

# LABORATORY ELECTRONICS LAB-EL Co.



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## OFFER FOR THE MEASUREMENT DEVICES AND SERVICES OF THE LAB-EL LABORATORY

Offer date: 2018-11-05

Remarks to offer please see on page 12..13.

### 1. Hytherographs, hygrometers, psychrometers

Price in EUR

(without VAT tax)

1.1. HYTHEROGRAPH LB-522 (with a display, -30...+80°C, 10...95% RH, min/max memory)	251,72
additional payment for a version LB522H: scope of humidity measurement : 0...100%	46,36
1.2. HYTHEROGRAPH LB-522B (with a display, -30...+80°C, 10...95% RH, min/max memory)	
economic version, lower measurement accuracy	171,98
additional payment for a version LB-522BH: scope of humidity measurement : 0...100%	46,36
1.3. HYTHEROGRAPH LB-701M WITH A READING PANEL LB-704 - portable device for measurement of air humidity and temperature (no interface, LED display); certificate of type form the Central Office of Measures positive opinion from the Central Military Meteorology Center; basic version: scope of measurement LB-701 temperature:(-40°C...85°C)*; scope of humidity measurement: 10%...95%	364,82
1.3.1 Protective cover (shoulder bag)	15,53
1.4. HYTHEROGRAPH LB-701 WITH A READING PANEL LB-705 - stationary device for measurement of air humidity and temperature in the rooms; PC interface; memory of 640 measurements basic version: scope of temperature measurement LB-701:(-40°C...85°C)* scope of humidity measurement: 10%... 95%	490,91
additional payment for a version LB-701H: scope of humidity measurement : 0...100%	46,36
1.4.1. An extension cord of a connection cable for a hytherograph LB-701	length 4 m 8,11
	length 9 m 11,13
	length 14 m 14,14
1.5. HYTHEROGRAPH LB-701 WITH A READING PANEL LB-706 (LB-706G) - portable device for measurement of air humidity and temperature in the rooms; PC interface, a clock, memory of approx. 2600 measurements, positive opinion from the Central Military Meteorology Center; basic version: scope of temperature measurement LB-701: (-40°C...85°C)* scope of humidity measurement: 10%... 95%	380,35
additional payment for a version LB-701H: scope of humidity measurement : 0...100%	46,36
additional payment for a version LB-706P: extended measurement memory (up to approx. 10500 measurements)	31,99
1.5.1 Protective cover (shoulder bag)	16,92
1.5.2 Printer KAFKA -1R	216,48
1.5.3 Printer KAFKA -1 Portable (portable, in a protective cover, with a built-in accumulator)	312,91
1.6. HYTHEROGRAPH LB-701 WITH A CONTROL-READING PANEL LB-725A (climate regulator)	

converter of the room air conditioners, climate chambers; PC interface; memory of approx. 4000 measurements; certificate of type form the Central Office of Measures. basic version:	scope of temperature measurement LB-701: (-40°C...85°C)* scope of humidity measurement: 10%... 95%	550,95
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1.7. HYTHEROGRAPH LB-710 - sensor in an industrial casing, for measurement of air humidity and temperature; positive opinion from the Central Military Meteorology Center; basic version LB-710:	scope of temperature measurement: (-40°C...+85°C)* scope of humidity measurement: 10%... 95%	251,72
version LB-710H:	scope of humidity measurement: 0...100%	298,07

1.8. HYTHEROGRAPH LB-710B - sensor in an industrial casing, for measurement of air humidity and temperature, scope of measurement: temperature 0°C...+70°C, humidity 0...100%, economic version - worse meteorological parameters compared to LB-710		106,16
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1.9. HYTHEROGRAPH LB-710D - sensor with a display, for measurement of humidity and temperature basic version LB-710D:	scope of temperature measurement: (-30°C...+80°C)* scope of humidity measurement: 10%... 95%	251,72
version LB-710DH:	scope of humidity measurement: 0...100%	298,07

1.10. HYTHEROGRAPH LB-710DB - sensor with a display, for measurement of air humidity and temperature, scope of measurement: temperature 0°C...+70°C, humidity 0...100%, economic version - worse meteorological parameters compared to LB-710D		169,66
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1.11. HYTHEROGRAPH LB-710R- sensor in a casing for a meteorological cage LB-719, for measurement of air humidity and temperature, electronics in a silicone filling scope of temperature measurement : (-40°C...85°C)*	scope of humidity measurement: 0...100%	344,89
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1.12. HYTHEROGRAPH LB-712TW - industrial sensor for measurement of air relative humidity and temperature It can have one out of three standards of the analogue outputs: current loop 4mA - 20mA; voltage output 0...1V; voltage output 0...10V basic version:	scope of humidity measurement: 10%...95%; scope of temperature measurement: (-40°C...+85°C)*	251,72
thermometer LB-712T (only temperature measurement):		75,56
hygrometer LB-712W (only humidity measurement):		191,45

1.13. PSYCHROMETER LB-754P WITH A READING PANEL LB-706T - portable device for measurement of air humidity and temperature using a psychrometric method, PC interface, memory of 2600 measurements;		392,18
	scope of temperature measurement: 5°C...70°C scope of humidity measurement: 5%...99,9%	
additional payment for a version LB-706TP: extended measurement memory (over 10450 measurements)		31,99

## 2. Thermometers

2.1. THERMOMETER LB-471T - with LED display, on a bus rail TS35, outside sensor Pt100 or Pt1000 without a sensor, scope of measurement: -100°C...+200°C		98,97
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2.2. THERMOMETER - CONVERTER LB-489 (4 x thermometer/S300/0-3V, Ethernet output), *a, *19)		144,86
sensor of 1 temperature TL-4(1 m cable)		17,85
each additional meter of cable		0,70
additional LB-489 option - power over Ethernet - POE		27,81
additional cable for connecting LAB-EL sensor to S300 input, each 1 m		1,16

2.3. THERMOMETER LB-522T (with a display, -30...+80°C, inside sensor, min/max memory)		97,35
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2.4. THERMOMETER LB-522TX (with a display, -100...+200°C or -200...+550°C, outside sensor, min/max memory) with a standard outside sensor TL-2 (-40°C to +80°C)*		115,20
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additional payment for a special sensor	a price depends on a sensor type
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<b>2.5. THERMOMETER - READING PANEL, PORTABLE LB-706T (LB-706GT)</b>	
reading panel without a sensor, scope -200°C...+550°C, memory of minimum 2600 measurements, PC interface;	202,58
<b>2.6. MEASUREMENT SENSORS FOR COOPERATION WITH A THERMOMETER LB-706T, LB-706GT (without LB-754P):</b>	
LB-754J - one thermometric sensor Pt1000, standard realisation TL-2 (-40°C...+80°C)*, *6)	29,44
LB-754J - one thermometric sensor Pt1000, special realisation	a price depends on a sensor type
LB-754T - two thermometric sensors Pt1000, standard realisation TL-2 (-40°C...+80°C)*, *6)	47,52
LB-754T - two thermometric sensors Pt1000, special realisation	a price depends on a sensor type
LB-754P - psychrometer (a sensor for measurement of temperature and humidity using a psychometric method)	189,37
LB-701 - additional probe for measurement of air temperature and humidity – hytherograph	190,06
<b>2.7. TWO CHANNEL THERMOMETER LB-708T - stationary meter of two temperatures and their difference, maximum scope</b>	
of measurements: -200°C...550°C (depends on a sensor structure):	230,85
additional payment for each sensor in a standard realisation TL-2 (-40°C...+80°C)*, *6)	22,48
additional payment for each sensor in a non-standard realisation	a price depends on a sensor type
<b>2.8. THERMOMETER LB-710DT - with a display LCD:</b>	
inside sensor, scope: -30°C do +80°C	90,39
in the scope (-40°C to + 80°C)*, outside standard sensor TL-2, *6)	107,55
in the scope -100°C...+ 200°C, outside special sensor,	a price depends on a sensor type
in the scope -200°C...+ 550°C, outside special sensor,	a price depends on a sensor type
<b>2.9. THERMOMETER LB-710TF - inside sensor, scope (-40°C...+85°C)*:</b>	
LB-710TX with an outside standard sensor TL-2 (-40°C do + 80°C)*, *6)	70,69
LB-710TX with an outside special sensor in the scope -100°C...+ 200°C,	87,61
	a price depends on a sensor type
<b>2.10. EIGHT CHANNEL THERMOMETER LB-711 - for measurement of temperatures in the scope from -100°C to +200°C</b>	
or from -200°C to +550°C ( version LB-711E):	202,58
additional payment for each standard sensor TL-2 (-40°C...+80°C)*, *6)	17,85
additional payment for each special sensor	a price depends on a sensor type
<b>2.11. THERMOMETER LB-712T - industrial sensor for temperature measurement in the scope (-40°C...+85°C)*,</b>	
it can have one out of three standards of the analogue outputs:	
current loop 4mA - 20mA; voltage output 0...1V; voltage output 0...10V	75,56

### **3. Barometers, thermohygrobarometers, pressure gauges, pressure calibrator**

<b>3.1. HYTHEROGRAPH LB-701 WITH A PANEL BAROMETER LB-706B (LB-706GB) - portable thermohygrobarometer</b>	
LCD display; PC interface; memory of approx. 1550 measurements;	
basic version:	scope of pressure measurement: 700hPa...1100hPa
	scope of humidity measurement LB-701: 10%... 95%
	scope of temperature measurement LB-701: (-40°C...+85°C)*
	544,69
additional payment for a version LB-701H: scope of humidity measurement : 0...100%	46,36
additional payment for a version LB-706BP: extended measurement memory (approx. 6250 measurements)	31,99
<b>3.1.1. Panel-barometer LB-706B (LB-706GB), basic version, without a thermohygrobarometer LB-701</b>	
PC interface; memory of approx. 3900 measurements;	354,63
additional payment for a version LB-706BP: extended measurement memory (approx. 15700 measurements)	31,99
<b>3.1.2 Protective cover (shoulder bag)</b>	
	16,92
<b>3.3. TERMOHYGROBAROMETER LB-715 - sensor in an industrial casing</b>	
basic version:	scope of temperature measurement (-40°C...+85°C)*
	scope of humidity measurement : 10%...95%
	scope of pressure measurement: 700 hPa...1100 hPa
	500,88
<b>3.4. BAROMETER LB-716 - scope of pressure measurement: 700 hPa...1100 hPa</b>	
	324,96

3.5. DIFFERENTIAL PRESSURE GAUGE LB-716D		
in one of the scopes: +/- 70; 350;1000; 2000; 4000; 6800 albo 10000 hPa		347,90
in one of the scopes: +/- 250; 1000; 2000 Pa		390,55
3.6. ABSOLUTE PRESSURE GAUGE LB-716P		347,90
3.7. BAROMETER LB-750, PC interface, internal measurement memory, a clock;		
version LB-750B: full scope of measurement: 700hPa...1100hPa		706,93
version LB-750W: scope of measurement: 10hPa...1100hPa		706,93
Model LB-750W must be calibrated in the external calibration laboratory (see point 13.2)		
3.8. DISPLAYING PANEL LB-471P – with a display LED, on a bus rail TS35, for cooperation with an outside pressure sensor with a signal 4..20 mA without a sensor, scope of measurement programmed upon request		98,97
3.9. MICROPROCESSOR PRESSURE CALIBRATOR PC-01		
double frequency version: 200kPa and 700kPa, class 0,05		565,55

#### 4. Recorders - loggers: portable (battery) and mobile (car)

Recorders cooperate with PC with use of the program LOGGER - see p. 11.9.

4.1.1. THERMOMETER RECORDER LB-515 (-40...+85°C, +/- 1°C)		37,78
4.1.2. THERMOMETER BUTTON RECORDER LB-515P-21G (-40...+85°C, +/- 1°C), *b),		29,20
4.1.3. THERMOMETER BUTTON RECORDER LB-515P-21H (+15...+46°C, +/- 1°C), *b),		32,68
4.1.4. THERMOMETER BUTTON RECORDER LB-515P-22L (-40...+85°C, +/- 0,5°C), *b),		58,41
4.2.1. THERMOMETER RECORDER LB-516T (-30...+85°C, +/- 1°C), *b),		50,99
4.2.2. THERMOMETER RECORDER LB-516AT (-30...+85°C, +/- 1°C), *b),		64,90
4.2.3. HYTHEROGRAPH RECORDER LB-516A (-30...+85°C, +/- 1°C), *b),		132,12
4.3.1. THERMOMETER RECORDER LB-520T (with a display, -30...+80°C, inside sensor),		136,75
4.3.2. THERMOMETER-RECORDER LB-520TX (with a display, outside sensor)		
with a standard sensor ( -60°C do +80°C)*, *6)		152,74
additional payment for a special sensor (-100...+200°C)	depends on a sensor type	
additional payment for a special sensor (-200...+550°C)	depends on a sensor type	
4.4. HYTHEROGRAPH-RECORDER LB-520 (with a display, -30...+80°C, 10...95% RH)		283,47
4.5. HYTHEROGRAPH-RECORDER LB-520B (with a display, -30...+80°C, 10...95% RH) economic version, lower measurement accuracy		206,52
4.6. HYTHEROGRAPH-RECORDER LB-520H (with a display, -30...+80°C, 0...100% RH)		329,83
4.7. HYTHEROGRAPH-RECORDER LB-535 (wireless, memory, display, -30...+80°C, 10...95% RH), *2a)		300,16
4.8.1. THERMOMETER LB-535T (wireless, memory, display, -30...+80°C, internal sensor), *2a),		300,16
4.8.2. THERMOMETER - PYROMETER LB-535TI with IR sensor (surface temp.: -70°C do +.380°C, wireless, memory, display), *2a),		202,58
4.8.3. THERMOMETER LB-535TX (wireless, memory, display, external sensor), *2a),		
with a standard sensor ( -60°C do +80°C)*, *6)		175,92
additional payment for a special sensor (-100...+200°C)	depends on a sensor type	
additional payment for a special sensor (-200...+550°C)	depends on a sensor type	
4.9. INTERFACES AND SOFTWARE FOR PC FOR THE LAB-EL RECORDERS, ASSEMBLY HANDLE:		
4.9.1. Interface LB-513 for programming and readout from the recorders LB-515, USB interfaace (set of: program LOGGER /U for 1 PC, USB cable)		113,57
4.9.2. Interface LB-513P for programming and readout from the recorders LB-515 and LB515P, USB interface (set of: program LOGGER /U for 1 PC, USB cable)		119,37
4.9.3. Interface LB-521/USB for programming and readout from the recorders LB-520		

(set of: program LOGGER /U for 1 PC, USB cable)	123,08
4.9.4. Stand LB-528 – multi-function stand for a recorder series LB-520	11,36
4.9.5. Handle with a lock LB-529 – for installation of a recorder series LB-520 on a wall	19,93
4.9.6. Interfaces LB-526 for wireless connection with LB-525 series, interface USB	
(set of: program LBX for PC, USB cable, for 1 logger LB-525)	146,25
(license extension for LBX program)	as in LBX price list
4.10. TEMPERATURE RECORDER-THERMOGRAPH LB-530 – measurement of up to 4 temperatures, 4 input door sensors scope of temperature measurement: -100...+200°C, scope of work temperatures -30...+70°C, recorder module with a built-in printer	533,10
additional payment for each standard sensor TL-2 (-40°C...+80°C)*, *6)	17,85
additional payment for each standard sensor TL-5 (-40°C...+70°C)*	22,48
screen with a handle for sensor assembly in a car	7,19
base for recorder assembly on a wall (i.e. in a car)	16,92
additional external power supply from 230V AC	28,28
4.11. RECORDER LB-755A - displays and stores the measurement results from 2 meters:	
LB-710, LB-711, LB-746, LB-747 (different upon request)	245,92
4.11.1. Protective cover (shoulder bag)	16,92
4.11.2. Printer KAFKA -1R (stationary)	216,48
4.11.3. Printer KAFKA -1 Portable (portable, in a protective cover, with a built-in accumulator)	312,91
4.11.4. Connection cables for car installation	14,14

## 5. The meters of other climate parameters and carbon dioxide concentration

5.1. WIND SPEED AND DIRECTION METER LB-746; a device can cooperate with one of the displaying panels or the recorders	
Anemometer LB-746 is built based on the mechanical elements of USA production	1277,35
Anemometer mechanics LB-746 (no internal electronic system)	1135,96
5.2.1. WIND SPEED AND DIRECTION METER LB-747; a device can cooperate with one of the displaying panels or the recorders	
Anemometer LB-747 is built based on the mechanical elements of British production (with a holder for a mast)	779,02
Anemometer LB-747P – measurement of only wind speed (no direction, with a holder for a mast)	619,09
Anemometer mechanics LB-747 (no internal electronic system, with a holder for a mast)	639,95
5.2.2. WIND METER CONVERTER LB-380 (for LB-747 mechanic, outputs: 0..10V, 4..20mA)	137,91
5.3. ATMOSPHERIC RAINFALL METER; a device can cooperate with one of the displaying panels or the recorders	
rain gauge ARG100	403,07
rain gauge RG50 with a heater	price to be settled
5.4. SUN RADIATION METER LB-900/LB-901 – in a version with a sensor:	
without a sensor, ready for connecting external sensor	139,07
with a silicon photodiode	226,22
with a sensor Kipp & Zonen SP LITE	750,28
with a sensor Kipp & Zonen NR LITE	1979,42
with a sensor Kipp & Zonen CMP3	1265,53
with a sensor Kipp & Zonen PQS1	1016,13
with a sensor Kipp & Zonen CMP21	4499,35
with other Kipp & Zonen sensors - please ask	
5.6. ULTRASOUND SNOW / WATER METER SR50A	1195,07
5.7. SURFACE MOISTURE METER LB-910	135,82
5.8.1. ANEMOMETER Kestrel 2000 – portable, turbine meter of air flow and temperature	121,69
5.8.2. ANEMOMETER Kestrel 3000 - as Kestrel 2000 plus measurement of air humidity	189,83
5.8.3. ANEMOMETER Kestrel 5000 - as Kestrel 3000 plus pressure measurement & registry in a memory	404,92
5.8.3. ANEMOMETER Kestrel 5500 - as Kestrel 5000 plus wind direction and more...	505,98

5.8.4. ANEMOMETER INTERFACE Kestrel 4000 for PC + a PC program for memory readout	94,80
5.8.5. Kestrel Portable Rotating Vane Mount + Mini Collapsible Tripod	101,29
5.8.6. Spare (exchangeable) turbine for Kestrel anemometer	19,01
5.9. ANEMOMETER AV-9201 – portable, turbine meter of air flow and temperature	77,88

#### **CO2 CARBON DIOXIDE CONCENTRATION METERS (SENSORS)**

5.10. CO2 and temperature METER / regulator LB-850A (measurement range: 0..10000 ppm, 0..50°C) display, 2 transmitter outputs, outputs: 0..10V, RS-232, S300 TL-4/N - external sensor of temperature (1 m cable)	394,03 18,54
5.11. CO2 METER LB-852 (without display), measurement range: 0..10000 ppm outputs: 0..10V, S300, *2a) option: power supply LB-830 for TS35 mount, option: air filter - for LB-760/LB-762 systems)	299,00 12,75 18,54
5.12. CO2 METER LB-853 (without display), measurement range: 0..10000 ppm OUTPUTS: 0..10V, 2 relays	194,70
5.13. CO2 and temperature METER / regulator LB-854 (measurement range: 0..10000 ppm, 0..50°C) display, 2 transmitter outputs, outputs: 0..10V,, 4-20 mA, RS-232, S300 TL-4/N - external sensor of temperature (1 m cable)	394,03 18,54
5.14. MODULE collection of environmental data / CO2 meter LB-856 (without display) measurement range: 0..10000 ppm, output: Ethernet; inputs: S300, 0..10V, external temperature sensor, *2a)	336,08

#### **6. Universal reading, registry and regulation panels, measurement systems, LAB-EL meteorological stations**

6.1. CURRENT CONVERTER LB-371- for connecting the meters with an interface S300to an input RS232C with a galvanic separation, outside calculator feeder, joints DB25/DB25 Additional adapter for RS-232 - DB25/DB9 LB-373	18,31 5,56
6.2. CURRENT CONVERTER LB-375- for connecting the meters with an interface S300to an input USB with a galvanic separation, powered from USB, *a), *c), *19) USB/USB cable - LB-375 accessory	18,31 2,32
6.3. CONVERTER LB-470 - interface S300 for two outputs 4..20mA, galvanic separation	67,91
6.4. TEMPERATURE REGULATOR LB-472 – output for Pt100/Pt1000, three level transmitter output	84,83
6.5. CONCENTRATOR LB-473 – 8 input, output RS-232/485	183,80
6.6. TEMPERATURE REGULATOR LB-474 – input for 2 sensors Pt100/Pt1000, 5 transmitter key outputs	173,84
6.7. BLOCK FOR 5 TRANSMITTERS LB-475 for a regulator LB-474	42,42
6.8. CONCENTRATOR RECORDER LB-476 - 8 inputs, memory, RS-232/485 & alarm outputs additional payment for optionally built-in interface Ethernet 10/100 (version LB-476E)	282,77 81,12
6.9.1. DATA ACQUISITION MODULE LB-480 Ethernet, memeory, display, SD), *a), *19) 8 inputs: S300/0-20mA/0-10V/Tremistor/Pt1000, 3 optional interface modules	593,83
6.9.2. DATA ACQUISITION MODULE LB-490 Ethernet, memeory, big graphic display, SD), *a), *19) 16 inputs: S300/0-20mA/0-10V/Tremistor/Pt1000, 6 optional interface modules, sleep function	1145,23
6.9.3. Additional options for LB-480 and LB-490: additional internal POE supply module	27,81

LB-499-RS232 module with RS-232 interface, galvanic isolation	11,59
LB-499-RS485 module with RS-485 interface, galvanic isolation	11,59
LB-499-REL2 module with two relays SPDP 2A/250VAC	11,59
LB-499-EL-WAVE module for wireless communication with LB-525A	45,20
LB-499-GSM module for GSM communication (GPRS and SMS service)	134,43
LB-499-GPS module with GPS receiver (localization and time service)	45,20
LB-499-AIN module with additional 3 inputs S300/0-20mA/0-10V	34,77
6.10. CONVERTER LB-489 (4 x thermometer/S300/0-3V, Ethernet output, see point 2.2.), *a)	144,86
6.11. TEMPERATURE REGULATOR LB-708TR – temperature measurement and regulation during a heating process (PID), big, easy to read display, interface RS-232, maximum scope: - 200°C..+550°C,	395,88
additional payment for a sensor in a standard realisation TL-2 (-40°C...+80°C)*	22,48
additional payment for a sensor in a special realisation	depends on a sensor type
6.12. CLIMATE REGULATOR LB-720C it includes: hytherograph LB-710, control –reading panel LB-722C and programmer (pilot) LB-721;	
basic version: panel work temperature: 0°C...70°C	570,42
version LB-720CM: panel work temperature: -40°C...70°C	623,26
6.13. UNIVERSAL READING PANEL LB-724 with a programmer (pilot) LB-723 - stationary; displays chosen (maximum two) climate parameters; for cooperation with: LB-710, LB-716, LB-716D, LB-746, LB-747, LB-711, LB-750 and a rain gauge	310,12
external printer KAFKA 1/Z (300 boud)	293,20
6.14. RECORDER LB-755A – displays and memorises the measurement results from 2 devices: (for details – see below 4.9)	245,92
6.15. CLIMATE REGULATOR FOR MUSHROOM GROWING LB-760A & LB-762 – measurement, regulation and registry of base temperature, air temperature and humidity and CO2 concentration	see price calculation according to a separate statement of expenses
6.16. INDUSTRIAL REGULATOR LB-600 a casing, a feeder, an operation packet, a central unit (LB600-A - 230V, LB600-B - 24V)	409,56
module of 10 analogue inputs (LB600-C04-10)	182,64
module of 5 analogue inputs (LB600-C04-5)	133,27
module of 8 binary inputs and 6 outputs (LB600-C06)	92,94
transmission module RS-232, RS-485, 4xS300 (LB600-C08)	56,09
module of 2 current analogue or voltage outputs (LB600-C09)	114,50
additional door for regulator casing	24,34
program for PC/Windows configuration-simulation	69,53
program LBX for PC/Windows – visualization, registry, cooperation with other devices - see point 11.10.	
6.17. BLOCK WITH 8 RELAYS (multi purpose, RS-232 input, case for TS35 rail)	139,07

## **7. Simple climate indicators**

### **7.1. Simple thermometers**

7.1.1. THERMOMETER WT-1	14,37
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### **7.2. Simple hytherographs**

7.2.1. HYTHEROGRAPH LB-103 (min/max memory, big display)	23,05
7.2.2. HYTHEROGRAPH LB-104 (min/max memory, portable)	17,38

### **7.3. Simple meteorological stations**

7.3.1. Meteorological station WS-3650	115,89
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## 8. Moisture meters for building industry and soil

(with no calibration certificate)

8.1. MATERIALS' MOISTURE METER LB-796A - multifunction device	
basic set for moisture measurement of wood, concrete, brick etc., capacitance method	424,16
additional resistance probe LB-796RC for wall materials + metal dowel	17,38
additional universal resistance probe LB-796RUT with temperature sensor	58,64
spare parts - plate electrode type C: for thin materials, for probe LB-796RUT	5,79
spare parts - sand sensor needles type D: 10cm, for probe LB-796RUT	6,49
additional needle hammer probe for wood LB-796RMT, internal temperature sensor	67,91
spare parts - wooden sensor needles type E: 10 mm, dia. 3 mm, for probe LB-796RMT and LB-796RUT	5,33
spare parts - wood sensor needles type F: 15 mm, dia. 3 mm, for probe LB-796RMT and LB-796RUT	5,79
additional probe for temperature measurement of any medium - thermometer TL-2/796/DB9	26,89
additional probe for air temperature and humidity measurement - HYTHEROGRAPH LB-710CB	173,84
program LB79x for modification of calibration data for various materials, PC cable	19,70
8.2.1. Additional probe for bulk materials (with the container) LB-798	339,33
8.2.2. Additional probe for bulk materials and soil (with the needles) LB-797	537,27
8.2.3. Panel LB-796P (without internal probe) for reading data from sensors LB-797, LB-798	282,77
8.2.4. Program LB79x for modification of calibration data for various materials, PC cable, power supply	19,70

## 9. Computer devices, interfaces

9.1. CARD PC/PCI, 2 ports RS-232, DB9M	16,22
9.2. CARD C168H/PCI Moxa for PC/PCI - , 8 ports RS-232, RS-422/485; 921,6 Kbps;	142,78
9.2.1. Connection BOX OPT-8A for a card C168H/PCI, 8 ports RS-232, DB25F + cable DB-62	84,83
9.2.2. Connection BOX OPT-8A for a card C168H/PCI, 8 ports RS-232, DB25M + cable DB-62	84,83
9.2.3. Fork CABLE OPT-8C for a card C168H/PCI, DB-62 for 8 ports RS-232, connections DB25M, 1m	24,80
9.2.4. Fork CABLE OPT-8D for a card C168H/PCI, DB-62 for 8 ports RS-232, connections DB9M, 1m	24,80
9.2.5. Connection BOX OPT-8F for a card C168H/PCI, 8 ports RS-422 with isolation, connections DB25F	384,99
9.2.6. Connection BOX OPT-8Z for a card C168H/PCI, 8 ports RS-422, connections DB25F	132,58
9.2.7. Connection BOX OPT-8K for a card C168H/PCI, 8 ports RS-422/485, connections DB25F	231,55
9.2.8. Connection BOX OPT-8S, RS-232, connection DB25F, over-voltage protection	181,95
9.2.9. Connection BOX OPT-8-RJ-45, 8 ports RS-232, connection RJ-45	130,26
9.2.10. Connection BOX OPT-8-M9, 8 ports RS232, connections DB9M	109,63
9.3. CARD C104H/PCI for PC/PCI - Moxa - 4 ports RS-232; 921,6 Kbps;	109,63
9.4. CARD C104HS/PCI for PC/PCI - Moxa - 4 ports RS-232; 921,6 Kbps, over-voltage protection	157,38
9.5. CARD CP132UL-I for PC/PCI - Moxa, 2 ports RS-422/485; 921,6 Kbps, optoisolation	190,29
9.6. GALVANIC SEPARATOR series LB-300-without outside power supply; for the connections RS232C	11,59
9.7. GALVANIC SEPARATOR series LB-300-with an outside power supply; for the connections RS232C	16,69
9.8. VOICE-MODEM (PCI card)	17,15
9.9. SIO – PC TERMINAL EMULATOR	61,65
9.10. Converter DE-311 (1 port RS-232/422/485 for LAN network 10/100 Mbps)	128,41
9.11. Converter Transio A53 Moxa (RS-232/RS422/485, galvanic isolation, a feeder)	71,16
9.12. CONVERTER USB/RS232	11,13

## 10. Devices for radio data transmission

10.1. GSM/GPRS MODEM Fastrack (module, cable RS-232, 230V AC adapter,	189,13
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cable for car DC supply, antenna)	
GSM/GPRS MODEM Fastrack (module without accesory)	#ADR!
accesory to MODEM Fastrack: antenna	7,88
accesory to MODEM Fastrack: power supply	14,60
accesory to MODEM Fastrack: RS-232/DB15 cable	2,32

## 11. Interfaces for the LAB-EL meters' calibration, PC software

11.1. CURRENT CONVERTER LB-371-for the meters' calibration	18,31
11.2. CURRENT CONVERTER LB-371C for calibration meters with S300 interface with USB input (with cable)	43,81
11.3. CALIBRATOR LB-291 for the hytherographs LB-701 (24 station)	1413,87
11.4. CARD LB-280M for 8 station hytherograph calibration LB-710	556,28
11.5. A cable for meter calibration (length 2 m)	25,50
11.6. ONE STATION SOFTWARE FOR CALIBRATION OF THE METERS SERIES LB-71x for calibration of a chosen (one) device type (only for DOS or FreeDOS)	104,30
11.7. MULTI-STATION SOFTWARE FOR CALIBRATION OF THE METERS SERIES LB-7xx simultaneous work of up to 4 cards LB-280K and a calibrator LB-291 (only for DOS or FreeDOS)	1576,12
11.8. LAB-EL CALCULATOR OF MOISTURE (PC program)	89,00
11.9. Program LOGGER for PC for data readout from a recorder, graph, archive for: LB-515 (interface LB-513, LB-514), LB-516, LB-520 (interface LB-521), LB-726, LB-755A, logger PASTYLKA: 21G, 21H, 22L i 23 (interface LB-513P)	75,33
11.10. PROGRAM SCADA "LBX" (processes visualization, synoptic screens, alarms, the archiving, diagrams, etc.) price depends on a program configuration, available modification to individual client's requirements	
basic module-visualization of 1 device	75,33
support module of an additional measurement device series LB-xxx	17,38
support module of an additional client to a server	50,99
support module of an additional MODBUS register (universal driver)	4,64
for each additional 12 months of the warranty extension counted from the day of ending the last warranty period	20% of the initial price of the set
11.11. PROGRAM "BASIC" - for conecting various LAB-EL devices to PC - price included in devices price	

## 12. The masts for the anemometers, equipment, the books, and other

12.1. METEOROLOGICAL CAGE LB-719 for a HYTHEROGRAPH LB-710R	95,73
an extension arm with a handle for a mast (1 inch pipe)	34,54
12.2. MRS-04 - Pipe mast, folding, with the stays, of height 4 m, for an anemometer	508,99
12.3.1. MK-10 - Truss mast, with the stays, of height 10 m	450,58
12.3.2. MK-12 - Truss mast, with the stays, of height 12 m	480,02
12.3.3. Wind sensor mounting arm	63,28
12.3.4. Mounting of the mast (without the concret base)	241,05
12.3.5. Mast transportation (proce for 1 km)	0,35
12.3.6. Building project for the mast for building permit	662,90
12.4. A grip for panel assembly LB-755A, LB-706 (i.e. in a car cabin)	16,92
12.5. Optical-acoustic signaler SZO-Av2	82,51
12.6. Optical-acoustic signaler with a built-in accumulator Odyssey-1E	57,02
12.7. Optical-acoustic signaler LD-96	9,97
12.8. A transition DB25/DB9 with a cable LB-373	5,56
12.9. REGULATION TECHNIQUE, REGULATOR LB-600, Automation of the processes... (a book)	5,79

12.10. MICROCLIMATE REGULATION IN A ROOM (a book)	9,73
12.11. PROTECTOR LB-341 – a module, lighting/ over-voltage protection for a symmetric line up to 24V	20,86
12.12.1. Kabel USB/USB standard cable, 1 m	2,32
12.12.2. Kabel RS-232 standard cable (DB9F/DB8M), 1 m	3,48
12.12.3. Ethernet standrad cable (RJ45/RJ45), 1 m	2,32
12.13. SHIPPING GOODS TO ADDRESS in POLAND by UPS	
parcel with weight up to 30 kg (payments for goods by bank transfer)	7,19
parcel with weight up to 30 kg (postal collection order, amount up to 1000 PLN)	9,04
parcel with weight up to 30 kg (postal collection order, amount from 1000 PLN up to 2000 PLN)	10,43
parcel with weight up to 30 kg (postal collection order, amount from 2000 PLN up to 3000 PLN)	11,36
parcel with weight up to 30 kg (postal collection order, amount from 3000 PLN up to 5000 PLN)	13,68
12.14. Alphanumeric 3-color display type 105, size 66 x 10 cm	176,15

### **13. Calibration and calibration with adjusting services of the devices in the outside laboratories, with LAB-EL mediation**

13.1. CALIBRATION IN THE CENTRAL OFFICE OF MEASURES – calibration of the hytherographs:	
Hytherograph calibration	282,77
13.2. CALIBRATION IN THE AIR FORCE INSTITUTE OF TECHNOLOGY of the barometers and the pressure meters	
calibration of the barometer model LB-750W in 13 points: 10, 100, 200, 300, ....., 1100, 1200 hPa	227,15
calibration of another models	price to be settled
13.3. CALIBRATION IN THE INSTITUTE OF ENERGY - calibration of the thermometers:	
Price depends on a number of sensors checked and checked temperatures	minimum 83,67
13.4. CALIBRATION IN PAN - calibration of the anemometer	156,45

### **14. Calibration of hytherographs, hygrometers, thermometers, psychrometers, dew point hygrometers, barometers, in the Humidity, Temperature and Pressure Laboratory LAB-EL - Accredited Laboratory - AP 067**

#### **Temperature, humidity**

Calibration of hytherographs, hygrometers, thermometers and psychrometers for measurement of relative humidity and/ or air and gasses temperatures. Calibration is offered in the scope: relative humidity 10%..98% RH, temperature -10°C...+60°C and dew point temperature -10°C...+40°C. Standard calibration points: 22°C: 29%, 57% i 85%, 5°C: 57%, 42°C: 57%. Calibration is performed in a climate chamber.

Calibration of the electronic thermometers (with outside sensors on the cables) and the platinum sensors of the Industrial resistance thermometers is offered in the scope: -90°C...+250°C and in the temperature -195,8 °C. Standard calibration points a) -20°C, +35°C, +80°C, b) 0°C, -20°C, -50°C. c) -20°C, 0°C, +35°C, +80°C, d) +100°C, +150°C, +195°C Calibration is performed in a liquid thermostat or dry thermostat.

Discount for calibration from 2 to 4 devices (similar probes, sensors) in the same points	-10%
Discount for calibration from 5 to 8 devices (similar probes, sensors) in the same points	-20%
Discount for calibration from 9 devices (similar probes, sensors) in the same points	-30%

14.1. Meter conservation before next calibration – upon request	18,54
14.2. Calibration of a hytherograph, a hygrometer, or a thermometer in a climate chamber.	

First calibration of a hytherograph or a hygrometer LAB-EL (5 standard points)	34,77
First calibration of a hytherograph LB-103, LB104 (5 standard points)	34,77
First calibration of a thermometer LB-105P (1 internal sensor, 1...3 standard points)	34,77
First calibration of a button logger LB-515P (standard points)	34,77
First calibration of a LAB-EL device, for each additional non standard calibration point	34,77
Calibration of a typical* hytherograph or a hygrometer (5 standard points)	81,12
Calibration of an non typical* hytherograph or a hygrometer (5 standard points)	113,57
Payment for each non standard calibration point of a hytherograph or a hygrometer	46,36
Recalibration of the mini temperature recorder LB-516T, LB-516AT (1...3 standard points)	57,95
Recalibration of a hytherograph LB-103, LB-104 (standard points)	57,95
Recalibration of a thermometer LB-105P1 (1 internal sensor, 1...3 standard points)	57,95

\*) **Typical** hytherograph-a hytherograph produced by LAB-EL or different, which allows on constant temperature and humidity reading without a need for repeating the manual operations.

**Not typical** hytherograph is a device, which independently switches itself off after some time and requires repeating the manual operation on its keyboard in order to obtain a measurement result.

#### 14.3. Thermometer calibration in a liquid or dry thermostat.

First calibration of a LAB-EL thermometer (1...3 standard points)	34,77
First calibration of a thermometer LAB-EL (4 standard points)	44,04
First calibration of a LAB-EL thermometer (1...3 non standard points)	41,72
First calibration of a thermometer LAB-EL, for each additional non standard point of calibration	11,59
First calibration of a thermometer WT-1 (1...3 standard points)	34,77
First calibration of a thermometer LB-103 (1 internal sensor, 1...3 standard points)	34,77
First calibration of a thermometer LB-105P1 (1 external sensor, 1...3 standard points)	34,77
First calibration of a thermometer LB-105P2 (2 external sensors, 1...3 standard points)	46,36
Thermometer calibration (1 standard point)	39,40
Thermometer calibration (2 standard points)	62,58
Thermometer calibration (3 standard points)	81,12
Thermometer calibration (4 standard points)	90,39
Recalibration of a thermometer LB-103 (1 internal sensor, 1...3 standard points)	46,36
Recalibration of a thermometer LB-105P1 (1 external sensor, 1...3 standard points)	46,36
Recalibration of a thermometer LB-105P2 (2 external sensors, 1...3 standard points)	57,95
Recalibration of a thermometer WT-1 (1...3 standard points)	46,36
Payment for each non standard calibration point of a thermometer	46,36

#### 14.4. Pyrometer (non contact thermometer) calibration (any pint in the range -15°C... +500°C)

1 calibration point	22,02
2 calibration point	30,13
3 calibration point	38,24
each next calibration point	12,75

#### 14.5. Calibration of climatic chambers

price after agreements the scope of works

#### 14.6. Calibration in situ in Client location

price after agreements the scope of works

## Pressure

Calibration of the barometers is offered in the scope 700 hPa ... 1100 hPa.

Standard calibration points: 700, 780, 860, 940, 1020 i 1100 hPa (for barometers with a scope 800 ... 1100 hPa) or 850, 900, 950, 1000, 1050 i 1100 hPa (for barometers with a scope 850 .. 1100 hPa).

Calibration of the differential pressure meters is offered in the scope +/- 1400 Pa.

Discount for calibration from 2 to 4 meters	-10%
Discount for calibration from 5 meters	-20%

14.7. Calibration with an adjustment of the barometers (in the scope provided above):	
First calibration with an adjustment of a LAB-EL pressure meter (up to 6 calibration points)	34,77
Pressure meter calibration (up to 10 calibration points)	81,12
Payment for each additional point of pressure meter's calibration	13,91
14.8. Preparing of duplicate of Calibration Certificate in Polish language	11,59
14.9. Preparing of duplicate of Calibration Certificate in English language	23,18

## Gas flow

Maximum surface size of the calibrated anemometer in the scope of accreditation is 90 cm<sup>2</sup>.

14.10. Thermo-anemometer calibration in the scope of accreditation 0,3...40 m/s	
14.11. Propeler anemometer calibration in the scope of accreditation 1...40 m/s	
Suggested calibration points: 1, 2,5, 5, 7,5, 10, 15, 20, 25 m/s	
Anemometer calibration - first point of calibration in the scope of accreditation	46,36
Anemometer calibration - each next point of calibration in the scope of accreditation	9,27
Anemometer calibration - each point outside of the scope of accreditation	4,64

## 15. Calibration of another meters in in the Humidity, Temperature and Pressure Laboratory LAB-EL (without accreditation)

15.1. Calibration with an adjustment of the pressure meters (in the scope 0 ... 700 kPa):	
First calibration with an adjustment of a LAB-EL pressure meter (up to 6 calibration points)	11,59
Calibration with an adjustment of a pressure meter (up to 10 calibration points)	41,72
Calibration (without an adjustment) of a pressure meter (do 10 calibration points )	27,81
Payment for each additional calibration point of a pressure meter	9,27

## 16. Microclimate measurements of rooms - Accredited Laboratory - AB 679

Price after agreements the scope of works

### REMARKS TO THE OFFER:

\* Attention: Scope of work temperatures of the standard PCV cables equals:  
in permanent installations: -30°C...+70°C, and in mobile connections -5°C...+70°C.  
Upon request – the cables for an extended scope of temperature are available: silicone -50°C...+180°C  
and teflon -80°C...+250°C.

**\*1) To the net prices provided above one needs to add vat tax 23% (inside Poland) or 0% (for export or EU delivery).**

**\*2) Devices can be connected to the PC with using of the following software:**

**\*2a) "LBX" program** (not included in the device price, offer - look at point 11.10 in the price-list)

**\*2b) "LOGGER" program** (not included in the price of the device, offer - look at point 11.9 in the price-list)

**\*2c) "DEDICATED" programs** (included in the price of devices)

LOGGER or LBX programs are covered by a 24-month warranty calculated from the date of invoice issue.

The guarantee authorizes you to download the updates from the website: <http://www.label.pl/po/ix.soft.html>.

After this period, we offer a subscription for further updates in accordance with the offer from the price list. 11.10.

Programs can be downloaded from the address: <http://www.label.pl/po/ix.soft.html>

**\*3) The meters' price does not include the calibration certificates (offer for certificates see pint 13...15).**

\*4) New hytherographs, hygrometers, thermometers and barometers produced by LAB-EL can have the calibration certificates calibrations from an accredited Calibration Laboratory LAB-EL in a promotion price 150 PLN (37 EUR).

- it does not apply to LB-103, LB-104, WT1 and LB-515P, for which a promotion price for a certificate is EUR: 34,77

- it does not apply to barometer LB-750W, calibrated in external laboratory (see point 13.2).

\*5) Standard sensor in the thermometers is of TL-2 type (diameter 5,8 mm, length 100 mm, cable length 1 m).

\*6) Sensor TL-2 with 1 meter cable. Additional cable length - add 1,20 EUR/m.

\*7) Additional length of a casing shield for the standard TL-2 sensors – additional payment 0,25 EUR/cm.

\*8) Offer's realisation period: from 1 day to 2 months.

\*9) Payment – prepayment by wire transfer or in cash.

- \*10) We assure 24 months warranty for our products and a full after warranty service performed at the company's headquarters.
- \*11) For the not LAB-EL production devices we assure 12 months warranty.
- \*12) Transport and insurance are paid by a client (prices EXW).
- \*13) We provide assistance in installing / configuring the devices.
- \*14) We perform device modifications according to a client's individual needs.
- \*15) This offer is not an offer in the understanding of the Civil Code.
- \*16) We reserve a right to change the prices that results from the changes in the exchange rates during a period in which this price list is being effective.
- \*17) The price list is valid only until a new one is announced.
- \*18) The prices were calculated based on the NBP exchange rate tables dated: 2018-11-05  
for the following exchange rates PLN/EUR: 4,3144
- \*19) Standard cables are not included in the sets, must be ordered separately (USB, Ethernet,...)
- \*20) All orders and agreements should be in written form only and should be signed by all persons authorised by law.
- \*21) Information about technical parameters of the devices offered available: <http://www.label.pl>

**Check our actual prices in the Internet:**

