



NetMasterII

NetMasterII is a system of permanent establishment (non portable) for monitoring and recording signals from sensors and transducers of physical quantities of all kinds, and events described by two states (On / Off).

It is also a warning system whenever a physical quantity exceeds the normal range of operation, or whenever a transducer or converter is faulty or if an event occurs.



NetMasterII has the necessary computing power and memory capacity to be able to perform these functions autonomously and independently of the existence of an advanced surveillance system such as one or more PCs equipped with surveillance software, recording, etc. NetMasterII's relationship with such systems is this of 'customer-server' (the server is NetMasterII).

NetMasterII most important feature is that this system is fully programmable. These functions get improved and updated daily. Investing in NetMasterII, we invest in a system which upgrades dynamically, when new features can be added as often as required by the particular application without changing the installed equipment (hardware).

NetMasterII includes;

- Analog to digital converter;

16bit, four channels of a single signal or two channels of differential signal and a source of constant current. It is suitable in connecting sensors-converters;

0-1.25V, 0-10V, 0-20mA, 4-20mA, NTC, PTC, Pt100, Pt1000, Ni1000, bridge-type measuring devices, thermocouples, etc.

If more entries of this type are needed, expansion cards are available (up to 32 analog inputs single signal inputs, or 16 differential signal inputs for each NetMasterII).

- 1-wire Channel

The channel and 1-wire communication protocol are developed by Dallas Semiconductors company for safe and economical connection of digital temperature, humidity etc, sensors. In an 1-wire channel more than 200 1-wire devices can be connected at a distance up to 150m. The most important feature of 1-wire sensors is that they have EEPROM memory which can store calibration data, turning the sensors into fully interchangeable. Another advantage of the 1-wire sensors is that they are free of noise errors or noise interference (due to digital transmission of information).

- RS422/RS485 channel:

This channel is wide known in industrial control applications. A variety of instruments, measuring equipment, programmable controllers, etc., has a RS422/RS485 channel

for communication and data exchange. NetMasterII communicates and exchanges data with any such device, as long as the communication protocol is known.

•RS232 Port (2 ports):

This port is especially used in connecting and integrating during the process of monitoring and recording laboratory instruments of great precision (each such instrument is fitted with port RS232). NetMasterII communicates and exchanges data with any such device, as long as the communication protocol is known. The RS232 port is also useful in connecting Modem, GSM Modem, etc for NetMasterII communication in client-server level.

•CAN channel (Controller Area Network):

It was originally developed by Bosch for sensors and devices' connection in very noisy (in terms of electrical noise) environments, such as a car. It is increasingly involved in industrial control. NetMasterII communicates and exchanges data with CAN devices as long as the communication protocol is known.

NetMasterII also includes;

- Twelve optoisolated cold-contact digital inputs for the identification of ON-OFF events
- Eight reply-outlets to enable warning or alarm displays
- Two analog outputs, one 0-10V and one PWM (pulse width modulation).

NetMasterII communication, either between them or with management information systems, is in accordance with client-server model where NetMasterII usually plays the role of the server (however, depending on the application, NetMasterII can perform a client software role). Technologies and PC and Internet communication protocols are used for communication.

The following Interfaces are included in the standard equipment:

- Ethernet Interface card for the connection to a local Ethernet network with all available versions (wireline, wireless, through router, etc.)

- PPP Interface for the connection via modem or GSM modem, connected to one of the RS232 ports available.

In applications, it supports the following communication protocols;

- TCP/IP
- UDP
- ICMP
- HTTP
- FTP
- Telnet
- DSN
- DHCP

The customization is done via FTP by modifying the relevant files.

The records file is also downloaded via FTP. Finally, on line communication and execution of the 'on the fly'

commands is done via server socket and ASCII over TCP / IP protocol.

To carry out functions related to time, there is real-time clock with automatic change between summer and winter time. The clock keeps time even when NetMasterII is not under voltage, thanks to a battery backup available.

The display of measured values and the operation parameters' configuration are done locally through the LCD display, of 2 lines and 16 characters each, and the six-keys keyboard.

The configuration menu is in Greek.

Finally, for the storage of configuration files and log files there is a Flash RAM 2MB memory, with the possibility of connecting a Flash Drive or external hard drive via the special USB extension, with practically unlimited expansion possibilities.