



PROGRAMMABLE MEASURE CONVERTER

CNL 23 L

CONFIGURATION HANDBOOK

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DIALOGUE - MODE TERMINAL

Devices can communicate with any system emulating a terminal. The dialogue and configuration parts being resident in device memory, no software or specific interface is necessary for their configuration. Two systems of terminal emulation are presented, the PSION and the PC. Different procedures are enumerated below.

1) PSION serie 2:

Before modification, plug the cable "**COMMS LINK**" on **PSION**.

To start up the PSION push the "**ON**" key.

Menu display: **RECH SAUV AGENDA
CALC PROG EFFACE**

Press the "**C**" key up to the "**COMMS**" menu, and validate by "**EXE**".

Menu display: **TRANSMIT RECEIVE
SETUP TERM AUTO**

Press on the "**T**" key up to the "**TERM**" menu, and validate by "**EXE**", we obtain an empty screen. The **PSION** is in terminal mode, just link it to the device with RS232 link. The measure is visualized on screen and, to configurate, press "**C**" on keyboard.

2) PSION Workabout:

To start up the PSION push the "**ON**" key.

At the presentation, push the "**MENU**" key, select "**SYSTEM SCREEN**" mode and validate by "**ENTER**".

Icons display: **DATA CALC SHEET PROGRAM COMMS**

Select icon "**COMMS**" and validate by "**ENTER**", we obtain an empty screen with a flashing cursor. The **PSION** is in terminal mode, just link it to the device with RS232 link. The measure is displayed on screen and, to configurate, press "**C**" on keyboard.

To quit terminal mode and switch off the PSION, push the "**OFF**" key. When you restart the **PSION** in terminal mode, it will be configured automatically and directly in terminal mode without configuring it again.

3) PC with DOS:

The terminal emulation mode software with DOS "IBM@-PC KERMIT-MS V2.26" is available at simple request. After the PC booting, at **C:\>**, type "**a: K**" and press "**ENTER**". The PC is in terminal mode and uses COM port 1.

If you want to use the second serial communication port (COM2), at **C:\>**, type: "**A:KERMIT**" and "**ENTER**" to launch the program, "**SET PORT 2**" and "**ENTER**" to select **COM2**, "**SET BAUD 9600**" and "**ENTER**" to select the speed, "**CONNECT**" and "**ENTER**", to enter in terminal mode.

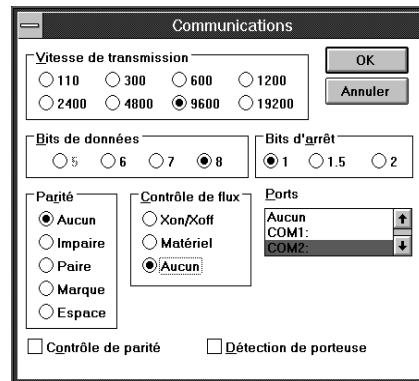
The PC is in terminal mode, connect it to the device with RS232 link. The measure is visualized on screen and, to configurate, press "**C**" on keyboard.

To quit Kermit terminal mode, press "**CTRL+\$**" simultaneously, then press the key "**C**". When the message KERMIT-MS appears, type "**QUIT**" to return to MS-DOS commands.

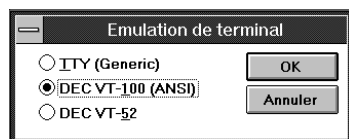
4) PC with WINDOWS 3.11:

Start **WINDOWS** and in "**ACCESSORIES**" group, click twice on  icon which get access to terminal mode.

In "**PARAMETERS**" menu, click on "**COMMUNICATION**". We access to the following windows. Configure communication parameters, 9600 bauds, no parity, 8 data bits, 1 stop bit, no flow control and validate.



Begin terminal emulation by click on "**PARAMETERS**", then on "**EMULATION TERMINAL**". The following board is displayed.



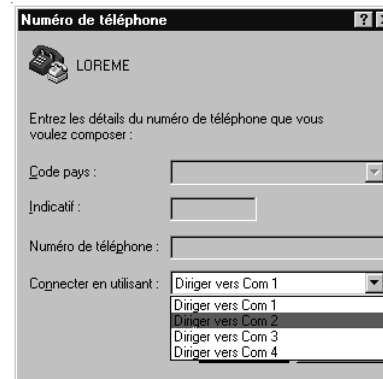
Choose terminal mode **DEC-VT-100(ANSI)** and validate. The PC is in terminal mode, connect it to device by plugging the RS232 link. The measure is now displayed and to configurate, press "**C**" on keyboard.



5) PC with WINDOWS 95/98:

To start up terminal program:
 1 - Click on "**START**" button,
 2 - Tick off "**PROGRAMS**", "**ACCESSORIES**", and "**HYPER TERMINAL**",
 3 - Click twice on 

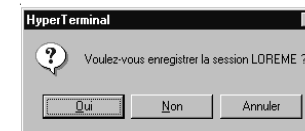
The following window is displayed. Enter a name for a new connection and validate, the hereunder window will appear



Choose a communication port and validate. The following window is displayed



Configure communication parameters, 9600 bauds, no parity, 8 data bits, 1 stop bit, no flow control and validate. The PC is in terminal mode, connect it to device with the RS232 link. The measure is now displayed and to configurate, press "**C**" on keyboard.



When quitting HyperTerminal, the following window will be displayed. To dialog with all LOREME devices without restart all the method, click on "**YES**"

To load LOREME session directly:

1 - Click on "**START**" button.
 2 - Tick off "**PROGRAMS**", "**ACCESSORIES**", and "**HYPER TERMINAL**".
 3 - Click twice on the icon 

LOREME.ht

6) Visualization:

When it starts up, the device is in measure mode.

Two datas are send to terminal:

8,00 V	Value of the input measure,
11.9 mA / 6,0 V	Value of the output 1 and 2.

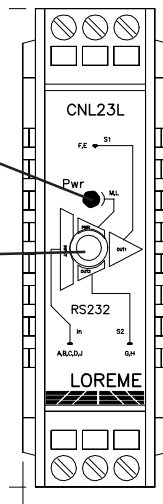
To access configuration, press on the "C" key and follow the configuration procedure.

DEVICE PRESENTATION

The purpose of this configuration handbook is to allow to become familiar with the functions supplied by the device.

Led indicating voltage presence.
Blink if the simulation box is detected

Jack 3.5 for a serial link allowing the device configuration or the simulation box connection.



CONFIGURATION

This manual recapitulates a detailed account of several configuration possibilities: Input, analog outputs.

To access configuration mode, press on the "C" key.

1) Method:

In configuration, different types of questions are asked. For each of them, several answers are possible. Here is their description:

1.1) Menu selection:

Example: INPUT
(Y - N)

The choice is done by pressing on "Y" or "N" keys.

This choice allows access to different configuration menus.

1.2) Parameter selection:

Example: VOLTAGE or VOLTAGE
(Y-N) YES (Y-N) NO

Previous choice = YES: - press on "Y" => validation, choice = YES,
- press on "Enter" => validation, choice = YES,
- press on "N" => change, choice = NO.

Previous choice = NO: - press on "N" => validation, choice = NO,
- press on "Enter" => validation, choice = NO,
- press on "Y" => change, choice = YES.

Choices are made by pressing on "Y" or "N" keys, and validation by pressing on displayed answer ("Y" for YES and "N" for NO) or by "Enter". Press on the "Enter" key without modification allows to validate previous answer.

1.3) Value acquisition:

Example: LOW SCALE
4 mA

Two possibilities:

- The validation without modification by pressing on "Enter" key,
- The modification with simultaneous display followed by validation with "Enter" key.

Remarks on value acquisition:

- It is possible, when a mistake is made during a value acquisition, before validating it, to go back by pressing on "DEL" key. This re-displays the message without taking notice of the mistake.
- In configuration mode, if there is no action during 2 minutes, device goes back in operating mode without taking notice of the modifications made before.
- In configuration mode, if you want go back to measure mode without taking notice of modifications made before, just press "ESC" (PC) or "SHIFT + DEL" (PSION).

2) Input:

The input possibilities are:

- Voltage (V)
- Current (mA)

with for each input type, the choice of:

- the low scale,
- the high scale.

Particularity:

- Potentiometer:

Configure the voltage input (V):

- low scale: 0 V,
- high scale: 5 V.

Move potentiometer at the start and at the end of range, notice each value.

Change voltage input (V):

- low scale = start range value,
- high scale = end range value.

See wiring diagram for potentiometer wiring.

3) Analog outputs:

Each outputs is independently configurable one of the other.

- Output type:

- current output (mA),
- voltage output (V) by the intermediary of internal switches.

with for each output type, the choice of:

- the low scale,
- the high scale,
- the response time,
- the reply value.

OFFSET MEASURE

Sometimes, it may be interesting to modify measure by a simple terminal keyboard intervention. It can be used in many situations:

- sensor aging,
- input refinement as a result of magnifying effect

To shift the measure, it is necessary:

- to be in measure mode,
- type on "+" or "-". The message "OFFSET" is send on the RS232 link, follow by the offset value and the actual corrected value
- use keys "+" and "-" to adjust offset,
- type on "ENTER" to memorize offset.

EMC CONSIDERATION

1) Introduction

In order to insure its policy concerning EMC, based on the European directive 89/336/CE, LOREME takes into account all the standards relative to this directive as soon as the design of each device starts.

All the tests made on our devices, designed to work in industrial plants, have been made regarding the EN 50081-2 and EN 50082-2 standards in order to edit a conformity certificate.

It is difficult to guarantee all the results concerning EMC because tests are made in a standard and typical configuration. Results may vary when a change of configuration occurs.

In order to be sure to use all the capabilities of the device, it will be necessary to respect a few rules concerning its installation.

2) Installation and utilization rules

2.1) General remarks

- Installation should be made with respect to the informations given in technical documents (installation, spacing between each device ...).
- Utilization conditions should be in accordance with specifications of the transmitter (temperature range, protection level) specified in technical datasheet. Dust, excessive humidity, corrosives atmospheres or important heat sources should be prohibited in order to insure an optimum utilization.
- Noisy environment or elements creating perturbations should be avoided. If it is possible, it will be better to install instrumentation devices separately from hi-power or commutation devices.

Do not install measurement devices close to hi-power relays, thyristor groups, contactors or all electromagnetic noise generators.

Do not use a portable transmitter (walkie-talkie) at less than 50 cm of the device. A 5 W transmitter may generate a field which intensity may be more than 10 V/m at a distance near of 50 cm.

2.2) Power supply

- At first, it's important to install the equipment with respect to the technical

specifications given in the device's datasheet (supply voltage, frequency, tolerance of values, stability, variations ...).

- The power supply of the device should be issued from a supply system using section switches and fuses made for instrumentation devices, and the supply line should be as direct as possible from section switch.

Don't use this power supply for relays, contactors or valves command.

- An isolating transformer, with its screen shorted to ground may be necessary if the supply circuit is made noisy with commutation of thyristors, relays, motors, speed variators ...

- It's important that the installation has to be connected to ground.

The voltage between neutral and earth must be less than 1 V and the resistance must be less than 6 Ohms.

- If the equipment has been installed near hi-frequency generators or arc welding installations, it may be useful to install adequate filters on the mains supply.

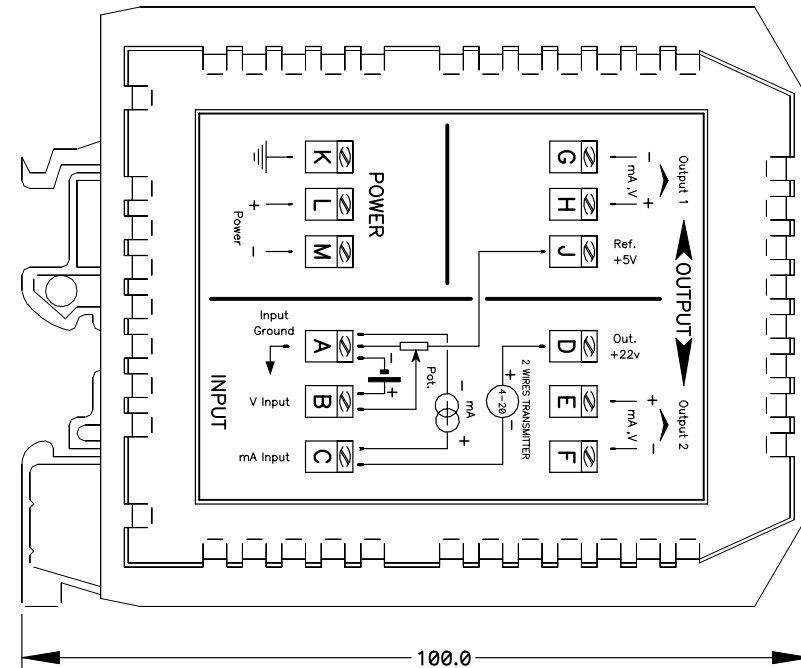
2.3) Inputs / Outputs

- In a noisy environment, it will be better to use shielded and twisted wires. The ground connection will be made at a single end of the wire.

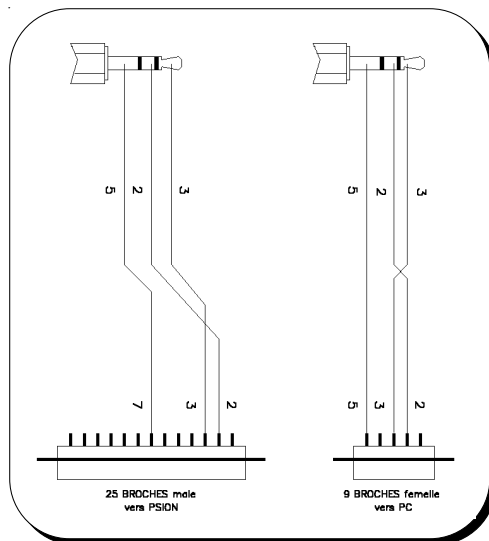
- I/O lines should be well separated from supply wires in order to avoid coupling between these wires.

- Data wires length should be as short as possible.

INPUTS - OUTPUTS WIRING



TERMINAL - DEVICE LINK

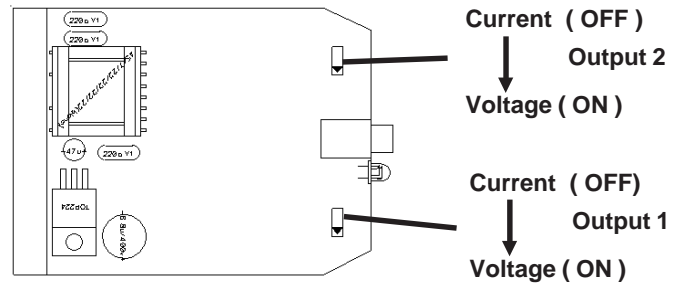


Input V:	B (+) terminal, A (-) terminal
Input mA:	C (+) terminal, A (-) terminal
Sensor power supply input:	D (+) terminal, C (-) terminal
Potentiometer input:	J (+Réf) terminal, B (+) terminal, A (-) terminal
Analog output 1:	H (+) terminal, G (-) terminal
Analog output 2:	E (+) terminal, F (-) terminal
Power supply:	L (+) terminal, M (-) terminal

OUTPUTS SWITCHING

When the type of the output change, you have to actuate manually the internal switch. During the output configuration phase, the following warning message appears: "INVERSER INTER.". This message indicates that is necessary to actute the internal switch so that the outputs are in the good state.

CNL23L internal view



EXTERNAL MODUL SML20 UTILIZATION

The SML20 is plugged on CNL23L jack. This modul allows, by the intermediary of a switch, to tune the outputs on 3 points (0%, 50%, 100%). When the CNL23L recognizes the SML20 presence, the LED goes flashing.