

EXAMPLE OF APPLICATION WITH LOAD CELL



DESCRIPTION

- LCB 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.
- 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).
- 2x M4 fixing holes for wall mounting via anchor plate (not included in the supply).
- IP67 AISI316 stainless steel box (dimensions: 97x38x82 mm including flying connectors).
- 3x IP67 M12 flying connectors included in the supply.



LCB WITH FLYING CONNECTORS

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.

PC CONFIGURATION SOFTWARE



MICRO USB FOR PC CONFIGURATION



CERTIFICATIONS

EAC Complies with the Eurasian Custom Union standards

FIELD BUSES



INTERFACES AND FIELDBUSES

	CODE	
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).	LCBRS485	<i>coming soon</i>
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.	LCBRS485ANA	
IO-Link. 2x male M12 circular connector, A-coded, 4-pin. The instrument works as <i>device</i> in a IO-Link network.	LCBIOLINK	
CANopen. Male M12 circular connector, A-coded, 5-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as <i>slave</i> in a CANopen synchronous network.	LCBCANOPEN	
CC-Link IE. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a CC-Link IE network.	LCBCCLINKIE	<i>coming soon</i>
CC-Link. Male M12 circular connector, A-coded, 4-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as <i>Remote Device Station</i> in a CC-Link network and occupies 3 stations.	LCBCCLINK	<i>coming soon</i>
PROFIBUS DP. Male M12 circular connector, B-coded, 5-pin. Female M12 circular connector, B-coded, 5-pin. The instrument works as <i>slave</i> in a Profibus-DP network.	LCBPROFIBUS	<i>coming soon</i>
Modbus/TCP. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Modbus/TCP network.	LCBMODBUSTCP	
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.	LCBETHETCP	<i>coming soon</i>
Ethernet/IP. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>adapter</i> in an Ethernet/IP network.	LCBETHEIP	
PROFINET IO. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>device</i> in a Profinet IO network.	LCBPROFINETIO	
EtherCAT. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in an EtherCAT network.	LCBETHERCAT	
POWERLINK. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Powerlink network.	LCBPOWERLINK	
SERCOS III. 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Sercos III network.	LCBSERCOSIII	

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.
- 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 5 points).
- 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.
- **TCP/IP WEB APP**
Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.

COMING SOON

CE-M version: 2014/31/EU-EN45501:2015-OIML R76:2006

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e) via PC software.
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

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	600/s
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷600 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

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Load cell + LCB wiring.	LCBCOL
	Alibi memory.	OPZWALIBI

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