

CONFIGURATION HANDBOOK

**GAL48BP
GAL48BP1**



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Device overview

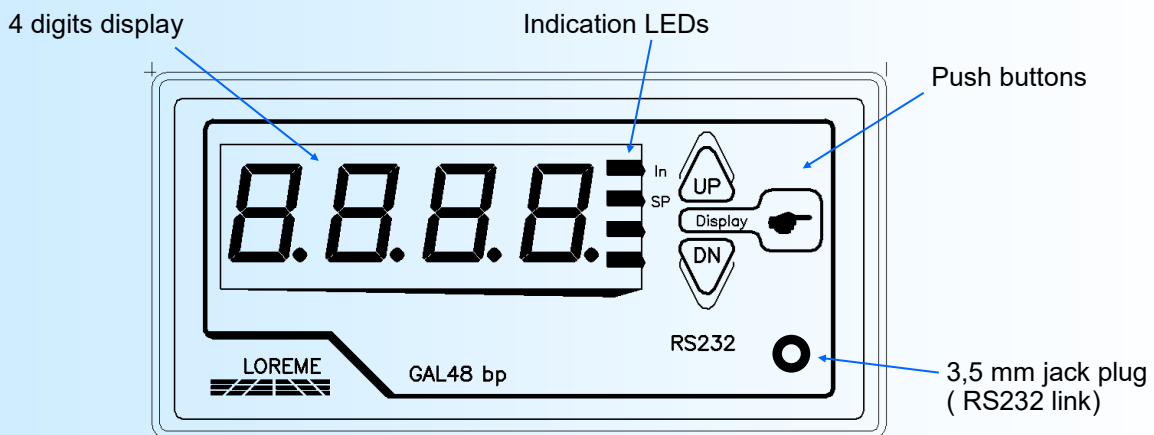
The **GAL48BP** can measure an input signal and generate an output setpoint signal independently of input measure. It is possible to select the signal to be displayed (setpoint or measure) via push button.

The **GAL48BP1** is a setpoint generator who can be drive by front face buttons or by an external analog signal. An output relay contact indicate the type of setpoint in use.

- opened contact : external setpoint.
- closed contact : internal setpoint.

The datasheet can be downloaded at : http://www.loreme.fr/fichtech/GAL48-GAL96-GAL144_eng.pdf

USER INTERFACE



The front face is compose of :

- 4 digits LED display for setpoint and measure.
- 2 LED :
 - **in** measure display (GAL48BP) or external setpoint (GAL48BP1).
 - **SP** setpoint display (GAL48BP) or internal setpoint (GAL48BP1).
- 3,5 mm jack stereo plug for RS232 link.
- 3 push buttons:

- Switch of setpoint / measure display or internal/external setpoint EXT
INT
- Increase setpoint value (internal).
- Decrease setpoint value (internal).
- Reset setpoint (internal) to the start value.

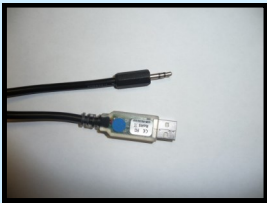
Note:

- On a GAL48BP in measure display mode, the display switch to setpoint if button <UP> or <DN> are press.
- On a GAL48BP1, when the external setpoint is selected, the buttons <UP> and <DN> are deactivated.

RS232 link setting

The device can be configured or updated in terminal mode via an RS232 link.

Step 1: Driver installation for USB / RS232 adapter



- download driver at www.loreme.fr:
http://www.loreme.fr/aff_produits.asp?rubid=53&langue=fr
- Click on executable file to install the driver,
- Plug the cable on a USB port, Windows install a new serial communication port **COMx** (x >= 4).

Note :

The use of the cable on another USB port don't generates a new communication port. Use of another adapter generates another communication port number (COMx) and requires the reconfiguration of the hyperterminal.

Step 2: Setting of terminal emulation software (PC with windows).

1 The terminal emulation software for PC « HyperTerminal » is resident in windows up to XP version. For later versions, it is downloadable on : www.loreme.fr in **download part** (<http://www.loreme.fr/HyperTerm/htpe63.exe>)
=> Run the downloaded software to install it.

2 Start a "hyper Terminal" connection :
- Click on **"START"** button
Up to XP version
- Go to **"Programs \ Accessories \ Communication \ Hyper Terminal"**
- Click on **"Hypertrm.exe"**
Or if the software was downloaded
- Go to **"All programs \ HyperTerminal Private Edition"**
- Click on **"HyperTerminal Private Edition"**

3 Enter name for the new connection

4 Choose the communication port related to the adapter.

5

Choose:
- 9600 bauds
- 8 DATA bits
- no parity
- 1 stop bit
- **XON/XOFF**

6 The PC is now in terminal mode, connect it to the device by plugging the RS232 cable. The measure is now displayed on the terminal. To access configuration, press 'C' key.

7 When leaving Hyper terminal, the following window will appear. By saving, the terminal session will start with the same configuration.

Thus, the shortcut **LOREME.ht** will permit to communicate with all LOREME devices.

Note: To modify the parameters of terminal session whereas this one is connected, it is necessary to disconnect it, modify the parameters and then to reconnect it.

Terminal mode

Visualization

At the power on, the **GAL48BP** is automatically in the measure display mode and the output setpoint take the value setting in 'Setpoint' configuration rubric.

2 information are display on terminal:

5.00 V	Measure or setpoint value.
12.00 mA	Output value.

At the power on, the **GAL48BP1** is set in the last display mode selected by the button "**EXT/INT**".

2 information are display on terminal:

50 %	Actual setpoint value.
12.00 mA	Output value.

Configuration

The handbook explains in detail the different configurations possibilities: input, display range, special functions, setpoint functions, analog output, password.

To enter configuration mode, just press "**C**" key.

1) Method

At the configuration time, different types of questions are displayed. For each one, several answers are possible. You will find below the detailed description of each case.

1.1) Menu selection

example: INPUT (Y-N) The user makes a choice by pressing the keys "**Y**" or "**N**".

1.2) Parameter selection

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

Previous choice = YES: - pressing "**Y**" or "**Enter**" => choice validation = YES.

- pressing "**N**" => choice changing = NO.

Previous choice = NO: - pressing "**N**" or "**Enter**" => choice validation = NO.

- pressing "**Y**" => choice changing = YES.

1.3) Value acquisition

Example: LOW SCALE
4 mA

There are two possibilities:

- The validation without modification by typing "**Enter**",

- The modification with simultaneous display followed by validation with "**Enter**".

Remarque:

- *It is possible, when a mistake is made during a value acquisition, before validating it, to go back by pressing on backspace key. This re-displays the message without taking notice of the mistake.*

- *In configuration mode, if there is no action on a key during 2 minutes, device goes back in measure 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 the escape key.*

2) Input parameters

The input type available are :

- current (+/- 20 mA)

- voltage (+/- 10 V),

- voltage (+/- 100 V),

- frequency (up to 35 kHz and only on **GAL48BP**)

For each input type, the user should setting the low and high scale.

7) Password (GAL48BP only)

It's possible to lock the configuration with a password (to define at the order). At the configuration access, if this option is enable, The device request a password. At the end of configuration, its possible to customize the password. By default the password is 177B.

End of configuration

OK! Message display when the new parameters are saved in memory.

MEASURE OFFSET (GAL48BP) or EXTERNAL SETPOINT (GAL48BP1)

In some case, it may be interesting to modify the measure when for example : aging of sensor, input correction...

To drift the measure:

- be in measure mode with measure displaying,
- type on "+" or "-" to access the function,
- The terminal display become:

125 kg	measured value or setpoint with offset.
OFFSET 10	Value of offset.

- use the keys "+" and "-" to change the value,
- Confirm with ENTER to save the value

Notes:

- *The offset still active after a power off.*
- *To deactivate the offset, enter in offset mode, set the value to 0 and confirm with ENTER.*
- *If no action are made during 20s, the device return to measure mode with no change.*
- *On a GAL48BP1, in external setpoint, the offset is not taking account.*

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

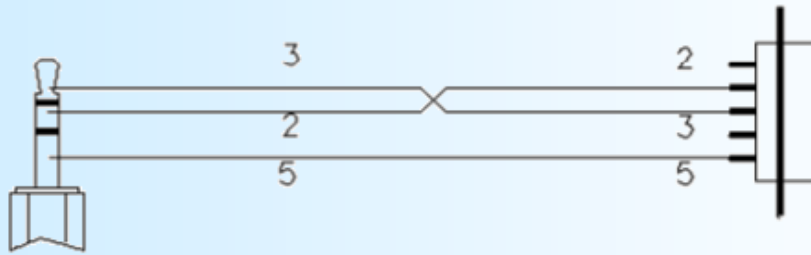
- Comply with the features indicated in the technical sheet (power supply voltage, frequency, allowance of the values, stability, variations ...).
- It is better that the power supply should come from a system with section switches equipped with fuses for the instrumentation element and that the power 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.

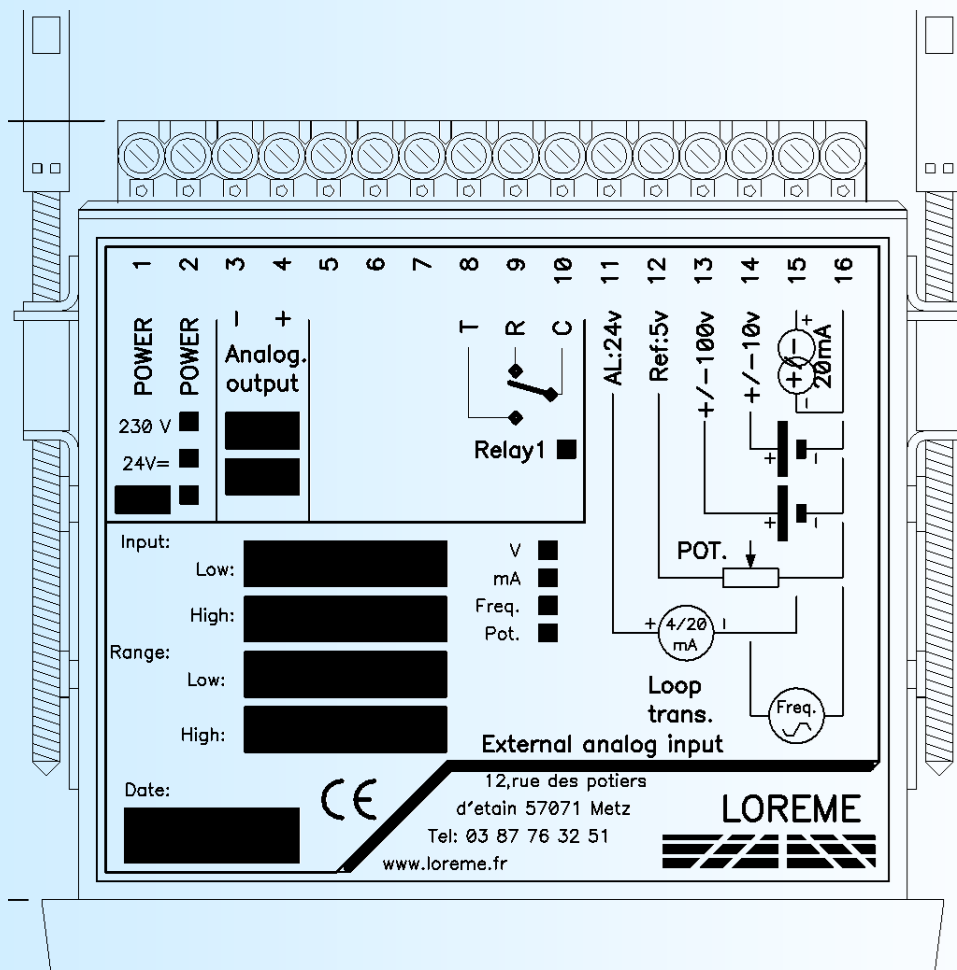
Wirings

jack stereo
3,5 mm to
GAL48BP



Sub-D 9 pins to
Terminal

WIRING



Input +/-20 mA
Input +/-10 V, frequency
Input +/-100 V

Pin 15 (+), pin 16 (-)
pin 14 (+), pin 16 (-)
pin 13 (+), pin 16 (-)

Potentiometer input
Sensor supply

pin 12 (Ref.), pin 14 (+), pin 16 (-)
pin 11 (+), pin 15(-)

Output relay (setpoint type
indication on GAL48BP1)

pin 8 (NO), pin 9 (NC), pin 10 (Common)

Analog setpoint output

pin 4 (+), pin 3 (-)

Power supply

pin 1 (~) , pin 2 (~)