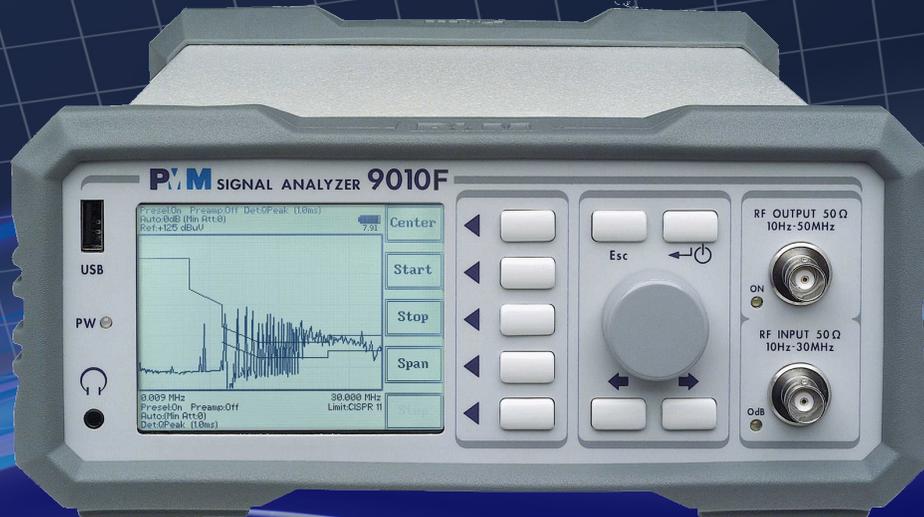


# 9010F

## EMI CISPR Receivers



### Main Features

- 10 Hz to 30-MHz frequency range
- Extendable up to 3/6/18 GHz by fibre-optic linked remote units 9030/9060/9180
- Operates gapless FFT
- Compliant with CISPR 16-1-1, MIL-STD-461, ANSI C63.2 and FCC
- Compliant with CISPR 14-1 when in conjunction with CA0010
- Conducted and radiated emission tests
- Combination of EMI test receiver and spectrum analyzer
- User port for driving external LISNs and ancillaries
- Internal CW generator
- Portable, robust and compact construction with plug-in rechargeable Li-ion battery
- Free PES (PMM Emission Suite SW) with Smart Detector function

The PMM 9010F is a CISPR16-1-1 compliant FFT EMI receiver, highly flexible and easy to use, suitable for measurements from 10 Hz up to 30 MHz. It can also perform tests up to 18 GHz thanks to frequency extensions using fiber-optic linked remote units.

The receiver features a fully digital architecture up to 30 MHz that immediately follows the analog RF preselector and attenuator, combining the superior accuracy of a numerical approach with the flexibility and user friendliness of a modern instrument.

The 9010F includes a user port for external devices like LISNs and switching boxes. Options such as MIL-STD RBW filters, RMS-AVG detector, and single-channel click analysis are available. An optional external four-channel click analyzer makes this measurement system an extremely attractive and profitable solution.

Very easy to operate, the 9010F has an internal CW generator that can be used for self-calibration routines and for generating RF signals (e.g. for EUT testing). Its compact size and rugged yet lightweight design, with plug-in rechargeable Li-ion battery, makes it perfect for in-situ testing.

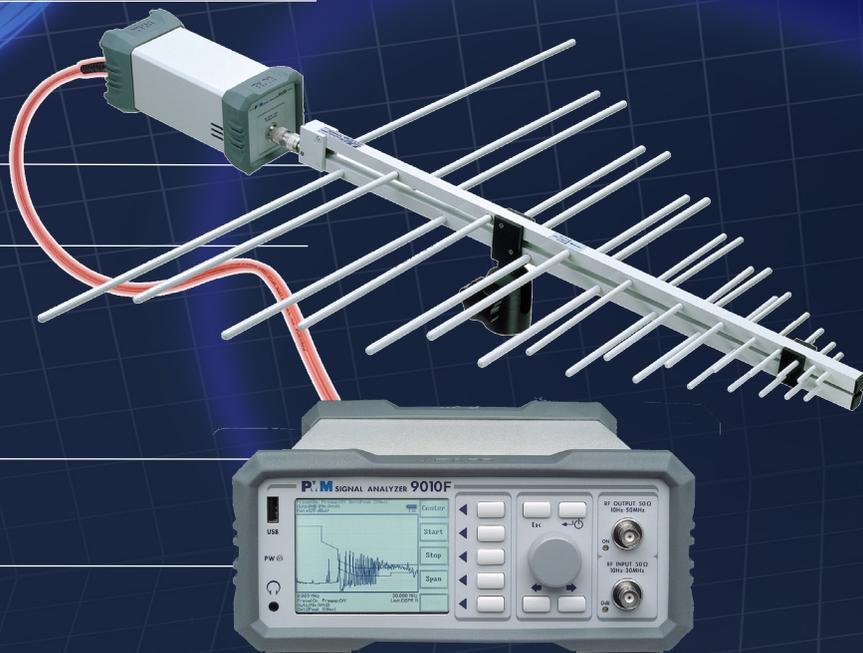
# 9010F

## EMI CISPR Receiver

### SPECIFICATIONS

<b>Frequency range</b>	10 Hz to 30 MHz (CISPR-16-1-1 Full-Compliance from 9 kHz to 30 MHz)
Resolution, Freq. accuracy	0,1 Hz < 1 ppm
<b>RF Input</b>	Zin 50 Ω, BNC fem.
VSWR 10 dB RF att.	< 1,2
0 dB RF att.	< 1,6
Attenuator	0 dB to 35 dB (5dB steps)
Pulse limiter	Built in (selectable)
Preamplifier gain	20 dB (after preselector, selectable)
<b>Max input level</b>	(without equipment damage)
Sinewave AC voltage	137 dBμV (1 W)
Pulse spectral density	97 dBμV/MHz *
<b>Preselector</b>	
One lowpass filter	< 9 kHz
Six bandpass filters	9 kHz to 150 kHz 150 kHz to 5670 kHz 5.67 MHz to 11.9 MHz 11.9 MHz to 16.71 MHz 16.71 MHz to 22.23 MHz 22.23 MHz to 30 MHz
<b>IF bandwidth</b>	
6 dB bandwidth	1, 3, 10, 30, 100, 300 kHz
CISPR-16-1-1 bandwidth (6 dB)	200 Hz; 9 kHz
MIL-STD-461(option)	10, 100 Hz, 1, 10 kHz
<b>Noise level</b>	(Preamplifier ON, Preselector OFF)
	9 to 150 kHz < - 27 dBμV (QP) (200 Hz RBW) < - 30 dBμV (AV)
	0,15 to 30 MHz < - 9 dBμV (QP) (9 kHz RBW) < - 14 dBμV (AV)
<b>Measuring detectors</b>	Peak, Quasi-Peak, Average, RMS, RMS-Average(Optional), CISPR-Average, APD and Smart Detector function
<b>Level measuring time</b> (Hold Time)	1 ms to 120 s. (CISPR 16-1-1 as default)
<b>Display units</b>	dBm, dBμV (as stand-alone); dBm, dBμV, dBμV/m, dBmA, dBmA/m, dBpW (through 9010 SW Utility on PC)
<b>Spurious response</b>	< 0 dBuV, < 10dBuV over 150 kHz
<b>Measurement accuracy</b>	10 Hz to 9 kHz ± 1,0 dB typical
S/N > 20 dB	9 kHz to 30 MHz ± 1,0 dB
<b>RF output</b> (tracking generator)	Zout 50 Ω, BNC fem.
<b>Frequency range</b>	10 Hz to 50 MHz
<b>Level</b>	60 dBμV to 90 dBμV (0,1 dB steps)
<b>Level accuracy</b>	± 0,5 dB (10 Hz to 30 MHz)
<b>I/O Interface</b>	USB 2.0 (rear), USB 2.0 (front; only for future implementation), RS-232, high-speed optical link (2 channels; 2nd channel for future implementation), user port (for LISN connection, etc.),IEEE-488 (GPIB) optional
<b>Operating temperature</b>	-5 °C to 45 °C
<b>Power supply</b>	10 - 15 Volt DC, 2,5 A; optional Li-ion interchangeable battery (8h use, typical)
<b>Dimensions</b> (W x H x D)	235 x 105 x 335 mm
<b>Weight</b>	4,3 kg

\* with MIN AULT > = 10 dB



### Optional accessories:

BP-02 Li-ion battery pack, 9010-RMA rack mount adapter for 19" rack.  
Options: 9010/MIL, 9010/RAV, 9010/CLICK.  
Fully compliant frequency extension modules: 9030, 9060, 9180.  
Accredited calibrations: 9010/UKAS, 9010/UKAS-Click

## Related products

### Receivers

- 7010/01: EMI Receiver 9 kHz to 1 GHz
- 7010/02: EMI Receiver 9 kHz to 30 MHz
- 7010/03: EMI Receiver 9 kHz to 3 GHz
- ER8000/00 EMI Receiver 9 kHz to 30 MHz
- ER8000/01 EMI Receiver 9 kHz to 3 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
- FR4003: Field Receiver 9 kHz to 30 MHz

### Antennas

- BC-01: Biconical Antenna 30 to 200 MHz
- BL-01: Biconical Log Periodic Antenna 30 MHz to 6 GHz
- 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
- LP-04: Log Periodic Antenna 200 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)
- Antenna Set AS-04 (BC01+LP04+TR01)
- Antenna Set AS-05 (BC01+LP04+DR01+TR01)
- Antenna Set AS-06 (BC01+LP02+LP03+DR01+TR01)
- Antenna Set AS-07 (BL01+TR01)
- Antenna Set AS-08 (BL01+DR01+TR01)
- RA-01: Rod Antenna 9 kHz to 30 MHz
- RA-01-HV: Rod Antenna 150 kHz to 30 MHz
- RA-01-MIL: Rod Antenna 9 kHz to 30 MHz

### LISNs

- 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
- SBRF4: RF Switching Box
- SHC-1/1000: Voltage probe, 1000 Vac, 35 dB
- SHC-2/1000: Voltage probe, 1000 Vac, 30 dB



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