Nesa Srl
Sistemi per monitoraggi ambientali e telecontrolli

TMF100 First installation quick guide R02.10

1. General technical characteristics

The multifunctional acquisition terminal Nesa model TMF100 is used as a programmable data acquisition switchboard peripheral for environmental monitoring and distance-control networks.

The management unit is also equipped with:
- LCD Display 2 rows 24 characters which allow local viewing of instant data, date/time and any operation parameters.

2. Content of the package

Before installation verify that the contents of the package are as follows:
- 1 TMF100 terminal
- 1 CD complete with documentation and software
- 1 RJ45 Ethernet cross cable

3. Introduction

Each acquisition peripheral is managed by an ARM9 microprocessor and by an embedded Linux operating system.

- Date time high precision programmable quartz clock with remote server synchronisation feature (NTP), equipped with lithium backup battery
- Reset and watchdog hardware for accidental system arrest and automatic reset.
- 2 RS232 serial communication interfaces.
- 2 USB ports hotplug with automatic recognition of the flash drives.
- 1 LAN interface for 10/100Mbit Ethernet communication.
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COM1 (modem) — display — status LED — COM2 — power switch
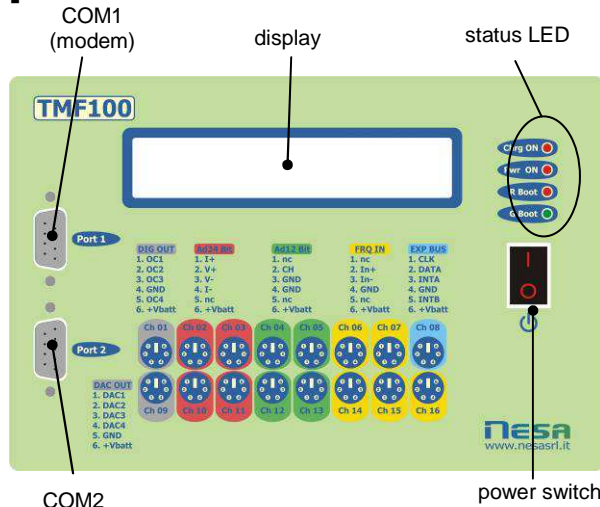
Status Led

Name	Colour	Function
Chrg ON	Red	Battery charge LED
Pwr ON	Red	Power LED
R Boot	Red	Boot anomaly indicator LED
G Boot	Green	Boot anomaly indicator LED

Power supply connector — Ethernet LAN 10/100 Mbit — reset button — Peripherals power supply
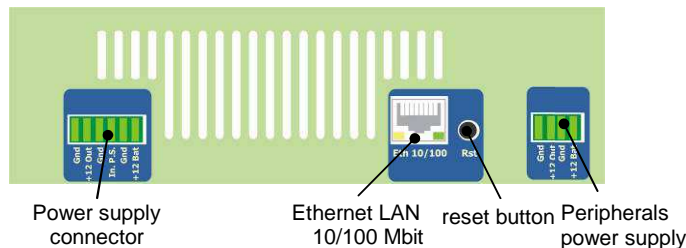
Power supply connector

Name	Function
+12 Bat	Battery power (+10,5Vdc÷ 15Vdc)
Gnd	Ground terminal block (3 terminals)
In.P.S.	Power supply input from solar panel or 220/13.5Vdc Power supply
+12 out	Auxiliary power output (max 3A)

Input diagram
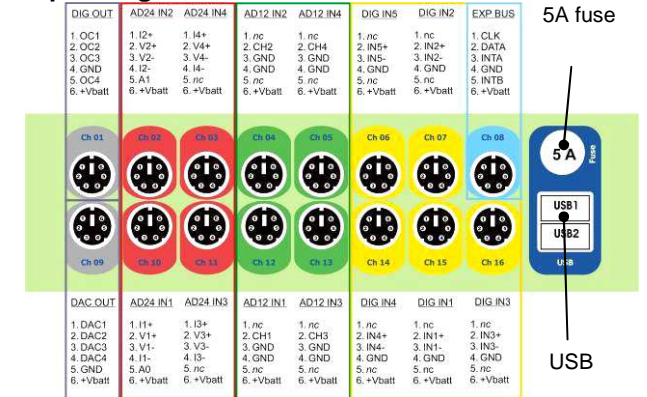
Description of the channels

Channel type	Function	Channel
Digital	Output	Ch01
24 bit analogue	Input	Ch02, Ch03, Ch10, Ch11
Analogue 12 bit	Input	Ch04, Ch05, Ch12, Ch13
Digital	Input	Ch06, Ch07, Ch14, Ch15, Ch16
Expansion	Bus	Ch08
Analogue 12 bit	Output	Ch09

4. First start-up

- Connect the power connector to a power supply or a battery (max. 15 Vdc).
- Move the power switch to the "1" position.
- Wait about 90 seconds.
- Ensure that the reading appears on the display (example: 108 01 T.B 13.8 V).

The machine is supplied from the factory tested and perfectly ready for operation.

⚠️ **Always connect the sensors with the machine off**

5. Web configuration

The configuration procedure of a TMF100 terminal is done via a web page which can be accessed through an internet browser (Internet Explorer, Firefox, Opera...)
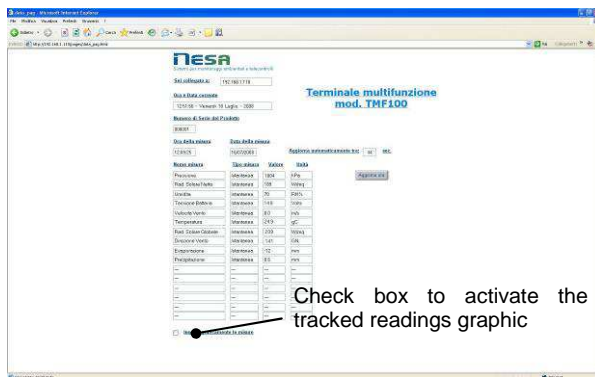The factory defaults are as follows:

LAN interface:
IP: **192.168.1.110**   Subnet mask: **255.255.255.0**

Username: **root**
Password   **root**

To correctly view the pages, enable JavaScript and the option to search for the most recent version of the cached pages (Options menu)

After having connected the network cable which comes with the unit to the PC, enter the IP address of the data logger in the browser address bar: http://192.168.1.110

Ensure that the static IP address of the computer to which the terminal is connected is in the same IP series as the data logger (example: 192.168.1.1).

The access page upon interrogating the terminal is as below:

Address bar

Access to the configuration page

Access to instant data

Change Language
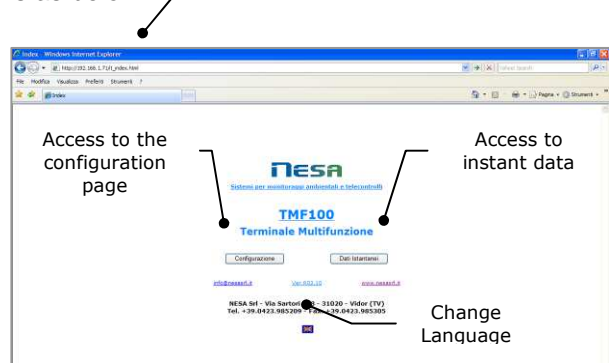
Click on the data instant view button to view the following page:

Check box to activate the tracked readings graphic

Click the Configuration button to view the following page:

Enter the default username : **root**

Enter the default password : **root**
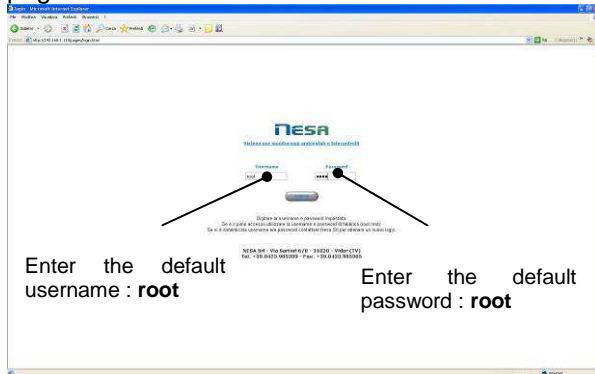
After the authentication phase access will be granted to the channel configuration page:
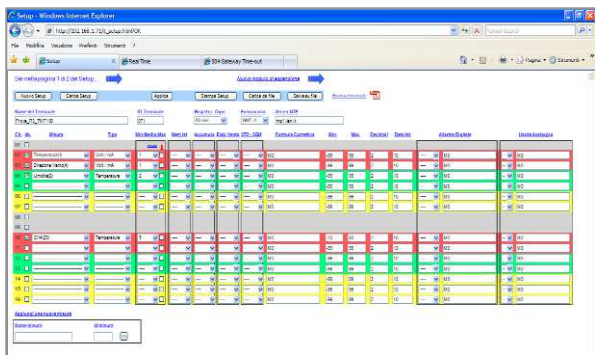
The next page allows configuration of the communication interface (FTP, IP address, username and password and date/time)
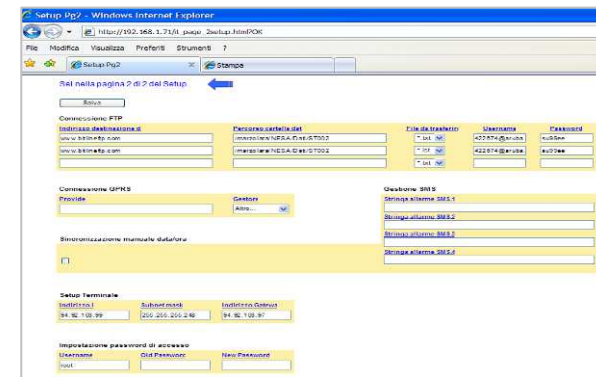
Further information is available directly via the links on the web page (on-line help).
The complete manual is downloadable in pdf format directly from the configuration page.

6. Technical data

Processor:	ARM9 (166MHz)
Analogue inputs :	4 @ 12bit
Pt100/0÷2Vdc/4÷20mA	4 @ 24bit
Analogue Outputs : (Vmax 0÷2Vdc)	4 @ 12bit
Digital inputs:	5 frequency inputs
Digital outputs:	4 open drain
Communication ports:	2 RS232
	2 USB Host
	1 LAN Ethernet 10/100Mb
Internal data memory:	From 32MB
External data memory:	Industrial USB flash drive 256~4GB
Date clock	quartz with battery backup and automatic update via NTP
Consumption:	80mA (stand by <20mA)
Power:	10,5Vdc ÷ 15Vdc
Dimensions:	177x118x60mm
Operating temperature:	-30 ÷ 70 °C
Weight:	0,8 Kg
Dimensions:	177x118x60mm

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