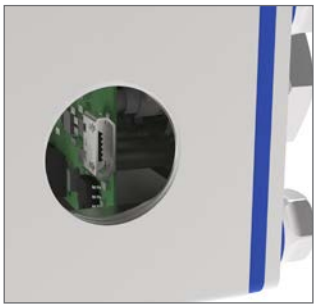
# LCB3A

## HYGIENIC UNIVERSAL DIGITIZER FOR LOAD CELLS




MICRO USB FOR
PC CONFIGURATION



### DESCRIPTION

- LCB3A transforms an analog load cell (mV/V output) into a digital one; it can also be used on existing load cells to digitize the weighing system.
- Hygienic device RPSCQC authorized by 3-A SSI.
- Conceived for IoT applications (Internet of Things).
- PC configuration software via micro USB port.
- Status LED of the communication interface.
- Mounting: wired or integral to the load cell body via standard ¼ GAS fitting (specific adapters for different threads are supplied on request).
- IP67 AISI 304 stainless steel box (dimensions: 90x40x107 mm including flying connectors).
- 3 M12 hygienic connectors with solder terminals included in the supply.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download from www.laumas.com.

### INPUTS/OUTPUTS AND COMMUNICATION

- 1 USB port.
- 3 relay outputs controlled by the setpoint values or via protocols.
- 2 digital inputs: status reading via serial communication protocols.
- 1 load cell input.



### CERTIFICATIONS

Complies with the Eurasian Custom Union regulations

Equivalent of the CE marking for the United Kingdom

American standard that regulates the design, production and use of hygienic equipment

UL Recognized component - Complies with United States and Canada regulations

### FIELDBUSES

MODBUS RTU · MODBUS/TCP · ETHERNET TCP/IP · ETHERNET POWERLINK · EtherCAT · EtherNet/IP

PROFIBUS · PROFINET · CC-Link · CC-Link IE Field Basic · IO-Link · CANopen · SERCOS interface

Rev. 0.0

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ISO 9001
ISO 14001

www.laumas.com

## INTERFACES AND FIELDBUSES

| | |
|---|---|
| **RS485**.<br>Male M12 circular connector, A-coded, 5-pin.<br>Female M12 circular connector, A-coded, 5-pin.<br>Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s). | *coming soon* |
| **RS485 + analog output.**<br>Current: 0÷20 mA; 4÷20 mA (up to 400 Ω).<br>Voltage: 0÷10 V; 0÷5 V (min 2 kΩ).<br>Male M12 circular connector, A-coded, 5-pin.<br>Female M12 circular connector, A-coded, 5-pin. | |
| **IO-Link.**<br>**2x** male M12 circular connector, A-coded, 4-pin.<br>The instrument works as *device* in a IO-Link network. | |
| **CANopen.**<br>Male M12 circular connector, A-coded, 5-pin.<br>Female M12 circular connector, A-coded, 5-pin.<br>The instrument works as *slave* in a CANopen synchronous network. | |
| **CC-Link IE Field Basic.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *slave* in a CC-Link IE Field Basic network. | |
| **CC-Link.**<br>Male M12 circular connector, A-coded, 4-pin.<br>Female M12 circular connector, A-coded, 5-pin.<br>The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations. | *coming soon* |
| **Profibus DP.**<br>Male M12 circular connector, B-coded, 5-pin.<br>Female M12 circular connector, B-coded, 5-pin.<br>The instrument works as *slave* in a Profibus DP network. | *coming soon* |
| **Modbus/TCP.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *slave* in a Modbus/TCP network. | |
| **Ethernet TCP/IP.**<br>Female M12 circular connector, D-coded, 4-pin.<br>The instrument works in an Ethernet TCP/IP network and it is accessible via web browser. | *coming soon* |
| **Ethernet/IP.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *adapter* in an Ethernet/IP network. | |
| **PROFINET IO.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *device* in a PROFINET IO network. | |
| **EtherCAT.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *slave* in an EtherCAT network. | |
| **POWERLINK.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *slave* in a Powerlink network. | |
| **SERCOS III.**<br>**2x** female M12 circular connectors, D-coded, 4-pin.<br>The instrument works as *slave* in a Sercos III network. | |



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## HYGIENIC UNIVERSAL DIGITIZER FOR LOAD CELLS

LAUMAS®

### MAIN FUNCTIONS

- Connections to:
  - PLC via analog output or fieldbuses;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - up to 4 load cells in parallel by junction box.
- TCP/IP WEB APP: integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via PC software) and real calibration (with sample weights and the possibility of weight linearization up to 8 points).
- Calibration via characterization values of the load cell.
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight) and preset tare.
- Semi-automatic zero.
- Direct connection between RS485 and RS232 without converter.
- Configuration backup and restore via PC software.

#### BASE PROGRAM

- Hysteresis and setpoint value setting.

#### SINGLE PRODUCT LOADING PROGRAM

- 99 settable formulas.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Batching start via external contact or fieldbus.

### TECHNICAL FEATURES

| | |
|---|---|
| Power supply and consumption | 12÷24 VDC ±10%; 5 W |
| Number of load cells • Load cells supply | up to 4 (350 Ω) - 4/6 wires • 3.3 VDC/40 mA |
| Linearity • Analog output linearity | <0.01% full scale • <0.01% full scale |
| Thermal drift • Analog output thermal drift | <0.0005% full scale/°C • <0.003% full scale/°C |
| A/D Converter | 24 bit (16000000 points) - 4.8 kHz |
| Divisions (with measurement range ±10 mV and sensitivity 2 mV/V) | ±999999 • 6.6 nV/d |
| Measurement range | ±26 mV |
| Usable load cells sensitivity | ±7 mV/V |
| Conversion rate | 5÷500 Hz |
| Decimals • Display increments | 0÷4 • x1 x2 x5 x10 x20 x50 x100 |
| Digital filter | 3 filter types |
| Relay outputs | 3 - max 115 VAC/150 mA - 24 VDC/200 mA |
| Digital inputs | 2 - 5÷24 VDC |
| USB port | Micro-B, USB 2.0 Full Speed |
| Humidity (condensate free) | 85% |
| Storage temperature | -30 °C +80 °C |
| Working temperature | -20 °C +50 °C |

| | | |
|---|---|---|
| c UL us | Relay outputs | 3 - max 30 VAC, 60 VDC |
| | Max wall mounting height | 2 m |
| | Equipment to be powered by PS2 power source | |

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*The Company reserves the right to make changes to the technical data, drawings and images without notice.*

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