



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



Rev. 0.0

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.

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	