

• **measure transmitting by numerical link**

- **Ethernet** Modbus TCP client mode (master) or server mode (slave)
- **RS485** Modbus/Profibus slave mode

• **Measure display on 5 digits**

• **Watchdog**

- relay contact on communication loss

• **option** : 2 alarms relays outputs

• **option** : isolated analog output



The ANL48 is a numeric indicator for display measure through an Ethernet or RS485 network. It can working in client mode (request a value in another device automatically) or in server mode (a PLC write the value to display).

DESCRIPTION:

Ethernet communication in client mode (modbus TCP master):

The user set the IP address of the slave to query, the modbus TCP register address and the variable format to display. The ANL48 established the connection and refresh the measure automatically. The ANL48 also display the connection status.

Ethernet communication in server mode (modbus tcp slave):

In this mode, the ANL48 display directly the value written by the PLC (several format of variable are available). A time out is used to notify that the variable is not refreshed.

RS485 communication: Modbus / PROFIBUS slave device:

In this mode, A master sends a value to the ANL48 who display it directly (several format of variable are available). A time out is used to notify that the variable is not refreshed.

Calculation function :

A scaling of variable is possible in two operating mode (client or server). The scaling equation is in the form $ax+b$.

Front face :

- Measure display: 5 digits, 14.2mm red LEDs,
- 3 push buttons for configuration,
- 4 red LEDs (viewing of alarms state, communication state, configuration)

Analog output (/S option)

- One isolated configurable analog output, current or voltage signal: 0... 4... 20 mA / 0... 1... 5... 10 V
- adjustable response time (measure filtering)
- configurable security value of output (value when lost communication)

Relay (/R option)

- up to 2 relays with changeover contact. Using in alarm detection or on/off regulation,
- Threshold, direction, hysteresis, activation or deactivation delays can be configured for each relay.

Feature:

- Slot-in box format 96x48mm,
- Pluggable 1.5mm² spring terminal blocks,
- AC/DC Universal switching power supply,
- conformal coating,
- protection rating : IP20 (IP65 in option)

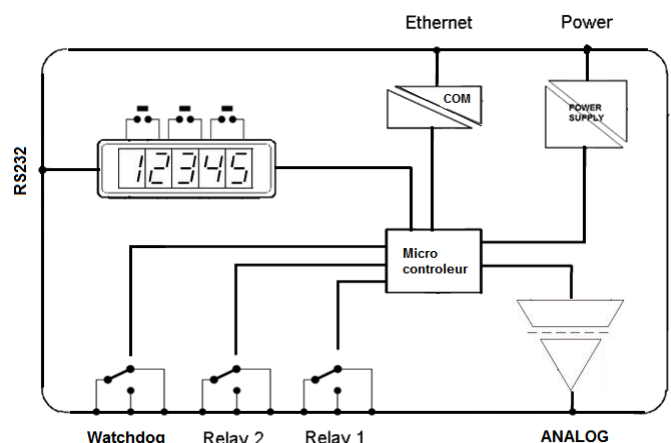
Security / reliability :

- Storage of configuration parameters in FLASH memory.
- Guarantee of data retention > 40 years,
- internal firmware can be updated if needing.
- "watchdog" controls the good running of programme and communication state. Output on contact relays and led indicator.
- galvanic isolation input / output / power.

Configuration / Parameters:

The ANL48 can be setup by the RS232 link (jack 3.5) in terminal mode, or by Ethernet (telnet connection).

Synoptic:



Version and order code:

ANL48-CMTCP	Ethernet version, 5 digits display, Modbus TCP (client , server)
ANL48-CM	RS485 version, 5 digits display, Modbus slave
ANL48-CP	RS485, 5 digits display, PROFIBUS slave
option :	
/R1	+ 1 relay
/R2	+ 2 relay
/S	+ 1 analog output
The /R and /S options are cumulative.	

COMMUNICATION

ANL48/ CMTCP version:

Ethernet 10/100 M
Modbus TCP (client or server) port 502
Refresh rate 0.1.....60s (client)
Connection RJ45 socket

ANL48/ CM version:

Half-duplex RS485 link 9600 / 19200 bauds
Connection 2 pts terminal block
Terminating resistance switchable

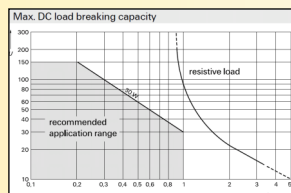
ANALOG OUTPUT (12bits resolution)

Type	Range	Accuracy
Current	0... 4... 20 mA	+/- 20 μ A
Admissible load:	0...800 Ohms	
Voltage	0... 10 V	+/- 10 mV
Output impedance:	500 Ohms (0.1% internal shunt)	
Programmable response time:	0.01s to 60s	

RELAIS

Power switching: 250Vac , 1Aac
Mechanical endurance: 10⁹ operations

Commutation for DC current :



POWER SUPPLY

Universal : (2 versions: standard and low voltage, not polarized)
standard: 20Vdc, 55Vac.....265Vac/dc
low voltage: 12Vdc.....30Vdc.
consumption < 3 VA

ENVIRONMENT

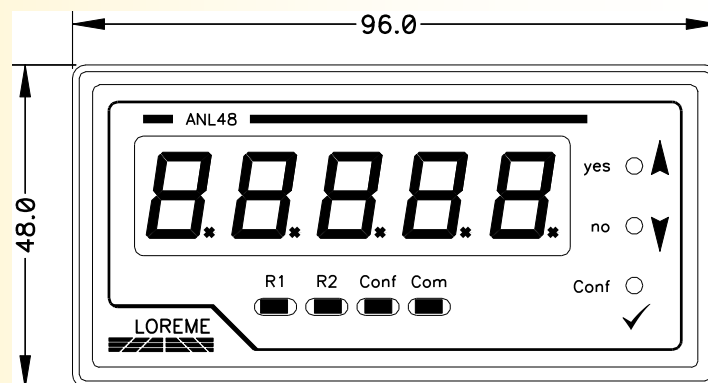
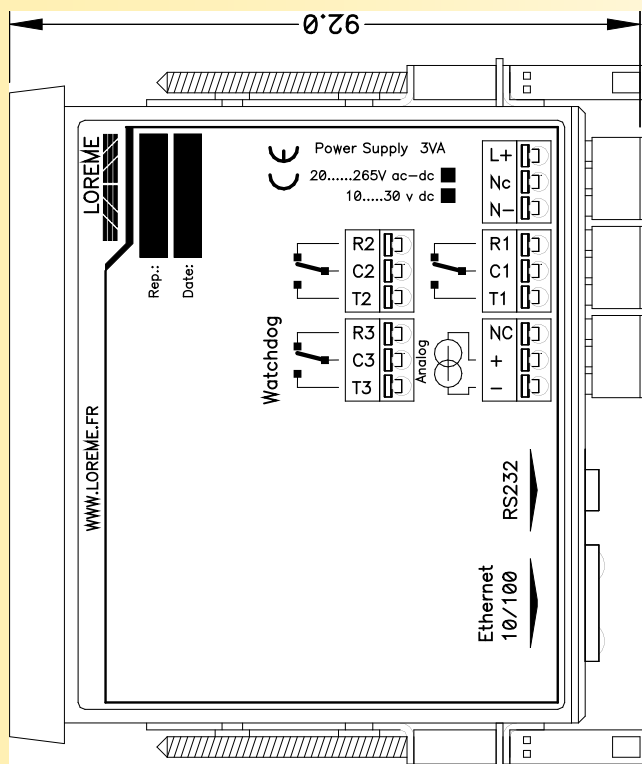
Operating temperature -10 to +60 °C
Storage temperature -20 to +85 °C
Thermal drift (analog output) < 50 ppm / °C (of full scale)
Humidity 85 % (not condensing)
weight ~ 180 g
Protection rating IP20
Dielectric strength 1500 Vrms continuous (power supply / communication / relays / output)
MTBF (MIL HDBK 217F) > 4 000 000 Hrs @ 25°C
Life time > 200 000 Hrs @ 30°C

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

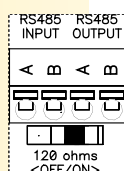
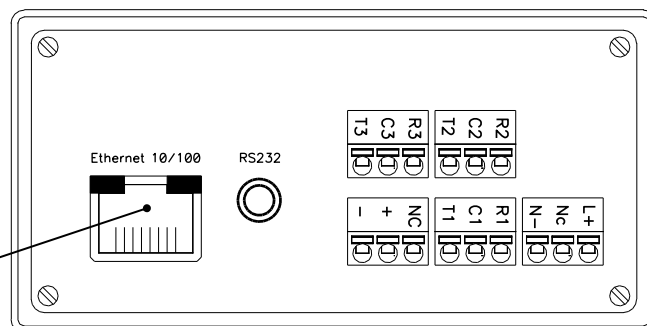
Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



WIRING AND OUTLINE DIMENSIONS:



Panel cutout : 92.5 x 42.5 mm



Connection for RS485 version (ANL48CM)