PROGRAMMABLE NUMERIC CONVERTER

CPL 23

CONFIGURATION HANDBOOK

TABLE DES MATIERES

DIALOGUE - TERMINAL MODE

Numeric devices can converse with all terminal emulation mode systems. As the dialogue and configuration part are in device's memory, no software or specific interface are necessary for their configuration.
Two terminal emulation mode systems are presented: the PSION and the PC. Differents procedures are enumerated below.

1) PSION serie 2:
First of all manipulation, plug in "COMMS LINK" on the PSION. To start up the PSION, push on the **"ON"** key.
The PSION displays this menu: **RECH SAUV AGENDA**
                                       CALC PROG EFFACE

Push on the **"C"** key until the menu **"COMMS"**, and validate with **"EXE"**.
The PSION displays this menu: **TRANSMIT RECEIVE**
                                       SETUP TERM AUTO

Push on the **"T"** key until the menu **"TERM"**, and validate with **"EXE"** to obtain a empty screen. The PSION is now in terminal mode and you can link the PSION to the device, by plugging in the RS 232. The measure is displayed, to configurate, push on the **"C"** key.

2) PSION Workabout:
To start up the PSION push on the **"ON"** key.
At the presentation, push on the **"MENU"** key. Select **"SYSTEME SCREEN"** mode and validate by **"ENTER"**.

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

Select icon **"COMMS"** and validate by **"ENTER"**, on display, a cursor flashing. The **PSION** is in terminal mode. Plug in "RS232" on PC. The measure is displayed and, to configure, push **"C"** on keyboard.

To quit terminal mode and switch off PSION, push on **"OFF"** key. When you re-start the **PSION** in terminal mode, it start automaticaly and directely in terminal mode without re-start configuration.

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 has booted, type **"a: K"** then press **"ENTER"**. The PC is in terminal mode and uses COM port 1.
If you want to use the second serial communication port (COM2), type:

> **"A:KERMIT"** and **"ENTER"** to launch the program,
> **"SET PORT 2"** and **"ENTER"** to select **COM2**,
> **"SET BAUD 9600"** and **"ENTER"** to select speed,
> **"CONNECT"** and **"ENTER"**, to enter in the terminal mode.

The PC is now emulating a terminal and may be connected to the device by plugging in the RS 232 link cable.
Measure is now displayed and configuration's acces allowed by a press on **"C"** key.

To quit kermit, press **"CTRL-$"** then press the key **"C"**.
When the message KERMIT-MS appears, type **"QUIT"** to return to MS-DOS commands.

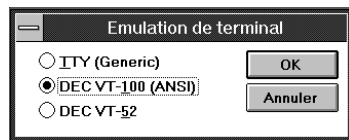**4) PC with WINDOWS 3.11:**
Start **WINDOWS** and in "**ACCESSOIRES**" group, double-click on
icon wich get access to terminal mode.

In "**PARAMETRES**" menubar, click on "**COMMUNICATION**" sub-menu. We access to the following windows. Configure communication parameters, 9600 bauds, no parity, 8 data bits, 1 stop bit, no flow control and validate.
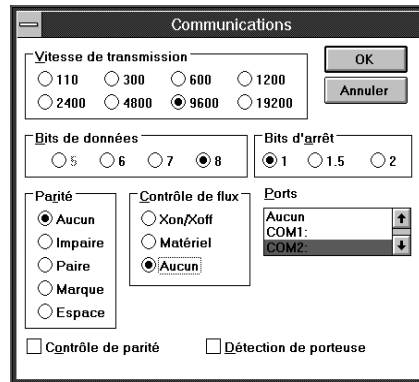
Begin terminal emulation by click on "**PARAMETRES**", then on "**EMULATION TERMINAL**". the following board is displayed.

Choose terminal mode **DEC-VT-100(ANSI)** and validate. The PC is in terminal mode, connect it to device by plugging the RS232 link cable. Measure is now displayed and to access at configuration, press on **"C"** key.

5) PC with WINDOWS 95/98:
To start up terminal program:
1 - Clique on button **"START"**,
2 - Tick off **"PROGRAMS"**, **"ACCESSOIRES"**, 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 belowing windows 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 to device by plugging in the RS232 link cable. Measure is now displayed and to access at the configuration, press on **"C"** key .
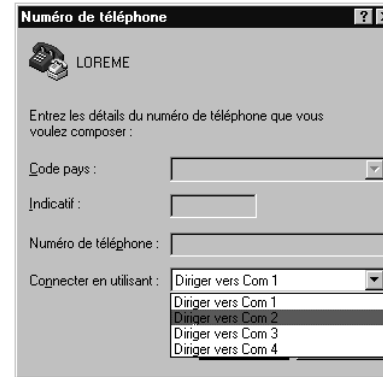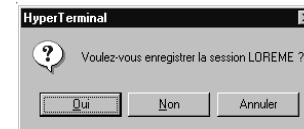
When quitting HyperTerminal will be diplayed the following window. To dialog with all LOREME devices without re-start all the method, click on **"OK"**

To load LOREME session directly:
> 1 - Click on button **"Start"**.
> 2 - Tick off **"Programs"**, **"Accessories"**, and **"HyperTerminal"**.
> 3 - Click twice on the icon

6) Visualization:
When it starts up, the device is in measure mode.
Two datas are send to terminal:

      231,0 V / 50,0 HZ   Value of the input measure and of the
                               frequency,
      11.9 mA / 6,0 V   Value of the output 1 and 2.

To access configuration, type on **"C"** key and follow the configuration procedure.
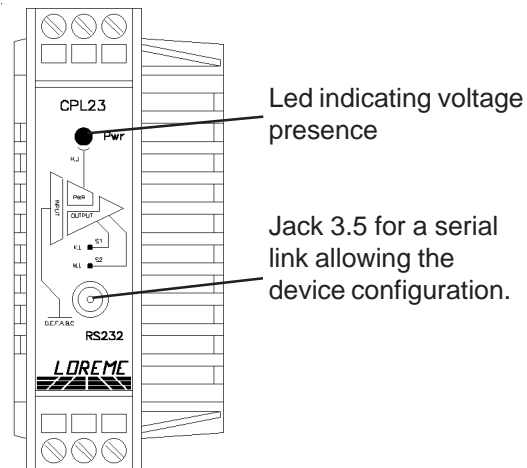
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DEVICE PRESENTATION

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

It's necessary to notice the difference between different models:

CPL23: Measure of a current or a voltage, Meausre DC or AC, two independent analog outputs.
CPL23L: Same input as CPL23 but whith only one analog output.

Led indicating voltage presence

Jack 3.5 for a serial link allowing the device configuration.

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CONFIGURATION

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This manual recapitulates a detailed account of several configuration possibilities: Input, analog outputs.
To access configuration mode, type on **"C"** key.
1) Method:
At configuration, several question types are asked. For each of them, several answers are possible. Description of each of them:

1.1) Menu selection:
Example: ENTREE
               (O-N)
The choice is done by typing on **"O"** or **"N"** keys.
This choice allows access to different configuration menus.

1.2) Parameter selection:
Example: TENSION   or   TENSION
               (O-N) OUI   (O-N) NON

Previous choice = OUI: - push on **"O"** => Validation of choice = YES,
                         - push on **"⏎"** => Validation of choice = YES,
                         - push on **"N"** => Change of choice = NO.

Previous choice = NON: - push on **"N"** => Validation of choice = NO,
                         - push on **"⏎"** => Validation of choice = NO,
                         - push on **"O"** => Change of choice = YES.

Choices are made pushing on **"O"** or **"N"** keys, and validation by pushing on **"⏎"** (PC) / **"EXE"** (PSION) when the answer **"O"** or **"N"** is displayed. Pushing on the key **"⏎"** / **"EXE"** without modification allows validate previous answer.

1.3) Value acquisition:
Example: ECHELLE BASSE
               4 mA

Two possibilities:
- The validation without modification by pushing on **"⏎"** / **"EXE"**,
- The keyboard value modification (simultaneous display), then the validation by **"⏎"** / **"EXE"**.

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

2) **Input:**

The input possibilities are:
- Voltage measure great calibre (V)
- Voltage measure small calibre (mV)
- current (A)

in
- direct current
- alternative current

When using current input or great calibre voltage input, It is necessary to configure the measure ratio used.

3) **Analog output :**

Each output is independently configurable. Analog output configuration is presented through 2 rubrics:

- assigning the output:
- measured value, voltage, current or frequency,
- low and high measure scale.

- parametrizing the output:
- type of output, current or voltage,
- low and high output scale,
- answer time,

In all cases, outputs are limited. Thats allows, for all input signal values, to peak clip the ouput signal at scale configuration.

PC - TRANSMITTER LINK

PSION link
25 pins male connector

PSION link
9 pins male connector
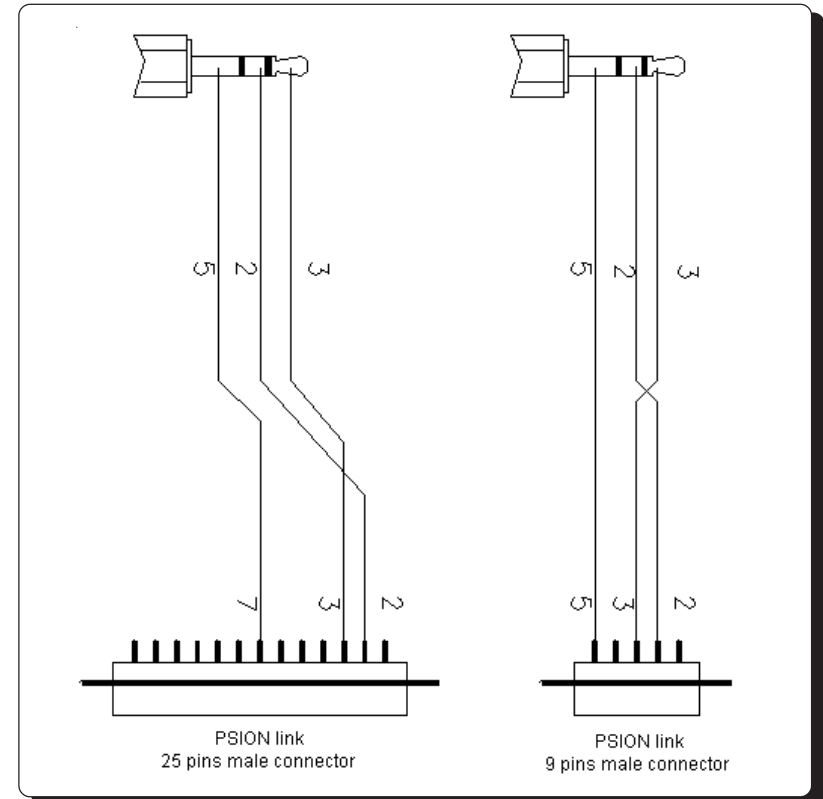
1) Introduction

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 hast 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 adequat filters on the mains supply.
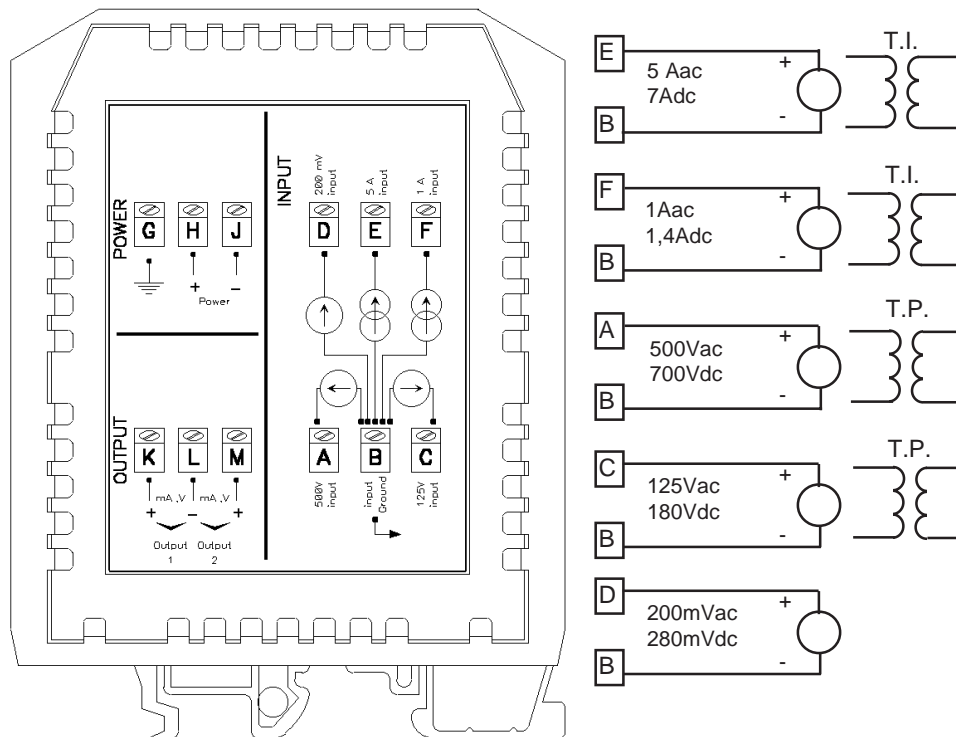
2.3) Inputs / Outputs

- 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.

WIRING INPUTS - OUTPUTS

Power supply: terminal H (+), terminal J (-)

Analog output 1:   terminal K (+), terminal L (-)
Analog output 2:   terminal M (+), terminal L (-)

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