



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 1/4 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 micro 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

FIELD BUSES

MODBUS RTU

MODBUS/TCP

ETHERNET TCP/IP

ETHERNET POWERLINK

EtherCAT

EtherNet/IP

PROFIBUS

PROFINET

CC-Link

CC-Link IE Basic

IO-Link

CANopen

SERCOS interface

datasheet_LCB3A_V1

INTERFACES AND FIELDBUSES

RS485.

Male M12 circular connector, A-coded, 5-pin.
Female M12 circular connector, A-coded, 5-pin.
Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s).

coming soon

RS485 + analog output.

Current: 0 ÷ 20 mA; 4 ÷ 20 mA (up to 400 Ω).
Voltage: 0 ÷ 10 V; 0 ÷ 5 V (min 2 kΩ).
Male M12 circular connector, A-coded, 5-pin.
Female M12 circular connector, A-coded, 5-pin.

IO-Link.

2x male M12 circular connector, A-coded, 4-pin.
The instrument works as *device* in a IO-Link network.

CANopen.

Male M12 circular connector, A-coded, 5-pin.
Female M12 circular connector, A-coded, 5-pin.
The instrument works as *slave* in a CANopen synchronous network.

CC-Link IE Field Basic.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *slave* in a CC-Link IE Field Basic network.

CC-Link.

Male M12 circular connector, A-coded, 4-pin.
Female M12 circular connector, A-coded, 5-pin.
The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations.

coming soon

Profibus DP.

Male M12 circular connector, B-coded, 5-pin.
Female M12 circular connector, B-coded, 5-pin.
The instrument works as *slave* in a Profibus DP network.

coming soon

Modbus/TCP.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *slave* in a Modbus/TCP network.

Ethernet TCP/IP.

Female M12 circular connector, D-coded, 4-pin.
The instrument works in an Ethernet TCP/IP network and it is accessible via web browser.

coming soon

Ethernet/IP.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *adapter* in an Ethernet/IP network.

Profinet IO.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *device* in a Profinet IO network.

EtherCAT.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *slave* in an EtherCAT network.

POWERLINK.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *slave* in a Powerlink network.

SERCOS III.

2x female M12 circular connectors, D-coded, 4-pin.
The instrument works as *slave* in a Sercos III network.

HYGIENIC UNIVERSAL DIGITIZER FOR LOAD CELLS

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 |
| Conversions per second | | 500 |
| Decimals • Display increments | | 0÷4 • x1 x2 x5 x10 x20 x50 x100 |
| Digital filter • Readings per second | | 3 filter types • 5÷500 |
| Relay outputs | | 3 - max 115 VAC/150 mA - 24 VDC/200 mA |
| Digital inputs | | 2 - 5÷24 VDC |
| Micro USB port | | B type - USB 2.0 (full-speed) |
| Humidity (condensate free) | | 85% |
| Storage temperature | | -30 °C +80 °C |
| Working temperature | | -20 °C +50 °C |
|  | Relay outputs | 3 - max 30 VAC, 60 VDC |
| | Max wall mounting height | 2 m |
| | Equipment to be powered by PS2 power source | |