

USER MANUAL



ETHERNET OUTPUT OPTION

ETH
FOR MICRA-M

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GENERAL INFORMATION

This manual does not constitute a contract or a commitment on the part of Diseños y Tecnología, S.A. All information contained in this document is subject to change without prior notice.

MANUAL VALID FOR OUTPUT OPTIONS INSTALLED IN INSTRUMENTS WITH 2.00 SOFT VERSION OR HIGHER

Package contents

With the output option it is also supplied:

- User manual that is complementary to the one delivered with MICRA indicator.
- Adhesive label with detailed pin description.

(Ethernet cable is not supplied).

Recycling instructions

This electronic instrument is covered by the 2002/96/CE European Directive so, it is properly marked with the crossed-out wheeled bin symbol that makes reference to the selective collection for electrical and electronic equipment which indicates that at the end of its lifetime, the final user cannot dispose of it as unsorted municipal waste.



In order to protect the environment and in agreement with the European legislation regarding waste of electrical and electronic equipments from products put on the market after 13 August 2005, the user can give it back, without any cost, to the place where it was acquired to proceed to its controlled treatment and recycling.

Warranty

All products are warranted against defective material and workmanship for a period of three years from acquisition date.



If a product appears to have a defect or fails during the normal use within warranty period, please contact the distributor from whom you purchased the product to be given proper instructions.

This warranty does not apply to defects resulting from action of the customer such as mishandling or improper interfacing.

The liability under this warranty shall extend only to the repair of the instrument; no responsibility is assumed by the manufacturer for any damage which may result from its use.



All DITEL products benefit from an unlimited and unconditional warranty of three (3) years from the date of their purchase. Now you can extend this period up to five (5) years from the product commissioning, only by fulfilling the corresponding form.

Fill up the form in our website at:
<http://www.ditel.es/warranty>

Product description

All information contained in this manual is valid only for ETH output options installed in MICRA indicators with 2.00 soft version or higher.

This optional output card allows connection to a Ethernet network via switch, hub or directly to a PC.

Compatible with most commonly used Ethernet standards; 100BASE-T and 10BASE-T which are automatically detected or transmission mode, full-duplex or half-duplex.

The protocol used for data transmission or reading/writing in memory is Modbus TCP/IP.

ETH output card must be installed in the slot corresponding to RS232 / RS485 / Ethernet serial interfaces so, only one of them can be running at the same time inside the indicator.

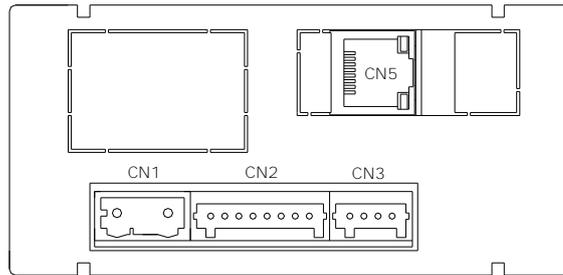
Internal software automatically recognizes output card once it is installed, showing related menu within configuring routines.

Connections

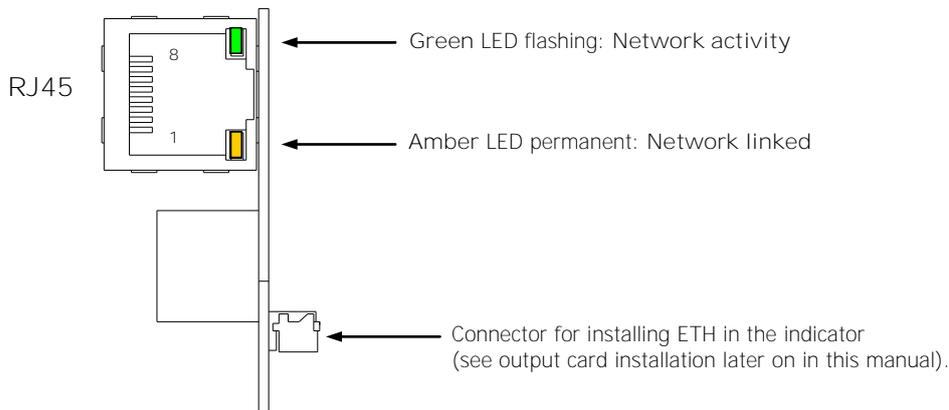
When ETH option is installed, CN5 connector comes out through rear part of the indicator. See its location in the figure below.

To connect the indicator to a Ethernet network, simply plug RJ45 male connector to CN5 until click is heard. For disconnecting it, just press the tab and move backwards the connector until it is released.

Location of ETH option rear connector (CN5)



ETH card rear view



CN5: RJ45 100BASE-T / 10BASE-T		
PIN	NAME	DESCRIPTION
1	+Tx	+ Data transmission
2	-Tx	- Data transmission
3	+Rx	+ Data reception
4	N.C.	Not connected
5	N.C.	Not connected
6	-Rx	- Data reception
7	N.C.	Not connected
8	N.C.	Not connected

NOTE:

For direct connection between dispositives use crossover Ethernet cable.

For connection to a 'Hub' or a 'Switch' use standard Ethernet cable.

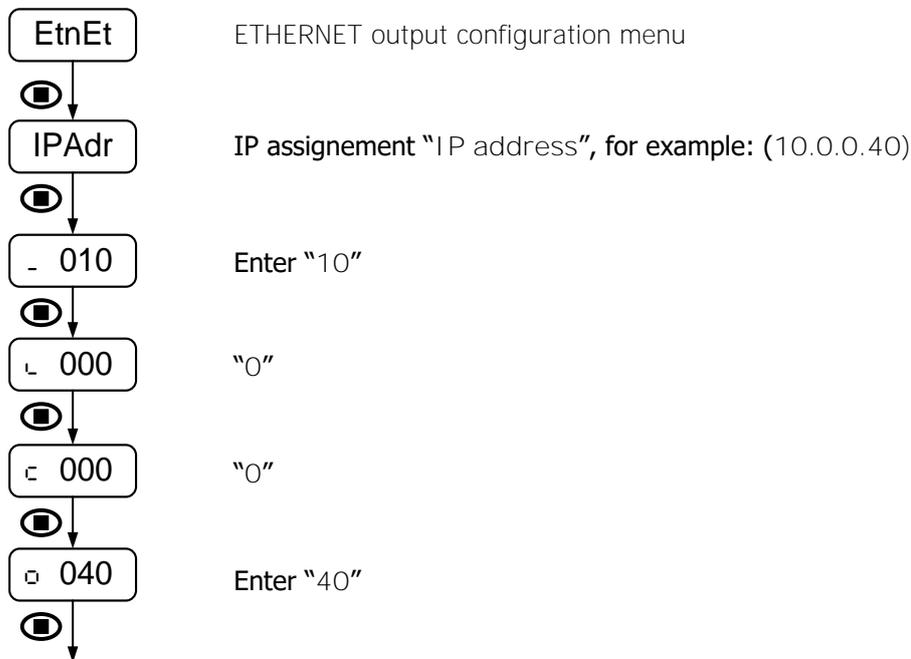
CONFIGURATION

Configuration menu

When connecting instrument to Power supply, display test begins automatically to check the good function of LED's and digits, once this test is finished, display shows internal software version and then the unit goes to RUN mode.

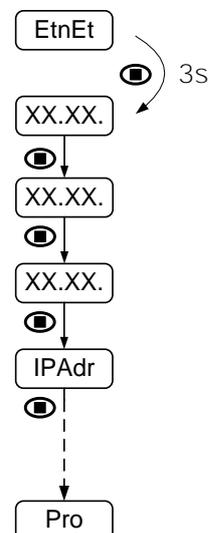
Current MICRA user manual is perfectly valid except for the two following considerations:

The only necessary configuration for ETH output option is the IP address, which identifies the MICRA inside the network. Once IP address is defined, all the rest of running parameters of the instrument can be modified using available software MICRASOFTTCP that can be free downloaded from our website (see later on this manual).



It is possible to visualize MAC address of the MICRA, while "EtnEt" is shown on display and ENTER is pressed for at least 3s until two first numbers XX.XX appear. Pressing again two times, the next pair of numbers will then sequentially shown (see right figure).

After pressing ENTER again, display shows "IPAdr" followed by IP address configuration according to the figure above.



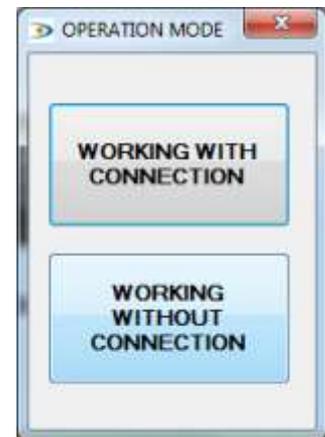
SOFTWARE

Indicator programming

Initial screen after executing MICRASOFTTCP.exe application:



When 'clicking' on the image appears the window for selecting working mode: 'with connection' or 'without connection' for a demo mode.



After selecting 'with connection' the following screen is displayed:

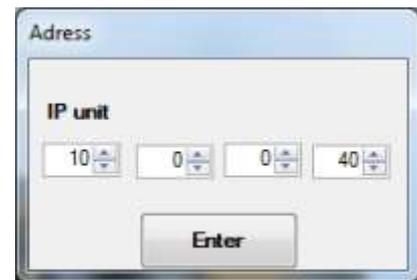


To configure the working protocol, in the menu 'Communication' select 'Protocol' and then 'Modbus TCP'.

IP address configuration 'IP' (ID) in the 'Communication' menu:



Enter desired working IP address of the indicator



Visualization of the parameters configuration display:



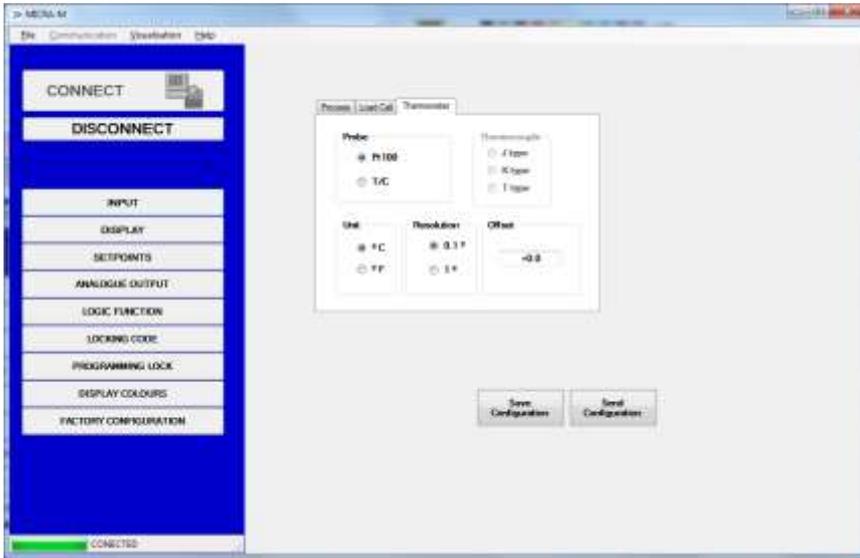
To establish connection with the indicator 'click' on 'CONNECT'.

At the bottom of the screen appears a green progress bar. Once it is finished, the message 'CONNECTED' is displayed.

Depending on working mode defined before, after 'clicking' on one of the 9 available configuration menus, it will be displayed related information on the right screen.

If it is necessary to change working mode, 'click' on one of the 3 upper available menus to set new mode. After that, select again the configuration menu to display the information of available parameters.

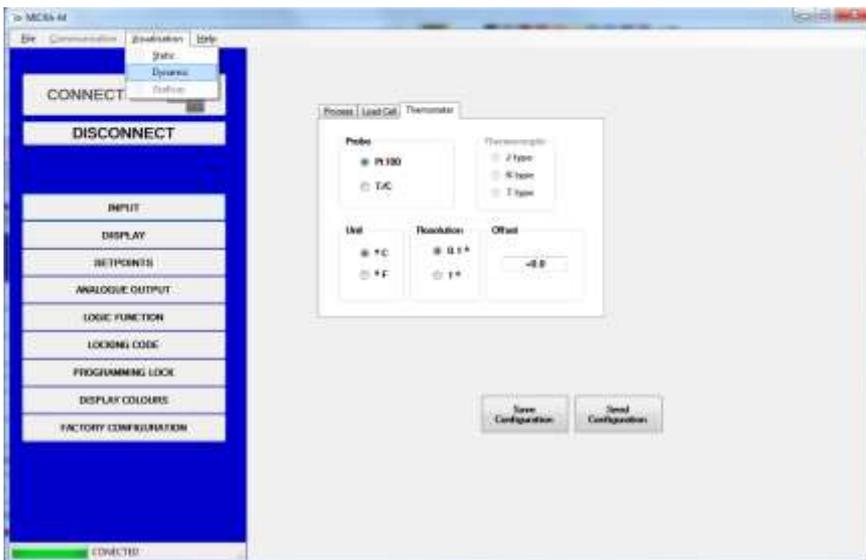
Example of parameters visualization related to input configuration menu:



Once all desired changes are made 'click' on 'Save Configuration'. Otherwise the application will show a message of confirmation.

Repeat the same procedure for the rest of configuration menus. To transfer all the configured parameters to the indicator 'click' on 'Send Configuration'.

Data visualization:

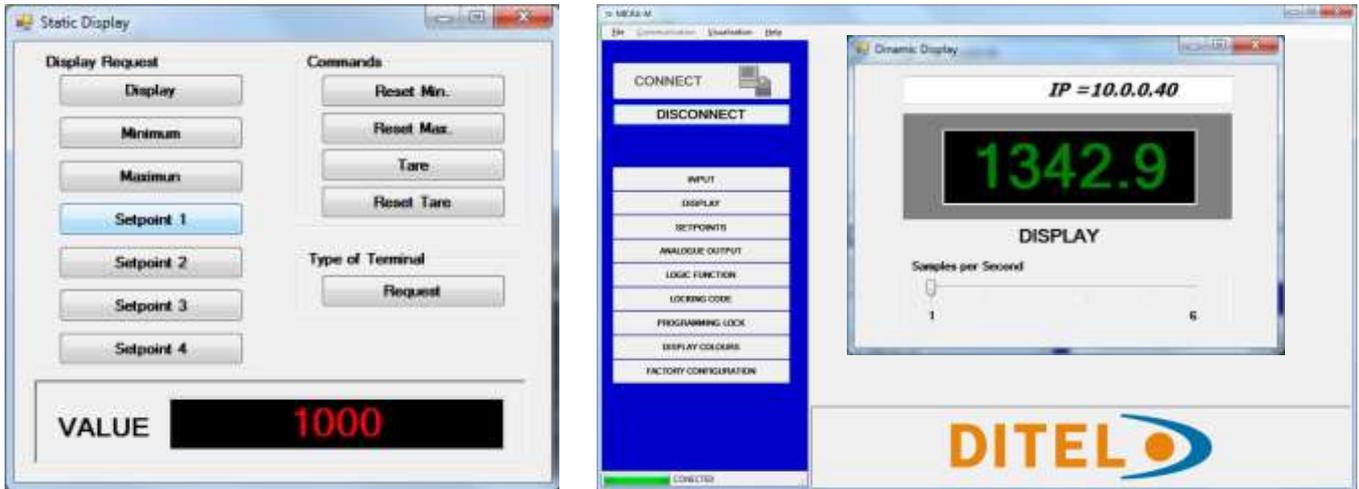


To visualize data using 'Visualization' menu, select 'Static' or 'Dynamic'.

'Static, visualization allows to see display, Offset and Setpoints values. These values are updated each time that desired option is 'clicked' on.

With 'Dynamic' visualization is only possible to see display values and they are automatically updated from 1 to 6 times per second depending on how this parameter had been configured.

Example of 'Static' and 'Dynamic' visualization:



To connect with other indicator 'click' on 'DISCONNECT' and repeat all steps from the beginning.

NOTE:

If an application different from MICRASOFTTCP is used, refer to memory addresses indicated in the MICRA MODBUS user manual (also available in our website).

Access to embedded web server

The indicator has also an embedded web server. Entering IP address of the instrument from any browser, it is possible to visualize different variables of the process if you are connected to the network.

For an instrument configured for 0-10V input signal and 4 output relays, data will be displayed as it is shown in the image below:



Available data in this case is: Display value, SetPoints status and value, Input signal and process variables "Tare", "Gross", "Max value" (Peak) and "Min value" (valley).

INSTALLATION

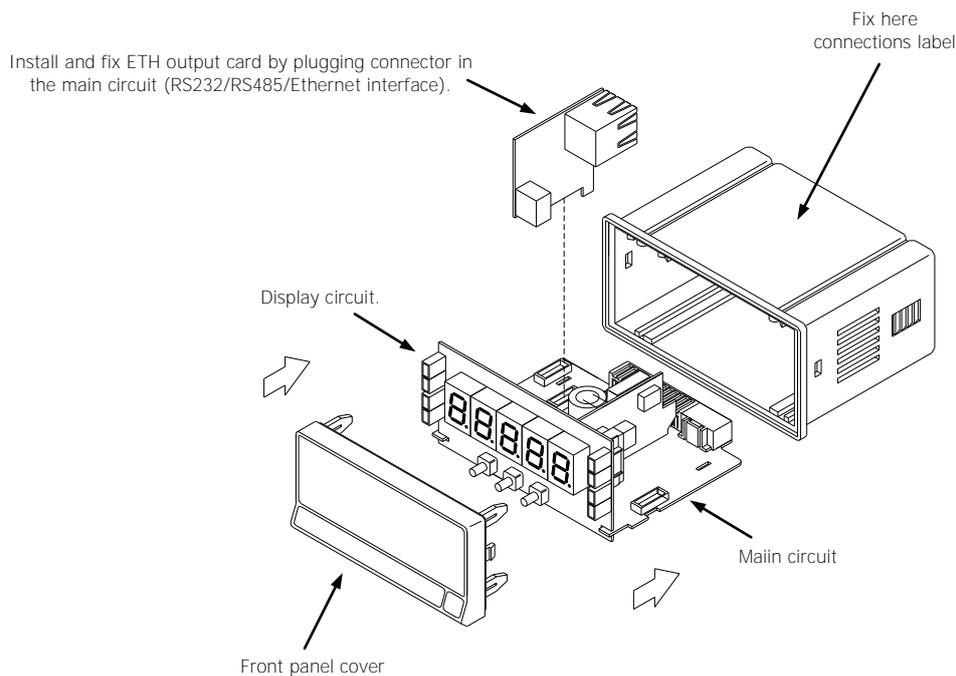
Output card installation

To physically install the output option, the electronics assembly should be first lifted out from the case. Use a screwdriver or similar to slightly press both side tabs until the rear case is released. Then broke the junctions from the corresponding polycarbonate cover in order to obtain the required orifice in the case. This orifice will allow output card connectors come out through instrument rear part once it is installed.

Install ETH option on the indicated location pushing slightly down until both connectors get perfectly together. For best installation, it is recommended to solder this card to the main circuit making use of the copper pads on both sides of its insertion pin and those surrounding the circuit hole where it is inserted in.

Once ETH is installed, carefully put the circuitry again inside the case verifying that circuits slide properly without much effort through rear case internal guides.

Each output card is supplied with an adhesive label that indicates wiring connections. To help identifying terminals, this label should be placed in the upper side of the unit case.



WARNING:

Disconnect all power and rest of input signals connected to the indicator before installing or extracting the output option card.



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