

CONFIGURATION HANDBOOK

GAL36BP



LOREME 12, rue des Potiers d'Etain Actipole BORNLY - B.P. 35014 - 57071 METZ CEDEX 3
Phone 03.87.76.32.51 - Telefax 03.87.76.32.52
Contact : Commercial@Loreme.fr - Technique@Loreme.fr
Download manual at : www.loreme.fr

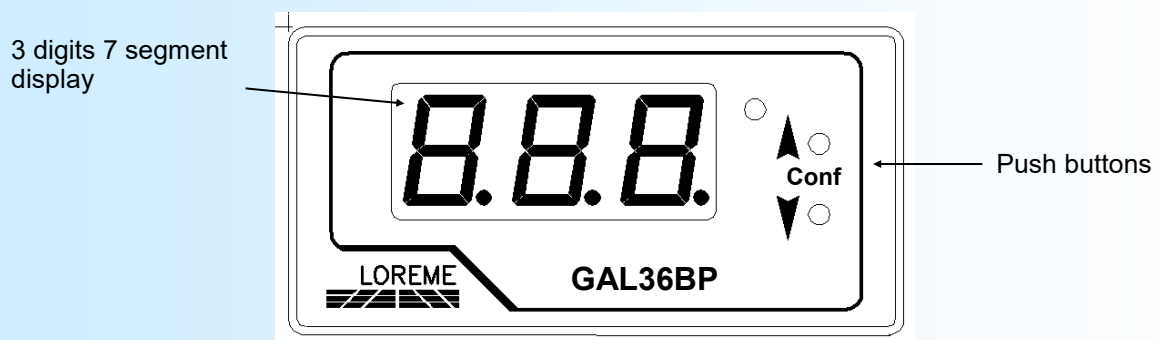
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Device Presentation

The GAL36BP setpoint generator provides an analog output signal (0 ... 4 ... 20 mA or 0 ... 1 ... 5 ... 10 V) for manual control of a machine or system. It has a 3 digits display allowing to visualize the value of the setpoint and 2 push buttons for adjustment and configuration.

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

USER INTERFACE



Push buttons functions:

- ▲ Increase the setpoint value, « YES » or increment value in configuration.
- ▼ Decrease the setpoint value, « NO » or decrement value in configuration.
- ▲ + ▼ Press both buttons for 2 seconds :
Reset the setpoint or access to configuration.

After a simultaneous pressing on buttons, the device displays the « rSt » message. Press on ▲ for reset the setpoint or ▼ to access the device configuration.

Visualization

The GAL36BP is able to display a setpoint value from -99 to 999. An overflow is indicated by the « Hi » message and a underflow by the « Lo » message.

Configuration

The device is fully configurable with the front panel buttons. The user can modify the output current scale, the display and the setpoint parameters. To access configuration mode, press the ▲ + ▼ buttons for 2 seconds.

The "rSt" message is display. It is possible to enter in configuration by pressing the ▼ (No) button, or reset the setpoint with the start value with the ▲ (yes) button.

The messages "cnF" and "r0.0" are display temporarily to indicate the enter in configuration mode and the device version in the form Hard.Soft.

1) Display configuration

1.1) Decimal point configuration

The user can choose the number of decimal displayed.

The message "dP" is display and the user can modify this parameter with the ▲ (Yes) button, or skip to the next parameter with the ▼ (No) button. In the (Yes) case, the device show the actual value. It is possible to modify this value (from 0 to 2) with the buttons. The display blinks during setup. The value is automatically validated after 4 seconds if no buttons is pressed.

1.2) Display scale configuration

The display scale is use to display the output current value in another physical unit. It is easier to read the information.

The message "d.Lo" is display. Press on ▲ (Yes) button to modify the low scale. Press the ▼ (No) button to skip this setup. The actual value is shown and the button ▲ , ▼ increase or decrease it. The display blinks during setup. The value is validated automatically after 4 seconds if no buttons is pressed.

The "d.Hi" message is for the high scale setup.

2) Output parameters configuration

The user can choose the output scale between 0-20 mA and 4-20 mA.

The message "OUT" is display. The ▲ (Yes) button is for modify parameter, the ▼ (No) button is for skip to next parameter. The actual scale is display and the button ▲ , ▼ permits to modify the value.

The "4.20" message is for a 4-20 mA output and "0.20" is for 0-20 mA output. The ▲ (Yes) button is for choose one of this option and the ▼ (No) is for display the next option.

3) Setpoint parameters configuration

3.1) Start value

The start value is the setpoint value after each restart or power on.
This value is in percent unit. 0% for 0 or 4 mA and 100% for 20 mA.

The "StP" message is display. Press on ▲ (Yes) button to setup the start value. Press the ▼ (No) button to skip this setup. The actual value is shown and the button ▲ , ▼ increase or decrease it. The display blinks during setup. The value is validated automatically after 4 seconds if no buttons is pressed.

3.2) Rising time

The rising time is the delay to modify the output current over the full scale with the buttons. It's value is in second (from 0 to 600 s). The setpoint value increment is directly proportional to this time.

Example:

With a rising time of 5 seconds, the setpoint increment is : $0.05 / 5 \text{ s} = 0.01$ or 1%.

So, for a 0-100 display, the setpoint value is increase or decrease by 1.0 and the output current by 0.16 mA (4-20 mA) or 0.2 mA (0-20 mA) after each button press.

For a 2 s rising time, the increment is : $0.05/2 = 0.025$ or 2.5%.

The "dLY" message is display. Press on ▲ (Yes) button to modify the value. Press the ▼ (No) button to skip this setup. The actual value is shown and the button ▲ , ▼ increase or decrease it. The display blinks during setup. The value is validate automatically after 4 seconds.

3.3) Setup limitation

The setpoint limitation is activate by default. The user is able to modify the setpoint from 0 to 100% of the display scale. It is possible to allows the setpoint adjustment from -10% to 110% if the limitation is deactivated.

The "cLP" is display. Press on ▲ (Yes) button to modify the value. Press the ▼ (No) button to skip this setup. The actual value is shown and the button ▲ , ▼ are used to choose.

The "YES" message indicated that the limitation is activate and "no" when it is not activated. The ▲ (Yes) is for choose one of the two options and the ▼ (No) is for display the next option.

At the end of configuration, the "End" message is displayed to indicate that all the parameters have been saved.

Note:

If there is no action on buttons within a 10 seconds delay, the device leaves the configuration mode without saving the modified parameters.

4) Setpoint reset

The user can reset the setpoint with the « start value » by pressing the two buttons for 2 seconds.

The "rSt" message is display. Press the ▲ (Yes) button to reset setpoint (the ▼ button is for access to the configuration mode).

EMC Considerations

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 sheet (direction of assembly, spacing between the devices, ...).
- Comply with the recommendations of use indicated in the technical 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.

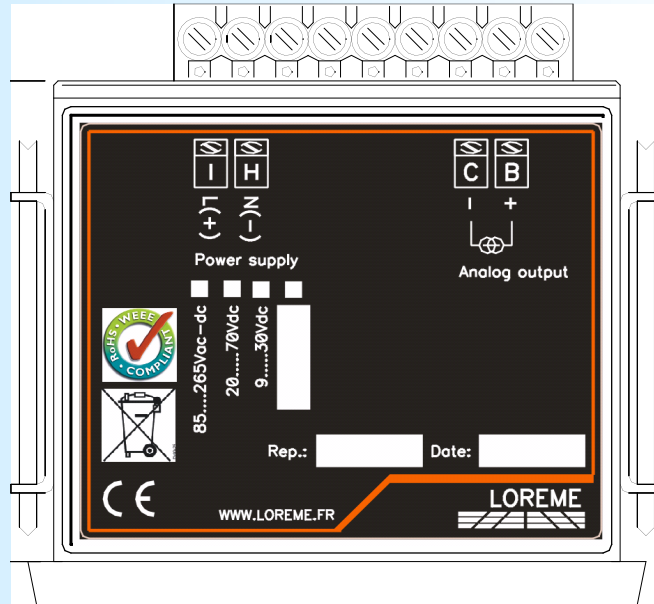
2.2) Power supply

- 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



Analogue output : borne B (+), borne C (-)
Power supply: bornes I et H.