



LCB3A

Hygienic universal digitizer for load cells



COMING SOON



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.

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 standards



Equivalent of the CE marking for the United Kingdom



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

FIELD BUSES

MODBUS RTU

MODBUS/TCP

ETHERNET TCP/IP

ETHERNET POWERLINK

EtherCAT

EtherNet/IP

PROFI BUS

PROFI NET

CC-Link

CC-Link IE Basic

IO-Link

CANopen

SERCOS interface



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 k Ω).
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.



■ 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/s
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	3 filter types • 5÷ 500 Hz
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

■ 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.