



Avviso pubblico, per titoli ed esami, per la copertura a tempo pieno ed indeterminato di n. 1 posto di Collaboratore Tecnico Professionale-Ingegnere-Categoria "D" - del CCNL Comparto Sanità - da assegnare all'Ufficio I.E.A – APPROVATO CON DDG. n. 177/2019.

PROVA A

- 1) Evoluzione normativa dei limiti alta frequenza
- 2) Attività di vigilanza e controllo inquinamento acustico
- 3) Articolazione ARPAB



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PROVA C

- 1) Normative di semplificazione impianti radioemissivi
- 2) La classificazione acustica del territorio
- 3) La Legge n. 132/2016



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PROVA D

- 1) Parametri in gioco nell'istruttoria di una SRB
- 2) Principali problematiche nell'effettuazione misure di rumore
- 3) Regolamento di organizzazione ARPAB



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PROVA E

- 1) Fasce di rispetto degli elettrodotti
- 2) Misure di rumore in ambiente esterno ed in ambiente abitativo
- 3) Il D. Lgs. n. 152/2006



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PROVA 1

INFORMATICA

Cosa è Microsoft Office?

INGLESE

Il candidato provveda a leggere e tradurre la frase di cui al foglio in allegato, evidenziata in giallo.



7 – 8053-SW02

Data acquisition Software

7.1 Introduction to PMM 8053-SW02 Software

8053-SW02 Software is a computer tool, which integrates itself with the system of the PMM 8053B General Purpose Field Meter or it is used to drive the automatic switching box SB-04.

By mean of a simple interface between the meter and the User's personal computer and software, based on the Windows™ Operating System, PMM SW02 software broadens the flexibility of use of PMM 8053B system by facilitating the acquisition, storage, and graphic and numeric display of the data collected.

PMM SW02 software (release 1.72) has the following basic functions:

- It scans the readings taken with PMM 8053B or with SB-04 and records the data at sampling intervals of one second for the of time defined by the user.
- It generates a visual alarm of the PC screen if the field exceeds the alarm threshold value defined by the user;
- It reverses the polarity of the voltage coming out from pin 4 of the serial port used to drive 8053B or SB-04 in case you exceed the threshold of alarm;
- It allows the readings that have been taken to be saved, at the same time, as both an envelope and as an individual data and, on later occasions, to be retrieved and analysed.
- It permits the data of the measurements stored in the Logger of PMM 8053B to be transferred to PC and saved in files and be graphically displayed.
- It makes a graphic representation of the envelope of the stored and/or saved readings, permitting moment by moment analysis of values with the aid of a marker.
- It permits the measured values to be compared with the limits imposed by the user.
- It permits the readings in progress to be graphically and numerically displayed in real time.
- The files saved on disk, related to the measurements taken, are recorded with the date and time of measurement and any other useful reference information added by the user, enabling a measurement database to be created very easily. Furthermore, they lend themselves to additional processing with other external programs or spreadsheets, such as Excel™.
- A simple user interface based on the Windows™ Operating System makes its use intuitive and user-friendly.
- The connection between the meter and the computer via serial cable (used for the connection with 8053B or SB-04) or via fiber optics (only when using 8053B or OR03), guarantees maximum security and flexibility in link-up in all operating conditions.



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PROVA 2

INFORMATICA

Cosa è un internet browser?

INGLESE

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4 - Applications

4.1 What is electrosmog?

Electrosmog is a popular term used to describe any phenomenon or problem associated with artificially generated electric or magnetic pollution. Any electric or electronic device may cause an environmental risk.

4.2 Observations about the risks

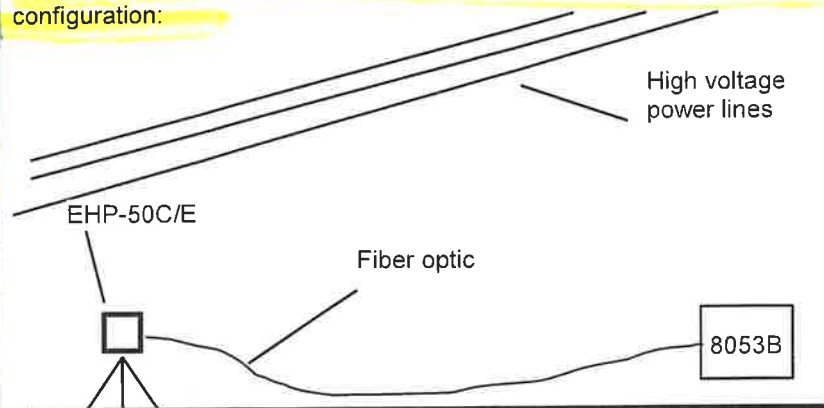
All motors, electronic workstations, AM or FM broadcasting transmitters, TVs, electric ovens, manufacturing machinery, cellular telephones and stations can generate potentially hazardous electric or magnetic fields. Anybody, both at work and elsewhere, can be exposed to sufficiently strong fields to be harmful to their health.

4.3 Measurement of power distribution lines

Various studies throughout the world confirm the risks involved in being radiated by strong electric or magnetic fields. A great deal has been written on the subject and doctors agree with these studies.

In fact, IEC, CENELEC, ICNIRP and many national organisations are currently taking electrosmog and its eventual consequences into consideration. New standards are in the phase of being drafted and applied for protecting workers and citizens all over the world.

All high voltage power systems have the potential for generating hazardous electric and magnetic fields. With the EHP-50C and EHP-50E or the magnetic field probes HP-050/051, the electric and magnetic strength of these fields can be measured. The following is the recommended configuration:



Thanks to its spectrum analysis function with EHP-50C or EHP-50E it is possible to store into the memory only the contribution given by the high voltage lines taking out of the measurement other not interesting frequencies.

Additionally with xxxDef LP mode it is allowed to log measurements for very long periods.

NOTE

Using EHP-50C or EHP-50E

To achieve the better sensitivity it is necessary to set the **Highest mode on the analyzer.**

Also, in **Spectrum mode** is possible to store only one specific frequency.

The new EHP-50C and EHP-50E offer a Stand-alone mode of operation and thanks to its internal memory is possible to perform a long term acquisition without connecting it to the 8053B.

With EHP-50C/E it is possible to collect data every 1 minute or every 30 seconds for 24 hours. Later on, it is possible to download all collected data to any PC by using the provided PMM software.

See Chapter 8.

Handwritten signatures and stamps:
A circular stamp with the text "NARDA S.p.A. - Via dell'Industria, 1 - 20139 Milano - Italy" is visible. Below it, the initials "GG" and "RC" are handwritten.

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PROVA 3

INFORMATICA

Cosa è un motore di ricerca?

INGLESE

Il candidato provveda a leggere e tradurre la frase di cui al foglio in allegato, evidenziata in giallo.



Handwritten signature and circular stamp, likely an official seal or mark.

3.7.2 Linear average AVG or quadratic average RMS

All the average measurements taken by PMM 8053B will be made depending on the **AVG** or **RMS** selection. To select **AVG** or **RMS** use the key at the bottom on the right in the **SET** function.



Both averages will be calculated on the basis of the following settings:

- Last 32 samples
- 30 sec
- 1 min
- 2 min
- 3 min
- 6 min
- 10 min
- 15 min
- 30 min

The Average value is displayed in the main window together with the Maximum and Minimum values. After PMM 8053B has acquired a sufficient number of data or the time set in this menu has elapsed, the average measurement will appear in the main display with a small v symbol as shown in the following example.

MAX	1.45
MIN	1.34
✓AVG	1.36

After the **V** symbol is appeared the shown average is the rolling averaging.

PMM 8053B will re-start to calculate a new averaging, which will overwrite the previous one, every time the MIN-MAX/AVG (or MIN-MAX/RMS) key is pressed; the accumulated averaged value will be displayed after the v symbol.

This value can not be saved into the internal memory of 8053B.

The number of samples used to perform the average calculation will depend from the Filter selected. For example, if the Filter is set to 10Hz the 8053B will collect less data than when using faster filter like 80 Hz.

By using the Data logger, the sample rate is always timed by the selected acquisition time. At the end of an acquisition, the number of data collected, used to calculate the averaging value will be different from the number of samples used to perform MIN-MAX/AVG.

The result will be a different Average value calculated by the Data Logger compared with the average value displayed on 8053B.

Only if the field will remain stable (same value for all the time required by the Data logger), the results will be the same.

NOTE

Handwritten signatures and stamps:
A circular stamp with the text "PMM 8053B" and "SAFETY TEST SOLUTIONS" is visible. There are several handwritten signatures and initials, including "SA", "RE", and "epg".

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PROVA 4

INFORMATICA

Operazioni da effettuare per impaginare un documento su Microsoft Word.

INGLESE

Il candidato provveda a leggere e tradurre la frase di cui al foglio in allegato, evidenziata in giallo.



Handwritten signature and stamp. The stamp is circular with the word "MATERIA" in the center. The signature "SA" is written above the stamp, "eg" to the left, and "Re" below.

3 – Instructions for use

3.1 Introduction

The PMM 8053B General Purpose Field Meter is designed to be simple and rapid in use and, therefore, able to be used even by personnel with little expertise with this type of meter.

The commands are entered through a 16-key alphanumeric keyboard and the relative software functions are displayed on a wide liquid crystal display.

The upper four keys of the alphanumeric keyboard are used for directly selecting the desired function indicated on the corresponding bar of the menu of the LCD display.

Some panels enable the user to simply select the function by shifting up and down the commands with the arrows on the menu bar.

A command is generally automatically repeated, either in a constant or increasing manner according to the selected command, by holding the keys down.

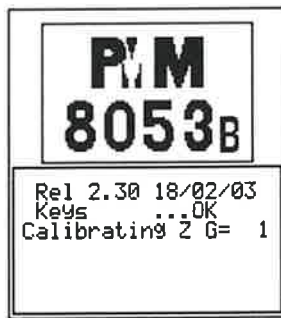
The remaining 12 keys of the alphanumeric keyboard are used for entering various kinds of data according to the chosen set-up.

The **BACK** key enables the user to return to the previous operation.

The **POWER** key allows the meter to be switched on or off.

3.2 To switch-on

Once the probe is inserted the meter can be switched on by pressing the **POWER** key. A long beep will confirm that the meter has been switched on.



The set-up routine will then be run and the following information will appear on the display:

1. Version and date of the firmware;
2. Control state of the keyboard;
3. Autocalibration of the input stage;
4. Control of the integrity of probe.

 **NOTE**

If the probe has not been previously connected to the meter Step 4 will not be performed and the word "NONE" will appear in the "Probe" box in the main window. If, instead, the probe is not working properly the word "FAIL" will appear in relation to the non-functioning axis (e.g., Z:OK, Y:FAIL, X:OK) and a beep will be emitted.

To use 8053B with EHP-50C is mandatory to have the 8053 firmware 2.30 or higher. To use it with EHP-50E the 8053 firmware 3.16 or higher is required.

 **NOTE**

The time required for the internal calibration of the meter depends on the noise filter chosen. If the filter is set at 10 or at 20 Hz, the calibration process will take longer than with higher frequencies. For normal use, we recommend setting the filter at 40 Hz.

Handwritten signatures and stamps:

There are several handwritten signatures and a circular stamp in the bottom left corner. The stamp contains the text 'NARDA' and 'SAFETY TEST SOLUTIONS'.