Unify Electronic
Progettazione e Costruzione
Apparecchiature Elettroniche

LIV-200 2.0

Single Axis Digital Electronic Level

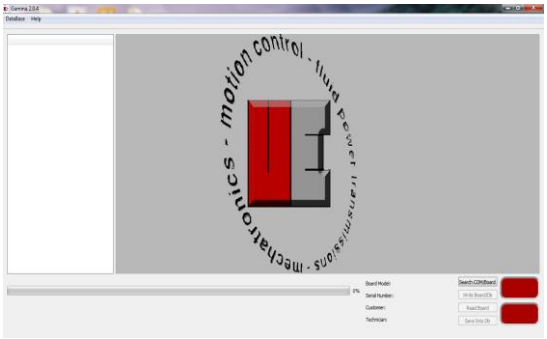
The "LIV-200" device is an instrument suitable for automatically leveling any moving system equipped with hydraulic or electric pistons such as agricultural machinery, operating machines and moving floors, against the danger of dangerous inclinations following translation on excessively steep / inclined terrain , automatically leveling the plane on the x axis.
By continuously monitoring the horizontal axis of the machine as a function of programmable thresholds, when the established values are reached / exceeded, the device activates the ON / OFF or PROPORTIONAL valves which bring the structure back to the correct position thus avoiding the condition of danger. If installed in systems with proportional valves, it is possible to use the PWM signal or the 0-5V or 0-10V analogue output.
The device is particularly interesting for application on all those machines that have to work at height and with uneven lands such as platforms for fruit harvesting, adjustment of fertilization bars, adjustment of moving floors, etc.
With the PLUS model it is possible to have precise measurements even at medium-high speeds thanks to the aid of eight digital inputs that allow you to measure the angular speed of the vehicle.

TECHNICAL FEATURES:

Power supply: ..... 10 - 30Vdc
Supply Current: .... 12Vdc 40mA -24Vdc 20mA
Operating temperature: ..... - 40 + 85 ° C
Sensitivity: ..... 0.1 °
Average error: ..... 0.1 °
Resolution:..... 0.1 °
3 AXIS X, Y, Z accelerometers: 2

Output:
Digital output mosfet (on / off-pwm) valv.1 axis x ..... max 3A
Digital output mosfet (on / off-pwm) valv.2 axis x ..... max 3A

REGULATION CURRENT
PROPORTIONAL SOLENOID VALVES: ..... from 0.05A @ 2.5A
CURRENT REGULATION Imin., Imax: ..... 0 - 50%
RAMP TIME ADJUSTMENT: ..... 0 - 10Sec
PWM: 60Hz- 330Hz
PWM RESOLUTION: ..... 10 Bit
TOLERANCE :..... + / - 2%
CANBUS port
Analog signal X axis inclination: ..... 0 - 10V
..... 0 - 5V
Zero position ..... 50% Vmax
Digital signal: ..... open Collector
Digital inputs (selectable NPN or PNP): .... n 2
Relay outputs out of zero: .... n 1
System Error output NPN type max. 50mA ....n 1



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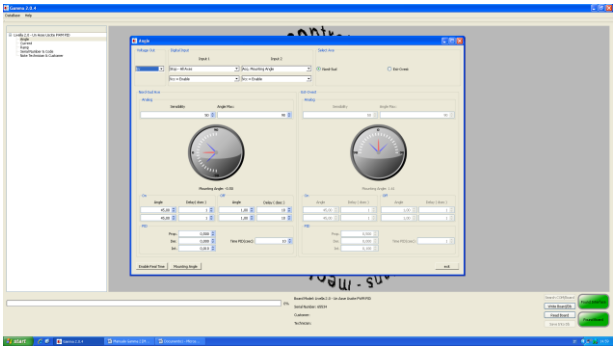
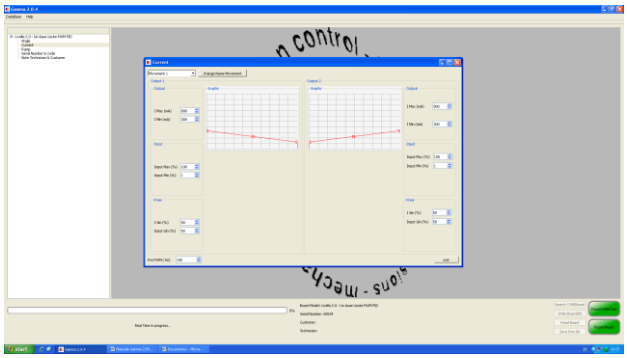
Programming via PC (with gamma 1 Suite and the USB -SPI interface module):



- Self-learning of the initial zero
- Analog output setting (5V or 10V)
- Analog signal gain
- Sensitivity (average value read x number of readings set) range that can be set from 1 to 100 readings
- Valve Output Operation Setting (ON / OFF-PWM)
- X axis relay intervention angle
- Y axis relay intervention angle
- Alarm intervention angle
- Measurement of the angle in Real Time
- No. of pulses per encoder or transducer Pk
- Wheel diameter in cm
- Wheelbase in cm
- Position of the spirit level from the wheel in cm
- Limiting angular velocity
- Encoder reading intervals (100mS steps)



Metallic Container 100x100x59
Degree of protection .... IP66 / 67

PRODUCT COMPLIES WITH EUROPEAN DIRECTIVE RHOS 2002/95 / EC CE certification

Item Code: F00259-0000-2.0 LIV-200 2.0 SINGLE AXIS DIGITAL LEVELING

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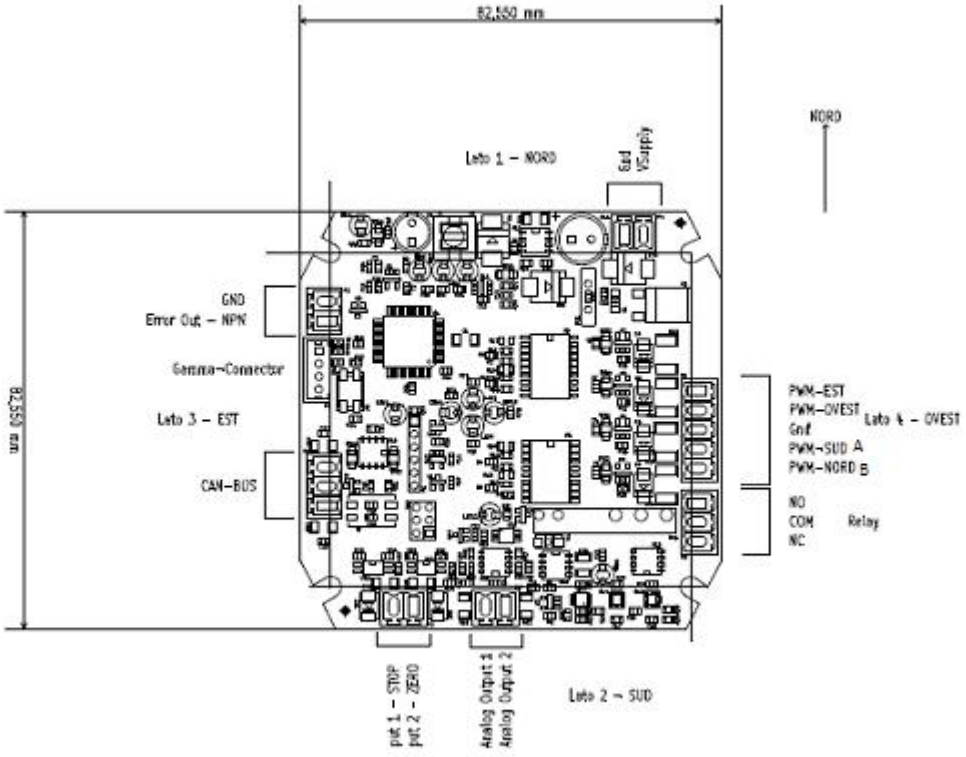
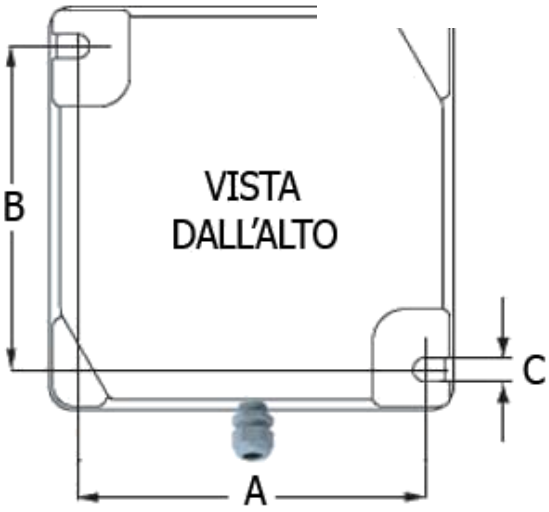
Wiring Board

CAUTION :

- This product must be mounted strictly horizontal to the plane to be measured
- The LIV-200 version can also be mounted vertically





FIXING DISTANCE IN mm

A = 86mm
B = 80mm
C = 06mm

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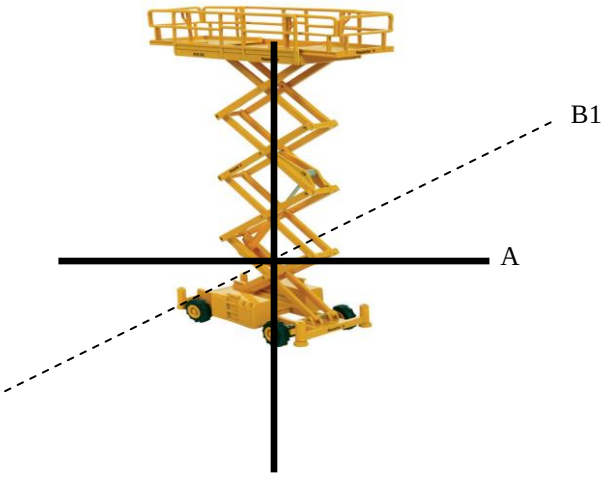
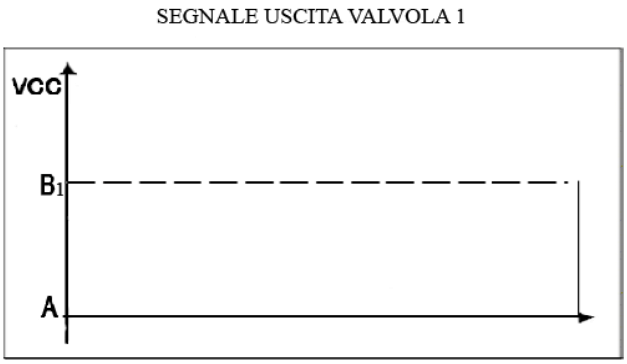
EXAMPLES OF APPLICATIONS

Thanks to the 3-axis accelerometers used and a complex software, the LEV400 finds multiple applications both on fixed and mobile systems such as:

- Maintaining the horizontal position for scissor lifts





As in the example shown for the Scissor Platform above, the same technology can be applied to various machines, such as Mobile Decks, Field Fertigation Bars, Drilling Machines.

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Automatic leveling on the 2 x and y axes of moving floors for trucking

Automatic leveling of bars for fertigation in the field

Automatic leveling on the two x and y axes of the platform and the column

The company assumes no responsibility for any errors that may be present in this document and also reserves the right to change the descriptions and data without notice.