

**CONFIGURATION HANDBOOK**

**ANL201**



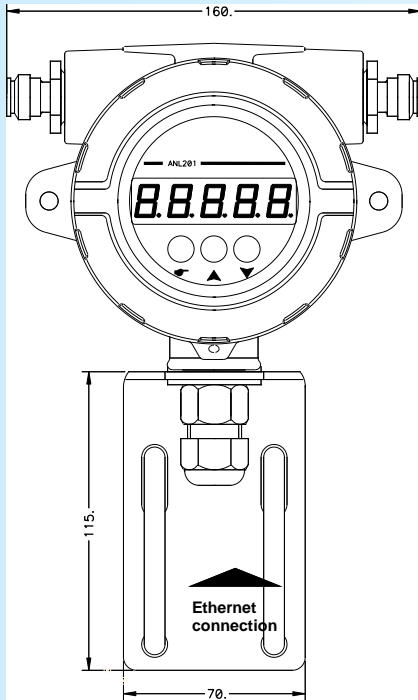
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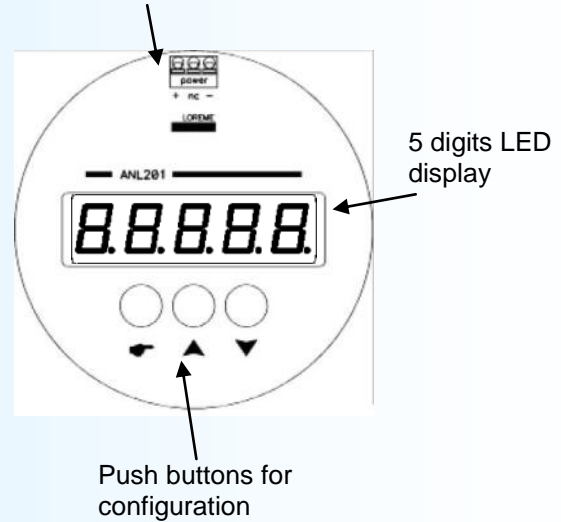
## Device Presentation

The ANL201 is an indicator driven with the Ethernet link on Modbus TCP. This device was designed for use in harsh environment (outdoor) or in explosive environment .



### Description of Display:

Power supply connector (under the front face)



To access to pluggable supply connector, unscrew the front face, route the cable and connect them to the supply terminals, replace the connector and screw back the front face ( see details at the end of this manual).

### Visualization

At the power on, the ANL201 display temporarily :

r 0-0

Show the Hard and Soft version of device.

. . . . .

No value displayed until communication is active.

t.out

No communication during the limit time, the display is Time OUT.

### Configuration

The default parameter for the ANL201 are :

- IP Address : 192.168.0.253
- Network mask : 255.255.255.0
- Time out : 5s

To access to configuration mode, press the 'Config' button.

After the version message, the first rubric is for the network parameters

Adr ?

Press '▲' for change the IP address.

Press '▼' to skip this and go to following rubric

, P - 1

Configuration of the first field of IP address. Press '▲' to modify this parameter, press '▼' to not.

192

Blinking display of parameter value.

Use '▲', '▼' to modify the value, confirm the change with '☛'.  
The limits for the address field are : 0 to 255.

'iP-2', 'iP-3', 'iP-4' Same way for the next fields of IP address.

192-1

'MSq-1' Configuration of the first field of mask network.

255

Set the value with '▲', '▼', confirm with '☛'

'MSq-2', 'MSq-3', 'MSq-4' same way for the next fields.

The following rubric is for time out delay before a "communication fault"

Timeout

button '▲' to access to setting, button '▼' to ending the configuration.

5

Blinking display. Modify the value with '▲', '▼',  
confirm with '☛'. The limits for the timeout delay are : 1sec to 60sec.

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The ANL201 display a series of 5 dashes during the storage of the new parameters.

End ..

End of configuration.

# Modbus TCP communication

## 1) Characteristic

Protocol: MODBUS TCP  
 Link: Ethernet 10/ 100 base T  
 Plug: RJ45  
 Default IP address: 192.168.0.253  
 Port: 502  
 Reading request: Not supported  
 Writing request: Function code : 06,16  
 Type of data: Value to be displaying.  
 Data format: Value in 32bits IEEE float format.

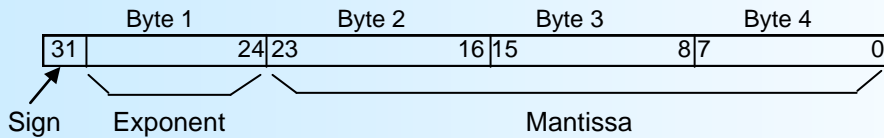
## 2) Data description

### 2.1) Available data

The value to be displayed is in 32 bits float format, 2 consecutives registers should be writing.

### 2.2) Data format

- 32 bits IEEE float format.  
 Data writing with MSB first. composed of 2 words ( 4 bytes ).



## 3) Table of data

Register address decimal (Hexadecimal)	b7 b6 b5 b4 b3 b2 b1 b0	Total	
		Word	Byte
0000 (\$0000)	value - Octet 1 Mot 1	1	1
	Msb Octet 2		2
0001 (\$0001)	value - Octet 1 Mot 2	2	3
	Lsb Octet 2		4

## 4) Communication

To display a value in ANL201, the master should send a writing request to the registers at address 0000 and 0001. The function code for this request can be 06 (for 2 writing) or 16 (for 1 writing).

The response time at the writing request is about 45ms.

### Note:

The ANL201 support only one Modbus tcp connexion at time.

## EMC Consideration

### **1) Introduction**

To meet its policy concerning EMC, based on the Community directives **2014/30/EU** & **2014/35/EU**, the LOREME company takes into account the standards relative to this directives from the very start of the conception of each product.

The set of tests performed on the devices, designed to work in an industrial environment, are made in accordance with **IEC 61000-6-4** and **IEC 61000-6-2** standards in order to establish the EU declaration of conformity. The devices being in certain typical configurations during the tests, it is impossible to guarantee the results in every possible configurations. To ensure optimum operation of each device, it would be judicious to comply with several recommendations of use.

### **2) Recommendations of use**

#### **2.1 ) General remarks**

- Comply with the recommendations of assembly indicated in the technical data sheet (direction of assembly, spacing between the devices, ...).
- Comply with the recommendations of use indicated in the technical data sheet (temperature range, protection index).
- Avoid dust and excessive humidity, corrosive gas, considerable sources of heat.
- Avoid disturbed environments and disruptive phenomena or elements.
- If possible, group together the instrumentation devices in a zone separated from the power and relay circuits.
- Avoid the direct proximity with considerable power distance switches, contactors, relays, thyristor power groups, ...
- Do not get closer within fifty centimeters of a device with a transmitter (walkie-talkie) of a power of 5 W, because the latter can create a field with an intensity higher than 10 V/M for a distance fewer than 50 cm.

#### **2.2 ) Power supply**

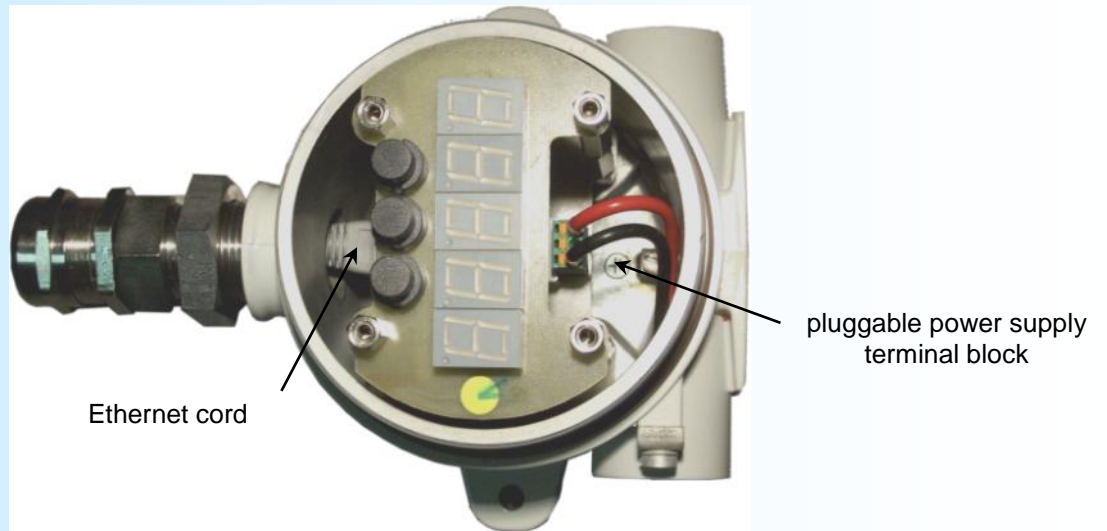
- Comply with the features indicated in the technical sheet (power supply voltage, frequency, allowance of the values, stability, variations ...).
- It is better that the power supply should come from a system with section switches equipped with fuses for the instrumentation element and that the power supply line be the most direct possible from the section switch.
- Avoid using this power supply for the control of relays, of contactors, of electrogates, ...
- If the switching of thyristor statical groups, of engines, of speed variator, ... causes strong interferences on the power supply circuit, it would be necessary to put an insulation transformer especially intended for instrumentation linking the screen to earth.
- It is also important that the installation should have a good earth system and it is better that the voltage in relation to the neutral should not exceed 1V, and the resistance be inferior to 6 ohms.
- If the installation is near high frequency generators or installations of arc welding, it is better to put suitable section filters.

#### **2.3 ) Inputs / Outputs**

- In harsh conditions, it is advisable to use sheathed and twisted cables whose ground braid will be linked to the earth at a single point.
- It is advisable to separate the input / output lines from the power supply lines in order to avoid the coupling phenomena.
- It is also advisable to limit the lengths of data cables as much as possible.

# Wirings

Power supply connection. (ANL201 without front face)



## Outline dimensions

