Весоизмерительные приборы
Каталог продукции **LAUMAS**

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Россия (495)268-04-70
Киргизия (996)312-96-26-47
Казахстан (7172)727-132

Эл. почта mfd@nt-rt.ru || Сайт: https://laumas.nt-rt.ru/

Certifications

“Made in Italy” Electronic Instruments for weighing and batching

LAUMAS produces Weight Indicators and Transmitters for PC/PLC connection to the most important international brands (Siemens, Rockwell Automation, Allen-Bradley, B&R Automation, Omron, Beckhoff, Schneider, Panasonic, Mitsubishi, Bosch Rexroth, Vipa, ABB, etc.) through the main fieldbuses on the market (Modbus RTU, Modbus TCP, PROFIBUS DP, PROFINET IO, Ethernet/IP, Ethernet TCP/IP, EtherCAT, POWERLINK, DeviceNet, CANopen, CC-Link, CC-Link IE, IO-Link, SERCOS III, etc.).

The wide range of products and components for industrial weighing systems is designed to be in compliance with the most relevant industry standards and is certified by the most established national and international bodies.

TABLE OF CONTENTS

PRODUCTS CATALOG

LAUMAS®

		PAGE
B1	**WEIGHT TRANSMITTERS**	
B1.1	LOAD CELLS DIGITIZERS	4
B1.2	MULTICHANNEL	4
B1.3	SINGLE CHANNEL	4
B1.4	WiFi	5
B1.5	WEB SERVER MASTER	5
B1.6	TRANSMITTERS BOXES	5
B2	**INTELLIGENT JUNCTION BOXES**	
B2.1	MULTICHANNEL	45
B3	**WEIGHT INDICATORS**	
B3.1	WEIGHT INDICATORS	51
B3.2	WEIGHT INDICATORS (WEIGHING AND BATCHING)	51
B3.3	BATCHING SYSTEMS WITH SEVERAL SCALES	53
B3.4	WEIGHBRIDGES	53
B3.5	SUPERVISORY SOFTWARE	54
B4	**ADPE**	
B4.1	WEIGHT INDICATORS IN EXPLOSION PROOF BOX	190
B4.2	FAIL-SAFE ZENER BARRIERS	190
B5	**REMOTE DISPLAYS, CONVERTERS AND PRINTERS**	
B5.1	CONVERTERS / WiFi-SERIAL TRANSCEIVERS	198
B5.2	REMOTE DISPLAYS	198
B5.3	THERMAL PRINTERS	198

B1 - WEIGHT TRANSMITTERS

PRODUCTS CATALOG

LAUMAS®

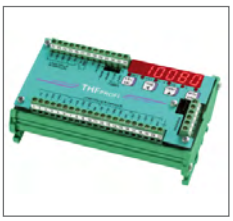
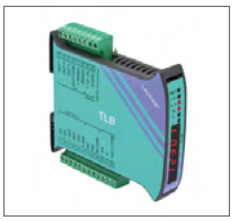
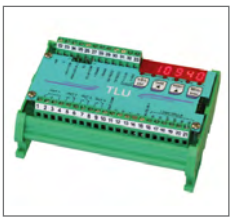
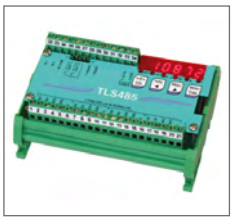
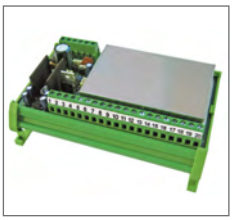
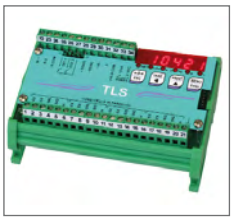
B1.1 LOAD CELLS DIGITIZERS

	LCB	7			

B1.2 MULTICHANNEL

	TLB4	10		TLM8	14

B1.3 SINGLE CHANNEL

	TLK	19		THFPROFI	31
	TLB	21		TLU	33
	TLE	25		TLL	35
	TLS485	27		TPS	37
	TLS	29		LCD2	39

B1.4 WiFi

TLKWF	41

B1.5 WEB SERVER MASTER

WEBLAU	43

B1.6 TRANSMITTERS BOXES

CASTLATEX	44

CASTLTASTATEX	44

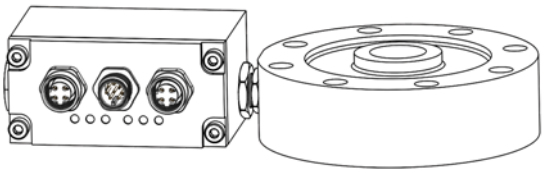
LCB

UNIVERSAL LOAD CELLS DIGITIZER

RS485 ANALOG OUTPUT IP67

COMING SOON

M OIML cULus ALIBI



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 ¼ 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

FIELDBUSES

MODBUS RTU MODBUS/TCP ETHERNET POWERLINK EtherCAT EtherNet/IP IO-Link

PROFIBUS PROFINET CC-Link CC-Link IE CANopen SERCOS interface ETHERNET TCP/IP

ISO 9001
ISO 14001

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	*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.	LCBRS485ANA	
IO-Link. **2x** male M12 circular connector, A-coded, 4-pin. The instrument works as *device* 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 *slave* in a CANopen synchronous network.	LCBCANOPEN	
CC-Link IE. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a CC-Link IE network.	LCBCCLINKIE	*coming soon*
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.	LCBCCLINK	*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.	LCBPROFIBUS	*coming soon*
Modbus/TCP. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* 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	*coming soon*
Ethernet/IP. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *adapter* in an Ethernet/IP network.	LCBETHEIP	
Profinet IO. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *device* in a Profinet IO network.	LCBPROFINETIO	
EtherCAT. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in an EtherCAT network.	LCBETHERCAT	
POWERLINK. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a Powerlink network.	LCBPOWERLINK	
SERCOS III. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a Sercos III network.	LCBSERCOSIII	

LCB
UNIVERSAL LOAD CELLS DIGITIZER

LAUMAS®

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.

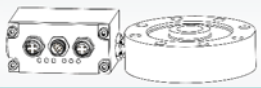
SINGLE PRODUCT LOADING PROGRAM

- 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	300/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
	COMING SOON Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

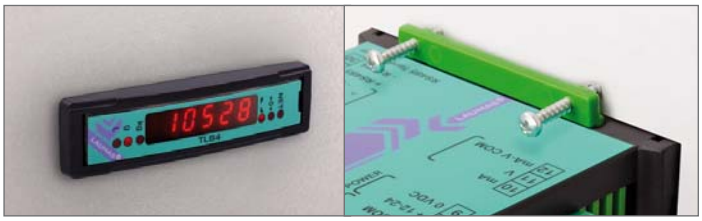
ISO 9001
ISO 14001

TLB4

WEIGHT TRANSMITTER - 4 INDEPENDENT CHANNELS

RS485 ANALOG OUTPUT ALIBI

Front panel mounting (fixing kit included)



DESCRIPTION

- Weight transmitter with 4 independent reading channels with display of the total weight.
- The TLB4 series allows to have same benefits and performance of an advanced digital weighing system even using analog load cells.
- Back panel mounting on Omega/DIN rail (space-saving vertical shape).
- Front panel mounting (except PROFIBUS DP version) with fixing kit included (panel drilling template: 96x23 mm; panel thickness: 2.5 mm).
- Dimensions: 115x26x120 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- Four buttons for the system calibration.
- Removable screw terminal blocks.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 3 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 4 load cell dedicated inputs.

FIELDBUSES

MODBUS RTU MODBUS/TCP CC-Link ETHERNET POWERLINK certified product DeviceNet EtherNet/IP PI CERTIFIED PROFIBUS • PROFINET

PROFIBUS PROFINET CANopen SERCOS interface ETHERNET TCP/IP EtherCAT

ISO 9001
ISO 14001

TLB4

WEIGHT TRANSMITTER - 4 INDEPENDENT CHANNELS

LAUMAS®

	DESCRIPTION	CODE
	RS485 serial port. Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s).	TLB4RS485
	Optoisolated 16 bit **analog output.** Current: 0÷20 mA; 4÷20 mA (up to 300 Ω). Voltage: 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ). Equipped with RS485 serial port.	TLB4
	CANopen port. Baud rate: 10, 20, 25, 50, 100, 125, 250, 500, 800, 1000 (kbit/s). The instrument works as *slave* in a synchronous CANopen network. Equipped with RS485 serial port.	TLB4CANOPEN
	DeviceNet port. Baud rate: 125, 250, 500 (kbit/s). The instrument works as *slave* in a DeviceNet network. Equipped with RS485 serial port.	TLB4DEVICENET
	CC-Link port. Baud rate: 156, 625, 2500, 5000, 10000 (kbit/s). The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations. Equipped with RS485 serial port.	TLB4CCLINK
	Profibus DP port. Baud rate: up to 12 Mbit/s. The instrument works as *slave* in a Profibus DP network. Equipped with RS485 serial port.	TLB4PROFIBUS
	Modbus/TCP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Modbus/TCP network. Equipped with RS485 serial port.	TLB4MODBUSTCP
	Ethernet TCP/IP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works in an Ethernet TCP/IP network and it is accessible via web browser. Equipped with RS485 serial port.	TLB4ETHETCP
	2x Ethernet/IP ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *adapter* in an Ethernet/IP network. Equipped with RS485 serial port.	TLB4ETHEIP
	2x Profinet IO ports. Type: RJ45 100Base-TX. The instrument works as *device* in a Profinet IO network. Equipped with RS485 serial port.	TLB4PROFINETIO
	2x EtherCAT ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in an EtherCAT network. Equipped with RS485 serial port.	TLB4ETHERCAT
	2x POWERLINK ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Powerlink network. Equipped with RS485 serial port.	TLB4POWERLINK
	2x SERCOS III ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Sercos III network. Equipped with RS485 serial port.	TLB4SERCOS

TLB4

WEIGHT TRANSMITTER - 4 INDEPENDENT CHANNELS

LAUMAS®

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.25 μV/VSI / OIML R61, R51 - WELMEC Guide 8.8:2017 (MID)

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
	Complies with New Zealand regulations for legal for trade use

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory.	OPZWALIBI

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 16 (350 Ω) - 4/6 wires • 5 VDC/240 mA
Linearity • Analog output linearity (only for TLB4)	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift (only for TLB4)	<0.0005% full scale/°C • <0.003% full scale/°C
A/D Converter	4 channels - 24 bit (16000000 points) - 4.8 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	600/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	21 levels • 5÷600 Hz
Relay outputs	3 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (only for TLB4)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

Relay outputs	3 - max 30 VAC, 60 VDC/150 mA
Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.25 μV/VSI
Working temperature	-10 °C +40 °C

TLB4

WEIGHT TRANSMITTER - 4 INDEPENDENT CHANNELS

MAIN FUNCTIONS

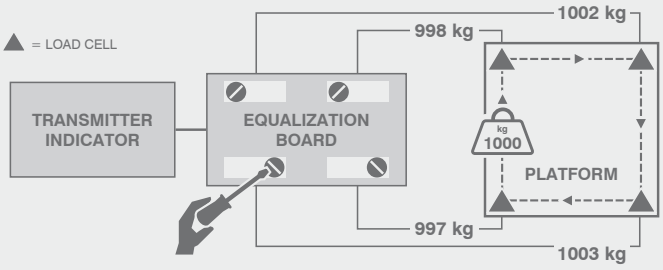
- 4 independent channels for load cells: monitoring and direct management of each connected load cell.
- Immediate reporting of anomalies (also on the connected weight indicator display).
- All the TLB4 functions can be managed by a W series weight indicator connected via RS485 serial port (excluding instruments with graphic display).
- Digital equalization of the 4 channels.
- Load distribution analysis on the 4 channels with backups archive: storing, consultation, printing.
- Detailed diagnostics of each load cell (max 4): depending on the type of weighing system you can perform:
  - load automatic diagnostics;
  - automatic diagnostics on zero.
- Tilt compensation of the weighing system up to ±10 degrees via inclinometer (not included). The weight correction is also valid for systems approved for legal for trade use.
- Archive of the last 50 significant events (zeroing, calibration, equalization, alarms): storing, consultation, printing.
- Transmission via RS485 (Modbus RTU) or fieldbus of the divisions for the 4 reading channels. Only the points of each load cell connected are transmitted, with no filter applied; the calculation of the weight value, the zero setting and calibration are made by the customer.
- Connections to:
  - PLC via analog output or fieldbus;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display, inclinometer and printer via RS485;
  - up to 16 load cells in parallel;
  - W series weight indicator via RS485.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Hysteresis and setpoint value setting.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.

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).
- Two operation mode: single interval or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

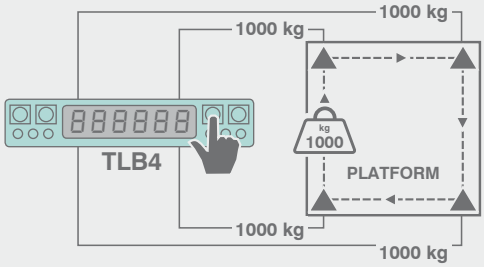
EQUALIZATION WITH JUNCTION BOXES

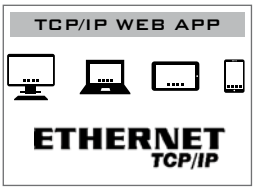
The equalization with junction boxes and trimmers requires several manual steps and can suffer drift over time, requiring subsequent repetitions of the same procedure.



DIGITAL EQUALIZATION

The TLB4 does not require the use of the junction box thanks to the support of 4 independent channels; the digital equalization function simplifies the procedure to a single step and it is free of drift over time.



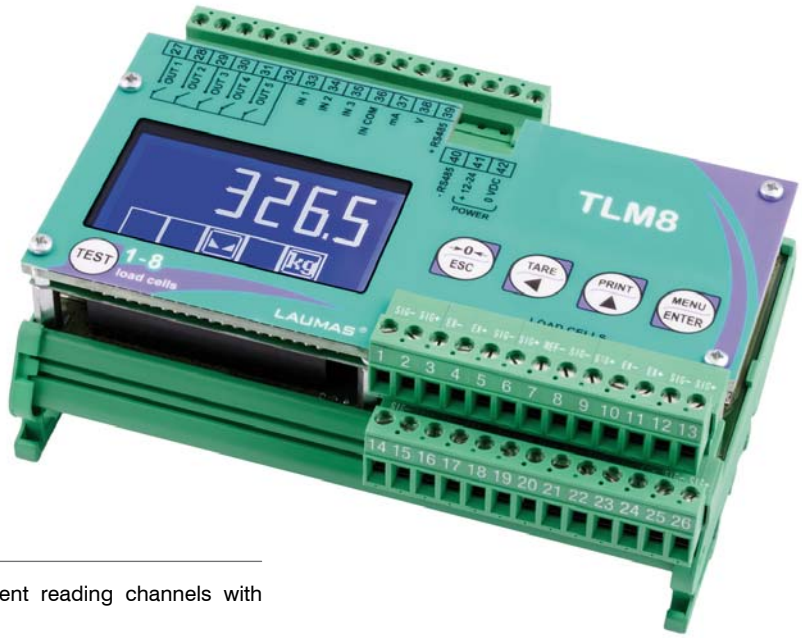


The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLM8

WEIGHT TRANSMITTER - 8 INDEPENDENT CHANNELS

IP67 RS485 ANALOG OUTPUT ALIBI Instrument Manager



DESCRIPTION

- Weight transmitter with 8 independent reading channels with display of the total weight.
- The TLM8 series allows to have same benefits and performance of an advanced digital weighing system even using analog load cells.
- TEST key for direct access to the diagnostic functions.
- Back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 148x92x60 mm.
- Backlit LCD graphic display, resolution: 128x64 pixel, visible area: 60x32 mm.
- 5-key keyboard.
- Removable screw terminal blocks.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

IP67 BOX VERSION (on request)

8+3 PG9 cable glands - plugs

8+3 PVC end-fittings for sheath

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- Current or voltage 16 bit analog output.
- 5 relay outputs controlled by the setpoint values or via protocols.
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 8 load cell dedicated inputs.

FIELDBUSES

MODBUS RTU · MODBUS/TCP · ETHERNET POWERLINK certified product · DeviceNet · EtherNet/IP · PI CERTIFIED PROFIBUS · PROFINET

PROFIBUS · CC-Link · CANopen · SERCOS interface · ETHERNET TCP/IP · EtherCAT

ISO 9001
ISO 14001

TLM8

WEIGHT TRANSMITTER - 8 INDEPENDENT CHANNELS

LAUMAS®

	DESCRIPTION	CODE
	RS485 serial port. Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s). 16 bit **analog output.** Current: 0÷20 mA; 4÷20 mA (up to 400 Ω). Voltage: 0÷10 V; 0÷5 V (min 2 kΩ)	TLM8
	CANopen port. Baud rate: 10, 20, 25, 50, 100, 125, 250, 500, 800, 1000 (kbit/s). The instrument works as *slave* in a synchronous CANopen network. Equipped with RS485 serial port and analog output.	TLM8CANOPEN
	DeviceNet port. Baud rate: 125, 250, 500 (kbit/s). The instrument works as *slave* in a DeviceNet network. Equipped with RS485 serial port and analog output.	TLM8DEVICENET
	CC-Link port. Baud rate: 156, 625, 2500, 5000, 10000 (kbit/s). The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations. Equipped with RS485 serial port and analog output.	TLM8CCLINK
	Profibus DP port. Baud rate: up to 12 Mbit/s. The instrument works as *slave* in a Profibus DP network. Equipped with RS485 serial port and analog output.	TLM8PROFIBUS
	Modbus/TCP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Modbus/TCP network. Equipped with RS485 serial port and analog output.	TLM8MODBUSTCP
	Ethernet TCP/IP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works in an Ethernet TCP/IP network and it is accessible via web browser. Equipped with RS485 serial port and analog output.	TLM8ETHETCP
	2x Ethernet/IP ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *adapter* in an Ethernet/IP network. Equipped with RS485 serial port and analog output.	TLM8ETHEIPN
	2x Profinet IO ports. Type: RJ45 100Base-TX. The instrument works as *device* in a Profinet IO network. Equipped with RS485 serial port and analog output.	TLM8PROFINETION
	2x EtherCAT ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in an EtherCAT network. Equipped with RS485 serial port and analog output.	TLM8ETHERCAT
	2x POWERLINK ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Powerlink network. Equipped with RS485 serial port and analog output.	TLM8POWERLINK
	2x SERCOS III ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Sercos III network. Equipped with RS485 serial port and analog output.	TLM8SERCOS

ISO 9001
ISO 14001

TLM8

WEIGHT TRANSMITTER - 8 INDEPENDENT CHANNELS

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 16 (350 Ω) - 4/6 wires • 5 VDC/240 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	8 channels - 24 bit (16000000 points) - 4.8 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	600/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	21 levels • 5÷600 Hz
Relay outputs	5 - max 115 VAC/150 mA
Optoisolated digital inputs	3 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 400 Ω) 0÷10 V; 0÷5 V (min 2 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5 - max 30 VAC, 60 VDC/150 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.2 μV/VSI
Working temperature	-10°C +40°C

TLM8

WEIGHT TRANSMITTER - 8 INDEPENDENT CHANNELS

LAUMAS®

MAIN FUNCTIONS

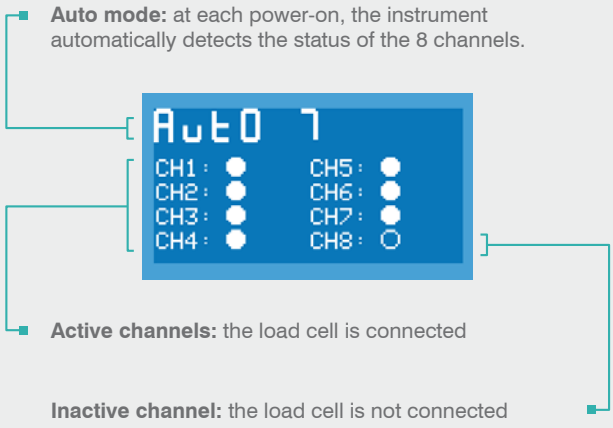
- 8 independent channels for load cells: monitoring and direct management of each connected load cell.
- Immediate reporting of anomalies (also on the connected weight indicator display).
- All the TLM8 functions can be managed by a W series weight indicator connected via RS485 serial port (excluding instruments with graphic display).
- Digital equalization of the 8 channels.
- Load distribution analysis on the 8 channels with backups archive: storing, consultation, printing.
- Detailed diagnostics of each load cell (max 8): depending on the type of weighing system you can perform:
  - load automatic diagnostics;
  - automatic diagnostics on zero.
- Tilt compensation of the weighing system up to ±10 degrees via inclinometer (not included). The weight correction is also valid for systems approved for legal for trade use.
- Archive of the last 50 significant events (zeroing, calibration, equalization, alarms): storing, consultation, printing.
- Transmission via RS485 (Modbus RTU) or fieldbus of the divisions for the 8 reading channels. Only the points of each load cell connected are transmitted, with no filter applied; the calculation of the weight value, the zero setting and calibration are made by the customer.
- Connections to:
  - PLC via analog output and fieldbus;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display, inclinometer and printer via RS485;
  - up to 16 load cells in parallel;
  - W series weight indicator via RS485.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Hysteresis and setpoint value setting.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.

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).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

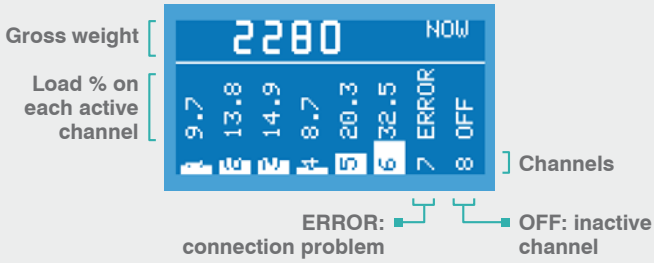
8 INDEPENDENT CHANNELS

The screen shows the standard automatic operating mode: the activation/deactivation status of each channel indicates the presence/ absence of connection with the load cells.



LOAD DISTRIBUTION

The TLM8 displays, in graphical form, the current load distribution on each active channel.



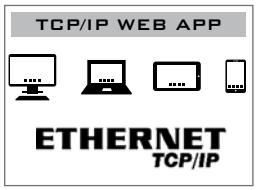
LOAD CELLS INPUT TEST

The TLM8 displays, in graphical form, the load cells response signal in mV for each active channel.

ISO 9001
ISO 14001

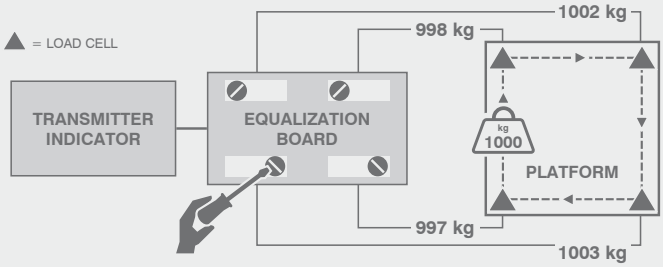
TLM8

WEIGHT TRANSMITTER - 8 INDEPENDENT CHANNELS



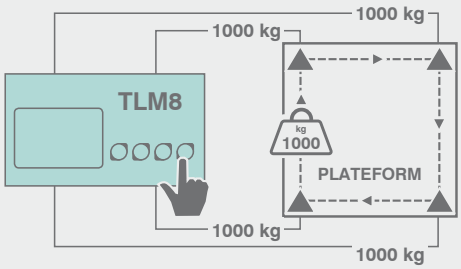
EQUALIZATION WITH JUNCTION BOXES

The equalization with junction boxes and trimmers requires several manual steps and can suffer drift over time, requiring subsequent repetitions of the same procedure.



DIGITAL EQUALIZATION

The TLM8 does not require the use of the junction box thanks to the support of 8 independent channels; the digital equalization function simplifies the procedure to a single step and it is free of drift over time.



OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory.	OPZWALIBI
	IP67 polycarbonate box; dimensions: 188x188x130 mm (four fixing holes Ø4 mm; centre distance: 164x164 mm)	
	- transparent lid - transparent lid; 8+3 PG9 cable glands - plugs - transparent lid; 8+3 PVC end-fittings for sheath	CASTLG CASTLG8PG9 CASTLG8GUA
	- external keyboard - external keyboard; 8+3 PG9 cable glands - plugs - external keyboard; 8+3 PVC end-fittings for sheath	CASTLGTAST CASTLGTAST8PG9 CASTLGTAST8GUA

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLK
WEIGHT TRANSMITTER

IP67 RS485 RS232 SAVING MODBUS RTU

DESCRIPTION

- Weight transmitter in IP67 polycarbonate box with 2 PG9 cable glands.
- Dimensions: 80x170x65 mm (four fixing holes Ø4 mm; centre distance: 60x120 mm).
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 6 signalling LED.
- 4-key keyboard.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols.
- 2 PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - up to 8 load cells in parallel by junction box;
  - W series weight indicator via RS485.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Hysteresis and setpoint value setting.
- Energy saving mode.
- All functions can be managed by a W series weight indicator connected via RS485 serial port (excluding instruments with graphic display).

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.6 μV/VSI
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module

TLK
WEIGHT TRANSMITTER

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 2 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +60 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.6 μV/VSI
Working temperature	-10 °C +40 °C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Rechargeable external lead battery. ▪ 12 V - 2800 mAh capacity ▪ IP67 polycarbonate box 160x80x85 mm with transparent cover (4 fixing holes Ø4 mm; centre distance: 152x122 mm). ▪ Battery charger. ▪ 26 hours operating time*.	BATEXT
	Rechargeable internal NiMH battery. ▪ 8 elements - 1.2 V - AA type - 2450 mAh capacity. ▪ Supplied already installed in the instrument, with external dedicated switch; overall box dimensions: 190x80x65 mm. ▪ 24 hours operating time*.	OPZBATTWF

** Approx. maximum operating time for typical use with fully charged battery, with 4 load cells (350 ohm) and energy saving mode enabled.*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLB
WEIGHT TRANSMITTER

RS485 ANALOG OUTPUT Instrument Manager

DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail.
- Space-saving vertical shape.
- Dimensions: 115x25x120 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- Four buttons for the system calibration.
- Removable screw terminal blocks.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 3 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

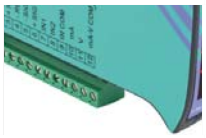
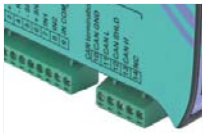
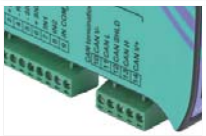
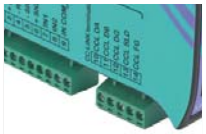
FIELDBUSES

MODBUS RTU · MODBUS/TCP · ETHERNET POWERLINK certified product · DeviceNet · EtherNet/IP · PI CERTIFIED PROFIBUS · PROFINET · PROFIBUS · CC-Link · CANopen · SERCOS interface · ETHERNET TCP/IP · EtherCAT

ISO 9001
ISO 14001

TLB
WEIGHT TRANSMITTER

LAUMAS®

	DESCRIPTION	CODE
	RS485 serial port. Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s).	TLB485
	Optoisolated 16 bit **analog output**. Current: 0÷20 mA; 4÷20 mA (up to 300 Ω). Voltage: 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ). Equipped with RS485 serial port.	TLB
	**CANopen** port. Baud rate: 10, 20, 25, 50, 100, 125, 250, 500, 800, 1000 (kbit/s). The instrument works as *slave* in a synchronous CANopen network. Equipped with RS485 serial port.	TLBCANOPEN
	**DeviceNet** port. Baud rate: 125, 250, 500 (kbit/s). The instrument works as *slave* in a DeviceNet network. Equipped with RS485 serial port.	TLBDEVICENET
	**CC-Link** port. Baud rate: 156, 625, 2500, 5000, 10000 (kbit/s). The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations. Equipped with RS485 serial port.	TLBCCLINK
	Profibus DP port. Baud rate: up to 12 Mbit/s. The instrument works as *slave* in a Profibus DP network. Equipped with RS485 serial port.	TLBPROFI
	Modbus/TCP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Modbus/TCP network. Equipped with RS485 serial port.	TLBMODBUSTCP
	Ethernet TCP/IP port. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works in an Ethernet TCP/IP network and it is accessible via web browser. Equipped with RS485 serial port.	TLBETHETCP
	2x Ethernet/IP ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *adapter* in an Ethernet/IP network. Equipped with RS485 serial port.	TLBETHEIPN
	2x Profinet IO ports. Type: RJ45 100Base-TX. The instrument works as *device* in a Profinet IO network. Equipped with RS485 serial port.	TLBPROFINETION
	2x EtherCAT ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in an EtherCAT network. Equipped with RS485 serial port.	TLBETHERCAT
	2x POWERLINK ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Powerlink network. Equipped with RS485 serial port.	TLBPOWERLINK
	2x SERCOS III ports. Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as *slave* in a Sercos III network. Equipped with RS485 serial port.	TLBSERCOS

ISO 9001
ISO 14001

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
NTEP	NTEP - n_{max} 5000 - Class III - United States and Canada

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity • Analog output linearity (only for TLB)	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift (only for TLB)	<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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	3 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (only for TLB)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	3 - max 30 VAC, 60 VDC/150 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

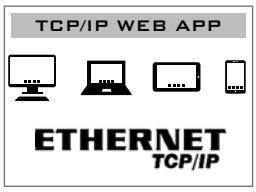
METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST Handbook 44, 2014; NCWM PUB 14, 2014
Operation modes	single interval, multi-interval	single interval, multi-interval
Accuracy class	III or IIII	III
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	5000 (class III)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

TLB
WEIGHT TRANSMITTER

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output or fieldbus;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.



CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Two operation mode: single interval or multi-interval.
- Net weight zero tracking.
- Calibration.

SPACE SAVING COMPACT DESIGN

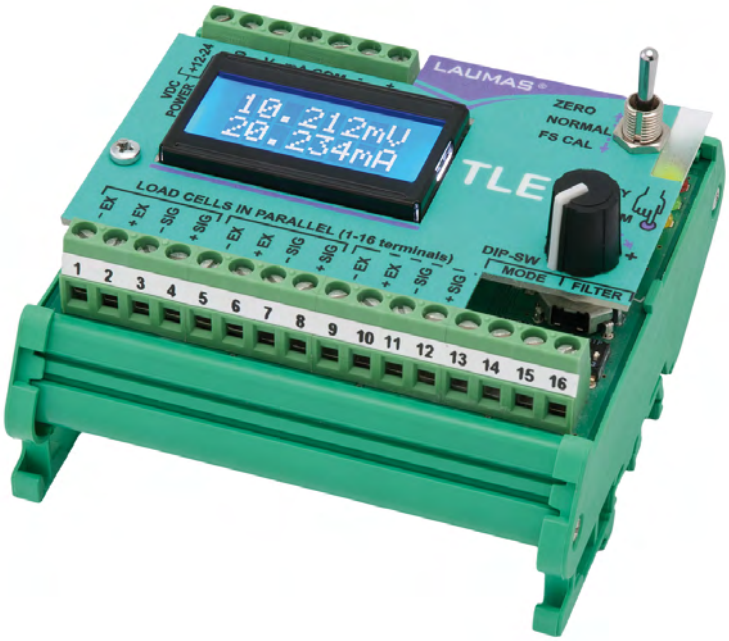
The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLE

ANALOG WEIGHT TRANSMITTER - RS485

IP67 RS485 ANALOG OUTPUT

MODBUS RTU



DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 90x95x60 mm.
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 3-way selector switch, DIP-switch and control knob.

INPUTS/OUTPUTS AND COMMUNICATION

- Current or voltage 16-bit high-speed analog output (response time: 3 ms).
- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 load cell dedicated inputs.

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - up to 8 load cells in parallel by junction box.
- Zero and full scale adjustment without multimeter.
- Simultaneous display of the response signal of the load cells expressed in mV and the value of the analog output.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Tare weight zero setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

TLE
ANALOG WEIGHT TRANSMITTER - RS485

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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) - 4.8kHz
Divisions (RS485)	±200000 • 0.01 μV/d (with measurement range ±10 mV and sensitivity 2 mV/V) ±300000 • 0.01 μV/d (with measurement range ±15 mV and sensitivity 3 mV/V)
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	8 levels • 10÷300 Hz
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us — Equipment to be powered by 12-24 VDC LPS or Class 2 power source

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	ATEX II 3GD *(zone 2-22)* version - transparent lid; 4+2 PG9 cable glands - plugs	CASTLATEX

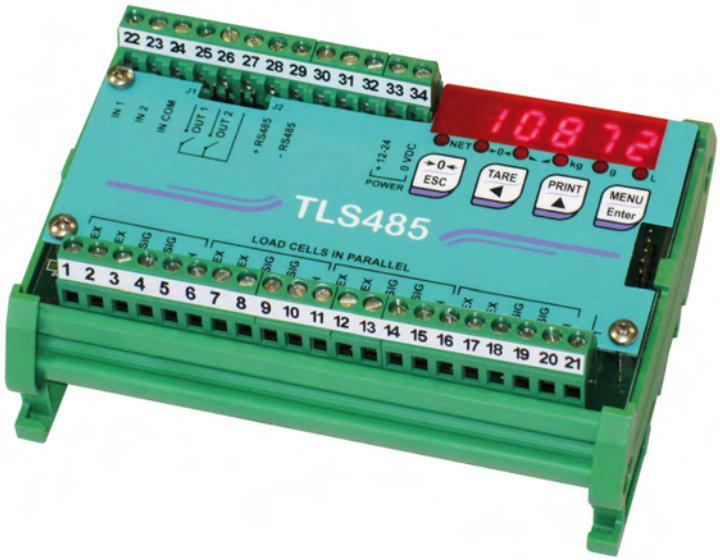
The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLS485

WEIGHT TRANSMITTER

IP67 RS485 Instrument Manager

MODBUS RTU



DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x92x50 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- 4-key keyboard.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 2 optorelay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 4 load cell dedicated inputs.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

TLS485
WEIGHT TRANSMITTER

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% full scale/°C
A/D Converter	24 bit (16000000 points) - 80 Hz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0,01 μV/d
Measurement range	±19.5 mV
Usable load cells sensitivity	±3 mV/V
Conversions per second	80/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷80 Hz
Optorelay outputs	2 - max 24 VDC/60 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Optorelay outputs: 2 - max 24 VDC/60 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source

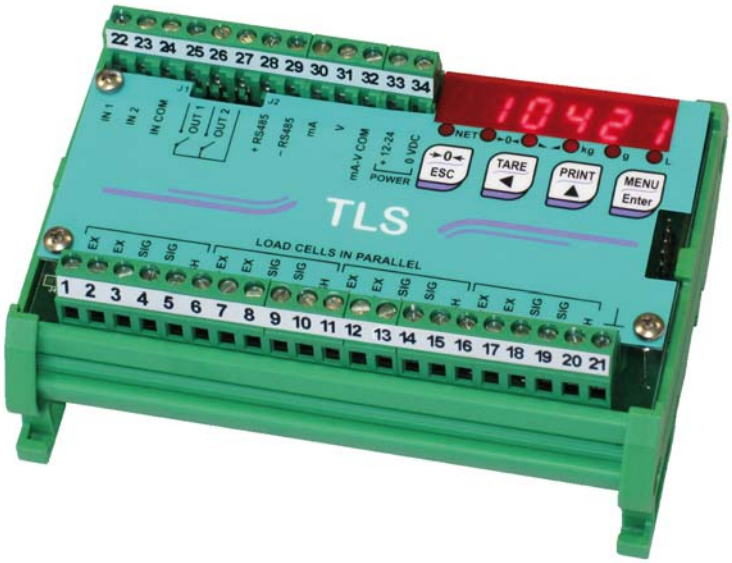
OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	- external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath	CASTLTAST CASTLTASTPG9 CASTLTASTGUA
	ATEX II 3GD *(zone 2-22)* version - external keyboard; 4+2 PG9 cable glands - plugs	CASTLTASTATEX

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLS
WEIGHT TRANSMITTER

IP67 RS485 ANALOG OUTPUT Instrument Manager MODBUS RTU



DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x92x50 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- 4-key keyboard.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- Current or voltage 16 bit optoisolated analog output.
- 2 optorelay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 4 load cell dedicated inputs.

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

TLS
WEIGHT TRANSMITTER

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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) - 80 Hz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0,01 μV/d
Measurement range	±19.5 mV
Usable load cells sensitivity	±3 mV/V
Conversions per second	80/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷80 Hz
Optorelay outputs	2 - max 24 VDC/60 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Optorelay outputs	2 - max 24 VDC/60 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	- external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath	CASTLTAST CASTLTASTPG9 CASTLTASTGUA
	ATEX II 3GD *(zone 2-22)* version - external keyboard; 4+2 PG9 cable glands - plugs	CASTLTASTATEX

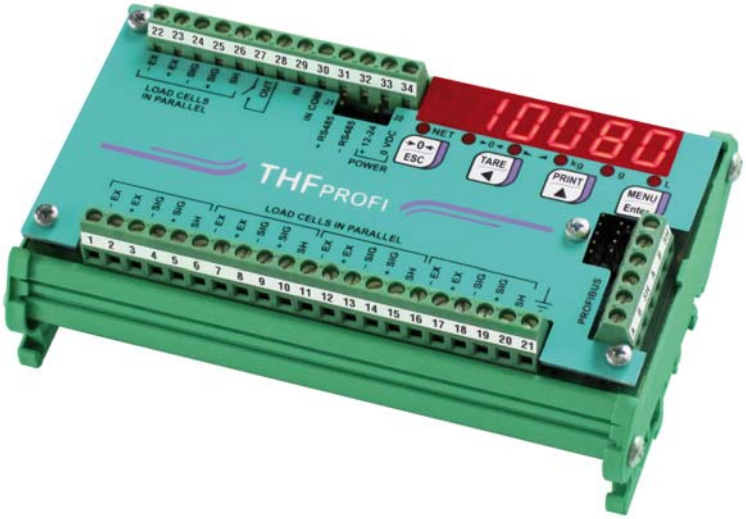
The Company reserves the right to make changes to the technical data, drawings and images without notice.

THFPROFI

WEIGHT TRANSMITTER - RS485/PROFIBUS

IP67 RS485

MODBUS RTU



DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 148x92x50 mm.
- 6-digit semi-alphanumeric red LED display (11 mm height).
- 6 signalling LED.
- 4-key keyboard.

INPUTS/OUTPUTS AND COMMUNICATION

- Serial port with Profibus DP protocol.
- RS485 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 1 relay output controlled by the setpoint values or via protocols.
- 1 optoisolated PNP digital input: status reading via serial communication protocols.
- 5 load cell dedicated inputs.

MAIN FUNCTIONS

- Connections to:
  - PLC via Profibus DP protocol (up to 126 instruments with line repeaters, up to 32 without line repeaters);
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

THFPROFI

WEIGHT TRANSMITTER - RS485/PROFIBUS

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/240 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0,01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	1 - max 115 VAC/150 mA
Optoisolated digital inputs	1 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Profibus DP port: baud rate • adresses	up to 12 (Mbit/s) • 1÷125
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

Relay outputs	1 - max 30 VAC, 60 VDC/150 mA
Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	- external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath	CASTLTAST CASTLTASTPG9 CASTLTASTGUA
	ATEX II 3GD *(zone 2-22)* version - external keyboard; 4+2 PG9 cable glands - plugs	CASTLTASTATEX

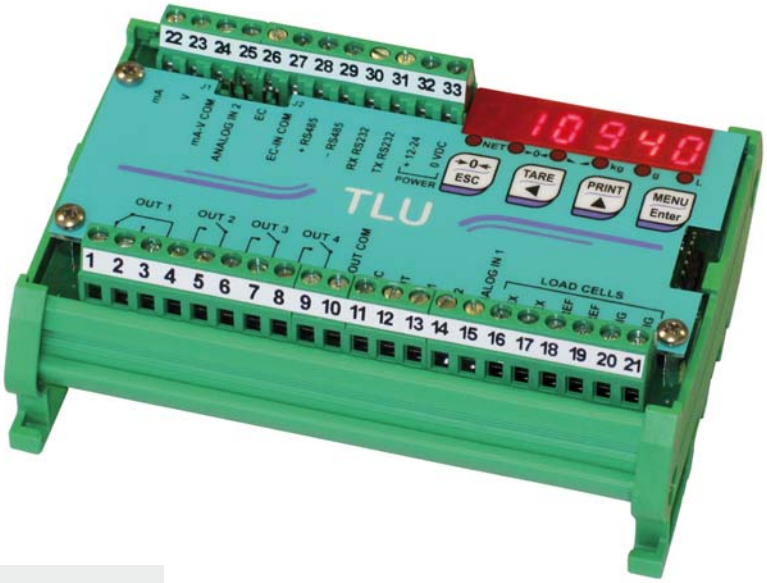
The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLU

LOAD LIMITING DEVICE/INDICATOR

IP67 RS485 RS232 ANALOG OUTPUT

MODBUS RTU



CODE

TLU
TLUANA (analog output)

DESCRIPTION

- Load limiting device/indicator for lifting systems suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x92x50 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- 4-key keyboard.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- Current or voltage 16 bit optoisolated analog output (TLUANA).
- 4 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (TLUANA);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Setpoint value setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

TLU
LOAD LIMITING DEVICE/INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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) - 80 Hz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0,01 μV/d
Measurement range	±19.5 mV
Usable load cells sensitivity	±3 mV/V
Conversions per second	80/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷80 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 115 VAC/150 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

OPTIONS ON REQUEST

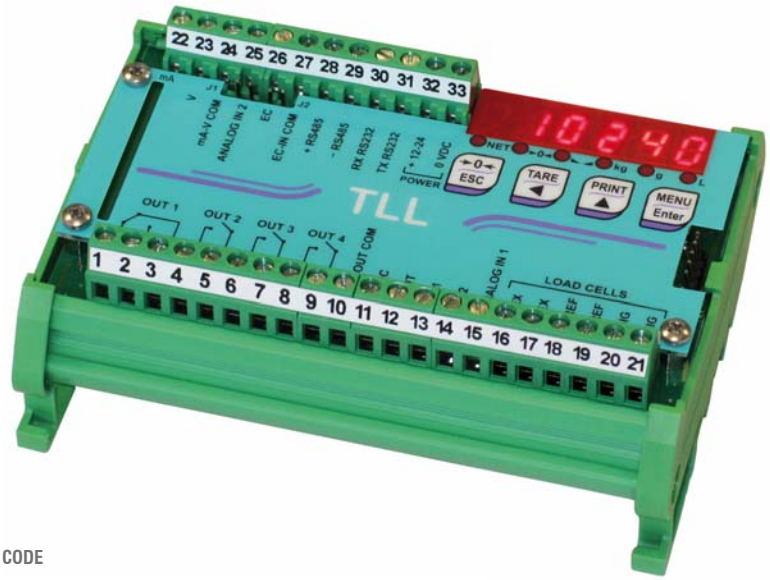
	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	- external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath	CASTLTAST CASTLTASTPG9 CASTLTASTGUA
	ATEX II 3GD *(zone 2-22)* version - external keyboard; 4+2 PG9 cable glands - plugs	CASTLTASTATEX

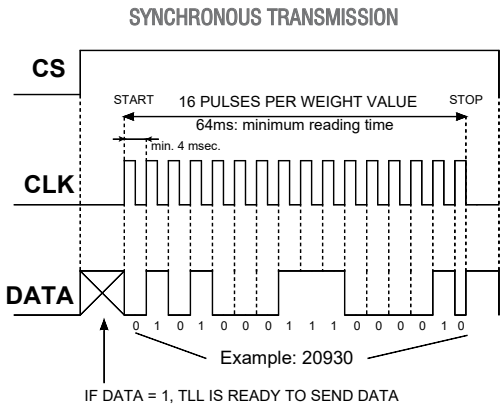
The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLL
WEIGHT TRANSMITTER

IP67 RS485 RS232 ANALOG OUTPUT

MODBUS RTU





CODE

TLL
TLLANA (analog output)

DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x92x50 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- 4-key keyboard.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- Current or voltage 16 bit optoisolated analog output (TLLANA).
- 4 relay outputs controlled by the setpoint values or via protocols (2 outputs if synchronous serial transmission is present).
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols (1 input if synchronous serial transmission is present).
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - PLC via synchronous serial communication;
  - PLC via analog output (TLLANA);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.

CERTIFICATIONS

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

TLL
WEIGHT TRANSMITTER

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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) - 80 Hz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0,01 μV/d
Measurement range	±19.5 mV
Usable load cells sensitivity	±3 mV/V
Conversions per second	80/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷80 Hz
Relay outputs	4/2 - max 115 VAC/150mA
Optoisolated digital inputs	2/1 - 5÷24 VDC PNP
Serial ports	synchronous transmission, RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)	
	- transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	- external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath	CASTLTAST CASTLTASTPG9 CASTLTASTGUA
	ATEX II 3GD *(zone 2-22)* version - external keyboard; 4+2 PG9 cable glands - plugs	CASTLTASTATEX

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TPS

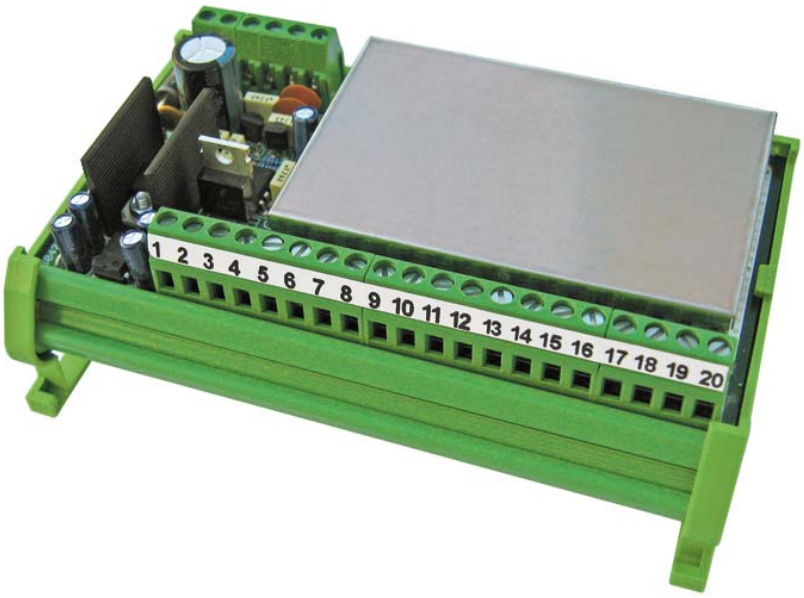
ANALOG WEIGHT TRANSMITTER 0-20 mA; 4-20 mA; 0-10 V

IP67

ANALOG OUTPUT

IP67 box version (on request)

4+2 PVC fittings for sheath



	CODE
Analog output and calibration by the customer	JOLLYTPS
Analog output	TPS

DESCRIPTION

- Analog weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x90x65 mm.

INPUTS/OUTPUTS AND COMMUNICATION

- Current or voltage 16 bit analog output.
- 4 load cell dedicated inputs.

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output.
  - max. 6 load cells in parallel by junction box.
- Ideal for use with analog/digital boards normally installed on PLC.
- Ability to reset the tare and get the maximum output value up to 1/6 of full scale.
- Analog filter to reduce the effects of weight oscillation.
- Calibration with sample weights or load cell simulator.
- Tare weight zero setting.

TPS

ANALOG WEIGHT TRANSMITTER 0-20 mA; 4-20 mA; 0-10 V

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	24 VDC ±15%; 6 W
Number of load cells • Load cells supply	up to 6 (350 Ω) - 4 wires • 10 VDC/180 mA
Linearity	0.01% full scale
Thermal drift	0.005% full scale/°C
Measure range	3-24 mV
Analog filter (10÷90%)	100÷1000 ms
Analog output	current: 0÷20 mA cc; max 400 Ω current: 4÷20 mA cc; max 400 Ω voltage: 0÷10 VDC; min 2000 Ω
Humidity (condensate free)	85%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

CALIBRATION

Coarse zero (zero setting selection)	4 dip-switches from 0-17 mV
Zero fine (zero position adjustment)	10-turn potentiometer trimmer, 10% range
Coarse full scale	4 dip-switches from 3-24 mV (1/6 full scale)
Fine full scale	10-turn potentiometer trimmer, 10% range

OPTIONS ON REQUEST

DESCRIPTION	CODE
IP67 polycarbonate waterproof box 170x140x95 mm (4 fixing holes Ø4 mm; centre distance152x122 mm).	
- transparent lid	CASTL
- transparent lid; 4+2 M16x1.5 cable glands - plugs	CASTLPG9
- transparent lid; 4+2 PVC end-fittings for sheath	CASTLGUA

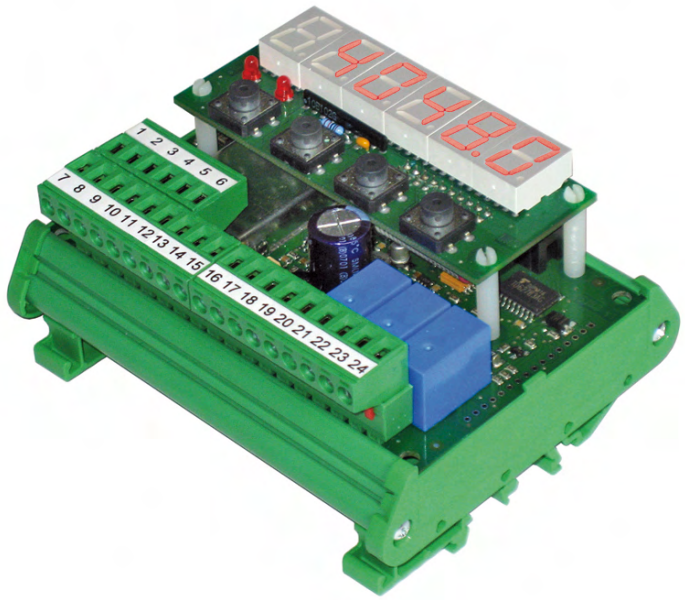
The Company reserves the right to make changes to the technical data, drawings and images without notice.

LCD2

DIGITAL INDICATOR/LOAD LIMITING DEVICE SUITABLE FOR LIFTING SYSTEMS

LAUMAS®

RS485
RS232



		CODE
1 instrument	load limiting device	LCD2
2 instruments	load limiting device in dual safety redundant systems	LCD2DS
2 instruments	load limiting device in more-weighing systems	LCD2A+B
3 instruments	load limiting device in more-weighing systems	LCD2A+B+C
4 instruments	load limiting device in more-weighing systems	LCD2A+B+C+D

DESCRIPTION

- Digital indicator/load limiting device suitable for back panel mounting on Omega/DIN rail.
- Dimensions: 115x93x65 mm.
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 5 signalling LED.
- 4-key keyboard.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232;
  - remote display via RS485/RS232 (except LCD2DS);
  - max 4 load cells in parallel by junction box.
- Load cells connections continuous check.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real (with sample weights).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial port for communication via ASCII continuous one way transmission.
- 3 optorelay digital outputs controlled by the setpoint values or via protocols.
- 1 digital input: status reading via serial communication protocols.
- 4 load cell dedicated inputs.

LCD2

DIGITAL INDICATOR/LOAD LIMITING DEVICE SUITABLE FOR LIFTING SYSTEMS

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±15%; 4 VA
Number of load cells • Load cells supply	up to 4 (350 Ω) • 5 VDC/60 mA
Linearity	<0.01% full scale
Thermal drift	<0.001% full scale/°C
A/D Converter	24 bit
Internal divisions	±99999
Measure range	min ±2 mV/V ; max ±19.5 mV
Conversion per second	10/s
Display range	0-60000
Decimals • Display increments	0÷3 • x1 x2 x5 x10 x20 x50 x100
Digital filter	0.1-10 Hz
Relay logic outputs	n. 3 - 24 VDC/0.5 A
Optoisolated logic inputs	n. 1
Serial ports	RS485, RS232
Baud rate	2400, 9600, 19200, 38400, 57600, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +60 °C
Working temperature	-10 °C +50 °C

OPTIONS ON REQUEST

DESCRIPTION	CODE
IP67 polycarbonate waterproof box 170x140x95 mm (4 fixing holes Ø4 mm; centre distance152x122 mm).	
- transparent lid	CASTL
- transparent lid; 4+2 M16x1.5 cable glands - plugs	CASTLPG9
- transparent lid; 4+2 PVC end-fittings for sheath	CASTLGUA

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TLKWF

WEIGHT TRANSMITTER - WiFi

IP67 WiFi RS485 RS232 eSAVING MODBUS RTU

DESCRIPTION

- WiFi weight transmitter in IP67 polycarbonate box with 2 PG9 cable glands.
- Dimensions: 80x170x65 mm (four fixing holes Ø4 mm; centre distance: 60x120 mm).
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 6 signalling LED.
- 4-key keyboard.

INPUTS/OUTPUTS AND COMMUNICATION

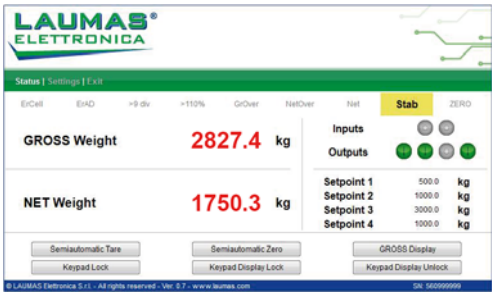
- WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols.
- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols or web.
- 2 PNP digital inputs: status reading via serial communication protocols or web.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - PC via WiFi/virtual Ethernet port;
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - others TLKWF devices and Laumas W series instruments (equipped with OPZW1RADIO optional module) via WiFi;
  - PC/smartphone/tablet via web browser (point-to-point direct connection);
  - up to 8 load cells in parallel by junction box;
  - W series weight indicator via RS485.
- Communication with existing WiFi networks.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Hysteresis and setpoint value setting.
- Energy saving mode.
- All functions can be managed by a W series weight indicator connected via RS485 serial port or WiFi (excluding instruments with graphic display).

TCP/IP WEB APP

Integrated software for remote supervision, management and control of the instrument.



CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.6 μV/VSI
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module

TLKWF

WEIGHT TRANSMITTER - WiFi

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 2 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Wireless	WiFi module with serial protocols in tunnel mode and integrated web server. Radio range up to 100 m line of sight.
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +60 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.6 μV/VSI
Working temperature	-10 °C +40 °C

OPTIONS ON REQUEST

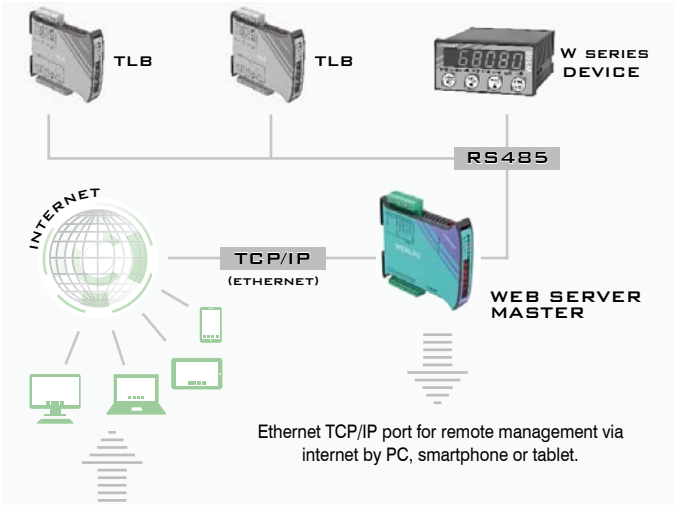
	DESCRIPTION	CODE
	Rechargeable external lead battery. ▪ 12 V - 2800 mAh capacity ▪ IP67 polycarbonate box 160x80x85 mm with transparent cover (4 fixing holes Ø4 mm; centre distance: 152x122 mm). ▪ Battery charger. ▪ 26 hours operating time*.	BATEXT
	Rechargeable internal NiMH battery. ▪ 8 elements - 1.2 V - AA type - 2450 mAh capacity. ▪ Supplied already installed in the instrument, with external dedicated switch; overall box dimensions: 190x80x65 mm. ▪ 24 hours operating time*.	OPZBATTWF

** Approx. maximum operating time for typical use with fully charged battery, with 4 load cells (350 ohm) and energy saving mode enabled.*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WEBLAU

WEB SERVER MASTER - 8 INSTRUMENTS VIA RS485



Ethernet TCP/IP port for remote management via internet by PC, smartphone or tablet.

DESCRIPTION

The WEBLAU device is a useful support for all installers/dealers of Laumas weighing instruments as it makes easier the remote maintenance, allowing to control wherever, the status of the instruments connected to RS485 including the possible anomalies.

- Web server master suitable for back panel mounting on Omega/DIN rail.
- Space-saving vertical shape.
- Dimensions: 115x25x120 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- Four buttons for the system calibration.
- Extractable screw terminal blocks.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via ModBus RTU protocol.
- ETHERNET TCP/IP communication port and a web server to view and control the status and operation of the instruments present in the RS485 network.

MAIN FUNCTIONS

- Displays the weight and state of up to 8 W and TLB series Laumas instruments, connected to RS485.
- Setpoint value setting.
- Inputs and outputs check and management.

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Relay outputs	1 - 115 VAC/150 mA
Serial ports	RS485
Baud rate	9600 (bit/s)
Ethernet TCP/IP port	RJ45 10Base-T or 100Base-TX (auto-sensing)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

The Company reserves the right to make changes to the technical data, drawings and images without notice.

CASTL-ATEX

IP67 WATERPROOF BOXES - ATEX VERSION

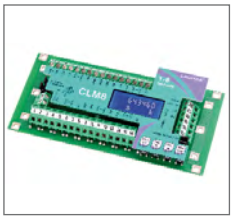
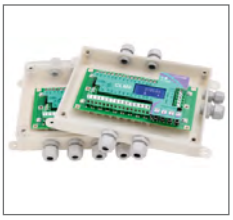
DESCRIPTION			CODE
for transmitters:	TLE	transparent cover	CASTLATEX
for transmitters:	TLS, TLS485, TLU, TLL, THFPROFI	external keyboard	CASTLTASTATEX

DESCRIPTION

- IP67 polycarbonate waterproof box.
- 4+2 PG9 cable glands-plugs.
- Dimensions: 170x140x95 mm (4 fixing holes Ø4 mm; centre distance152x122 mm).
- ATEX II 3GD (*zone 2-22*).
- IECEx *(zone 2-22).*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

B2.1 MULTICHANNEL

	**CLM8I**	**47**		**CLM4ABS CLM8ABS CLM4ABSR CLM8ABSR**	**47**
	CLM8	**47**		**CASTL CASTLPG9 CASTL8PG9 CASTLGUA CASTL8GUA**	**47**
	CLM8INOX	**47**			

CLM8

INTELLIGENT JUNCTION BOX - 8 INDEPENDENT CHANNELS

LAUMAS®

IP67 RS485 RS232 ±10° ALIBI Instrument Manager

ETHERNET TCP/IP option on request — TCP/IP WEB APP

MODBUS RTU

DESCRIPTION

- Intelligent junction box with 8 independent channels for load cells; allows the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 4-key keyboard.
- Lightning and electrical shock protection device.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

PVC END-FITTINGS FOR SHEATH

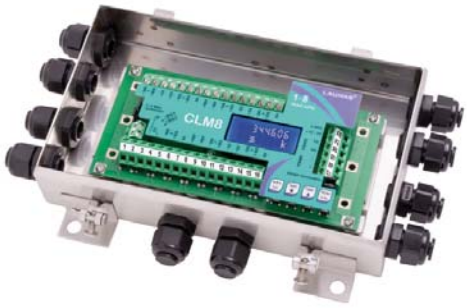
- IP67 polycarbonate box with transparent lid.
- Dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm).

➔ *CLM8 instrument not included.*

	CODE
box without holes	CASTL
4+2 M16x1.5 cable glands - plugs	CASTLPG9
8+2 PG9 cable glands - plugs	CASTL8PG9
4+2 PVC end-fittings for sheath	CASTLGUA
8+2 PVC end-fittings for sheath	CASTL8GUA

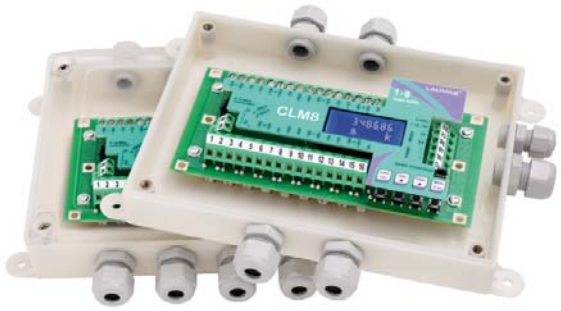
- Omega/DIN rail mounting version suitable for back panel or junction box; dimensions: 125x92x52 mm.

CODE
CLM8



- IP67 AISI 304 stainless steel version.
- Dimensions: 200x148x45 mm (four fixing holes Ø4 mm; centre distance: 148x132 mm).

	CODE
8+2 PG9 cable glands - plugs	CLM8INOX



- IP67 ABS version with transparent lid.
- Dimensions: 210x130x40 mm (four fixing holes Ø4 mm; centre distance: 196x112 mm).

	CODE
4+3 PG9 (1 PG7) cable glands - plugs	CLM4ABS
8+3 PG9 (1 PG7) cable glands - plugs	CLM8ABS
4+3 PVC end-fittings for sheath	CLM4ABSR
8+3 PVC end-fittings for sheath	CLM8ABSR

- Naked version, board only; dimensions: 151x72x30 mm.

CODE
CLM8I

CLM8

INTELLIGENT JUNCTION BOX - 8 INDEPENDENT CHANNELS

LAUMAS®

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 8 load cell dedicated inputs.
- Ethernet TCP/IP port (option on request).

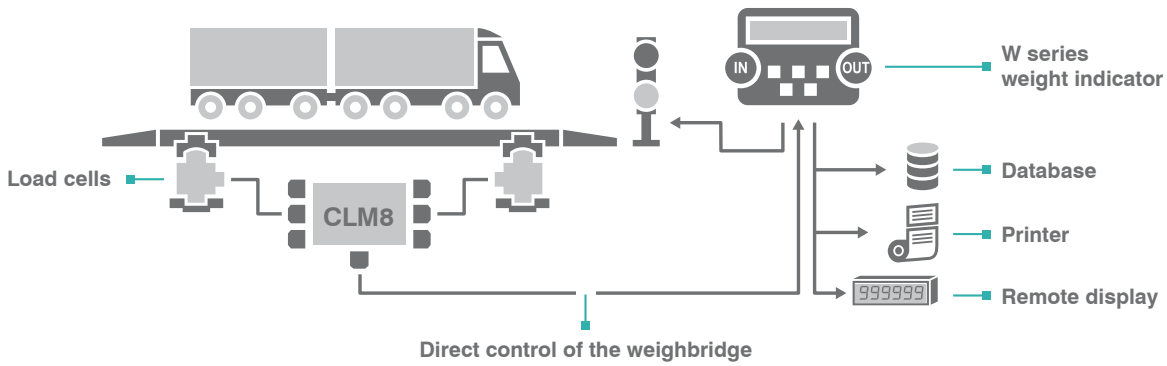
MAIN FUNCTIONS

- 8 independent channels for load cells: monitoring and direct management of each connected load cell.
- Immediate reporting of anomalies (also on the connected weight indicator display).
- All the CLM8 series functions can be managed by a W series weight indicator connected via RS485 serial port (excluding instruments with graphic display).
- Digital equalization of the 8 channels.
- Load distribution analysis on the 8 channels with backups archive: storing, consultation, printing.
- Detailed diagnostics of each load cell (max 8): depending on the type of weighing system you can perform:
  - load automatic diagnostics;
  - automatic diagnostics on zero.
- Tilt compensation of the weighing system up to ±10 degrees via inclinometer (not included). The weight correction is also valid for systems approved for legal for trade use.
- Archive of the last 50 significant events (zeroing, calibration, equalization, alarms): storing, consultation, printing.
- Transmission via RS232/RS485 (ModBus RTU) or TCP/IP (option on request) of the divisions for the 8 reading channels. Only the points of each load cell connected are transmitted, with no filter applied; the calculation of the weight value, the zero setting and calibration are made by the customer.
- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display, inclinometer and printer via RS485/RS232;
  - up to 16 load cells in parallel;
  - W series weight indicator via RS485.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

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).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

EXAMPLE OF APPLICATION - WEIGHBRIDGE



CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.4 μV/VSI

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

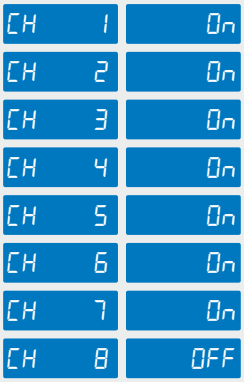
CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module

CLM8

INTELLIGENT JUNCTION BOX - 8 INDEPENDENT CHANNELS

8 INDEPENDENT CHANNELS



The display shows the status of each channel to indicate the presence/absence of connection with the load cells.

Active channels: the load cell is connected

Inactive channel: the load cell is not connected

LOAD DISTRIBUTION

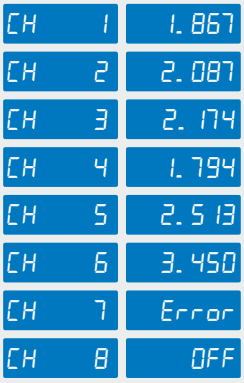
The CLM8 displays the current load distribution on each active channel.

Load percentage on each active channel

ERROR: connection problem

OFF: inactive channel

LOAD CELLS INPUT TEST



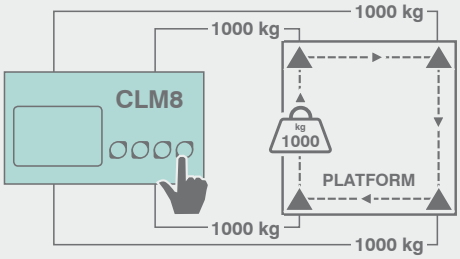
Load cells response signal in mV for each active channel

ERROR: connection problem

OFF: inactive channel

DIGITAL EQUALIZATION

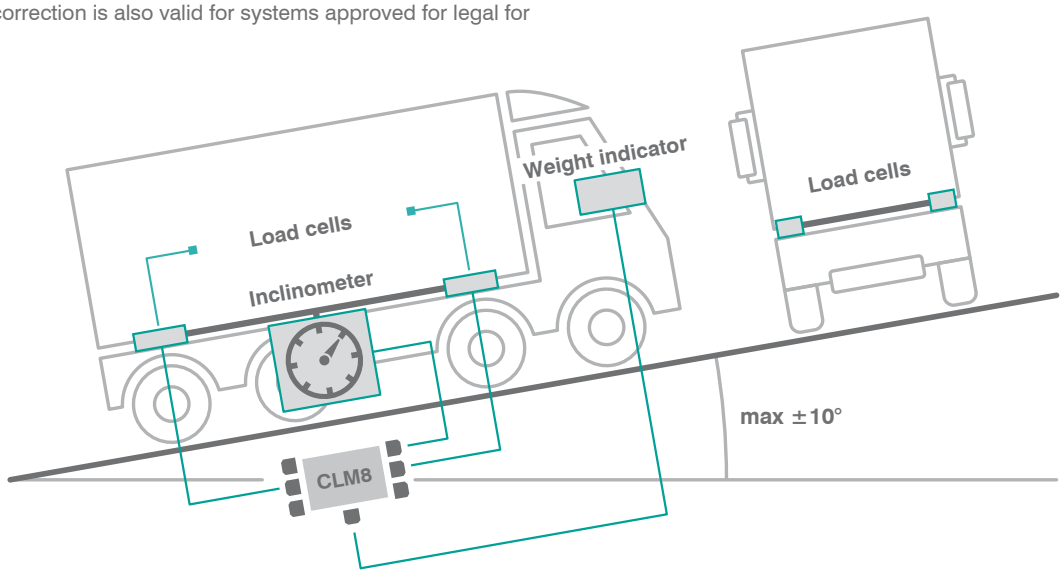
By placing a sample weight at each load cell, it is possible to perform the digital equalization of the weighing system.
The digital equalization function simplifies the procedure to a single step and it is free of drift over time.



▲ = LOAD CELL

INCLINOMETER NEW

The inclinometer function uses the tilt data provided by an external sensor connected to the weighing instrument, to compensate for the variations in the detected weight value due to the inclination of the weighed structure with respect to the horizontal plane. The range of allowed inclination values is ±10°.
The weight correction is also valid for systems approved for legal for trade use.



ISO 9001
ISO 14001

CLM8

INTELLIGENT JUNCTION BOX - 8 INDEPENDENT CHANNELS

LAUMAS®

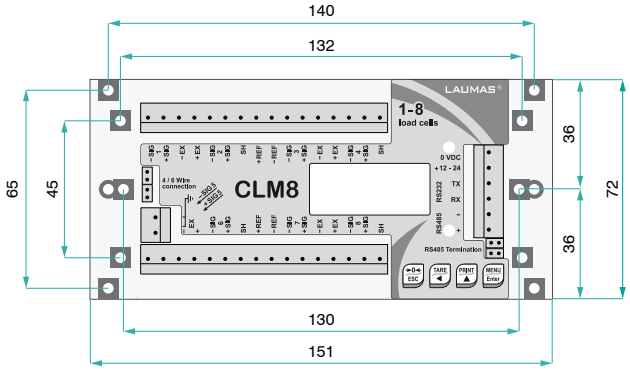
TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 16 (350 Ω) - 4/6 wires • 5 VDC/240 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% full scale/°C
A/D Converter	8 channels - 24 bit (16000000 points) - 4.8 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	600/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	21 levels • 5÷600 Hz
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us — Equipment to be powered by 12-24 VDC LPS or Class 2 power source.

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Maximum number of scale verification divisions with inclinometer	1000 (class IIII); 5200 (class III) single interval; 2x5200 or 3x2000 (class III) multi-interval or multiple range
Minimum input signal for scale verification division	0.4 μV/VSI
Working temperature	-10 °C +40 °C



OPTIONS ON REQUEST

	DESCRIPTION	CODE
±10°	Inclinometer model NS-15/DPN2-RXG (TE Connectivity Sensors product).	INCDPN2-RXG
	Inclinometer model NS-15/DPN2-RUG with protective case (TE Connectivity Sensors product).	INCDPG2-RUG
	Alibi memory.	OPZWALIBI
	Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument.	OPZETTCPCLM

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

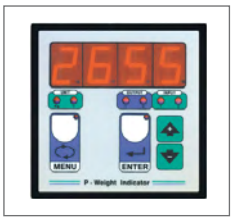
B3.1 WEIGHT INDICATORS

	WLIGHT NEW	56		WTAB-G	67
	W100	59		WTAB-2G	67
	WTAB-L	62		WETOIML	72
	WTAB-R	62		WEIOIML	74

B3.2 WEIGHT INDICATORS (WEIGHING AND BATCHING)

	W200	76		WDOS	95
	W200BOX	82		WDESK-L	102
	W200BOXEC	89		WDESK-R	102

B3.2 WEIGHT INDICATORS (WEIGHING AND BATCHING)

	WDESK-G	111		PWS	143
	WINOX-L	120		WT60	146
	WINOX-R	120		WL60	149
	WINOX-G	129		WR	152
	WINOX-2G	129		TAIPAN265	154
	JOLLY2 JOLLY4	139		COBRA265	156
	PWI	141			

B3.3 BATCHING SYSTEMS WITH SEVERAL SCALES

	DOS2005	158		WRMDB	162
	WRBIL	160			

B3.4 WEIGHBRIDGES

	WDESK-BL	164		WTAB-BL	176
	WDESK-BR	164		WTAB-BR	176
	WTAB-BGE	168		WINOX-BL	180
	WINOX-BGE	172		WINOX-BR	180

B3.5 SUPERVISORY SOFTWARE

	INSTRUMENT MANAGER NEW	183		PROG-WRMDB	187
	PROG-DB	185		PROG-NG	188
	PROG-WRBIL	186			

WLIGHT
WEIGHT INDICATOR

RS232 · RECHARGEABLE BATTERY · ALIBI · MODBUS RTU

Indicator-holder bracket and column

Stainless steel bracket for wall mounting

D-SUB connectors - IP40

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

ISO 9001
ISO 14001

WLIGHT
WEIGHT INDICATOR

LAUMAS®

DESCRIPTION

- ABS weight indicator.
- Installation: desk, wall, column.
- Dimensions: 280x120x200 mm.
- 6-digit semi-alphanumeric red LED display (20 mm height).
- 8 signaling LED.
- 5-key keyboard.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.
- Designed to operate with 8 NiMH rechargeable batteries, 1.2 V, AA type (not included).

INPUTS/OUTPUTS AND COMMUNICATION

- RS232 serial port for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS232;
  - up to 8 load cells in parallel by junction box.
- Piece counting.
- Weight totalizing.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard.
- The indicator can be used as a remote display.

CE-M (NAWI) e NTEP (SCALES) approved versions

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

OPTIONS ON REQUEST

	POWER SUPPLY	CODE
	8 NiMH rechargeable batteries, 1.2 V, AA type. Operating time: 16 hours.	OPZWBATTWLIGHT

	ACCESSORIES	
	ABS adjustable support for column mounting.	STAFFAWDESK
	Stainless steel adjustable bracket for wall mounting. Dimensions with bracket: 206x290x187 mm.	STAFFAIWINOX
	Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Painted steel bracket for platform/floor mounting. Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFACN COLONNAM + STAFFAIN

	APPLICATIONS - SOFTWARE	
	Alibi memory.	OPZWALIBI

WLIGHT
WEIGHT INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Serial ports	RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Working temperature	-20 °C +58 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

The Company reserves the right to make changes to the technical data, drawings and images without notice.

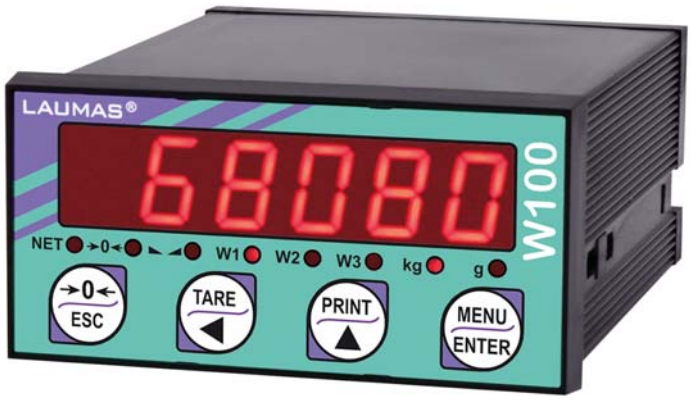
W100
WEIGHT INDICATOR

LAUMAS®

RS485 RS232 · ANALOG OUTPUT · ALIBI

MODBUS RTU

Instrument Manager



DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 96x48x130 mm (drilling template: 92x45 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 4-key keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Removable screw terminal blocks.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.
- Weight value printing with date and time via keyboard or external contact.
- The indicator can be used as a remote display with setpoint.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

On request: label support for initial verification

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple range or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

W100
WEIGHT INDICATOR

LAUMAS®

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module Support for metric label (dimensions: 124x77x1.5 mm)
	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0,01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

W100
WEIGHT INDICATOR

LAUMAS®

OPTIONS ON REQUEST

	ACCESSORIES	CODE
	IP65 panel gasket.	OPZW48X96IP65

	INTERFACES	
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA
	Additional RS485 port. ➔ *One input and one output not available.*	✶ OPZW1RS485
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420

✶ *Select one option among those marked with an asterisk.*

	EXPANSIONS	
	12 groups selection by 5 setpoint via external selector switch.	✶ EC
	12 groups selection by 5 setpoint via external contact.	✶ E
	Simultaneous use of E/EC option with the analog output.	OPZWAEC
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M

✶ *Select one option among those marked with an asterisk.*

	APPLICATIONS - SOFTWARE	
	Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WTAB-L/R

WEIGHT INDICATOR

RS485 RS232 · ANALOG OUTPUT · ALIBI · RECHARGEABLE BATTERY · WiFi · Instrument Manager

4 D-SUB connectors - IP40

Integrated thermal printer (on request)

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WTAB-L/R

WEIGHT INDICATOR

LAUMAS®

DESCRIPTION

- ABS desk weight indicator.
- Dimensions: 315x170x315 mm.
- *L version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *R version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 8-key keyboard.
- IP40 protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Piece counting.
- Weight totalizing.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 points).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight).
- 9 preset tare values that can be stored.
- Semi-automatic zero.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).
- Weight value printing with date and time via keyboard or external contact.
- The indicator can be used as a remote display with setpoints.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

WTAB-L/R
WEIGHT INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay digital outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

OPTIONS ON REQUEST

	POWER SUPPLY	CODE
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed in the instrument. Operating time: 16 hours.	OPZWBATTWTAB

	ACCESSORIES	
	Integrated thermal printer: 24 column, paper end sensor, working temperature: 0÷50 °C, humidity: 20%÷80%, paper roll included (width: 57 ±0.5 mm - outside diameter: 50 mm). ➔ *RS485 port not available.*	OPZWTABSTA
	Thermal paper roll.	CARTASTAVT
	Adhesive thermal paper roll.	CARTAFISCADEN

	INTERFACES AND FIELDBUSES	
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols.	✶ OPZW1RADIOTAB
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA
	Additional RS485 port. ➔ *One input and one output not available.*	✶ OPZW1RS485
	CANopen protocol.	✶ OPZW1CADB9
	DeviceNet protocol.	✶ OPZW1DEDB9
	Profibus DP protocol.	✶ OPZW1PRDB9
	Ethernet/IP protocol - Ethernet port.	✶ OPZW1ETIPDB9
	Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument.	✶ OPZW1ETTCPDB9

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST

		CODE
	Modbus/TCP protocol - Ethernet port.	✶ OPZW1MBTCPDB9
	Profinet IO protocol - Ethernet port.	✶ OPZW1PNETIODB9
	USB port for data storage to pen drive (included). These data (weighed values, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply.	OPZWUSBDB9
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420

APPLICATIONS - SOFTWARE

	Alibi memory.	OPZWALIBI
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC

✶ *Select one option among those marked with an asterisk.*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WTAB-G/2G

WEIGHT INDICATOR

RS485 RS232 · ANALOG OUTPUT · ALIBI · BARCODE SCAN · WiFi · RECHARGEABLE BATTERY

MULTILANGUAGE SOFTWARE

4 D-SUB connectors - IP40

Integrated thermal printer (on request)

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WTAB-G/2G

WEIGHT INDICATOR

LAUMAS®

DESCRIPTION

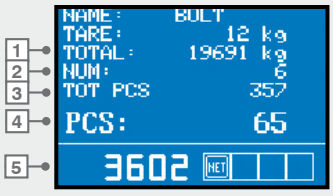
- ABS desk weight indicator.
- Dimensions: 315x170x315 mm.
- *G version*: backlit LCD graphic display, resolution: 240x64 pixel, visible area: 133x39 mm; 50-key keyboard.
- *2G version*: backlit LCD graphic display, resolution: 240x128 pixel, visible area: 128x75 mm; 27-key keyboard.
- IP40 protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.
- Multilanguage software (4 languages + 1 customizable).

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

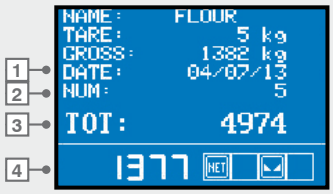
Example screens

Piece counter



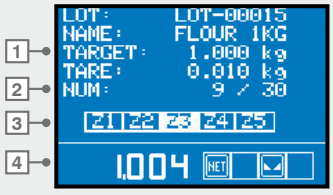
1. Totalized weight since last deletion.
2. Performed weighings since last deletion.
3. Totalized pieces since last deletion.
4. Number of pieces.
5. Net weight.

Totalizer



1. Date of last deletion.
2. Performed weighings since last deletion.
3. Totalized weight since last deletion.
4. Net weight.

Statistical checking of prepackages



1. Nominal weight.
2. Checked samples/total samples.
3. Tolerance zone.
4. Net weight.

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Piece counting.
- Weight totalizing.
- Statistical checking of prepackages.
- 99 items database with association of a preset tare value, 3 setpoint values and 2 values for weight thresholds function (HIGH/LOW).
- Weight thresholds function (HIGH/LOW) shown on the display.
- Customizable name of the production lot.
- Barcodes printing by lot name, item name, weighings progressive number.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).
- Weight value printing with date and time via keyboard or external contact.
- The indicator can be used as a remote display with setpoint.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

WTAB-G/2G
WEIGHT INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay digital outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

ISO 9001
ISO 14001

OPTIONS ON REQUEST

	POWER SUPPLY	CODE
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed in the instrument. Operating time: 16 hours.	OPZWBATTWTAB

	ACCESSORIES	
	Integrated thermal printer: 24 column, paper end sensor, working temperature: 0÷50 °C, humidity: 20%÷80%, paper roll included (width: 57 ±0.5 mm - outside diameter: 50 mm). ➔ *RS485 port not available.*	OPZWTABSTA
	Thermal paper roll.	CARTASTAVT
	Adhesive thermal paper roll.	CARTAFISCADEN

	INTERFACES AND FIELDBUSES	
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols.	✶ OPZW1RADIOTAB
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA
	Additional RS485 port. ➔ *One input and one output not available.*	✶ OPZW1RS485
	CANopen protocol.	✶ OPZW1CADB9
	DeviceNet protocol.	✶ OPZW1DEDB9
	Profibus DP protocol.	✶ OPZW1PRDB9
	Ethernet/IP protocol - Ethernet port.	✶ OPZW1ETIPDB9
	Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument.	✶ OPZW1ETTCPDB9

✶ *Select one option among those marked with an asterisk.*

WTAB-G/2G
WEIGHT INDICATOR

LAUMAS®

OPTIONS ON REQUEST

		CODE
	Modbus/TCP protocol - Ethernet port.	✶ OPZW1MBTCPDB9
	Profinet IO protocol - Ethernet port.	✶ OPZW1PNETIODB9
	USB port for data storage to pen drive (included). These data (weighed values, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. Support for keyboard and barcode reader.	OPZWUSBDB9
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420

APPLICATIONS - SOFTWARE

	Alibi memory.	OPZWALIBI
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC

✶ *Select one option among those marked with an asterisk.*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WETOIML
WEIGHT INDICATOR

RS232

DESCRIPTION

- Desktop ABS weight indicator (dimensions: 245x170x170 mm) Column mounting with optional indicator holder column or wall mounting with optional bracket (dimensions with support: 245x170x220 mm).
- 6-digit semi-alphanumeric red LED display (20 mm height).
- 6 signalling LED.
- 5-key waterproof keyboard.
- 6 V rechargeable internal battery, 4 Ah capacity.
- Power supply included.

INPUTS/OUTPUTS AND COMMUNICATION

- RS232 serial port for communication via protocol ASCII Laumas or continuous one way transmission.
- DB9 connector for connection to load cell.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS232;
  - remote display and printer via RS232.
- Weight totalizing.
- Piece counting.
- Average weight of heads of cattle.
- Net/Gross function for manual batching.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- 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.
- Gross/net weight and tare printing (date, time and customer logo/ header with external printer).

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).
- Operation mode: single interval.
- Net weight zero tracking.
- Calibration.
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (aliby memory).

CERTIFICATIONS

OIML R76:2006, III class, 3x10000 divisions 0.2 μV/VSI

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module

WETOIML
WEIGHT INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 VAC ±10%; 12 W
Number of load cells • Load cells supply	up to 4 (350 Ω) 4/6 wires • 5 VDC/150 mA
Linearity	<0.01% full scale
Internal divisions	max 200000
Measurement range	-10 mV +15 mV
Display range	0-999999
Decimals • Display increments	0-3 • x1 x2 x5 x10 x20 x50
Readings per second	20/s
Minimum input signal	1 μV
Serial ports	RS232
Baud rate	1200, 2400, 4800, 9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +50 °C
Working temperature	-10 °C +40 °C

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation mode	Single interval
Accuracy class	III
Maximum number of scale verification divisions	max 3000
Minimum impedance load cell	87Ω
Maximum impedance load cell	1215Ω
Input sensitivity	2 μV
Initial zeroing device	≤ 10% di max
Device for maintaining zero	≤ 0.5 division/s. (total effect of maintaining zero + semi-automatic zero ≤4% Max)
Semi-automatic zeroing device	≤ 2% di max
Subtractive tare device (semiautomatic tare)	T- ≤ max
Connecting cable with junction box	6-wire shielded cable without length limitations

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Galvanized steel bracket for wall mounting. - Overall dimensions with bracket: 245x170x220 mm.	STAFFAWET
	Indicator stainless steel support column (Ø38 mm, h 700 mm) Painted steel bracket for platform/floor mounting.	COLONNAM + STAFFACN
	Indicator stainless steel support column (Ø38 mm, h 700 mm) Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFAIN

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WEIOIML

WEIGHT INDICATOR

RS232

DESCRIPTION

- IP67 AISI 304 stainless steel weight indicator; suitable for desk or wall or column mounting.
- Dimensions: 210x140x75 mm; with support: 245x140x260 mm. IP67 waterproof connectors.
- 6-digit semi-alphanumeric red LED display (20 mm height).
- 6 signalling LED.
- 5-key waterproof keyboard.
- Rechargeable internal battery, 6 V 4 Ah.

INPUTS/OUTPUTS AND COMMUNICATION

- RS232 serial port for communication via protocol ASCII Laumas or continuous one way transmission.
- Circular connectors for connection to load cell.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS232.
  - remote display and printer via RS232.
- Weight totalizing.
- Piece counting.
- Average weight of heads of cattle.
- Net/Gross function for manual batching.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight).
- Semi-automatic zero.
- Gross/net weight and tare printing (date, time and customer logo/ header with external printer).

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).
- Operation mode: single interval.
- Net weight zero tracking.
- Calibration.
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (aliby memory).

WEIOIML
WEIGHT INDICATOR

LAUMAS®

CERTIFICATIONS

OIML R76:2006, III class, 3x10000 divisions 0.2 μV/VSI

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module

TECHNICAL FEATURES

Power supply and consumption	230 VAC ±10%; 12 W
Number of load cells • Load cells supply	up to 4 (350 Ω) 4/6 wires • 5 VDC/150 mA
Linearity	<0.01% full scale
Internal divisions	max 200000
Measurement range	-10 mV +15 mV
Display range	-2000 ÷ 999999
Decimals • Display increments	0-3 • x1 x2 x5 x10 x20 x50
Readings per second	20/s
Minimum input signal	1 μV
Serial ports	RS232
Baud rate	1200, 2400, 4800, 9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +50 °C
Working temperature	-10 °C +40 °C

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation mode	Single interval
Accuracy class	III
Maximum number of scale verification divisions	max 3000
Minimum impedance load cell	87Ω
Maximum impedance load cell	1215Ω
Input sensitivity	2 μV
Initial zeroing device	≤ 10% di max
Device for maintaining zero	≤ 0.5 division/s. (total effect of maintaining zero + semi-automatic zero ≤4% Max)
Semi-automatic zeroing device	≤ 2% di max
Subtractive tare device (semiautomatic tare)	T- ≤ max
Connecting cable with junction box	6-wire shielded cable without length limitations

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Stainless steel indicator-holder column (Ø38 mm, h 700 mm) Painted steel bracket for platform/floor mounting.	COLONNAM + STAFFACN
	Stainless steel indicator-holder column (Ø38 mm, h 700 mm) Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFAIN

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

W200

WEIGHT INDICATOR - WEIGHING AND BATCHING

RS485 RS232 · ANALOG OUTPUT · ALIBI · Instrument Manager

PROGRAM	OIML	M	NMI	NZ	GOST	NTEP	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	•	W200
LOAD	R76 - R61	•	•	•	•	•	•	•	W200-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	W200-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	W200-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	W200-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	W200-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	W200-MU

* *External 8-relay modules included*

ON REQUEST

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NZ	Complies with New Zealand regulations for legal for trade use
GOST	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

W200

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 96x96x130 mm (drilling template: 92x92 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Removable screw terminal blocks.
- The instrument can be configured and managed using the free "Instrument Manager" PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

W200

WEIGHT INDICATOR - WEIGHING AND BATCHING

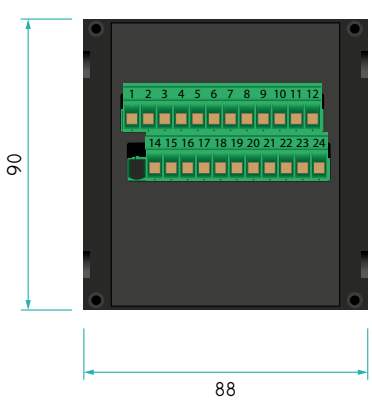
LAUMAS®

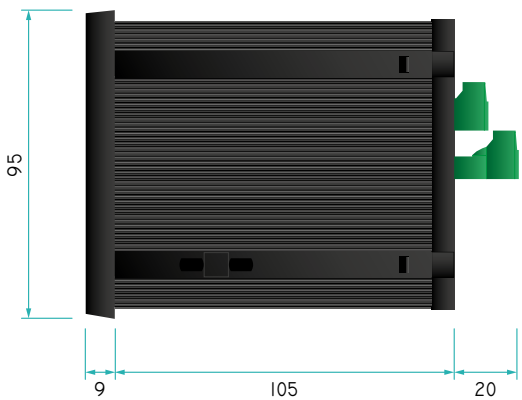
TECHNICAL FEATURES

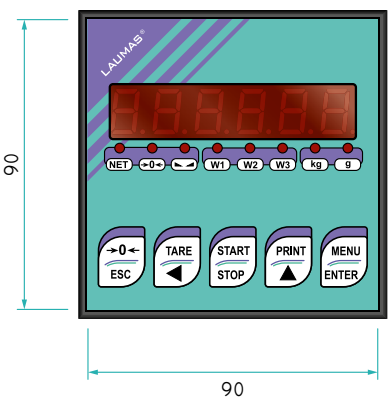
Power supply and consumption	12÷24 VDC ±10%; 5 W (on request: 115÷230 VAC; 50÷60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity • Analog output linearity	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)







ISO 9001
ISO 14001

W200
WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. → *Not compatible with fieldbuses and USB port.* → *Not compatible with EAC certifications.*	B C S 3P 6P 14P • • • • • •

	ACCESSORIES	
	IP65 panel gasket.	OPZW96X96IP65 B C S 3P 6P 14P • • • • • •

	INTERFACES AND FIELDBUSES	
ANALOG OUTPUT	Optoisolated 16 bit **analog output**. → *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
RS485+	**Additional RS485** port. → *One input and one output not available.* → *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
CANopen	**CANopen** protocol. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1CAW200 B C S 3P 6P 14P • – – – – –
DeviceNet	**DeviceNet** protocol. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1DEW200 B C S 3P 6P 14P • – – – – –
PROFIBUS	**Profibus DP** protocol. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1PRW200 B C S 3P 6P 14P • • • • • •
EtherNet/IP	**Ethernet/IP** protocol - Ethernet port. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1ETIPW200 B C S 3P 6P 14P • – – – – –
ETHERNET TCP/IP	**Ethernet TCP/IP** protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1ETTCPW200 B C S 3P 6P 14P • • • • • •
MODBUS/TCP	**Modbus/TCP** protocol - Ethernet port. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1MBTCPW200 B C S 3P 6P 14P • • • • • •
PI	**Profinet IO** protocol - Ethernet port. → *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1PNETIOW200 B C S 3P 6P 14P • – – – – –
	USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. → *Not compatible with 115 VAC and 230 VAC.*	OPZWUSBW200 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

ISO 9001
ISO 14001

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE	B	C	S	3P	6P	14P
	USB male/female extension cable with IP68 panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68	•	•	•	•	•	•
	Ethernet male/female extension cable with IP68 panel connector; lenght: 30 cm, sealing cap included.	OPZWCONETHEIP68	•	•	•	•	•	•
	Ethernet male/male extension cable with IP68 connector; lenght: 5 m, to be used in combination with the OPZWCONETHEIP68 option.	OPZWCONETHE5MT	•	•	•	•	•	•
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010	•	•	•	•	•	•
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420	•	•	•	•	•	•

EXPANSIONS

			B	C	S	3P	6P	14P
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC	•	•	•	•	•	•
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E	•	•	•	•	•	•
	Simultaneous use of E/EC option with the analog output.	OPZWAEC	•	•	•	•	•	•
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M	•	•	•	•	–	–
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC: RELE6PROD24V 115/230 VAC: RELE6PROD230V	–	–	–	–	•	•

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.	RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

W200BOX

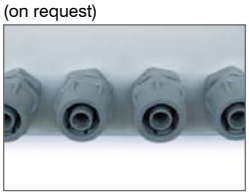
WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

ANALOG OUTPUT · ALIBI · IP67 · Instrument Manager · RS485 RS232

ATEX/IECEx/EAC EX version (on request)

PVC end-fittings for sheath (on request)



PROGRAM	OIML	IECEx Ex	M	NMI TRADE APPROVED	NEW ZEALAND TRADE APPROVED	CSA	NTEP	EAC Ex	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-B
LOAD	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOX-MU

* *External 8-relay modules included.*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS • PROFINET

ISO 9001
ISO 14001

W200BOX

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
Ex	ATEX II 3GD *(zone 2-22)* ➔ *The external relay modules must be protected.*
IECEx	IECEx *(zone 2-22)* ➔ *The external relay modules must be protected.*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

DESCRIPTION

- Weight indicator in IP67 polycarbonate box with 4+2 PG9 cable glands-plugs, suitable for wall mounting.
- Dimensions: 170x140x95 mm (4 fixing holes Ø 4 mm; centre distance: 152x122 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key keyboard.
- Real-time clock/calendar with buffer battery.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

W200BOX

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple range or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

W200BOX

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

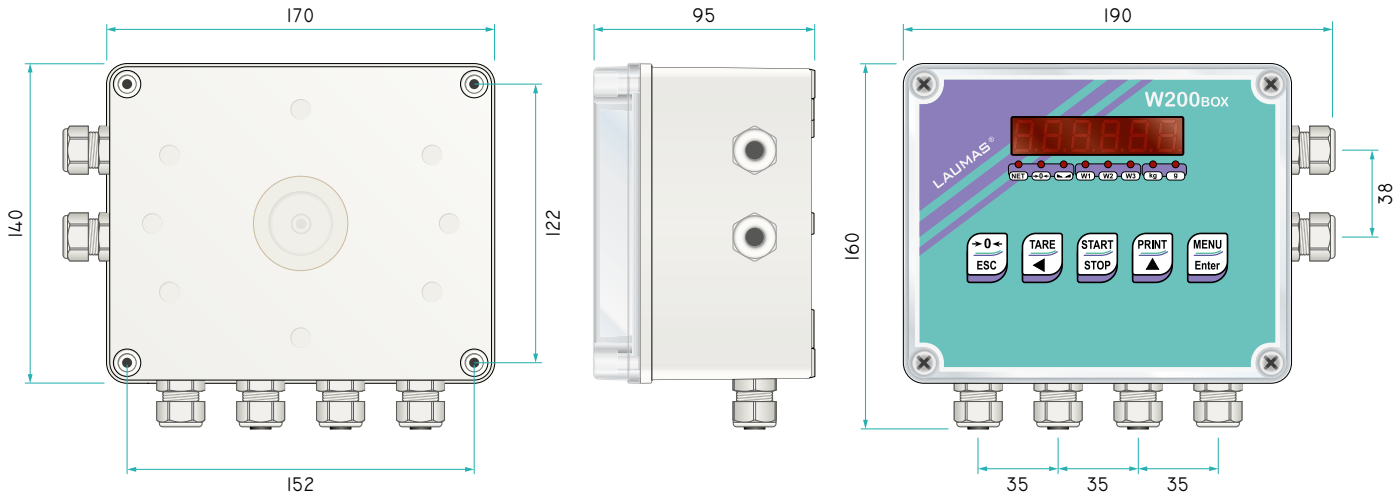
LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/240 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation mode	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)



ISO 9001
ISO 14001

W200BOX

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	ACCESSORIES	CODE
	6 PVC end-fittings for sheath.	W200BOX-U B C S 3P 6P 14P • • • • • •
	INTERFACES AND FIELD BUSES	
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Additional RS485 port. ➔ *One input and one output not available.* ➔ *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
	CANopen protocol.	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol.	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol.	✶ OPZW1PRW200BOX B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *Internal crimp wiring.*	✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	Modbus/TCP protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	EXPANSIONS	CODE
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC B C S 3P 6P 14P • • • • • •
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E B C S 3P 6P 14P • • • • • •
	Simultaneous use of E/EC option with the analog output.	OPZWAEC B C S 3P 6P 14P • • • • • •
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M B C S 3P 6P 14P • • • • – –
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC RELE6PROD24V 115/230 VAC RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.	RELE14PROD B C S 3P 6P 14P – – – – – •

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	APPLICATIONS - SOFTWARE	CODE
	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

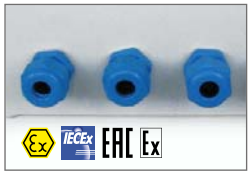
W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

ANALOG OUTPUT · ALIBI · IP64 · Instrument Manager · RS485 RS232

ATEX/IECEx/EAC EX version (on request)



PVC end-fittings for sheath (on request)

PROGRAM	OIML	IECEx Ex	M	NMI TRADE APPROVED	NEW ZEALAND TRADE APPROVED		NTEP	EAC Ex	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-B
LOAD	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	•	•	W200BOXEC-MU

* *External 8-relay modules included.*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
Ex	ATEX II 3D *(zone 22)* ➔ *The external relay modules must be protected.*
IECEx	IECEx *(zone 22)* ➔ *The external relay modules must be protected.*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

DESCRIPTION

- Weight indicator in IP64 polycarbonate box with 4+2 PG9 cable glands-plugs, suitable for wall mounting.
- External selector switch for setpoint groups or formulas selection.
- Start and stop buttons.
- Dimensions: 170x140x95 mm (4 fixing holes Ø 4 mm; centre distance: 152x122 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key keyboard.
- Real-time clock/calendar with buffer battery.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple range or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch.

BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch.
- Batching start via button or keyboard.

Only for:
LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

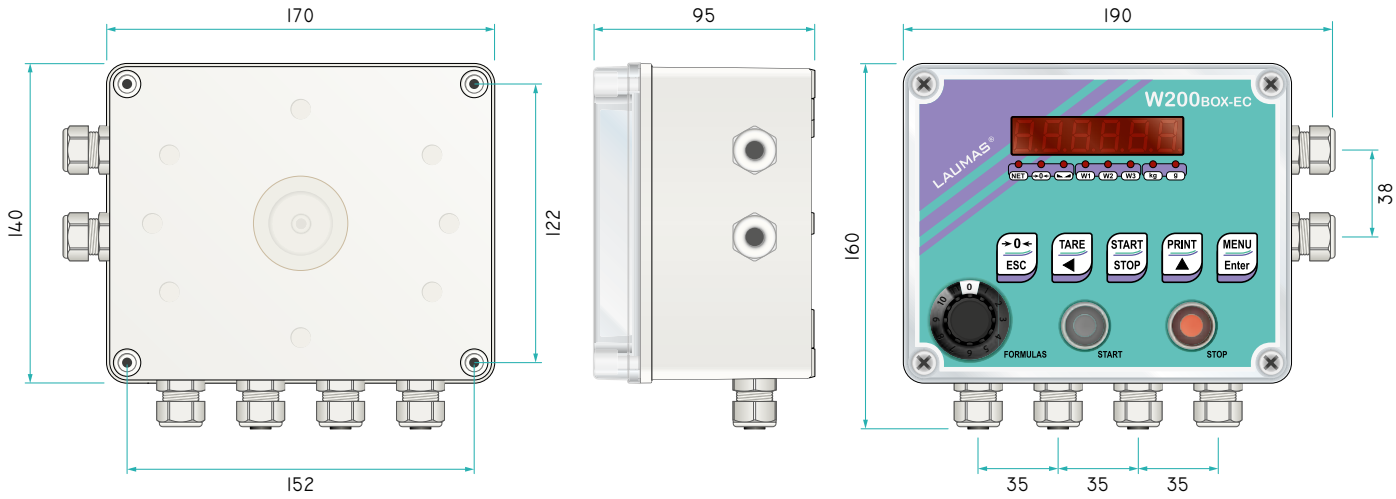
LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/240 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us		
	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation mode	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)



Rev. 0.0

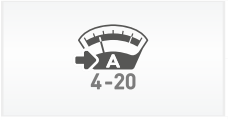
ISO 9001
ISO 14001

W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	ACCESSORIES	CODE
	6 PVC end-fittings for sheath.	W200BOX-U B C S 3P 6P 14P • • • • • •
	INTERFACES AND FIELD BUSES	
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Simultaneous use of E/EC option with the analog output. ➔ *Option required to use the analog output.*	OPZWAEC B C S 3P 6P 14P • • • • • •
	CANopen protocol.	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol.	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol.	✶ OPZW1PRW200BOX B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *Internal crimp wiring.*	✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	Modbus/TCP protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - Ethernet port. ➔ *Internal crimp wiring.*	✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

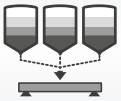
W200BOXEC

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	EXPANSIONS		CODE
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.		RELE5M B C S 3P 6P 14P • • • • – –
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC 115/230 VAC	RELE6PROD24V RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.		RELE14PROD B C S 3P 6P 14P – – – – – •

	APPLICATIONS - SOFTWARE	
FORM %	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WDOS

WEIGHT INDICATOR - WEIGHING AND BATCHING

RS485 RS232 · ANALOG OUTPUT · ALIBI

MULTILANGUAGE SOFTWARE

PROGRAM	OIML	M	NMI	NZ	GOST	NTEP	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	•	WDOS-MU
LOAD	R76 - R61	•	•	•	•	•	•	•	WDOS-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	WDOS-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDOS-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDOS-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDOS-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	WDOS-MU

* *External 8-relay modules included*

ON REQUEST

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NZ	Complies with New Zealand regulations for legal for trade use
GOST	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WDOS

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 96x130x96 mm (drilling template: 92x92 mm).
- Backlit LCD graphic display, resolution: 128x64 pixel, visible area: 60x32 mm.
- 6-digit semi-alphanumeric red LED display (10 mm height).
- 8 signalling LED.
- 10-key keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Removable screw terminal blocks.
- Multilanguage software (4 languages + 1 customizable).

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Simultaneous display of net weight and gross weight.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- Graphical representation of the system load status.
- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Production storage.
- Products stocks management.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:
LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

WDOS

WEIGHT INDICATOR - WEIGHING AND BATCHING

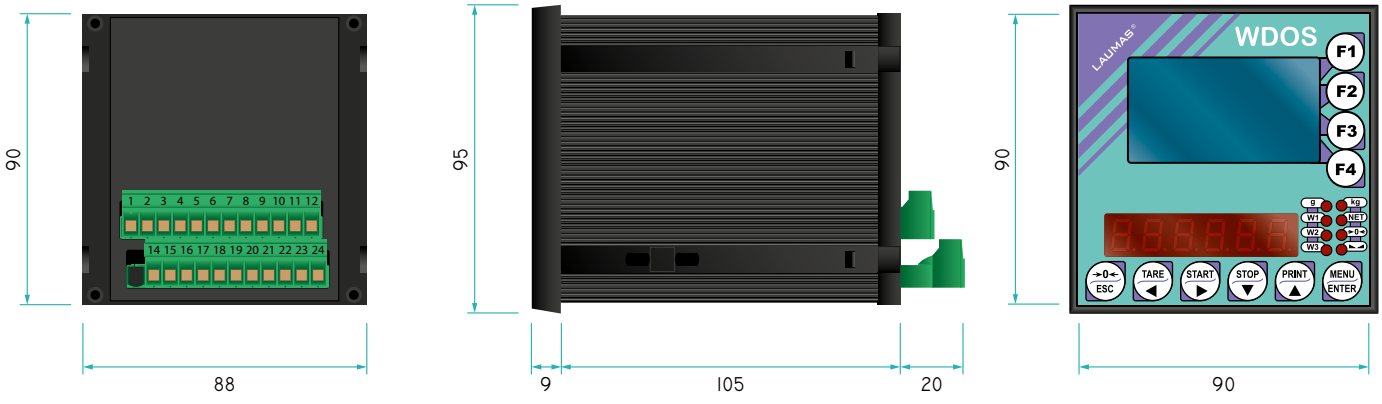
LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W (on request: 115÷230 VAC; 50÷60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/240 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation mode	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)



ISO 9001
ISO 14001

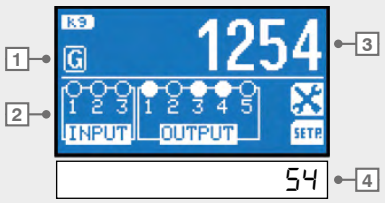
WDOS

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

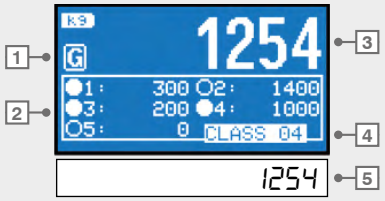
Example screens for BASE program

Net weight, gross weight and inputs/outputs status displaying



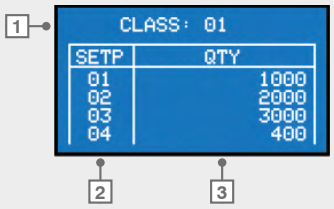
1. Gross weight symbol.
2. Inputs and outputs status.
3. Gross weight value.
4. Net weight value.

Gross weight and setpoint displaying



1. Gross weight symbol.
2. Setpoint status and value.
3. Gross weight value.
4. Number of setpoint class *(only for instruments equipped with E/EC option)*.
5. Gross weight value.

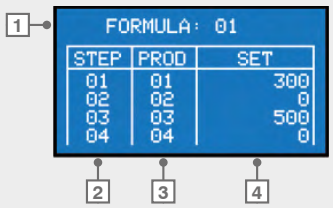
Setpoint programming



1. Selected class.
2. Setpoint number.
3. Setpoint value.

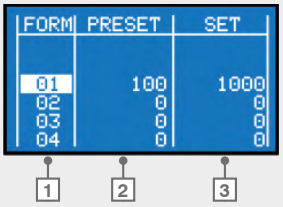
Example screens for BATCHING programs

Formulas programming
3/6/14 PRODUCTS program



1. Selected formula.
2. Step number.
3. Product number.
4. Set value.

Formulas programming
LOAD and UNLOAD programs



1. Selected formula.
2. Preset value.
3. Set value.

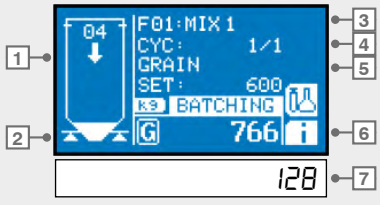
Details of batching product displaying
LOAD and UNLOAD programs

1. Formula number.
2. Running cycle.
3. Product number.
4. Preset value.
5. Set value.
6. Fall value.
7. Tolerance value.

Production displaying for each formula
(amount of batched product and number of cycles performed)

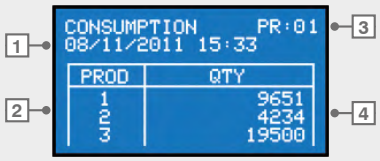
1. Date and time of last deletion.
2. Formulas list.
3. Selected formula.
4. Batched quantity and number of cycles performed.

Displaying during the batching
3/6/14 PRODUCTS program



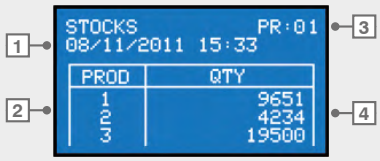
1. Product number and arrow indicating the product loading.
2. Product level on the scale.
3. Formula number and name.
4. Running cycle.
5. Product number or name.
6. Gross weight value.
7. Batching product weight.

Consumptions displaying for each product
3/6/14 PRODUCTS program



1. Date and time of last deletion.
2. Products list.
3. Selected product.
4. Consumptions.

Stocks displaying for each product
3/6/14 PRODUCTS program



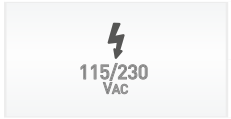
1. Current date and time.
2. Products list.
3. Selected product.
4. Stocks.

ISO 9001
ISO 14001

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

POWER SUPPLY

CODE



Power supply 115/230 VAC; 50/60 Hz; 6 VA.
→ *Not compatible with fieldbuses and USB port.*
→ *Not compatible with EAC certifications.*

B C S 3P 6P 14P
• • • • • •

ACCESSORIES

IP65 panel gasket.

OPZW96X96IP65
B C S 3P 6P 14P
• • • • • •

INTERFACES AND FIELD BUSES

Optoisolated 16 bit **analog output**.
→ *One input and one output not available.*

✶ OPZW1ANALOGICA
B C S 3P 6P 14P
• • • • • •

Additional RS485 port.
→ *One input and one output not available.*
→ *Not compatible with E/EC option.*

✶ OPZW1RS485
B C S 3P 6P 14P
• • • • • •

CANopen protocol.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1CAWDOS
B C S 3P 6P 14P
• – – – – –

DeviceNet protocol.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1DEWDOS
B C S 3P 6P 14P
• – – – – –

Profibus DP protocol.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1PRWDOS
B C S 3P 6P 14P
• • • • • •

Ethernet/IP protocol - Ethernet port.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1ETIPWDOS
B C S 3P 6P 14P
• – – – – –

Ethernet TCP/IP protocol - Ethernet port.
Integrated software for remote supervision, management and control of the instrument.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1ETTCPWDOS
B C S 3P 6P 14P
• • • • • •

Modbus/TCP protocol - Ethernet port.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1MBTCPWDOS
B C S 3P 6P 14P
• • • • • •

Profinet IO protocol - Ethernet port.
→ *Not compatible with 115 VAC and 230 VAC.*

✶ OPZW1PNETIOWDOS
B C S 3P 6P 14P
• – – – – –

USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply.
→ *Not compatible with 115 VAC and 230 VAC.*

OPZWUSBWDOS
B C S 3P 6P 14P
• • • • • •

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE	B	C	S	3P	6P	14P
	USB male/female extension cable with IP68 panel connector; length: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68	•	•	•	•	•	•
	Ethernet male/female extension cable with IP68 panel connector; length: 30 cm, sealing cap included.	OPZWCONETHEIP68	•	•	•	•	•	•
	Ethernet male/male extension cable with IP68 connector; length: 5 m, to be used in combination with the OPZWCONETHEIP68 option.	OPZWCONETHE5MT	•	•	•	•	•	•
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010	•	•	•	•	•	•
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420	•	•	•	•	•	•

EXPANSIONS

			B	C	S	3P	6P	14P
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC	•	•	•	•	•	•
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E	•	•	•	•	•	•
	Simultaneous use of E/EC option with the analog output.	OPZWAEC	•	•	•	•	•	•
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M	•	•	•	•	–	–
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC: RELE6PROD24V 115/230 VAC: RELE6PROD230V	–	–	–	–	•	•

✶ *Select one option among those marked with an asterisk.*

WDOS

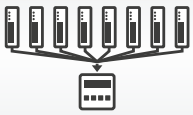
WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.	RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •
	Single gross weight values reading by others transmitting instruments (up to 8) via RS485 serial port.	OPZWINGSER8 B C S 3P 6P 14P • – – – – –

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

IP67 · RS485 RS232 · ANALOG OUTPUT · ALIBI · WiFi · Instrument Manager · RECHARGEABLE BATTERY

Indicator-holder bracket and column
Stainless steel bracket for wall mounting
Panel mounting

PROGRAM	OIML	M	NMI TRADE APPROVED	NEW ZEALAND TRADE APPROVED		NTEP	EAC	cULus	LCD	RED LED
BASE	R76 - R61	•	•	•	•	•	•	•	WDESKL-B	WDESKR-B
LOAD	R76 - R61	•	•	•	•	•	•	•	WDESKL-C	WDESKR-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	WDESKL-S	WDESKR-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKL-3	WDESKR-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKL-6	WDESKR-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKL-14	WDESKR-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	WDESKL-MU	WDESKR-MU

* *External 8-relay modules included*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

DESCRIPTION

- ABS weight indicator.
- *L version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *R version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 6-key keyboard.
- Real-time clock/calendar with buffer battery.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

To know the specific characteristics of the various instrument versions, refer to the table of available versions.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Piece counting.
- Weight totalizing.
- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W (on request: 115/230 VAC; 50/60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

AVAILABLE VERSIONS

	DESCRIPTION	CODE
	P version (*standard*) - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x164 mm. - IP67 protection rating. - 6 PG9 cable glands. - Power supply included.	WDESK-P
	Q version - Installation: front panel (supports included; drilling template: 186x92 mm), desk, wall. - Dimensions: 226x122x152 mm. - IP67 front panel protection rating. - Removable screw terminal blocks.	WDESK-Q
	D version - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x189 mm. - IP40 protection rating. - IP67 front panel protection rating. - 4 D-SUB connectors. - Power supply included.	WDESK-D
	X version: **ATEX II 3GD (zone 2-22)** - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x164 mm. - IP67 protection rating. - 6 PG9 cable glands.	WDESK-X

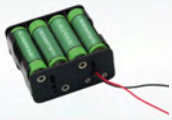
OPTIONS ON REQUEST

	ACCESSORIES	CODE
	Stainless steel adjustable bracket for wall and table mounting. Dimensions with bracket: 230x122x250 mm.	STAFFAINOXWDESK
	Supports for front panel mounting.	STAFFEWINOX
	ABS adjustable support for column mounting.	STAFFAWDESK
	Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Painted steel bracket for platform/floor mounting. Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFACN COLONNAM + STAFFAIN

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

OPTIONS ON REQUEST

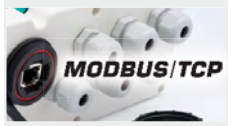
	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➔ *Not compatible with D version.* ➔ *Not compatible with EAC certifications.*	
	24 VDC/1 A stabilized power supply. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1A
	24 VDC/1 A stabilized power supply with jack connector. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1AJACK
	24 VDC/1 A stabilized power supply with omega rail socket. - 100÷240 VAC input. - 3 m cable length, with or without jack connector.	ALI24SPINAPRESA
	Battery pack made up of 8 NiMH rechargeable elements, 1.2 V, AA type. - Non-removable. - Operating time: 16 hours.	OPZWBATTWDESK

WDESK-L/R

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	INTERFACES AND FIELDBUSES	CODE
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols. (* for Q version) ➔ *X version: only available with internal antenna.*	✶ OPZW1RADIO ✶ OPZW1RADIOQ(*) B C S 3P 6P 14P • • • • • •
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Additional RS485 port. ➔ *One input and one output not available.* ➔ *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
	CANopen protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1PR B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1ETIP68 ✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - IP68 Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1ETTCP68 ✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	**Modbus/TCP** protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1MBTCP68 ✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1PNETIO68 ✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	IP68 USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. ➔ *Not compatible with X version.*	OPZWUSB68 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

ISO 9001
ISO 14001

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE
	Extension cable for the WiFi module antenna; length: 100 cm. ➔ *Q version: included with the OPZW1RADIOQ option.*	OPZWCONWF B C S 3P 6P 14P • • • • • •
	USB male/female extension cable with IP68 panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68 B C S 3P 6P 14P • • • • • •
	Ethernet male/female extension cable with IP68 panel connector; lenght: 30 cm, sealing cap included.	OPZWCONETHEIP68 B C S 3P 6P 14P • • • • • •
	Ethernet male/male extension cable with IP68 connector; lenght: 5 m.	OPZWCONETHE5MT B C S 3P 6P 14P • • • • • •
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

EXPANSIONS

	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC B C S 3P 6P 14P • • • • • •
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E B C S 3P 6P 14P • • • • • •
	Simultaneous use of E/EC option with the analog output.	OPZWAEC B C S 3P 6P 14P • • • • • •
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M B C S 3P 6P 14P • • • • – –

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

			CODE
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC 115/230 VAC	RELE6PROD24V RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.		RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

FORM ⇩ %	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

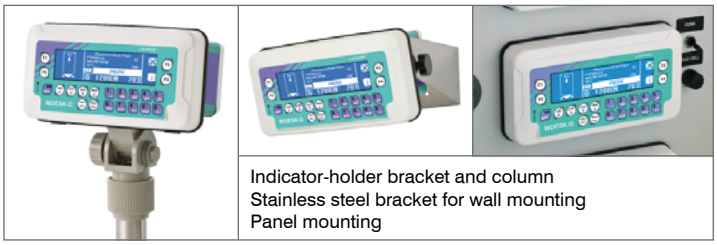
WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

IP67 · RS485 RS232 · RECHARGEABLE BATTERY · WiFi · BARCODE SCAN · ALIBI · ANALOG OUTPUT

MULTILANGUAGE SOFTWARE



Indicator-holder bracket and column
Stainless steel bracket for wall mounting
Panel mounting

PROGRAM	OIML	M	NMI	NZ		NTEP	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	•	WDESKG-B
LOAD	R76 - R61	•	•	•	•	•	•	•	WDESKG-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	WDESKG-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKG-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKG-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	WDESKG-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	WDESKG-MU

* *External 8-relay modules included*

ON REQUEST

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

M	Conformity assessment (initial verification) in combination with Laumas weighing module
NMI	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NZ	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

DESCRIPTION

- ABS weight indicator.
- Backlit LCD graphic display, resolution: 240x64 pixel, visible area: 133x39 mm.
- 21-key keyboard.
- Real-time clock/calendar with buffer battery.
- Multilanguage software (4 languages + 1 customizable).

To know the specific characteristics of the various instrument versions, refer to the table of available versions.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Customizable name of the production lot.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Piece counting.
- Weight totalizing.
- Statistical checking of prepackages.
- 99 items database with association of a preset tare value, 3 setpoint values and 2 values for weight thresholds function (HIGH/LOW).
- Weight thresholds function (HIGH/LOW) shown on the display.
- Barcodes printing by lot name, item name, weighings progressive number.
- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- Graphical representation of the system load status.
- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Production storage.
- Products stocks management.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W (on request: 115÷230 VAC; 50÷60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

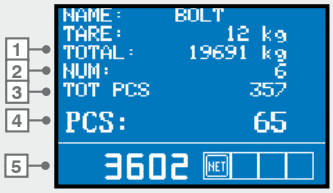
WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

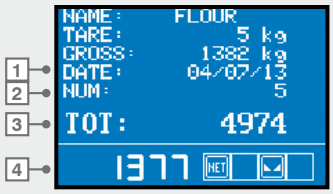
Example screens for BASE program

Piece counter



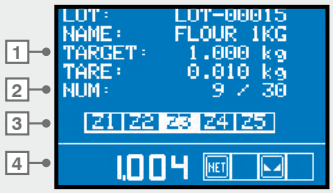
1. Totalized weight since last deletion.
2. Performed weighings since last deletion.
3. Totalized pieces since last deletion.
4. Number of pieces.
5. Net weight.

Totalizer



1. Date of last deletion.
2. Performed weighings since last deletion.
3. Totalized weight since last deletion.
4. Net weight.

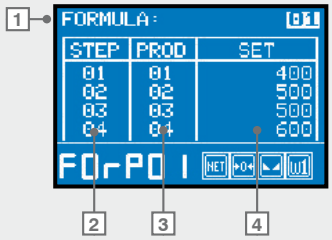
Statistical checking of prepackages



1. Nominal weight.
2. Checked samples/total samples.
3. Tolerance zone.
4. Net weight.

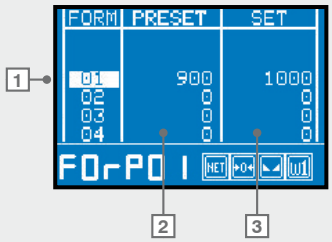
Example screens for BATCHING programs

Formulas programming
3/6/14 PRODUCTS program



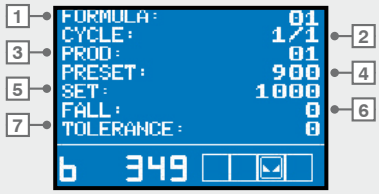
1. Selected formula.
2. Step number.
3. Product number.
4. Set value.

Formulas programming
LOAD and UNLOAD programs



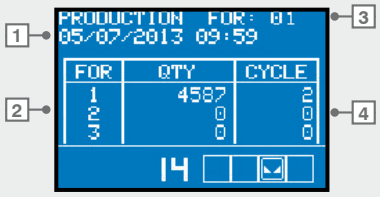
1. Selected formula.
2. Preset value.
3. Set value.

Details of batching product displaying
LOAD and UNLOAD programs



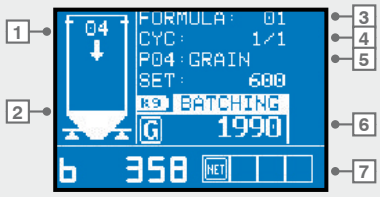
1. Formula number.
2. Running cycle.
3. Product number.
4. Preset value.
5. Set value.
6. Fall value.
7. Tolerance value.

Production displaying for each formula
(amount of batched product and number of cycles performed)



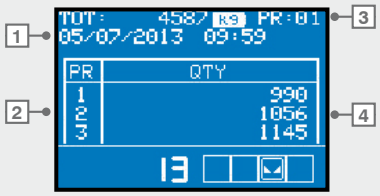
1. Date and time of last deletion.
2. Formulas list.
3. Selected formula.
4. Batched quantity and number of cycles performed.

Displaying during the batching
3/6/14 PRODUCTS program



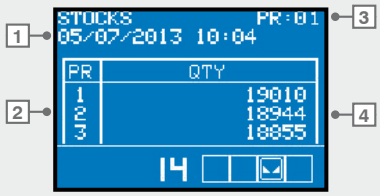
1. Product number and arrow indicating the product loading.
2. Product level on the scale.
3. Formula number.
4. Running cycle.
5. Product number and name.
6. Gross weight value.
7. Batching product weight.

Consumptions displaying for each product
3/6/14 PRODUCTS program



1. Date and time of last deletion.
2. Products list.
3. Selected product.
4. Consumptions.

Stocks displaying for each product
3/6/14 PRODUCTS program



1. Current date and time.
2. Products list.
3. Selected product.
4. Stocks.

ISO 9001
ISO 14001

WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

AVAILABLE VERSIONS

	DESCRIPTION	CODE
	P version (*standard*) - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x164 mm. - IP67 protection rating. - 6 PG9 cable glands. - Power supply included.	WDESK-P
	Q version - Installation: front panel (supports included; drilling template: 186x92 mm), desk, wall. - Dimensions: 226x122x152 mm. - IP67 front panel protection rating. - Removable screw terminal blocks.	WDESK-Q
	D version - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x189 mm. - IP40 protection rating. - IP67 front panel protection rating. - 4 D-SUB connectors. - Power supply included.	WDESK-D
	X version: **ATEX II 3GD (zone 2-22)** - Installation: desk, wall, column, front panel (drilling template: 186x96 mm). - Dimensions: 226x122x164 mm. - IP67 protection rating. - 6 PG9 cable glands.	WDESK-X

OPTIONS ON REQUEST

	ACCESSORIES	CODE
	Stainless steel adjustable bracket for wall and table mounting. Dimensions with bracket: 230x122x250 mm.	STAFFAINOXWDESK
	Supports for front panel mounting.	STAFFEWINOX
	ABS adjustable support for column mounting.	STAFFAWDESK
	Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Painted steel bracket for platform/floor mounting. Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFACN COLONNAM + STAFFAIN

WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST

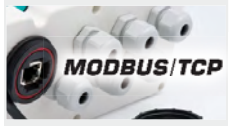
	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➔ *Not compatible with D version.* ➔ *Not compatible with EAC certifications.*	
	24 VDC/1 A stabilized power supply. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1A
	24 VDC/1 A stabilized power supply with jack connector. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1AJACK
	24 VDC/1 A stabilized power supply with omega rail socket. - 100÷240 VAC input. - 3 m cable length, with or without jack connector.	ALI24SPINAPRESA
	Battery pack made up of 8 NiMH rechargeable elements, 1.2 V, AA type. - Non-removable. - Operating time: 16 hours.	OPZWBATTWDESK

WDESK-G

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	INTERFACES AND FIELDBUSES	CODE
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols. (* for Q version) ➔ *X version: only available with internal antenna.*	✶ OPZW1RADIO ✶ OPZW1RADIOQ(*) B C S 3P 6P 14P • • • • • •
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Additional RS485 port. ➔ *One input and one output not available.* ➔ *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
	CANopen protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X version: not compatible with E/EC option.*	✶ OPZW1PR B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1ETIP68 ✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - IP68 Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1ETTCP68 ✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	**Modbus/TCP** protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1MBTCP68 ✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - IP68 Ethernet port. ➔ *X, P version: internal crimp wiring.*	✶ OPZW1PNETIO68 ✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	IP68 USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. Support for keyboard and barcode reader. ➔ *Not compatible with X version.*	OPZWUSB68 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE
	Extension cable for the WiFi module antenna; length: 100 cm. ➔ *Q version: included with the OPZW1RADIOQ option.*	OPZWCONWF B C S 3P 6P 14P • • • • • •
	USB male/female extension cable with IP68 panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68 B C S 3P 6P 14P • • • • • •
	Ethernet male/female extension cable with IP68 panel connector; lenght: 30 cm, sealing cap included.	OPZWCONETHEIP68 B C S 3P 6P 14P • • • • • •
	Ethernet male/male extension cable with IP68 connector; lenght: 5 m.	OPZWCONETHE5MT B C S 3P 6P 14P • • • • • •
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

EXPANSIONS

	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC B C S 3P 6P 14P • • • • • •
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E B C S 3P 6P 14P • • • • • •
	Simultaneous use of E/EC option with the analog output.	OPZWAEC B C S 3P 6P 14P • • • • • •
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M B C S 3P 6P 14P • • • • – –

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

			CODE
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC 115/230 VAC	RELE6PROD24V RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.		RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

FORM ⇩ %	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

IP69K · RS485 RS232 · ANALOG OUTPUT · ALIBI · RECHARGEABLE BATTERY · WiFi · Instrument Manager

Indicator-holder bracket and column
Desk version
Panel mounting

PROGRAM	OIML	M	NMI TRADE APPROVED	NEW ZEALAND TRADE APPROVED		NTEP	EAC Ex	EAC	cULus	LCD	RED LED
BASE	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-B	WINOXR-B
LOAD	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-C	WINOXR-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-S	WINOXR-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-3	WINOXR-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-6	WINOXR-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-14	WINOXR-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	•	WINOXL-MU	WINOXR-MU

* *External 8-relay modules included*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
	Declaration of conformity + IP69K marking protection rating (only PG9 version) *Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)* *Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)*
M	Conformity assessment (initial verification) in combination with Laumas weighing module
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

DESCRIPTION

- AISI 304 stainless steel weight indicator.
- *L version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *R version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 6-key keyboard.
- Real-time clock/calendar with buffer battery.
- The instrument can be configured and managed using the free “Instrument Manager” PC software, which you can download.

To know the specific characteristics of the various instrument versions, refer to the table of available versions.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Piece counting.
- Weight totalizing.
- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W (on request P version: 115/230 VAC; 50/60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

AVAILABLE VERSIONS

	DESCRIPTION	CODE
	P version (*standard*) - Installation: wall and desk (bracket included), column, front panel (drilling template: 248x160 mm). - Dimensions: 286x206x108 mm; with bracket: 290x206x187 mm. - IP68 protection rating. - 6 PG9 cable glands. - Power supply included.	WINOX-P
	Q version - Installation: front panel (supports included; drilling template: 248x160 mm), wall, desk, column. - Dimensions: 286x206x96 mm. - IP68 front panel protection rating. - Removable screw terminal blocks.	WINOX-Q
	D version - Desk version. - Dimensions: 286x85x206 mm. - IP40 protection rating. - IP68 front panel protection rating. - 6 D-SUB connectors. - Power supply included.	WINOX-D
	X version: **ATEX II 3GD (zone 2-22)** **IEX version**: **IECEx (zone 2-22)** - Installation: wall and desk (bracket included), column, front panel (drilling template: 248x160 mm). - Dimensions: 286x206x108 mm; with bracket: 290x206x187 mm. - IP68 protection rating. - 6 PG9 cable glands.	WINOX-X WINOX-IEX

OPTIONS ON REQUEST

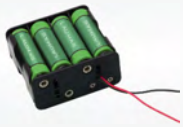
	ACCESSORIES	CODE
	Stainless steel adjustable bracket for wall and table mounting.	STAFFAIWINOX
	Supports for front panel mounting.	STAFFEWINOX
	ABS support for column mounting.	STAFFAIWINOXSUP
	Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Painted steel bracket for platform/floor mounting. Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFACN COLONNAM + STAFFAIN

WINOX-L/R

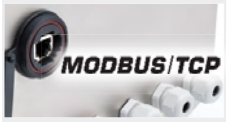
STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST

	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➔ *Not compatible with Q, D, X, IEX versions.* ➔ *Not compatible with OPZWBATTWINOX option.* ➔ *Not compatible with EAC certifications.*	OPZWINOXVCA
	24 VDC/1 A stabilized power supply. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1A
	24 VDC/1 A stabilized power supply with jack connector. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1AJACK
	24 VDC/1 A stabilized power supply with omega rail socket. - 100÷240 VAC input. - 3 m cable length, with or without jack connector.	ALI24SPINAPRESA
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed in the instrument. Operating time: 16 hours. ➔ *Not compatible with D version.* ➔ *Not compatible with 115 VAC and 230 VAC.*	OPZWBATTWINOX
	Battery pack made up of 8 NiMH rechargeable elements, 1.2 V, AA type. - Non-removable. - Operating time: 16 hours. ➔ *Not compatible with Q and D versions.* ➔ *Not compatible with 115 VAC and 230 VAC.*	OPZWBATTWINOXATEX

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	INTERFACES AND FIELDBUSES	CODE
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols. (* for Q version) ➔ *Not compatible with X and IEX versions.*	✶ OPZW1RADIO ✶ OPZW1RADIOQ(*) B C S 3P 6P 14P • • • • • •
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Additional RS485 port. ➔ *One input and one output not available.* ➔ *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
	CANopen protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1PR B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1ETIP68 ✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - IP68 Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1ETTCP68 ✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	**Modbus/TCP** protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1MBTCP68 ✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1PNETIO68 ✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	IP68 USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. ➔ *Not compatible with X and IEX versions.*	OPZWUSB68 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE	B	C	S	3P	6P	14P
	Extension cable for the WiFi module antenna; length: 100 cm. ➔ *Q version: included with the OPZW1RADIOQ option.*	OPZWCONWF	•	•	•	•	•	•
	USB male/female extension cable with IP68 panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68	•	•	•	•	•	•
	Ethernet male/female extension cable with IP68 panel connector; lenght: 30 cm, sealing cap included.	OPZWCONETHEIP68	•	•	•	•	•	•
	Ethernet male/male extension cable with IP68 connector; lenght: 5 m.	OPZWCONETHE5MT	•	•	•	•	•	•
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010	•	•	•	•	•	•
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420	•	•	•	•	•	•

EXPANSIONS

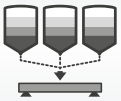
			B	C	S	3P	6P	14P
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC	•	•	•	•	•	•
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E	•	•	•	•	•	•
	Simultaneous use of E/EC option with the analog output.	OPZWAEC	•	•	•	•	•	•
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M	•	•	•	•	–	–

✶ *Select one option among those marked with an asterisk.*

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

			CODE
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC 115/230 VAC	RELE6PROD24V RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.		RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

FORM ⇩ %	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

ANALOG OUTPUT · ALIBI · RECHARGEABLE BATTERY · WiFi · BARCODE SCAN · RS485 RS232 · IP69K

MULTILANGUAGE SOFTWARE

Indicator-holder bracket and column
Desk version
Panel mounting

PROGRAM	OIML	M	NMI TRADE APPROVED	NEW ZEALAND TRADE APPROVED			EAC Ex	EAC	cULus	LCD 133x39 mm	LCD 128x75 mm
BASE	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-B	WINOX2G-B
LOAD	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-C	WINOX2G-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-S	WINOX2G-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-3	WINOX2G-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-6	WINOX2G-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-14	WINOX2G-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	•	WINOXG-MU	WINOX2G-MU

* *External 8-relay modules included*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS · PROFINET

ISO 9001
ISO 14001

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
	Declaration of conformity + IP69K marking protection rating (only PG9 version) *Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)* *Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)*
M	Conformity assessment (initial verification) in combination with Laumas weighing module
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

DESCRIPTION

- AISI 304 stainless steel weight indicator.
- *G version*: backlit LCD graphic display, resolution: 240x64 pixel, visible area: 133x39 mm - 21-key keyboard.
- *2G version*: backlit LCD graphic display, resolution: 240x128 pixel, visible area: 128x75 mm - 27-key keyboard.
- Real-time clock/calendar with buffer battery.
- Multilanguage software (4 languages + 1 customizable).

To know the specific characteristics of the various instrument versions, refer to the table of available versions.

INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).
- WiFi module (option on request).

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Customizable name of the production lot.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 8 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- TCP/IP WEB APP
  Integrated software in combination with the WiFi module and Ethernet TCP/IP options for remote supervision, management and control of the instrument.

CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

BASE PROGRAM

- Piece counting.
- Weight totalizing.
- Statistical checking of prepackages.
- 99 items database with association of a preset tare value, 3 setpoint values and 2 values for weight thresholds function (HIGH/LOW).
- Weight thresholds function (HIGH/LOW) shown on the display.
- Barcodes printing by lot name, item name, weighings progressive number.
- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

BATCHING PROGRAM

- Graphical representation of the system load status.
- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Production storage.
- Products stocks management.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

ISO 9001
ISO 14001

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W (on request P version: 115/230 VAC; 50/60 Hz; 6 VA)
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

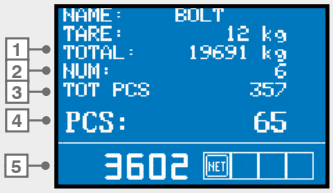
WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

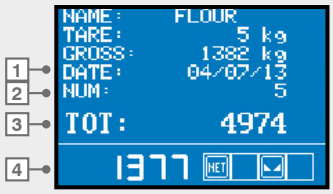
Example screens for BASE program

Piece counter



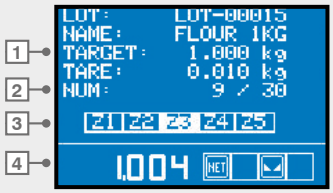
1. Totalized weight since last deletion.
2. Performed weighings since last deletion.
3. Totalized pieces since last deletion.
4. Number of pieces.
5. Net weight.

Totalizer



1. Date of last deletion.
2. Performed weighings since last deletion.
3. Totalized weight since last deletion.
4. Net weight.

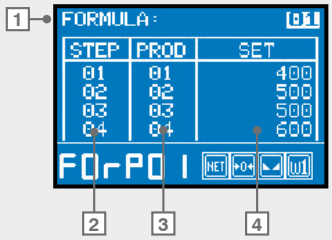
Statistical checking of prepackages



1. Nominal weight.
2. Checked samples/total samples.
3. Tolerance zone.
4. Net weight.

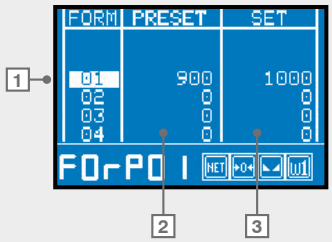
Example screens for BATCHING programs

Formulas programming
3/6/14 PRODUCTS program



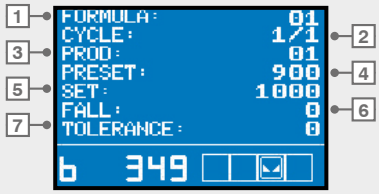
1. Selected formula.
2. Step number.
3. Product number.
4. Set value.

Formulas programming
LOAD and UNLOAD programs



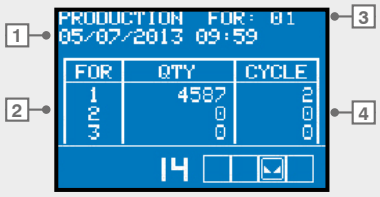
1. Selected formula.
2. Preset value.
3. Set value.

Details of batching product displaying
LOAD and UNLOAD programs



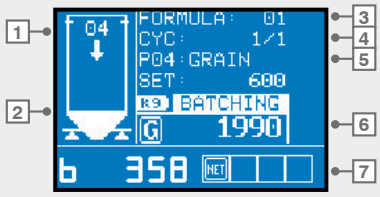
1. Formula number.
2. Running cycle.
3. Product number.
4. Preset value.
5. Set value.
6. Fall value.
7. Tolerance value.

Production displaying for each formula
(amount of batched product and number of cycles performed)



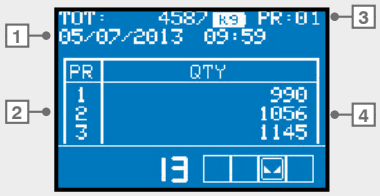
1. Date and time of last deletion.
2. Formulas list.
3. Selected formula.
4. Batched quantity and number of cycles performed.

Displaying during the batching
3/6/14 PRODUCTS program



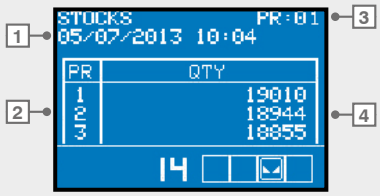
1. Product number and arrow indicating the product loading.
2. Product level on the scale.
3. Formula number.
4. Running cycle.
5. Product number and name.
6. Gross weight value.
7. Batching product weight.

Consumptions displaying for each product
3/6/14 PRODUCTS program



1. Date and time of last deletion.
2. Products list.
3. Selected product.
4. Consumptions.

Stocks displaying for each product
3/6/14 PRODUCTS program



1. Current date and time.
2. Products list.
3. Selected product.
4. Stocks.

ISO 9001
ISO 14001

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

AVAILABLE VERSIONS

	DESCRIPTION	CODE
	P version (*standard*) - Installation: wall and desk (bracket included), column, front panel (drilling template: 248x160 mm). - Dimensions: 286x206x108 mm; with bracket: 290x206x187 mm. - IP68 protection rating. - 6 PG9 cable glands. - Power supply included.	WINOX-P
	Q version - Installation: front panel (supports included; drilling template: 248x160 mm), wall, desk, column. - Dimensions: 286x206x96 mm. - IP68 front panel protection rating. - Removable screw terminal blocks.	WINOX-Q
	D version - Desk version. - Dimensions: 286x85x206 mm. - IP40 protection rating. - IP68 front panel protection rating. - 6 D-SUB connectors. - Power supply included.	WINOX-D
	X version: **ATEX II 3GD (zone 2-22)** **IEX version**: **IECEx (zone 2-22)** - Installation: wall and desk (bracket included), column, front panel (drilling template: 248x160 mm). - Dimensions: 286x206x108 mm; with bracket: 290x206x187 mm. - IP68 protection rating. - 6 PG9 cable glands.	WINOX-X WINOX-IEX

OPTIONS ON REQUEST

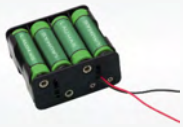
	ACCESSORIES	CODE
	Stainless steel adjustable bracket for wall and table mounting.	STAFFAIWINOX
	Supports for front panel mounting.	STAFFEWINOX
	ABS support for column mounting.	STAFFAIWINOXSUP
	Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Painted steel bracket for platform/floor mounting. Stainless steel indicator-holder column (Ø38 mm, height 700 mm). Stainless steel bracket for platform/floor mounting.	COLONNAM + STAFFACN COLONNAM + STAFFAIN

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST

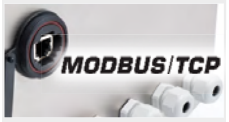
	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➔ *Not compatible with Q, D, X, IEX versions.* ➔ *Not compatible with OPZWBATTWINOX option.* ➔ *Not compatible with EAC certifications.*	OPZWINOXVCA
	24 VDC/1 A stabilized power supply. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1A
	24 VDC/1 A stabilized power supply with jack connector. - 100÷240 VAC input. - 3 m cable length.	ALI24SPINA1AJACK
	24 VDC/1 A stabilized power supply with omega rail socket. - 100÷240 VAC input. - 3 m cable length, with or without jack connector.	ALI24SPINAPRESA
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed in the instrument. Operating time: 16 hours. ➔ *Not compatible with D version.* ➔ *Not compatible with 115 VAC and 230 VAC.*	OPZWBATTWINOX
	Battery pack made up of 8 NiMH rechargeable elements, 1.2 V, AA type. - Non-removable. - Operating time: 16 hours. ➔ *Not compatible with Q and D versions.* ➔ *Not compatible with 115 VAC and 230 VAC.*	OPZWBATTWINOXATEX

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	INTERFACES AND FIELDBUSES	CODE
	WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols. (* for Q version) ➔ *Not compatible with X and IEX versions.*	✶ OPZW1RADIO ✶ OPZW1RADIOQ(*) B C S 3P 6P 14P • • • • • •
	Optoisolated 16 bit **analog output**. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	Additional RS485 port. ➔ *One input and one output not available.* ➔ *Not compatible with E/EC option.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
	CANopen protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1CA B C S 3P 6P 14P • – – – – –
	DeviceNet protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1DE B C S 3P 6P 14P • – – – – –
	Profibus DP protocol. ➔ *Q version: one input and one output not available.* ➔ *Q version: integrated RS485 port not available.* ➔ *Q, P, X, IEX version: not compatible with E/EC option.*	✶ OPZW1PR B C S 3P 6P 14P • • • • • •
	Ethernet/IP protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1ETIP68 ✶ OPZW1ETIPCR B C S 3P 6P 14P • – – – – –
	Ethernet TCP/IP protocol - IP68 Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1ETTCP68 ✶ OPZW1ETTCPCR B C S 3P 6P 14P • • • • • •
	**Modbus/TCP** protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1MBTCP68 ✶ OPZW1MBTCPCR B C S 3P 6P 14P • • • • • •
	Profinet IO protocol - IP68 Ethernet port. ➔ *X, IEX, P version: internal crimp wiring.*	✶ OPZW1PNETIO68 ✶ OPZW1PNETIOCR B C S 3P 6P 14P • – – – – –
	IP68 USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. Support for keyboard and barcode reader. ➔ *Not compatible with X and IEX versions.*	OPZWUSB68 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

WINOX-G/2G

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		CODE	B	C	S	3P	6P	14P
	Extension cable for the WiFi module antenna; length: 100 cm. ➔ *Q version: included with the OPZW1RADIOQ option.*	OPZWCONWF	•	•	•	•	•	•
	USB male/female extension cable with IP68 panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68	•	•	•	•	•	•
	Ethernet male/female extension cable with IP68 panel connector; lenght: 30 cm, sealing cap included.	OPZWCONETHEIP68	•	•	•	•	•	•
	Ethernet male/male extension cable with IP68 connector; lenght: 5 m.	OPZWCONETHE5MT	•	•	•	•	•	•
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010	•	•	•	•	•	•
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420	•	•	•	•	•	•

EXPANSIONS

			B	C	S	3P	6P	14P
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	✶ EC	•	•	•	•	•	•
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	✶ E	•	•	•	•	•	•
	Simultaneous use of E/EC option with the analog output.	OPZWAEC	•	•	•	•	•	•
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M	•	•	•	•	–	–

✶ *Select one option among those marked with an asterisk.*

WINOX-G/2G

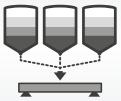
STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

			CODE	B	C	S	3P	6P	14P
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12÷24 VDC	RELE6PROD24V	–	–	–	–	•	•
		115/230 VAC	RELE6PROD230V	–	–	–	–	•	•
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.		RELE14PROD	–	–	–	–	–	•

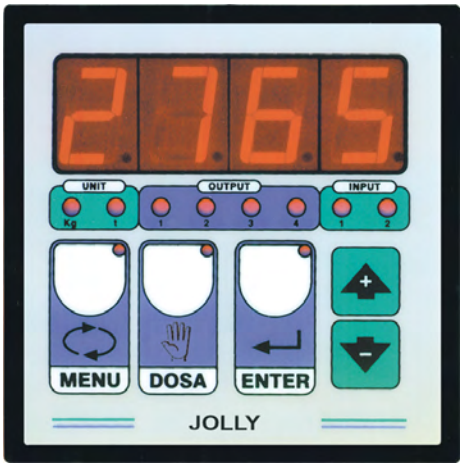
APPLICATIONS - SOFTWARE

			B	C	S	3P	6P	14P
FORM ⇩ %	Formulas setting in percentage.	OPZWFORPERC	–	–	–	•	•	•
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC	–	•	–	•	•	•
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI	–	–	–	•	•	•
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP	–	–	–	•	•	•
	Alibi memory.	OPZWALIBI	•	•	•	•	•	•
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC	•	•	•	•	•	•
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN	–	•	•	•	•	•

The Company reserves the right to make changes to the technical data, drawings and images without notice.

JOLLY

WEIGHT INDICATOR - 2/4 OUTPUTS - 2 INPUTS



Box for wall mounting (on request)
IP64 protection rating

	CODE
6 operating modes selectable and calibration by the customer	JOLLY2
4 operating modes selectable and calibration by the customer	JOLLY4

DESCRIPTION

- Weight indicator in DIN box suitable for panel mounting or in a box for wall mounting (on request).
- Dimensions: 96x96x65 mm (drilling template: 91x91 mm).
- 4-digit semi-alphanumeric red LED display (20 mm height).
- 8+3 signalling LED.
- 5-key keyboard.
- IP64 front panel protection rating.
- Removable screw terminal blocks.

INPUTS/OUTPUTS AND COMMUNICATION

- 2/4 relay digital outputs controlled by the setpoint values.
- 2 digital inputs.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Reading the load cells value expressed in mV: load cells connections continuous check.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard).
- Tare weight zero setting.

JOLLY2 weighing and batching systems; 6 modes selectable:

- Weight indicator with a relay alarm threshold (1SET)
- Weight indicator with two relay alarm thresholds (2SET)
- Single product batching in loading with two speeds (1LOAD)
- Two products batching in loading succession (2LAOD)
- Single product batching in unloading with two speeds (1UNLOAD)
- Two products batching in unloading succession (2UNLOAD)

JOLLY4 weighing and batching systems; 4 modes selectable:

- Weight indicator with four alarm thresholds (4SET).
- Two products batching in loading with slow and cycle end (2LOAD).
- Three products batching in loading with cycle end (3LOAD).
- Four products batching in loading (4LOAD).

JOLLY

WEIGHT INDICATOR - 2/4 OUTPUTS - 2 INPUTS

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 VAC; 50/60 Hz; 5 VA
Number of load cells • Load cells supply	up to 4 (350 Ω) • 5 VDC/60 mA
Internal divisions	20000
Measure range	-4 mV +16.5 mV
Display range	-999 +19999*
Display increments	x1 x2 x5
Conversion rate	10/s
Relay logic outputs	n. 2/4 - 115 VAC/2 A
Logic inputs	n. 2
Humidity (condensate free)	90%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

** over 10000 divisions the weight will restart from zero and will blink to indicate that the above mentioned value has been surpassed*

OPTIONS ON REQUEST

	DESCRIPTION
12/24 VDC	Power supply 12 VDC / 24 VDC
	IP64 box; dimensions 98x125x75 mm Wall mounting version

The Company reserves the right to make changes to the technical data, drawings and images without notice.

P-WI

WEIGHT INDICATOR - 2 OUTPUTS - 2 INPUTS

Box for wall mounting (on request)
IP64 protection rating

PROGRAM		CODE
2 SETPOINT	Two setpoint values settable by keyboard	PWI
LOAD	Single-product load batching; 1 formula	PWIC
UNLOAD	Single-product unload batching; 1 formula	PWIS

DESCRIPTION

- Weight indicator in DIN box suitable for panel mounting or in a box for wall mounting (on request).
- Dimensions: 96x96x65 mm (drilling template: 91x91 mm).
- 4-digit semi-alphanumeric red LED display (20 mm height).
- 6+3 signalling LED.
- 4-key keyboard.
- IP64 front panel protection rating.
- Removable screw terminal blocks.

INPUTS/OUTPUTS AND COMMUNICATION

- 2 relay digital outputs controlled by the setpoint values or via protocols.
- 2 digital inputs.
- 1 load cell dedicated input.

MAIN FUNCTIONS

- Connections to:
  - 24 column printer via TTL serial;
  - up to 4 load cells in parallel by junction box.
- Reading the load cells value expressed in mV: load cells connections continuous check.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard).
- Tare weight zero setting.
- Password protection: It is possible to enable an internal parameter to protect the access to the calibration and constants programming.

2 SETPOINT

- Weight indicator with 2 setpoint can be set by keyboard (max value 9999), output on two voltage free contacts.
- Hysteresis settable by keyboard.
- Print of weight, date and time from keyboard.

BATCHING PROGRAM:

- Slow, weight, fall and max weight values settable by keyboard.
- Automatic fall and consumption calculation.
- Print of constant, formulas and consumption; automatic printing of batching data at the end of every cycle.
- Pause of the batching by the keyboard.

Only for:

LOAD program

- Single-product load batching by two different extraction speeds, executing the autotare every cycle-start.

UNLOAD program

- Single-product unload batching by two different extraction speeds and shows the increasing weight on the display.

P-WI

WEIGHT INDICATOR - 2 OUTPUTS - 2 INPUTS

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 VAC; 50/60 Hz; 5 VA
Number of load cells • Load cells supply	up to 4 (350 Ω) • 5 VDC/60 mA
Internal divisions	20000
Measure range	-4 mV +16.5 mV
Display range	-999 +19999*
Display increments	x1 x2 x5
Conversion rate	10/s
Relay logic outputs	n. 2 - 115 VAC/2 A
Logic inputs	n. 2
Humidity (condensate free)	90%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

** over 10000 divisions the weight will restart from zero and will blink to indicate that the above mentioned value has been surpassed*

OPTIONS ON REQUEST

	DESCRIPTION
12/24 VDC	Power supply 12 VDC / 24 VDC.
	IP64 box; dimensions 98x125x75 mm. Wall mounting version

The Company reserves the right to make changes to the technical data, drawings and images without notice.

P-WS

WEIGHT INDICATOR - 4 OUTPUTS - 2 INPUTS

Box for wall mounting (on request)
IP64 protection rating

PROGRAM		CODE
4 SETPOINT		PWS4S
LOAD	12 formulas	PWSC
UNLOAD	12 formulas	PWSS
3 PRODUCTS	12 formulas	PWS3
* 6 PRODUCTS	12 formulas	PWS6
* 14 PRODUCTS	9 formulas	PWS14

* *External 8-relay modules included*

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting or in a box for wall mounting (on request).
- Dimensions: 96x96x65 mm (drilling template: 91x91 mm).
- 4-digit semi-alphanumeric red LED display (20 mm height).
- 6+3 signalling LED.
- 5-key keyboard.
- IP64 front panel protection rating.
- Removable screw terminal blocks.
- External 8-relay modules included:
  - for **6 PRODUCTS:** dimensions: 80x160x60 mm; external contacts: 115 VAC 2 A;
  - for **14 PRODUCTS:** dimensions: 80x160x60 mm, 80x120x60 mm; external contacts: 115 VAC 2 A.

INPUTS/OUTPUTS AND COMMUNICATION

- 4 relay outputs controlled by the setpoint values.
- 2 digital inputs.
- 1 load cell input.

P-WS

WEIGHT INDICATOR - 4 OUTPUTS - 2 INPUTS

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - 24 column printer via TTL serial;
  - up to 4 load cells in parallel by junction box.
- Reading the load cells value expressed in mV: load cells connections continuous check.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard).
- Tare weight zero setting.
- Password protection: It is possible to enable an internal parameter to protect the access to the calibration and constants programming.

4 SETPOINT

- Weight indicator with 4 setpoint can be set by keyboard.
- Hysteresis settable by keyboard.
- Peak holder memorization by closing the peak contact.
- Decimal point: possible positions xxxx; xxx.x; xx.xx; x.xxx.
- Select the contacts as Normally Open or Normally Closed.
- Print of weight, setpoint and constant from keyboard.
- Relays may change state according to either the displayed peak value.

BATCHING PROGRAM

- 12 different formulas storage (LOAD/UNLOAD/3-6 PRODUCTS).
- 9 different formulas memorization (14 PRODUCTS).
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through tapping function.
- Consumption storage.
- Keyboard printing of constant, formulas and consumption; automatic printing of batching data at the end of every cycle.
- Batching start via keyboard (setting formula and cycle number to be performed).
- Current batching can be interrupted via keyboard or external contact.
- Pause of the batching by the keyboard.

Only for:

LOAD program

- Autotare after one or more batching cycles selectable by operator.

UNLOAD program

- Automatic loading between the minimum and maximum weight values.

3-6-14 PRODUCTS program

- Autotare on the first product.
- Slow contact for a product batching by two different extraction speeds (6 PRODUCTS).

TECHNICAL FEATURES

Power supply and consumption	230 VAC; 50/60 Hz; 5 VA
Number of load cells • Load cells supply	up to 4 (350 Ω) • 5 VDC/60 mA
Internal divisions	20000
Measure range	-4 mV +16.5 mV
Display range	-999 +19999*
Display increments	x1 x2 x5
Conversion rate	10/s
Relay logic outputs	n. 4 - 115 VAC/2 A
Logic inputs	n. 2
Humidity (condensate free)	90%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

** over 10000 divisions the weight will restart from zero and will blink to indicate that the above mentioned value has been surpassed*

P-WS

WEIGHT INDICATOR - 4 OUTPUTS - 2 INPUTS

OPTIONS ON REQUEST

	DESCRIPTION	CODE
12/24 VDC	Power supply ➔ *Not available for 14 PRODUCTS* - 12 VDC for 4 SETPOINT - LOAD - UNLOAD - 3 PRODUCTS - 24 VDC for 4 SETPOINT - LOAD - UNLOAD - 3 PRODUCTS - 24 VDC for 6 PRODUCTS	
	IP64 box; dimensions 98x125x75 mm; wall mounting ➔ *Available only for BASE version*	
	External selector switch for selecting 12 groups of 4 setpoints or 12/9 formulas.	EC
	12 groups by 4 setpoint or 12/9 formulas by external contacts.	E

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WT60

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

RS232/422 RS485 ANALOG OUTPUT

MODBUS RTU

PROFIBUS

PROGRAM		CODE
BASE	4 setpoint	WT60B
BASE ANALOG	Analog Output	WT60/ANA
LAOD	12 formulas	WT60C
UNLOAD	12 formulas	WT60S
3 PRODUCTS	12 formulas	WT603P
* 6 PRODUCTS	12 formulas	WT606P
* 14 PRODUCTS	12 formulas	WT6014P

* *External 8-relay modules included*

DESCRIPTION

- Weight indicator in DIN box suitable for panel mounting (dimensions: 144x72x170 mm; drilling template: 139x67 mm; 170 mm mounting depth with serial wirings and terminal blocks). IP56 window cover (on request).
- 5-digit semi-alphanumeric red LED display (20 mm height).
- 8 signalling LED.
- 5-key keyboard.
- IP54 front panel protection rating.
- Extractable terminal boards.
- External 8-relay modules included:
  - for **6 PRODUCTS:** dimensions: 80x60x160 mm; 115 VAC 2A external contacts.
  - for **14 PRODUCTS:** dimensions: 80x60x160 mm, 80x60x120 mm; 115 VAC 2A external contacts.

INPUTS/OUTPUTS AND COMMUNICATION

- 2 independent serial ports: COM1 = RS232 and COM2 = RS422/485 for communication via ModBus RTU protocol, Profibus DP, ASCII Laumas bidirectional or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols.
- 3 optoisolated PNP digital inputs.
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request for batching programs).

WT60

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (WT60/ANA)
  - PC/PLC via COM1/2 (up to 32 instruments) with PC supervision software;
  - remote display (COM1/2) and printer (COM1).
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Tare weight zero setting.
- Gross weight zero tracking.
- Semi-automatic zero.
- Displaying of the maximum weight value reached (peak).
- Weight value printing with date and time via keyboard or external contact.
- Reading the load cells value expressed in mV: load cells connections continuous check.
- Password to protect the access to selected functions.

BASE PROGRAM / BASE WITH ANALOG OUTPUT

- Weight indicator with 4 setpoint.
- Hysteresis and setpoint value setting.
- Automatic zero setting at power-on.

BATCHING PROGRAM

- 50 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance value control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Print of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.
- Setting a single tolerance value for all formulas/products
- Current batching can be interrupted via keyboard or external contact.
- Pause of the batching by the keyboard.

Only for:

LOAD program

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3-6-14 PRODUCTS program

- Autotare at batching start.
- Net weight batching for each product.
- Slow contact for a product batching by two different extraction speeds (6 PRODUCTS).

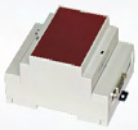
TECHNICAL FEATURES

Power supply and consumption	115/230 VAC; 50/60 Hz; 10 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) 4/6 wires • 5 VDC/120 mA
Linearity • Analog output linearity	<0.01% full scale • <0.03% full scale
Thermal drift • Analog output thermal drift	<0.0003% full scale/°C • <0.001% full scale/°C
A/D Converter	24 bit
Internal divisions	±99999
Measurement range	±2 mV ±19.5 mV
Display range	± 99999 (20% ÷ 100% full scale)
Decimals • Display increments	0-4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	0.2-25 Hz • 5,10, 25, 50 reading/s
Relay outputs	n. 4 - 115 VAC/30 VDC; 0.5 A
Digital inputs	n. 3
Serial ports	COM1: RS232; COM2: RS422/RS485
Baud rate	1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600 (bit/s)
Optoisolated analog output	16 bit = 65536 divisions; 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; 0-5 V; 0-10 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

WT60

WEIGHT INDICATOR - WEIGHING AND BATCHING

OPTIONS ON REQUEST

	DESCRIZIONE	CODE
ANALOG OUTPUT	Optoisolated 16 bit analog output.	
	Profibus converter, IP40, suitable for Omega/DIN rail mounting, allows to connect 1 or 2 Laumas instruments in Slave configuration to any security Profibus DP Master by means of the RS422/RS485 port. Dimensions: 71x58x90 mm. 1 instrument 2 instruments	 MPROFIUNO MPROFIDUE
	Weight indicator with external selector switch for 12 groups by 4 setpoint selection and management software for weight sorting machine. ➔ *Available only for BASE version*	WT60B12F
	External selector switch for selecting the first 12 formulas.	EC
	Selection of the first 12 formulas via external contact.	E
	IP56 window cover for front panel mounting. External dimensions: 220x140x40 mm. Inner place suitable for instrument mounting: 178x77 mm	S

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WL60

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

RS232/422 RS485 ANALOG OUTPUT

MODBUS RTU

PROFIBUS

PROGRAM		CODE
BASE	6 setpoint	WL60B
LAOD	50 formulas	WL60C
UNLOAD	50 formulas	WL60S
3 PRODUCTS	50 formulas	WL603
* 6 PRODUCTS	50 formulas	WL606
* 14 PRODUCTS	50 formulas	WL6014
* 19 PRODUCTS	50 formulas	WL6019
* 27 PRODUCTS	50 formulas	WL6027

* *External 8-relay modules included*

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 144x72x120 mm (drilling template: 139x67 mm; 170 mm mounting depth with wirings and moderator).
- 8-digit semi-alphanumeric red LED display (14 mm height).
- 16-key keyboard with buzzer.
- IP54 front panel protection rating.
- Real-time clock/calendar with buffer battery.
- Extractable terminal boards.
- External 8-relay modules included:
  - for **6 PRODUCTS:** dimensions: 80x60x160 mm; external contacts: 115 VAC 2 A.
  - for **14 PRODUCTS:** dimensions: 80x60x160 mm, 80x60x120 mm; external contacts: 115 VAC 2 A.
  - for **19-27 PRODUCTS:** dimensions: 93x60x126 mm; power supply: 24 VDC 8 W; external contacts: 115 VAC 0.5 A.

INPUTS/OUTPUTS AND COMMUNICATION

- 2 independent serial ports: COM1=RS232 and COM2= RS422/485 for communication via ModBus RTU protocol, Profibus DP (RS422/485), ASCII Laumas bidirectional or one way transmission.
- 6 relay outputs controlled by the setpoint values or via protocols.
- 6 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.
- Current or voltage 16 bit analog output (on request).

WL60

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - PC/PLC via COM1/2 (up to 32 instruments) with PC supervision software;
  - remote display and printer via COM1/2;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Tare weight zero setting.
- Zero tracking.
- Semi-automatic zero.
- Displaying of the maximum weight value reached (peak).
- Weight value printing with date and time via keyboard or external contact.
- Reading the load cells value expressed in mV: load cells connections continuous check.
- Password to protect the access to selected functions.

BASE PROGRAM / BASE WITH ANALOG OUTPUT

- Weight indicator with 6 setpoint.
- Hysteresis and setpoint value setting.
- Automatic zero setting at power-on.

BATCHING PROGRAM

- 50 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Print of batching data.
- Alarm contact management.
- Automatic batching.
- Batching start via external contact or keyboard.
- Signaling of minimum and maximum weight.
- Setting a single tolerance value for all formulas/products.
- Current batching can be interrupted via keyboard or external contact.
- Pause of the batching by the keyboard.

Only for:

LOAD program

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3-6-14 PRODUCTS program

- Net weight batching for each product.

TECHNICAL FEATURES

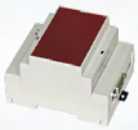
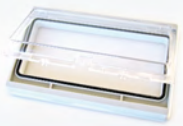
Power supply and consumption	230 (115) VAC; 50/60 Hz; 15 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity • Analog output linearity	<0.01% full scale • <0.03% full scale
Thermal drift • Analog output thermal drift	<0.0003% full scale/°C • <0.001% full scale/°C
A/D Converter	24 bit
Internal divisions	±99999
Measurement range	±2 mV ±19.5 mV
Display range	± 99999 (20% ÷ 100% full scale)
Decimals • Display increments	0-4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	0.2-25 Hz • 5, 10, 25, 50 reading/s
Relay outputs	n. 6 - 115 VAC/30 VDC; 0.5 A
Digital inputs	n. 6
Serial ports	COM1: RS232; COM2: RS422/RS485
Baud rate	1200, 2400, 4800, 9600, 14400, 19200, 28000, 38400, 57600, 115200 (bit/s)
Analog output (on request)	16 bit. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

WL60

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

OPTIONS ON REQUEST

	DESCRIZIONE	CODE
ANALOG OUTPUT	16 bit analog output.	
	Profibus converter, IP40, suitable for Omega/DIN rail mounting, allows to connect 1 or 2 Laumas instruments in Slave configuration to any security Profibus DP Master by means of the RS422/RS485 port. Dimensions: 71x58x90 mm. 1 instrument 2 instruments	 MPROFIUNO MPROFIDUE
FORM %	Formulas setting in percentage. ➔ *Available for 3-6-14 PRODUCTS version*	OPZFORPERC
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Available for 3-6-14 PRODUCTS version*	OPZQMC
	Intermediate unloadings during the batching. ➔ *Available for 3-6-14 PRODUCTS version*	OPZSCARI
	Partial unloadings at cycle end. ➔ *Available for 3-6-14 PRODUCTS version*	OPZSCARP
	IP56 window cover for front panel mounting. External dimensions: 220x140x40 mm. Inner place suitable for instrument mounting: 178x77 mm	S

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WR

WEIGHT INDICATOR - WEIGHING AND BATCHING

RS232/422
RS485

MODBUS RTU

PROFIBUS

PROGRAM		CODE
4 PRODUCTS	50 formulas / 20 steps	WR4/50/1
* 12 PRODUCTS	50 formulas / 20 steps	WR12/50/1
* 8 PRODUCTS + 4 LITRE-COUNTER	50 formulas / 20 steps	WR8+4/50/1
* 20 PRODUCTS	50 formulas / 20 steps	WR20/50/1

* *External 8-relay module included.*

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 192x96x150 mm (drilling template: 186x92 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- Backlit LCD display, two-line by 16-digit (5 mm height).
- 4 signalling LED.
- 18-key keyboard.
- IP54 front panel protection rating.
- Real-time clock/calendar.
- External 8-relay module included in the versions with more than 4 products: suitable for mounting on Omega/DIN rail, to install up to 100 meters of distance; dimensions: 93x60x126 mm; power supply: 24 VDC 8 W; external contacts: 115 VAC 0.5 A.

INPUTS/OUTPUTS AND COMMUNICATION

- 2 independent serial ports: COM1=RS232 and COM2=RS232 or RS422/485 for communication via ModBus RTU protocol, Profibus DP (RS422/485), ASCII Laumas bidirectional or continuous one way transmission.
- 8 relay outputs controlled by the setpoint values or via protocols.
- 8 optoisolated PNP digital inputs: status reading via serial communication protocols.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via COM2 (up to 32 instruments) with PC Supervision Software;
  - remote display and printer via COM1/2;
  - up to 8 load cells in parallel by junction box.
- 50 formulas to 20 programming steps (otherwise 99 formulas to 10 programming steps, on request).
- Programming, in the desired order by the operator, steps for loading product, partial or total unloading, opening and closing relay output, waiting for external input, waiting for a desired time.
- For litre-counter version: setting and displaying products directly in kg.
- Batching start via keyboard by setting formula and desired cycles (up to 9999).
- Starting via external contact of the formula and the number of cycles previously stored by keyboard, or starting via external contact of the first 15 formulas (9 formulas by contraves) selected by the four BCD inputs for a only cycle at a time.
- Alarm for lack of product during the batching.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Minimum stocks check for each product.
- Reading real stock: consumption and stocks calculation for each product (option on request).
- Production calculation for each formula with cycle's number executed.
- Alarm contact management.
- Automatic batching via keyboard for a single product.
- Automatic unloading via keyboard for a preset amount.
- Assisted manual batching.
- Print of batching data.
- Pause of the batching by the keyboard.
- Batching resume after a blackout.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration and real calibration (with sample weights).
- Tare weight zero setting.
- Reading the load cells value expressed in mV.
- Password to protect the access to selected functions.
- Autotare at batching start.

ISO 9001
ISO 14001

WR

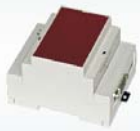
WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 VAC; 50/60 Hz; 25 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0003% full scale/°C
A/D Converter	24 bit
Internal divisions	60000 (20% ÷ 100% full scale)
Measurement range	-7.5 mV +17.5 mV
Display range	-99999; +900000
Decimals • Display increments	0-4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	0.2-25 Hz • 6, 12, 25, 50 reading/s
Relay outputs	n. 8 - 115 VAC/30 VDC 0.5 A
Optoisolated digital inputs	n. 8 - 12/24 VDC PNP
Serial ports	COM1: RS232; COM2: RS232, RS422/RS485
Baud rate	2400, 9600, 19200, 38400 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20°C +70°C
Working temperature	-10°C +50°C

OPTIONS ON REQUEST

	DESCRIZIONE	CODE
	Profibus converter, IP40, suitable for Omega/DIN rail mounting, allows to connect 1 or 2 Laumas instruments in Slave configuration to any security Profibus DP Master by means of the RS422/485 port. Dimensions: 71x58x90 mm.	
	1 instrument	MPROFIUNO
	2 instruments	MPROFIDUE
	Reading real stock: consumption and stocks calculation for each product. By weighing the silos by means weight transmitters and load cells, it is possible transmit to WR the real quantity (stock) present into the silos.	

The Company reserves the right to make changes to the technical data, drawings and images without notice.

TAIPAN265

LOSS-IN-WEIGHT WEIGHING SYSTEM

RS232/422 RS485 ANALOG OUTPUT

DESCRIPTION

- Loss-in-weight regulator in DIN box suitable for front panel mounting.
- Dimensions: 144x72x120 mm (drilling template: 139x67 mm)
- Backlit LCD display, two-line by 16-digit (5 mm height).
- Protective fuse accessible from the outside.

On request:

- PROFIBUS protocol (it needs additional module).
- Separate module for an additional analogue input and output.
- ETHERNET interface module.
- 24 column printer.

MAIN FUNCTIONS

- Maintaining the set point flow by adjusting IP analog output, with an alarm output of flow out of tolerance.
- Continuous transmission of the instantaneous flow rate, detected by analog output proportional to it.
- Ability to set, for batching, the values of preset, set and fall with pulse outputs to the achievement of values.
- Calculation of total weight of the batched material and transmission through pulse output; ability to drive a printer via RS232.
- Programming of up to 15 different set points of work, settable by BCD inputs.
- Ability to freeze the analog output value by means of logic input, in order to avoid the initial pendulation of system (for all 15 set point).
- Ability to display, during operation, I/O status, the current weight, current speed, encoder pulses and the correction factor set
- Possibility to connect to PC/PLC by means comunication protocols: ASCII, Modbus RTU and Profibus (on request).

INPUTS/OUTPUTS AND COMMUNICATION

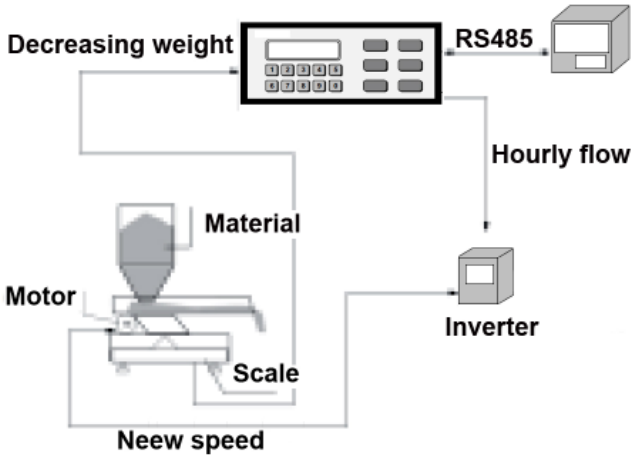
- 1 RS232/RS422/RS485 serial output (9-pin female connector) for communication via ModBus RTU, Profibus DP, ASCII protocols.
- 6 relay outputs.
- 8 optoisolated PNP digital inputs.
- 1 load cell dedicated input.
- Current or voltage 16 bit analog output.

TAIPAN265

LOSS-IN-WEIGHT WEIGHING SYSTEM

LAUMAS®

APPLICATION DIAGRAM



TECHNICAL FEATURES

Power supply and consumption	230/115 VAC 50-60Hz ; 15 VA
Number of load cells • Load cells supply	up to 6 (350 Ω) a 4/6 wires • 5 VDC / 90 mA
A/D Converter	24 bit
Measurement range	±3.9 mV/V
Display resolution	60000
Internal resolution	16000000
Display increments	x1 x2 x5 x10
Relay outputs	6 - max 115 VAC / 30 VDC / 0.5 A each
Optoisolated digital inputs	8 - 12/24 VDC PNP
Serial ports	COM1: RS232c half duplex; COM2: RS422/RS485 half duplex
Baud rate	9600 (bit/s)
Analog output	16 bit. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V (min 10 kΩ)
Encoder supply	12 VDC
Encoder input	single phase push-pull max. 2 kHz
Humidity (condensate free)	10÷90%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

The Company reserves the right to make changes to the technical data, drawings and images without notice.

COBRA265

CONTINUOUS BELT WEIGHING SYSTEM

RS232/422 RS485 ANALOG OUTPUT

DESCRIPTION

- Flow rate regulator for belt in DIN box suitable for front panel mounting (dimensions: 144x72x120 mm; drilling template: 139x67 mm).
- Backlit LCD alphanumeric display, two-line by 16-digit (5 mm height).
- Protective fuse accessible from the outside.
- The COBRA265 not only integrates weight and speed variables but also generates the instantaneous flow rate per hour, total weight and the function of automatic flow rate regulator function.

On request:

- PROFIBUS protocol (it needs additional module).
- separate module for an additional analogue input and output.
- ETHERNET interface module.
- 24 column printer.

INPUTS/OUTPUTS AND COMMUNICATION

- 1 RS232/RS422/RS485 serial port (9-pin female connector) for communication via ModBus RTU protocol, ASCII.
- 6 relay outputs.
- 8 optoisolated PNP digital inputs.
- 1 load cell dedicated input.
- Current or voltage 16 bit analog output.

MAIN FUNCTIONS

- Maintaining the set point flow by adjusting IP analog output, with an alarm output of flow out of tolerance.
- Continuous transmission of the instantaneous flow rate, detected by analog output proportional to it.
- Ability to set, for batching, the values of preset, set and fall with pulse outputs to the achievement of values.
- Calculation of total weight of the batched material and transmission through pulse output; ability to drive a printer via RS232.
- Programming of up to 15 different set points, settable by BCD inputs.
- Congelamento da ingresso logico del valore dell'uscita analogica, al fine di riproporlo alla ripartenza evitando il pendolamento iniziale del sistema (eseguibile per tutti i 15 set point).
- Possibilità di visualizzare durante il funzionamento lo stato degli I/O, il peso corrente, la velocità istantanea, gli impulsi encoder e il fattore di correzione impostato.
- Procedure di taratura di zero con nastro in movimento e di taratura con materiale con conseguente creazione del fattore di correzione.
- Possibilità di collegamento con PC/PLC mediante protocollo di comunicazione ASCII, ModBus RTU e Profibus (on request).

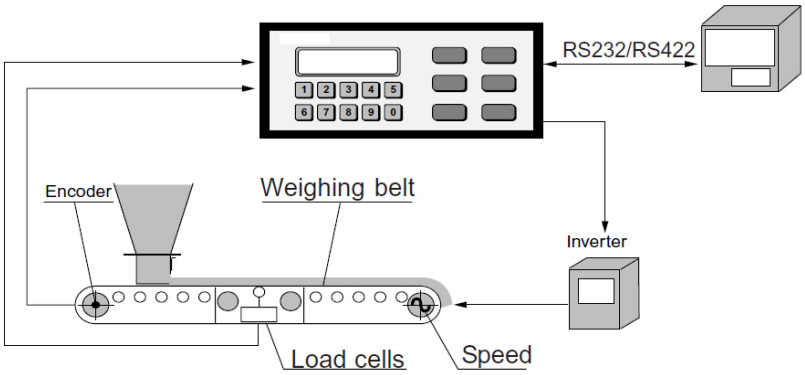
ISO 9001
ISO 14001

COBRA265

CONTINUOUS BELT WEIGHING SYSTEM

LAUMAS®

APPLICATION DIAGRAM



Ask for an offer for WEIGH BRIDGE or CONVEYOR BELT complete.

TECHNICAL FEATURES

Power supply and consumption	230/115 VAC 50-60 Hz; 15 VA
Number of load cells • Load cells supply	up to 6 (350 Ω) a 4/6 wires • 5 VDC / 90 mA
Measurement range	±3.9 mV/V
A/D Converter	24 bit
Display resolution	60000
Internal resolution	16000000
Readings per second	x1 x2 x5 x10
Relay outputs	6 - max 115 VAC / 30 VDC / 0.5 A each
Optoisolated digital inputs	8 - 12÷24 VDC PNP
Serial ports	COM1: RS232c half duplex; COM2: RS422/RS485 half duplex
Baud rate	2400, 9600, 19200, 38400 (bit/s)
Optoisolated analog output	16 bit. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V (min 10 kΩ)
Encoder supply	12 VDC
Encoder input	single phase push-pull max. 2 kHz
Humidity (condensate free)	85%
Storage temperature	-20 °C +50 °C
Working temperature	-10 °C +50 °C

The Company reserves the right to make changes to the technical data, drawings and images without notice.

DOS2005

SYSTEMS FOR CONCRETE-ASPHALT PLANT WITH 3 SCALES

LAUMAS®

CE UK CA

A Scale

B Scale

C Scale

PROGRAM	SCALE		CODE
8 + 4 PRODUCTS	A + B	20 formulas / 2 scales	DOS2005/2
8 + 4 + 4 PRODCUTS	A + B + C	20 formulas / 3 scales	DOS2005/3

DESCRIPTION

- DOS2005 has been designed to control 2 or 3 scales simultaneously with 1 litre-counter (max 20 Hz).
- The **A** scale manages up to 8 products, while the **B** and **C** scales manage up to 4 products each.
- An important characteristic is that batching can be started from a weighing scale even if the other scales have not finished the batching cycle (max 1 cycle of displacement).

A scale: up to 8 products

- DOS2005 main unit in DIN box suitable for panel mounting.
- Dimensions: 144x96x80 mm (drilling template: 137x91 mm).
- 5-digit semi-alphanumeric red LED display (20 mm height).
- 18 signalling LED.
- 8-key keyboard.
- IP64 front panel protection rating.
- Clock/calendar.
- 6 relay outputs.
- 5 digital inputs.
- 3 load cell dedicated inputs.

B - C scales: up to 4 products for each scale

- RIPE model instruments in DIN box suitable for panel mounting.
- Dimensions: 96x96x80 mm (drilling template: 91x91 mm).
- 4-digit semi-alphanumeric red LED display (20 mm height) (after exceeding the value 9999 the display shows the value with movable point; for example 11.50 means 11500).
- 3-key keyboard.
- IP64 front panel protection rating.
- 4 relay outputs.
- 5 digital inputs.

External 6-relay module

- Omega/DIN rail mounting.
- Dimensions: 115x80x55 mm.

DOS2005

SYSTEMS FOR CONCRETE-ASPHALT PLANT WITH 3 SCALES

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - 24 column printer via TTL serial;
  - up to 12 load cells in parallel by junction box.
- 20 settable formulas.
- Tare weight zero setting.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Reading the load cells value expressed in mV: load cells connections continuous check.
- Batching start via keyboard by setting formula and desired cycles (up to 9999).
- Batching start via external contact of the first 12 formulas.
- Autotare on first component for each scale.
- Precision batching through slow function.
- Precision batching through tapping function.
- Automatic fall calculation.
- Consumption storage.
- Print of batching data.
- The litre-counter quantity can be modified also during the batching phase.
- Batching resume after a blackout.
- Manual batching via keyboard.
- Digital filter to reduce the effects of weight oscillation.
- Password to protect the access to selected functions.
- Pause of the batching by the keyboard.

TECHNICAL FEATURES

Power supply and consumption	230 VAC ±10%; 50/60 Hz; 15 VA
Number of load cells • Load cells supply	up to 12 (350 Ω) • 5 VDC/180 mA
Internal divisions	12000
Measurement range	±4 mV; +16.5 mV
Display range	-3000 +60000
Display increments	x1 x2 x5 x10
Readings per second	6 reading/s
Relay outputs	n. 6, 6, 4 - 115 VAC 2 A
Digital inputs	n. 5
Humidity (condensate free)	90%
Storage temperature	-20 °C +70 °C
Working temperature	-10 °C +50 °C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Selection of the first 12 formulas via external selector switch.	EC
	Selection of the first 12 formulas via external contact.	E
MC	Multiplies, via external selector switch, the products amount set in the formulas for a coefficient ranging from 0.5 to 6.	MC
ME	Multiplies, via 12 external contact, the products amount set in the formulas for a coefficient ranging from 0.5 to 6.	ME

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WRBIL

SIMULTANEOUSLY BATCHING SYSTEMS WITH SEVERAL SCALES

LAUMAS®

RS232/422
RS485

A Scale

B Scale

C Scale

PROGRAM	SCALE		CODE
* 31 PRODUCTS	A	50 formulas / 20 steps / 1 loading scale	WR31/50/1
* 26 PRODUCTS	A	50 formulas / 20 steps / 1 loading scale +1 unload	WR26/50/1+1
* 27 PRODUCTS	A + B	50 formulas / 20 steps / 2 loading scales	WR27/50/2
* 22 PRODUCTS	A + B	50 formulas / 20 steps / 2 loading scales +1 unload	WR22/50/2+1
* 23 PRODUCTS	A + B + C	50 formulas / 20 steps / 3 loading scales	WR23/50/3
24 PRODUCTS	A + B + C	50 formulas / 20 steps / 3 loading scales	WR24/50/3

* *In addition to the automatically batched products, it is possibile set up to 6 more manually batched products*

DESCRIPTION

- The WRBIL system manages weighing in batching plants that require up to 3 scales in the same production line.
- It manages from 1 to 3 scales simultaneously, with management of 22 to 31 different products distributed between scales, plus 6 products for manual additions (false scales).
- The WR26/50/1+1 and WR22/50/2+1 versions are able to manage, in addition to the loading scales, even 1 unloading scale.
- Supervisory software by PC via RS422/RS485 connection (on request).
- It is possible to select two different operating modes:
  - the second batching cycle can be started even if the other scales are at first batching cycle (max 1 cycle of displacement).
  - the second batching cycle can be started only if the other scales have finished the first batching cycle.
- In case of damage to a transmitter it is possible to connect the load cells directly to the WR (“Emergency scale” function).

The system consists of:

- 1 WR main unit;
- From 1 to 3 weight indicators (**M** approved): W100, W200, WDOS, WDESK, WINOX (the number of indicators depends on the number of scales);
- From 3 to 4 external 8-relay modules: suitable for mounting on Omega/DIN rail, dimensions: 93x60x126 mm; 24 VDC 8 W power supply; 115 VAC 0.5 A external contacts.

For INPUTS/OUTPUTS AND COMMUNICATION, MAIN FUNCTIONS and other data refer to instrument data sheets: WR, W100, W200, WDOS, WDESK, WINOX.

WRBIL

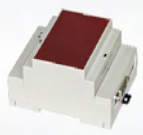
SIMULTANEOUSLY BATCHING SYSTEMS WITH SEVERAL SCALES

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 (115) VAC; 50/60 Hz; 25 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0003% full scale/°C
A/D Converter	24 bit
Internal divisions	60000 (20% ÷ 100% full scale)
Measurement range	-7.5 mV +17.5 mV
Display range	-99999; +900000
Decimals • Display increments	0-4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	0.2-25 Hz • 6, 12, 25, 50 reading/s
Relay outputs	n. 8 - 115 VAC/30 VDC 0.5 A
Optoisolated digital inputs	n. 8 - 12/24 VDC PNP
Serial ports	RS232, RS422, RS485
Baud rate	9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20°C +70°C
Working temperature	-10°C +50°C

OPTIONS ON REQUEST

	DESCRIZIONE	CODE
	Profibus converter, IP40, suitable for Omega/DIN rail mounting, allows to connect 1 or 2 Laumas instruments in Slave configuration to any security Profibus DP Master by means of the RS422/485 port. Dimensions: 71x58x90 mm.	
	1 instrument	MPROFIUNO
	2 instruments	MPROFIDUE
	Supervisory software by PC: formulas storage up to 500; production data by formula; quantities consumed for each product; traceability of raw materials used for all batching cycles; print of batching data.	PROG WRBIL

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WRMDB

MULTIPLE SCALE BATCHING SYSTEMS

RS232/422
RS485

A scale
AGGREGATES
by weight

B scale
CEMENT
by weight

C scale
WATER
by weight

D scale
ADDITIVE
by weight

PROGRAM	SCALE		CODE
6 + 2 PRODUCTS	A + B	50 formulas / 2 scales	WRMDB6/2
6 + 2 + 2 PRODUCTS	A + B + C	50 formulas / 3 scales	WRMDB6/2/2
10 + 4 PRODUCTS	A + B	50 formulas / 2 scales	WRMDB10/4
10 + 4 + 4 PRODUCTS	A + B + C	50 formulas / 3 scales	WRMDB10/4/4
8 + 4 + 1 + 4 PRODUCTS	A + B + C + D	50 formulas / 4 scales	WRMDB8/4/1/4

DESCRIPTION

- The WRMDB system for concrete preparation and to control batching from 2 to 4 scales and impulse water (max 20 Hz):
  - 2 scales: 6 aggregates, 2 cements, impulse water;
  - 3 scales: 6 aggregates, 2 cements, 2 weight/impulses additives, impulse water;
  - 2 scales: 10 aggregates, 4 cements, impulse water;
  - 3 scales: 10 aggregates, 4 cements, 4 weight/impulses additives, impulse water;
  - 4 scales: 8 aggregates, 4 cements, weight/impulses water, 4 weight/impulses additives.
- It allows to measure the humidity of 2 aggregates (excluding probes) and to calculate the amount of water and aggregates according to the humidity value detected.
- Suitable for **M** approved plant for concrete mixer trucks load and sale of concrete to third parties.
- Supervisory software by PC via RS422 or RS485 connection (on request).
- When more batching cycles have been programmed via keyboard, batching on one scale (aggregate, cement, additive) may start even if the other scales have not yet terminated the previous batching cycle.

The system consists of:

- 1 WR main unit.
- From 2 to 4 weight indicators (**M** approved): W100, W200, WDOS, WDESK, WINOX (the number of indicators depends on the number of scales).
- From 2 to 4 external 8-relay modules: suitable for mounting on DIN rail, dimensions: 93x60x126 mm; 24 VDC 8 W power supply; 115 VAC 0.5 A external contacts.

For INPUTS/OUTPUTS AND COMMUNICATION, MAIN FUNCTIONS and other data refer to instrument data sheets: WR, W100, W200, WDOS, WDESK, WINOX.

WRMDB

BATCHING SYSTEMS WITH SEVERAL SCALES

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	230 (115) VAC; 50/60 Hz; 25 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0003% full scale/°C
A/D Converter	24 bit
Internal divisions	60000 (20% ÷ 100% full scale)
Measurement range	-7.5 mV +17.5 mV
Display range	-99999; +900000
Decimals • Display increments	0-4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	0.2-25 Hz • 6, 12, 25, 50 reading/s
Relay outputs	n. 8 - 115 VAC/30 VDC 0.5 A
Analog inputs	n. 5 - 0÷10 VDC
Optoisolated digital inputs	n. 8 12/24 VDC PNP
Serial ports	RS232, RS422, RS485
Baud rate	9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20°C +70°C
Working temperature	-10°C +50°C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Selection of the first 12 formulas via external selector switch.	EC
	Selection of the first 12 formulas via external contact.	E
MC	Multiplies, via external selector switch, the products amount set in the formulas for a coefficient ranging from 0.5 to 6.	MC
ME	Multiplies, via 12 external contact, the products amount set in the formulas for a coefficient ranging from 0.5 to 6.	ME
	Supervisory software by PC: formulas storage up to 500; production data by formula; quantities consumed for each product; traceability of raw materials used for all batching cycles; print of batching data.	PROG WRMDB

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WDESK-BL/BR

WEIGHBRIDGE INDICATOR

RS485
RS232
RECHARGEABLE BATTERY
ALIBI

4 D-SUB connectors - IP40

Stainless steel bracket for wall mounting (on request)

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

DESCRIPTION

- ABS weight indicator.
- Dimensions: 226x122x189 mm.
- *BL version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *BR version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 19-key keyboard.
- IP40 protection rating.
- IP67 front panel protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.

INPUTS/OUTPUTS AND COMMUNICATION

- 3 serial ports (2x RS485 and 1x RS232) for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI
cULus	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

WDESK-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells, 350 Ω, (or 16 load cells, 700 Ω) in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Double weighing (entry and exit), single weighing (entry or exit), double weighing with trailer, single weighing with trailer, multiple weighing (weighing of multi-compartment trucks).
- Simultaneous management of 254 trucks.
- Open input weighings archive (max 254).
- Database with 999 preset tares.
- Up to 10000 weighings that can be saved in alibi memory.
- Traffic light management via relay outputs.
- Totals management (loaded and unloaded products).
- Printing of displayed weight, open weighings, totals, and last weighing done.
- Customizable printouts (header) via PC software.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Hysteresis and setpoint value setting.

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) or 16 (700 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	2x RS485, 1x RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

ISO 9001
ISO 14001

WDESK-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

INTELLIGENT JUNCTION BOXES

CLM4ABS / CLM8ABS

CLM8INOX

The weight indicator displays the intelligent junction box functions.

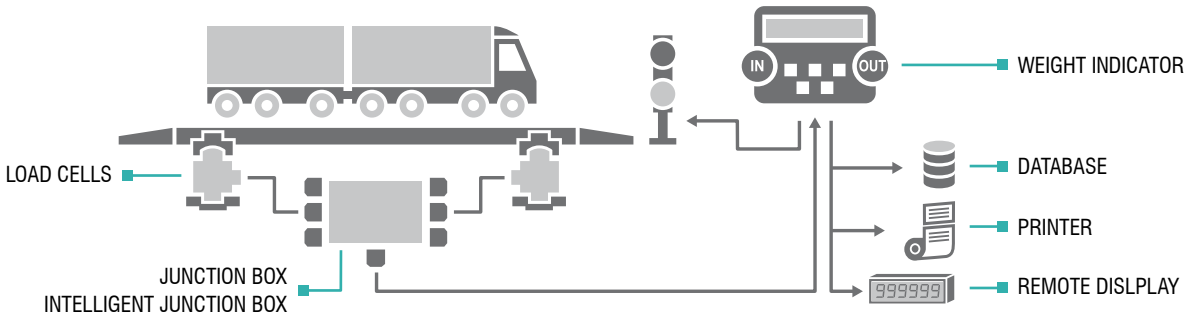
Example:

LOAD DISTRIBUTION ON THE 8 INDEPENDENT CHANNELS

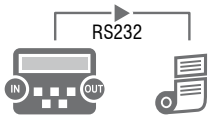
Load percentage on each active channel

ERROR: connection problem

OFF: channel not active

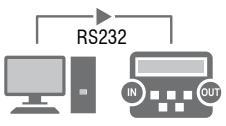


PRINTER

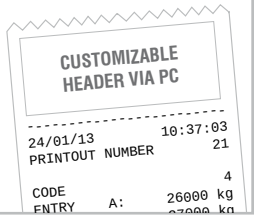


Supported external printers:
Epson TM-U295
Epson LX300
Custom Kube II
Laumas STAVT II
Other models on request.

CUSTOMIZABLE PRINTOUT



Printout example refers to the integrated printer.

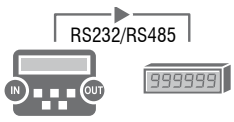


Epson name is the exclusive property of Seiko Epson Corporation; "Custom" name is the exclusive property of Custom Group SpA.

DATABASE

The database allows you to associate a preset tare value to an identification code (ID).

REMOTE DISPLAY



Suitable for weight remote displaying.

WDESK-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Stainless steel adjustable bracket for wall and table mounting. Dimensions with bracket: 230x122x250 mm.	STAFFAINOXWDESK
	Supports for front panel mounting.	STAFFEWINOX
	Battery pack made up of 8 NiMH rechargeable elements, 1.2 V, AA type. - Non-removable. - Operating time: 11 hours.	OPZWBATTWDESK
	Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WTAB-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

RS485 RS232 · RECHARGEABLE BATTERY · ALIBI · BARCODE SCAN · ETHERNET TCP/IP

Integrated thermal printer (on request)

6 D-SUB connectors - IP40

MULTILANGUAGE SOFTWARE

DESCRIPTION

- ABS desk weight indicator.
- Dimensions: 315x170x315 mm.
- Backlit LCD graphic display, resolution: 240x64 pixel, visible area: 133x39 mm.
- 52-key keyboard.
- IP40 protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- Rechargeable battery (option on request).
- Multilanguage software (4 languages + 1 customizable).
- D-SUB connectors.

INPUTS/OUTPUTS AND COMMUNICATION

- 1 Ethernet TCP/IP port.
- 2 USB ports for connection to external keyboard, barcode reader or pendrive (included).
- 4 serial ports (2x RS485 and 2x RS232) for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols.
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells, 350 Ω, (or 16 load cells, 700 Ω) in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Double weighing (entry and exit), single weighing (entry or exit), double weighing with trailer, single weighing with trailer, multiple weighing (weighing of multi-compartment trucks).
- Simultaneous management of 254 trucks.
- Open input weighings archive (max 254).
- Database with 500 vehicles (license plates, preset tares), products, customers and operators.
- Up to 10000 weighings that can be saved in alibi memory.
- Remote display with traffic light function managed via RS485/RS232.
- Traffic light management via relay outputs.
- Totals management (loaded and unloaded products).
- Barcode reader management with printing and open weighing ID recall.
- Data transfer to USB pendrive (included).
- Printing of displayed weight, open weighings, totals, and last weighing done.
- Customizable printouts (header and footer) via PC software.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.

ISO 9001
ISO 14001

WTAB-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

NMI Trade Approved - Complies with Australian market regulations for legal for trade use

Complies with New Zealand regulations for legal for trade use

Complies with the regulations of the Russian Federation for legal for trade use

NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) or 16 (700 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5 - max 115 VAC/150 mA
Optoisolated digital inputs	3 - 5÷24 VDC PNP
Serial ports	2x RS485, 2x RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

	Relay outputs	5 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

WTAB-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

INTELLIGENT JUNCTION BOXES

CLM4ABS / CLM8ABS

CLM8INOX

The weight indicator displays the intelligent junction box functions.

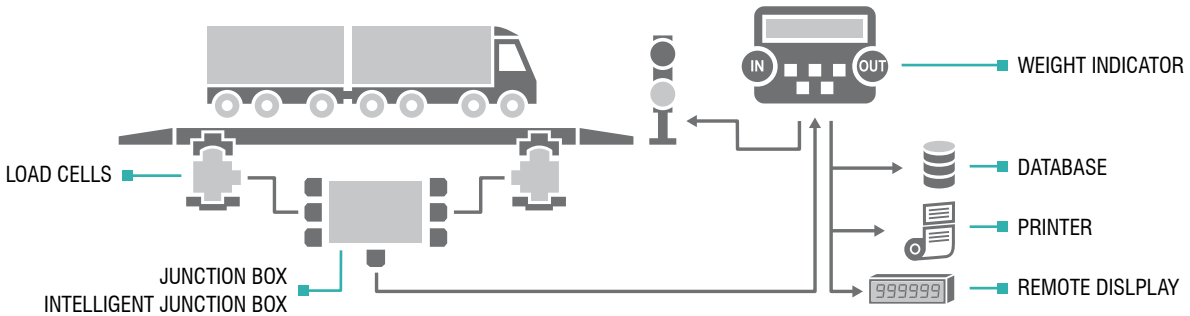
Example:

LOAD DISTRIBUTION ON THE 8 INDEPENDENT CHANNELS

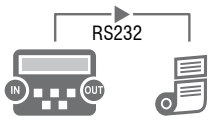
Load percentage on each active channel

ERROR: connection problem

OFF: channel not active



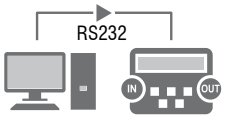
PRINTER



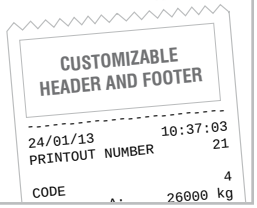
Supported external printers:
Epson TM-U295
Epson LX300
Custom Kube II
Laumas STAVT II
Other models on request.

Integrated thermal printer

CUSTOMIZABLE PRINTOUT



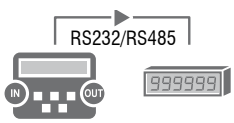
Printout example refers to the integrated printer.



DATABASE

The database allows to associate a vehicle (license plate and preset tare) to a customer identification code (ID) and to weighing data.

REMOTE DISPLAY



RIP6100IP65

Remote display with traffic light function managed via serial port.

Epson name is the exclusive property of Seiko Epson Corporation; "Custom" name is the exclusive property of Custom Group SpA

WTAB-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed inside the battery compartment accessible from the outside. Operating time: 13 hours.	OPZWBATTWTAB
	Integrated thermal printer: 24 column, paper end sensor, working temperature: 0÷50 °C, humidity: 20%÷80%, paper roll included (width: 57 ±0.5 mm - outside diameter: 50 mm). *One RS485 port not available.*	OPZWTABSTA
	Thermal paper roll.	CARTASTAVT
	Adhesive thermal paper roll.	CARTAFISCADEN
	Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WINOX-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

RS485
RS232
BARCODE SCAN
ALIBI
ETHERNET TCP/IP

6 D-SUB connectors - IP40

MULTILANGUAGE SOFTWARE

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

DESCRIPTION

- AISI 304 stainless steel desk weight indicator.
- Dimensions: 286x85x206 mm.
- Backlit LCD graphic display, resolution: 240x64 pixel, visible area: 133x39 mm.
- 52-key keyboard.
- IP40 protection rating.
- IP68 front panel protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- Multilanguage software (4 languages + 1 customizable).
- D-SUB connectors.

INPUTS/OUTPUTS AND COMMUNICATION

- 1 Ethernet TCP/IP port.
- 2 USB ports for connection to external keyboard, barcode reader or pendrive (included).
- 4 serial ports (2x RS485 and 2x RS232) for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols.
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

WINOX-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells, 350 Ω, (or 16 load cells, 700 Ω) in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Double weighing (entry and exit), single weighing (entry or exit), double weighing with trailer, single weighing with trailer, multiple weighing (weighing of multi-compartment trucks).
- Simultaneous management of 254 trucks.
- Open input weighings archive (max 254).
- Database with 500 vehicles (license plates, preset tares), products, customers and operators.
- Up to 10000 weighings that can be saved in alibi memory.
- Remote display with traffic light function managed via RS485/RS232.
- Traffic light management via relay outputs.
- Totals management (loaded and unloaded products).
- Barcode reader management with printing and open weighing ID recall.
- Data transfer to USB pendrive (included).
- Printing of displayed weight, open weighings, totals, and last weighing done.
- Customizable printouts (header and footer) via PC software.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.

CERTIFICATIONS

OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
NEW ZEALAND TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use
NTEP	NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

WINOX-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) or 16 (700 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5 - max 115 VAC/150 mA
Optoisolated digital inputs	3 - 5÷24 VDC PNP
Serial ports	2x RS485, 2x RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	5 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory.	OPZWALIBI

WINOX-BGE

GRAPHIC WEIGHBRIDGE INDICATOR

LAUMAS®

INTELLIGENT JUNCTION BOXES

CLM4ABS / CLM8ABS

CLM8INOX

The weight indicator displays the intelligent junction box functions.

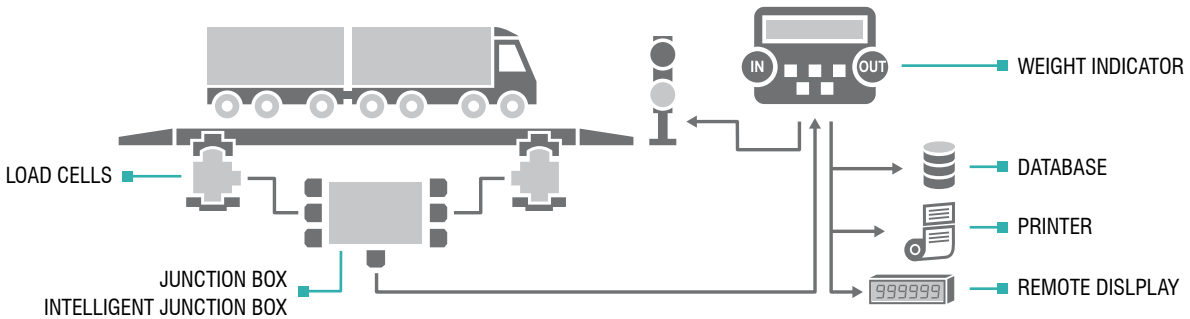
Example:

LOAD DISTRIBUTION ON THE 8 INDEPENDENT CHANNELS

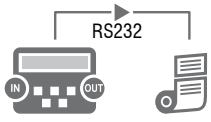
Load percentage on each active channel

ERROR: connection problem

OFF: channel not active

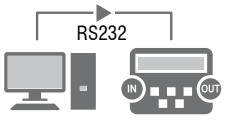


PRINTER



Supported external printers:
Epson TM-U295
Epson LX300
Custom Kube II
Laumas STAVT II
Other models on request.

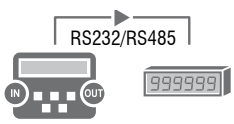
CUSTOMIZABLE PRINTOUT



DATABASE

The database allows to associate a vehicle (license plate and preset tare) to a customer identification code (ID) and to weighing data.

REMOTE DISPLAY



Remote display with traffic light function managed via serial port.

RIP6100IP65

Epson name is the exclusive property of Seiko Epson Corporation; "Custom" name is the exclusive property of Custom Group SpA

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

WTAB-BL/BR

WEIGHBRIDGE INDICATOR

RS485
RS232
RECHARGEABLE BATTERY
ALIBI

4 D-SUB connectors - IP40

Integrated thermal printer (on request)

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

DESCRIPTION

- ABS desk weight indicator.
- Dimensions: 315x170x315 mm.
- *BL version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *BR version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 19-key keyboard.
- IP40 protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.

INPUTS/OUTPUTS AND COMMUNICATION

- 3 serial ports (2x RS485 and 1x RS232) for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

NMI Trade Approved - Complies with Australian market regulations for legal for trade use

Complies with New Zealand regulations for legal for trade use

Complies with the regulations of the Russian Federation for legal for trade use

NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

WTAB-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells, 350 Ω, (or 16 load cells, 700 Ω) in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Double weighing (entry and exit), single weighing (entry or exit), double weighing with trailer, single weighing with trailer, multiple weighing (weighing of multi-compartment trucks).
- Simultaneous management of 254 trucks.
- Open input weighings archive (max 254).
- Database with 999 preset tares.
- Up to 10000 weighings that can be saved in alibi memory.
- Traffic light management via relay outputs.
- Totals management (loaded and unloaded products).
- Printing of displayed weight, open weighings, totals, and last weighing done.
- Customizable printouts (header) via PC software.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Hysteresis and setpoint value setting.

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) or 16 (700 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	2x RS485, 1x RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

WTAB-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

INTELLIGENT JUNCTION BOXES

CLM4ABS / CLM8ABS

CLM8INOX

The weight indicator displays the intelligent junction box functions.

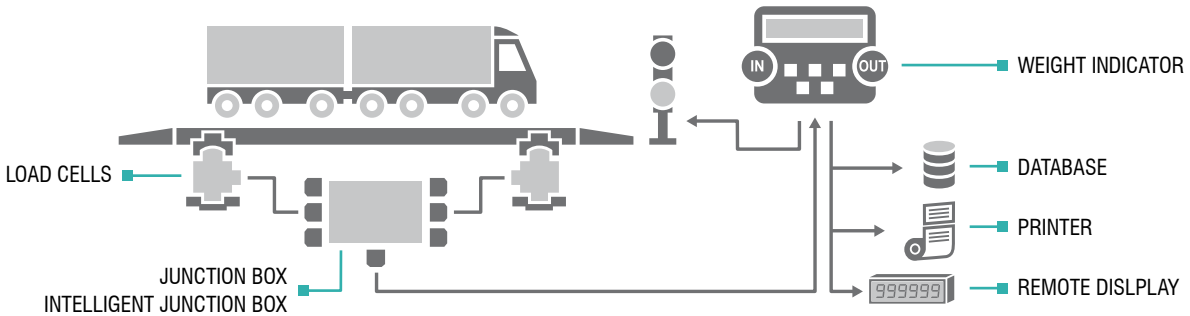
Example:

LOAD DISTRIBUTION ON THE 8 INDEPENDENT CHANNELS

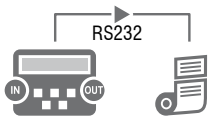
Load percentage on each active channel

ERROR: connection problem

OFF: channel not active



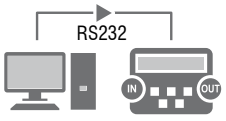
PRINTER



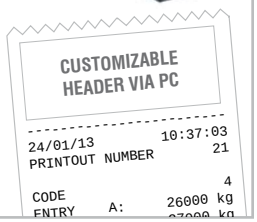
Supported external printers:
Epson TM-U295
Epson LX300
Custom Kube II
Laumas STAVT II
Other models on request.

Integrated thermal printer

CUSTOMIZABLE PRINTOUT



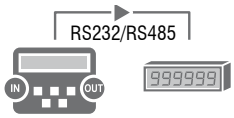
Printout example refers to the integrated printer.



DATABASE

The database allows you to associate a preset tare value to an identification code (ID).

REMOTE DISPLAY



RIP6100

Suitable for weight remote displaying.

Epson name is the exclusive property of Seiko Epson Corporation; "Custom" name is the exclusive property of Custom Group SpA.

WTAB-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	12.2 V rechargeable lead battery, 2.8 Ah capacity, supplied already installed in the instrument. Operating time: 13 hours.	OPZWBATTWTAB
	Integrated thermal printer: 24 column, paper end sensor, working temperature: 0÷50 °C, humidity: 20%÷80%, paper roll included (width: 57 ±0.5 mm - outside diameter: 50 mm). ➔ *One RS485 port not available.*	OPZWTABSTA
	Thermal paper roll.	CARTASTAVT
	Adhesive thermal paper roll.	CARTAFISCADEN
	Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

WINOX-BL/BR

WEIGHBRIDGE INDICATOR

RS485
RS232
RECHARGEABLE BATTERY
ALIBI

4 D-SUB connectors - IP40

Stabilized power supply included
24 VDC/1 A - 100÷240 VAC input
3 m cable length

DESCRIPTION

- AISI 304 stainless steel desk weight indicator.
- Dimensions: 286x85x206 mm.
- *BL version*: 6-digit semi-alphanumeric backlit LCD display (20 mm height) - 46 signalling symbols.
- *BR version*: 6-digit semi-alphanumeric red LED display (20 mm height) - 16 signaling LED.
- 19-key keyboard.
- IP40 protection rating.
- IP68 front panel protection rating.
- Real-time clock/calendar with buffer battery.
- Power supply included.
- D-SUB connectors.

INPUTS/OUTPUTS AND COMMUNICATION

- 3 serial ports (2x RS485 and 1x RS232) for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI

UL Recognized component - Complies with the United States and Canada standards

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

NMI Trade Approved - Complies with Australian market regulations for legal for trade use

Complies with New Zealand regulations for legal for trade use

Complies with the regulations of the Russian Federation for legal for trade use

NTEP - n_{max} 10000 - Class III/IIIL - United States and Canada

WINOX-BL/BR

WEIGHBRIDGE INDICATOR

LAUMAS®

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer via RS485/RS232;
  - up to 8 load cells, 350 Ω, (or 16 load cells, 700 Ω) in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Double weighing (entry and exit), single weighing (entry or exit), double weighing with trailer, single weighing with trailer, multiple weighing (weighing of multi-compartment trucks).
- Simultaneous management of 254 trucks.
- Open input weighings archive (max 254).
- Database with 999 preset tares.
- Up to 10000 weighings that can be saved in alibi memory.
- Traffic light management via relay outputs.
- Totals management (loaded and unloaded products).
- Printing of displayed weight, open weighings, totals, and last weighing done.
- Customizable printouts (header) via PC software.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) 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.
- Hysteresis and setpoint value setting.

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 6 W
Number of load cells • Load cells supply	up to 8 (350 Ω) or 16 (700 Ω) - 4/6 wires • 5 VDC/120 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% 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 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	4 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	2x RS485, 1x RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

c UL us	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST HANDBOOK 44, 2020; NCWM PUB 14, 2021
Operation modes	single interval, multi-interval, multiple range	single interval, multi-interval, multiple range
Accuracy class	III or IIII	III or IIIL
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	10000 (class III/IIIL)
Minimum input signal for scale verification division	0.2 μV/VSI	
Working temperature	-10 °C +40 °C	-10 °C +40 °C (+14 °F +104 °F)

ISO 9001
ISO 14001

WINOX-BL/BR
WEIGHBRIDGE INDICATOR

LAUMAS®

INTELLIGENT JUNCTION BOXES

CLM4ABS / CLM8ABS

CLM8INOX

The weight indicator displays the intelligent junction box functions.

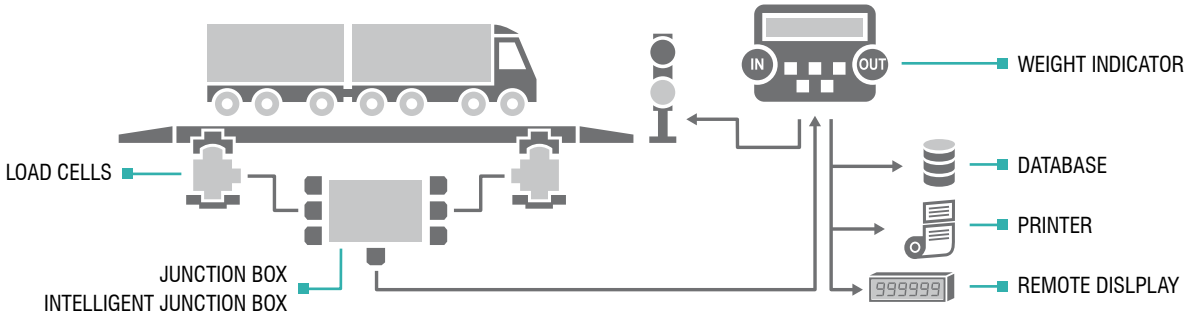
Example:

LOAD DISTRIBUTION ON THE 8 INDEPENDENT CHANNELS

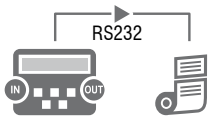
Load percentage on each active channel

ERROR: connection problem

OFF: channel not active

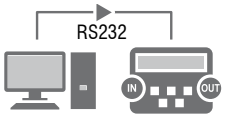


PRINTER

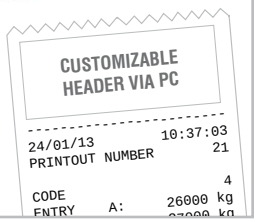


Supported external printers:
Epson TM-U295
Epson LX300
Custom Kube II
Laumas STAVT II
Other models on request.

CUSTOMIZABLE PRINTOUT



Printout example refers to the integrated printer.

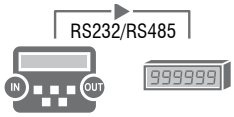


Epson name is the exclusive property of Seiko Epson Corporation; "Custom" name is the exclusive property of Custom Group SpA.

DATABASE

The database allows you to associate a preset tare value to an identification code (ID).

REMOTE DISPLAY



Suitable for weight remote displaying.

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory.	OPZWALIBI

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

INSTRUMENT MANAGER

SOFTWARE FOR MANAGING THE INSTRUMENT PARAMETERS

LAUMAS®

The Instrument Manager software allows you to manage the setting of parameters, updating and monitoring of W series weight indicators and TL series weight transmitters from a PC.

The connection is made between the RS232 or RS485 serial port of Laumas instruments and the PC USB port using a RS232/USB or RS485/USB converter cable.

The software can be used on Windows 7 or higher.

MAIN FUNCTIONS

CONFIGURATIONS

- Through the Instrument Manager, you can create a complete configuration for an instrument by setting the values of all the functional parameters from a PC. You can also create complete configurations for instruments not connected to a PC and send or upload them later.
- By saving the configurations within the software, you will be able to recover them quickly and easily.
- You can compare different configurations and print a summary of the value of all the parameters, highlighting any differences.

MONITORING

- Real-time monitoring of the weight read by the instrument to analyze the pattern in relation to setpoint, stability and digital inputs/outputs.
- *For multichannel weight transmitters:*
  real-time display of the weight distribution on the various load cells connected to the instrument and of the mV values read individually on each channel.

REAL CALIBRATION

- Calibration of an instrument through sample weights: the procedure is guided by an interface that shows in real time the weight read by the instrument and any corrections made by the user.
- *For multichannel weight transmitters:*
  selection of channels and equalization of an instrument in order to standardize the weight when the position on the platform varies. Through the wizard, you can minimize errors during the procedure and display the weight distribution in real time. Through a dedicated interface, you can monitor and manually set the active channels.

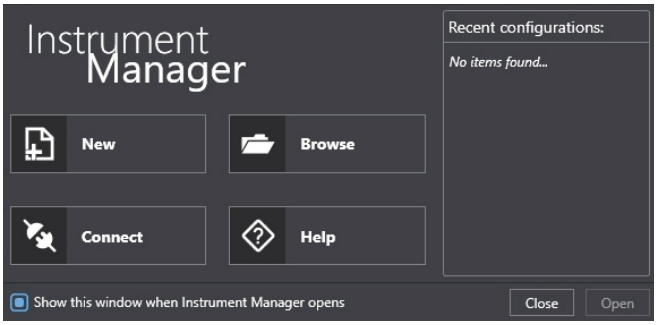
AUTOMATIC FIRMWARE UPDATE OF THE INSTRUMENT

- The Instrument Manager software allows you to update the firmware of the weighing instrument by automatically downloading from the internet the new firmware distributed by Laumas. In this way, the instruments will always be updated to the latest versions.

QUALIFIED ACCESS TO LEGALLY RELEVANT PARAMETERS

- Instrument Manager allows simple management of legally relevant parameters for approved instruments, keeping them protected from unauthorized access.

WELCOME SCREEN



INSTRUMENT MANAGER

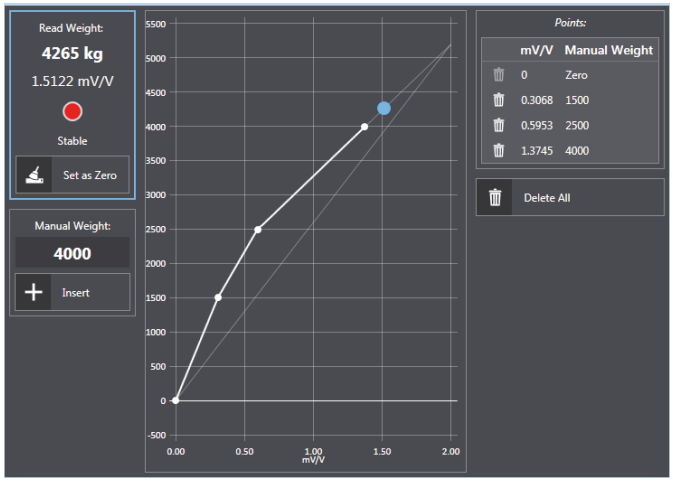
SOFTWARE FOR MANAGING THE INSTRUMENT PARAMETERS

LAUMAS®

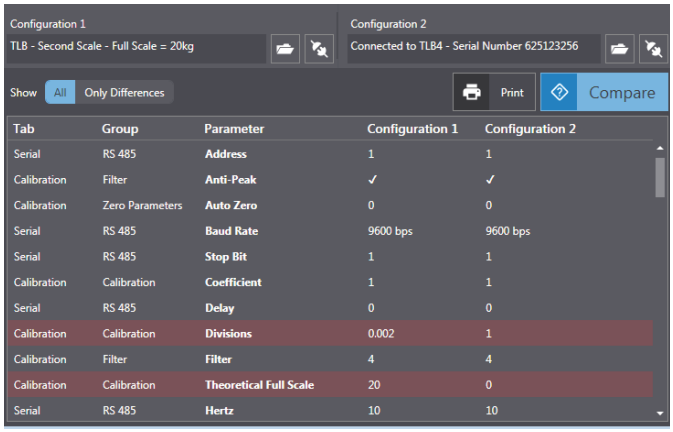
CONFIGURATIONS

	Profile	Instrument	Model	Version	Name	Details	Date	Last Edit
Clear Filters							From / To	From / To
	D Default	TLB	TLB	1.14.0	**Second Scale**	Full Scale = 20kg	6/17/2019 2:22:16 PM	6/17/2019 2:22:16 PM
	D Default	TLB	TLB	1.14.0	**TLB Default**		6/17/2019 2:22:28 PM	6/17/2019 2:22:28 PM
	S Second Profile	TLB4	TLB4 Powerlink	1.5.0	**For PLC**		6/17/2019 2:22:45 PM	6/17/2019 2:22:45 PM
	S Second Profile	TLM8			**EtherCAT Online**		6/17/2019 2:23:01 PM	6/17/2019 2:39:01 PM

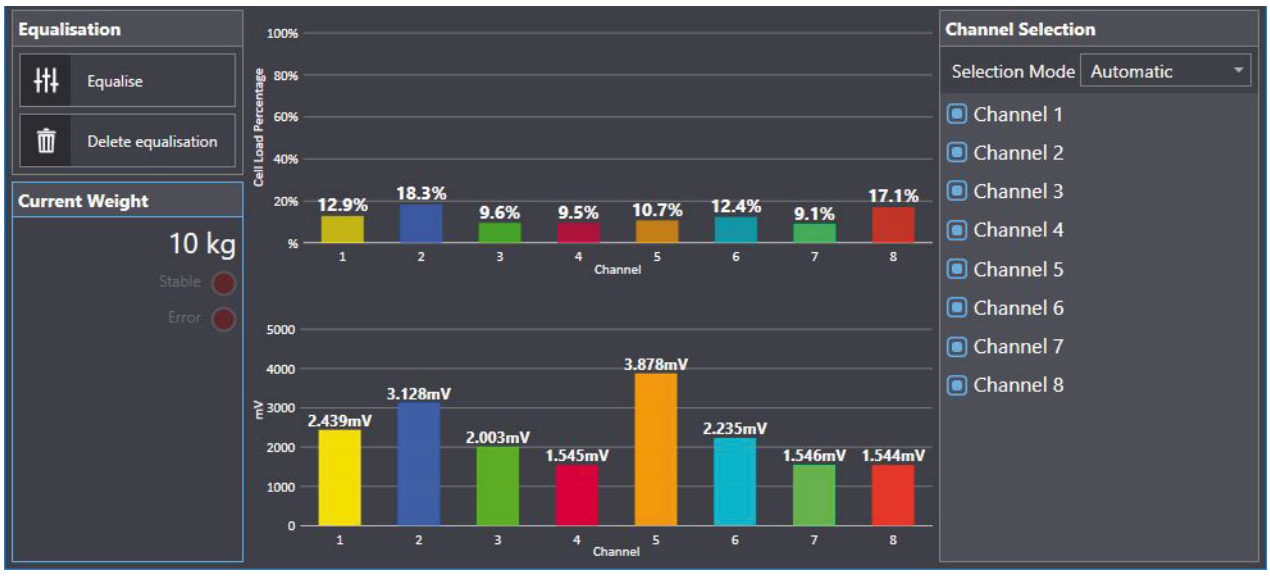
REAL CALIBRATION



COMPARE



MULTICHANNEL



The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

PROG DB

SOFTWARE FOR DATA STORAGE ON PC

The PROG DB software enables managing via PC any data (performed weighings, batching procedures, alarms) coming from various instruments of the W200, WDOS, WDESK, WINOX, WTAB series.

Data is transferred from the instrument to the PC:
- via USB key (OPZWUSB option);
- in serial mode (OPZWDATIPC option): RS232 for distances shorter than 15 metres, or RS485 via converter.

The software runs under Microsoft Windows XP/Vista/7/10.

MULTILANGUAGE SOFTWARE

MAIN FUNCTIONS

- Software included in the supply of OPZWDATIPC and OPZWUSB options.
- Automatic recognition of new connected instruments.
- Customization of the instruments with name and notes.
- Display of single instrument data.
- Search among data of all the instruments (consumption and production included), with the possibility to activate filters.
- Export of displayed data and of the search procedures conducted in CSV.
- Printing of displayed data and of the search procedures conducted.

OPERATING SPECIFICATIONS FOR BASE MOD. INDICATORS

- Storage of the current weight value by manual control (from the keypad or an external input) and/or automatic control (by using the built-in timer). Each stored record includes: gross weight, net weight, tare, unit of measurement, number of decimals, date and time, Alibi ID (only if the alibi memory is available) and the peak or coefficient.
- Recording of weight samples at the instrument's maximum speed (300 Hz).
- Recording the weight beyond the threshold: the instrument's setpoints can be used to create a system that stores the moment when the weight exceeds a certain threshold.
- Data recording for stress tests (only for OPZWUSB):
  - This mode enables the recording of weight values up to the instrument's maximum sampling speed (300 Hz).
  - During the test, the instrument saves the values temporarily in the internal memory (max. 5000 samples), and at the end of the test, it transfers them to the USB key. The adjustment of the built-in timer value (3 to 999 ms) allows the continuous recording for a period of 15 to 4995 secs.
  - A setpoint can be used to set the recording start at the moment when a certain weight is reached. Then, storage will end automatically when the weight goes beyond the set threshold value.

OPERATING SPECIFICATIONS FOR LOAD, UNLOAD, 3/6/14 PRODUCTS MOD.

- Storage of all data related to the batching cycles performed, such as: formula number, current cycle number, scale number, date and time together with product number (the latter for each batched product), theoretical value and actual value.

MEMORY FULL SIGNAL

- Check of the memory usage status. When the memory usage status reaches the set thresholds, a signal is sent. When the memory is 100% full, older data are overwritten (circular memory).

PROG WRBIL

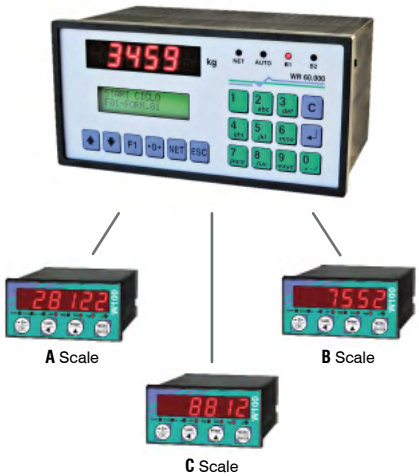
SUPERVISORY SOFTWARE FOR WRBIL

The PROG WRBIL software allows supervision the WRBIL system by means of a PC connected by RS232 for distance lower than 15 meters, or RS485 for distance up to 1500 meters by means RS232/485 converter.

The program allows to view the state of the plant in a synoptic for an intuitive graphical interface of the system, viewing the outputs for control of electric valves, temperature feelers, taps etc.

The software runs under Microsoft Windows 98/2000/XP/7/10. RS232 port is used for PC communication (communication is also possible by using a USB to RS232 converter).

WRBIL SYSTEM



MULTILANGUAGE SOFTWARE

MAIN FUNCTIONS

SYNOPTIC MANAGEMENT

- The program allows monitoring of all the plant in a single graphic page. Batching start by PC.

FORMULAS

- The program allows to store up to 500 formulas divided in 10 groups of 50 formulas.
- The operator can set the name of the formula, add a comment and the position on the instrument.
- The program provides the following functions: formula searching by name, printing, editing and deletion of any single formula.

CONSUMPTION AND PRODUCTION

- Displaying on PC data production for formula or displaying consumption for each product stored on the instrument.

STOCKS

- Individual silos containing raw materials are displayed in the main synoptic, with the quantities updated in real time. The individual quantities are further divided in order to keep track of the loads carried.
- It's possible to assign a name or comment to the load carried: that comments will remain tied to the batched product and may be recovered when desired by reading the archive "BATCHED NET WEIGHTS", where every batching is stored in a database. This feature allows the traceability from the suppliers of raw materials used for all batching cycles.

PRINTOUT

- Automatic printout of batching data at the end of the cycle.
- The system uses the pre-defined Windows' printer.

PROG WRMDB

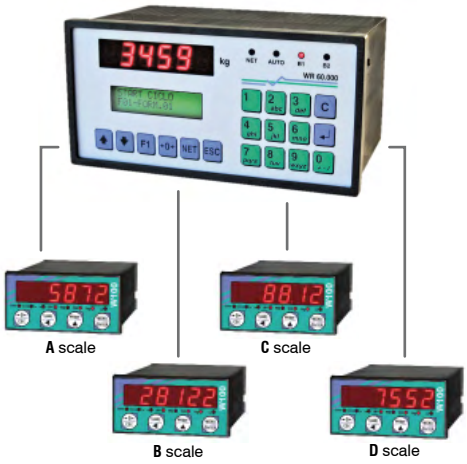
SUPERVISORY SOFTWARE FOR WRMDB

The PROG WRMDB software allows supervision the WRMDB system by means of a PC connected by RS232 for distance lower than 15 meters, or RS485 for distance up to 1500 meters by means RS232/485 converter.

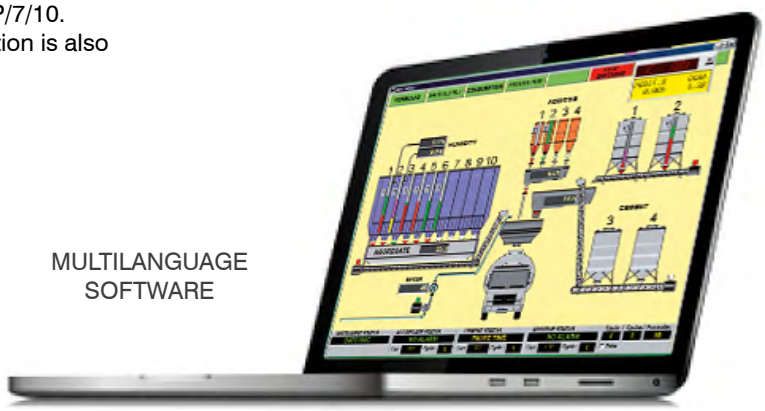
The program allows to view the state of the plant in a synoptic for an intuitive graphical interface of the system, viewing the outputs for control of electric valves, temperature feelers, taps etc.

The software runs under Microsoft Windows 98/2000/XP/7/10. RS232 port is used for PC communication (communication is also possible by using a USB to RS232 converter).

WRMDB SYSTEM



MULTILANGUAGE SOFTWARE



MAIN FUNCTIONS

SYNOPTIC MANAGEMENT

- The program allows monitoring of all the plant in a single graphic page.

FORMULAS

- The program allows to store up to 500 formulas divided in 10 groups of 50 formulas.
- The operator can set the name of the formula, add a comment and the position on the instrument.
- The program provides the following functions: formula searching by name, printing, editing and deletion of any single formula.

CONSUMPTION AND PRODUCTION

- Displaying on PC data production for formula or displaying consumption for each product stored on the instrument.

STOCKS

- Individual silos and hoppers containing raw materials are displayed in the main synoptic, with the quantities updated in real time. The individual quantities are further divided in order to keep track of the loads carried.
- It's possible to assign a name or comment to the load carried: that comments will remain tied to the batched product and may be recovered when desired by reading the archive "BATCHED NET WEIGHTS", where every batching is stored in a database. This feature allows the traceability from the suppliers of raw materials used for all batching cycles.

PRINTOUT

- Automatic printout of batching data at the end of the cycle.
- The system uses the pre-defined Windows' printer.

PROG NG

PC SUPERVISORY SOFTWARE

The software allows PC supervision of up to 32 instruments interconnected via RS422/RS485.

Instruments: W100, W200, WDOS, WDESK, WINOX, TLS, TLB, WR, WL60, WT60. The software runs under Microsoft Windows 98/2000/XP/7/10.

Database can also be installed on a server.
PROG NG is not compatible with weighbridge instruments.

MULTILANGUAGE SOFTWARE

SOFTWARE	CONNECTED INSTRUMENTS (max 32)	
	FIRST INSTRUMENT	ADDITIONAL INSTRUMENTS (max 31)
PROGNGWR	WR	WR WL60 WT60 WDOS, WINOX, W100, W200, WDESK, TLS485, TLB485
PROGNGWL	WL	WL60 WT60 WDOS, WINOX, W100, W200, WDESK, TLS485, TLB485
PROGNGWT **PROGNGWDOS** **PROGNGWINOX**	WT WDOS WINOX	WT60 WDOS, WINOX, W100, W200, WDESK, TLS485, TLB485
PROGNGW100 **PROGNGW200** **PROGNGWDESK**	W100 W200 WDESK	W100, W200, WDESK, TLS485, TLB485
PROGNGTLS485 **PROGNGTLB485**	TLS485 TLB485	TLS485, TLB485

PROG NG

PC SUPERVISORY SOFTWARE

LAUMAS®

MAIN FUNCTIONS

CUSTOMER AND SUPPLIER DATA

- Customer/Supplier data are linked with the raw materials or production to allow the traceability.

RAW MATERIAL STOCKS

- Automatic storage of the loading-unloading quantities in case of weighed silos, otherwise the quantities can be inserted by the operator.
- Setting of date, lot, delivery note.
- Historical archive of raw material loading/unloading.
- Raw material traceability with date, time, supplier etc.

BATCHING

- It is possible the contemporary batching start for more instruments on the same production line.
- The batching start can be executed directly by PC or instrument (from keyboard or external contact).
- Batchings historical archive: data of all batchings started by PC or instrument, data for every used raw material, production lot, customer data etc.
- Event/alarm archive: saving of data, time and operator's name for every significant operation or alarm.
- Consumption & production statistics to obtain the total consumption for each raw material or production quantities for each formula in a specified period.

FORMULAS

- The program allows to memorize unlimited formulas on PC database.

PRODUCTION PROGRAM

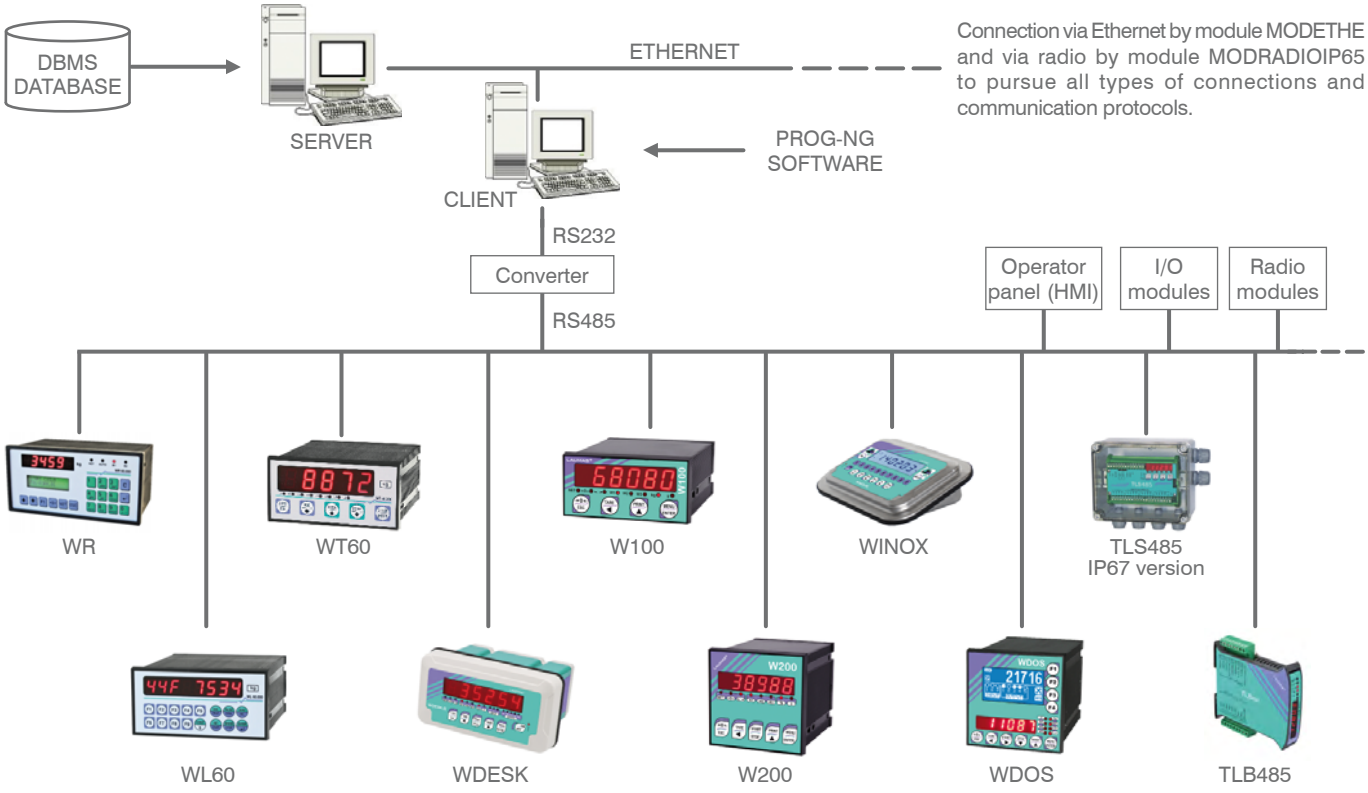
- Production start of different formulas in the programmed sequence.

PRINT

- It is possible to print also on file in HTML format for obtaining the references via internet.

PASSWORD

- Selectable for every operator with different levels of protection.



Connection via Ethernet by module MODETHE and via radio by module MODRADIOIP65 to pursue all types of connections and communication protocols.

ISO 9001
ISO 14001

B4.1 WEIGHT INDICATORS IN EXPLOSION PROOF BOX

ADPEW100RIP 192

ADPEW200 193

B4.2 FAIL-SAFE ZENER BARRIERS

BARRIERAMTL 197

ADPEW100RIP

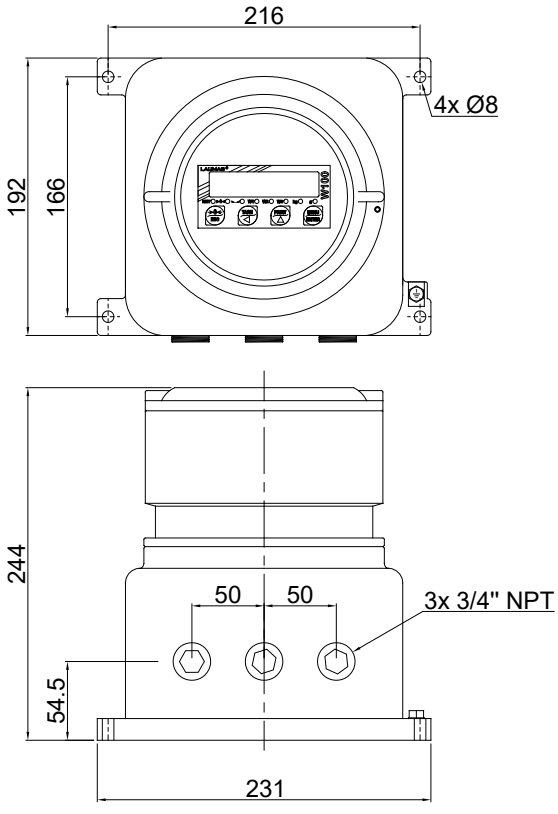
W100RIP REMOTE DISPLAY IN EXPLOSION PROOF BOX

IP66

DESCRIPTION

- W100RIP remote display.
- ADPE explosion proof box equipped with heat-resistant transparent tempered glass window:

ATEX marking	IECEx marking
II 2 GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db IP66 (-20 °C≤Ta≤+40 °C) BVI 14 ATEX 0007	Ex d IIC T6 Gb Ex tb IIIC T85°C Db IP66 (-20 °C≤Ta≤+40 °C) IECEx EPS 14.0017



Weight 8 kg

ADPEW200

W200 SERIES WEIGHT INDICATOR IN EXPLOSION PROOF BOX

LAUMAS®

RS485 RS232 · ANALOG OUTPUT · ALIBI · Instrument Manager · IP66

DESCRIPTION

The system is composed by:

- W200 weight indicator.
- ATEX certified Zener barriers (dimensions: 105x12.6x82 mm, standard OMEGA/DIN rail mounting):
  MTL 7766Pac supply barrier
  MTL 7761ac signal barrier
- ADPE explosion proof box (ATEX/IECEx) equipped with heat-resistant transparent tempered glass window and 5 external buttons which performs the same function as W200 keypad:

ATEX marking	IECEx marking
Ex II 2(1) GD Ex d [ia Ga] IIB+H2 T6 Gb Ex tb [ia Da] IIIC T85°C Db IP66 (-20 °C≤Ta≤+40 °C) INERIS 14ATEX0008X	Ex d [ia Ga] IIB+H2 T6 Gb Ex tb [ia Da] IIIC T85°C Db IP66 (-20 °C≤Ta≤+40 °C) IECEx INE 13.0065X

- The instrument can be configured and managed using the free "Instrument Manager" PC software, which you can download.

PROGRAM	OIML	M							CODE
BASE	R76 - R61	•	•	•	•	•	•	•	ADPEW200-B
LOAD	R76 - R61	•	•	•	•	•	•	•	ADPEW200-C
UNLOAD	R76 - R61	•	•	•	•	•	•	•	ADPEW200-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	ADPEW200-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	ADPEW200-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	•	ADPEW200-14
Multiprogram	R76 - R61	•	•	•	•	•	•	•	ADPEW200-MU

* *External 8-relay modules included*

ON REQUEST

FIELDBUSES

MODBUS RTU · MODBUS/TCP · CANopen · PROFIBUS · DeviceNet · EtherNet/IP · ETHERNET TCP/IP · PI CERTIFIED PROFIBUS & PROFINET

ISO 9001
ISO 14001

ADPEW200

W200 SERIES WEIGHT INDICATOR IN EXPLOSION PROOF BOX

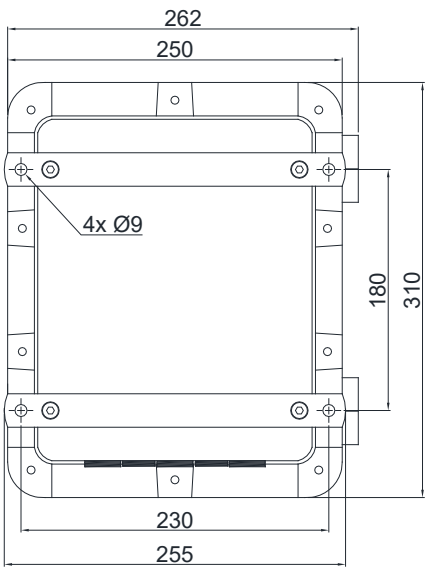
LAUMAS®

CERTIFICATIONS

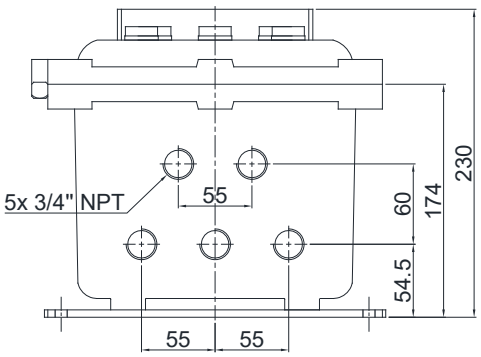
OIML	OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
M	Conformity assessment (initial verification) in combination with Laumas weighing module
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NMI TRADE APPROVED	NMI Trade Approved - Complies with Australian market regulations for legal for trade use
TRADE APPROVED	Complies with New Zealand regulations for legal for trade use
	Complies with the regulations of the Russian Federation for legal for trade use

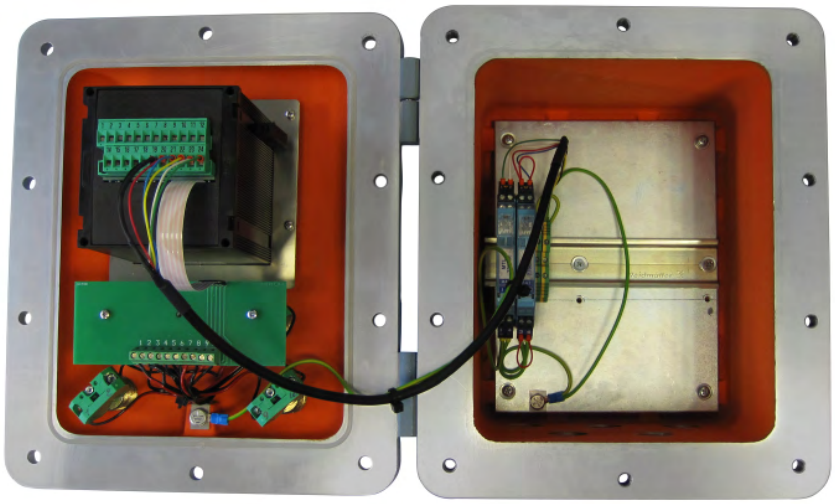
DIMENSIONS (mm)

REAR SIDE



BOTTOM SIDE





Weight: 14 kg

ADPEW200

W200 SERIES WEIGHT INDICATOR IN EXPLOSION PROOF BOX

LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS - *The options refer to the W200 weight indicator*

	POWER SUPPLY	CODE
115/230 VAC	Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➔ *Not compatible with fieldbuses.* ➔ *Not compatible with EAC certifications.*	B C S 3P 6P 14P • • • • • •
	INTERFACES AND FIELDBUSES	
ANALOG OUTPUT	Optoisolated **analog output** - 16 bit. ➔ *One input and one output not available.*	✶ OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
RS485+	**Additional RS485** port. ➔ *One input and one output not available.*	✶ OPZW1RS485 B C S 3P 6P 14P • • • • • •
CANopen	**CANopen** protocol. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1CAW200 B C S 3P 6P 14P • – – – – –
DeviceNet	**DeviceNet** protocol. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1DEW200 B C S 3P 6P 14P • – – – – –
PROFIBUS	**Profibus DP** protocol. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1PRW200 B C S 3P 6P 14P • • • • • •
EtherNet/IP	**Ethernet/IP** protocol - Ethernet port. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1ETIP B C S 3P 6P 14P • – – – – –
ETHERNET TCP/IP	**Ethernet TCP/IP** protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1ETTCP B C S 3P 6P 14P • • • • • •
MODBUS/TCP	**Modbus/TCP** protocol - Ethernet port. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1MBTCP B C S 3P 6P 14P • • • • • •
PI PROFIBUS • PROFINET	**Profinet IO** protocol - Ethernet port. ➔ *Not compatible with 115 VAC and 230 VAC.*	✶ OPZW1PNETIO B C S 3P 6P 14P • – – – – –
0-10	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
4-20	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

✶ *Select one option among those marked with an asterisk.*

ISO 9001
ISO 14001

ADPEW200

W200 SERIES WEIGHT INDICATOR IN EXPLOSION PROOF BOX

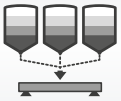
LAUMAS®

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS - *The options refer to the W200 weight indicator*

EXPANSIONS

		CODE
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M B C S 3P 6P 14P • • • • – –
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS. 12÷24 VDC / 115/230 VAC	RELE6PROD24V RELE6PROD230V B C S 3P 6P 14P – – – – • •
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.	RELE14PROD B C S 3P 6P 14P – – – – – •

APPLICATIONS - SOFTWARE

	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P – – – • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. ➔ *Not available for CE-M approved version.*	OPZWQMC B C S 3P 6P 14P – • – • • •
	Intermediate unloadings during the batching. ➔ *Not available for CE-M approved version.*	OPZWSCARI B C S 3P 6P 14P – – – • • •
	Partial unloadings at cycle end. ➔ *Not available for CE-M approved version.*	OPZWSCARP B C S 3P 6P 14P – – – • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P – • • • • •

TREATMENT

	Treatment for metallic surfaces by “off-shore” painting for ADPEW200 box.	OPZOSADPEW200

Rev. 0.0

The Company reserves the right to make changes to the technical data, drawings and images without notice.

BARRIERAMTL

INTRINSIC SAFETY ZENER BARRIERS

LAUMAS®

DESCRIPTION

- Zener barriers protect circuits in ATEX Zones. They are safety devices that divert a fault tension to the ground, preventing the formation of sparks or the overheating of devices in hazardous areas.
- Omega/DIN rail mounting.
- Extractable screw terminals.

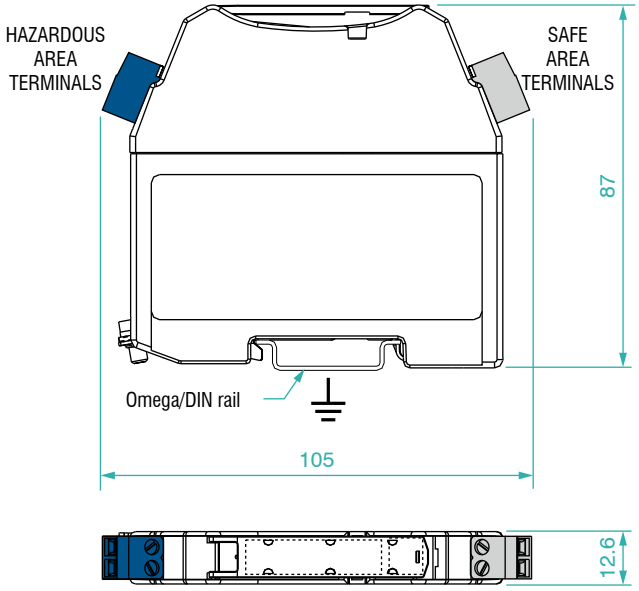
ATEX marking	IECEx marking
Ex II (1) GD [Ex ia Ga] IIC [Ex ia Da] IIIC (-20 °C≤Ta≤+60 °C) BAS01ATEX7217	[Ex ia Ga] IIB [Ex ia Ga] IIC [Ex ia Da] IIIC (-20 °C≤Ta≤+60 °C) IECEx BAS 04.0025

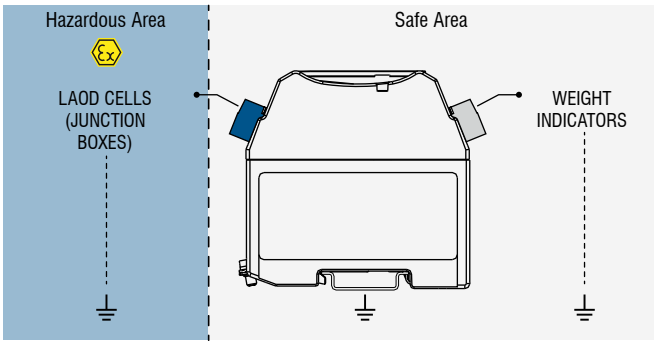
Intrinsically safety MTL7766Pac passive barrier (power supply):

- 2 channels, analog signal, strain-gauge bridges.
- -20 °C≤Ta≤+60 °C; Po=0.942 W; Co=1.41 μF; Lo=0.34 mH;
- Each channel: Uo=12 V; Io=157 mA.

Intrinsically safety MTL 7761ac passive barrier (signal):

- 2 channels, analog signal.
- -20 °C≤Ta≤+60 °C; Po=0.225 W; Co=4.9 μF; Lo=3.72 mH;
- Each channel: Uo=9 V; Io=100 mA.

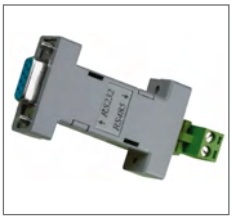




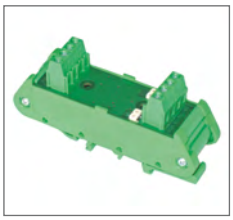
The Company reserves the right to make changes to the technical data, drawings and images without notice.

B5.1 CONVERTERS / WiFi-SERIAL TRANSCEIVERS

MODWF 200



CONV232485 203



CONVLAU 202

CONVUSB485 203

CONVUSB 203

B5.2 REMOTE DISPLAYS

RIP6100IP65 204 NEW

RIPLED5100 207

RIP6100 205 NEW

RIP550SHA 208

RIPDOSMANHA 206

HDRIP675Y 209

B5.3 THERMAL PRINTERS

STAVTII 210

STAVP 211

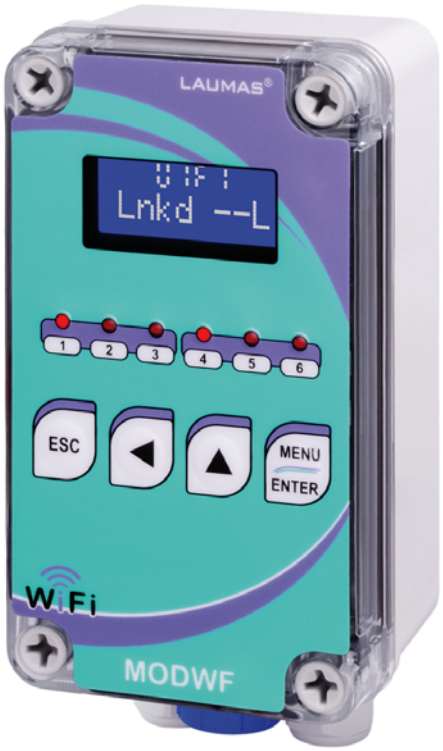
MODWF

WiFi / SERIAL TRANSCEIVER

MODBUS RTU

DESCRIPTION

- WiFi communication interface device between two serial devices.
- Transceiver in IP67 polycarbonate box with 2 PG9 cable glands.
- Dimensions: 80x170x65 mm (four fixing holes Ø4 mm; centre distance: 60x120 mm).
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 6 signalling LED.
- 4-key keyboard.



INPUTS/OUTPUTS AND COMMUNICATION

- WiFi module for wireless connection with ModBus RTU, ASCII Laumas protocols.
- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.

MAIN FUNCTIONS

- Connections to:
  - PC via WiFi/virtual Ethernet port;
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - others MODWF devices and W series weight indicators (equipped with OPZW1RADIO optional module) via WiFi.
- WiFi/serial tunnel function.
- Communication with existing WiFi networks.
- Energy saving mode.

CERTIFICATIONS

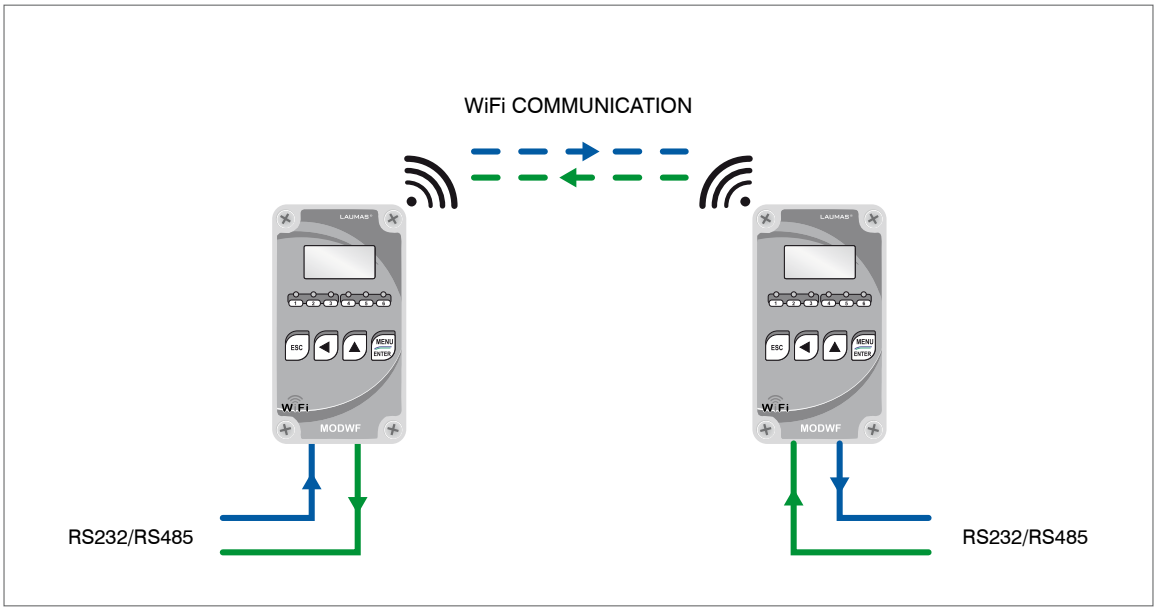
EAC Complies with the Eurasian Custom Union standards

TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 2 W
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Wireless	WiFi module with serial protocols in tunnel mode. Radio range up to 100 m line of sight.
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

MODWF

WiFi / SERIAL TRANSCEIVER



OPTIONS ON REQUEST

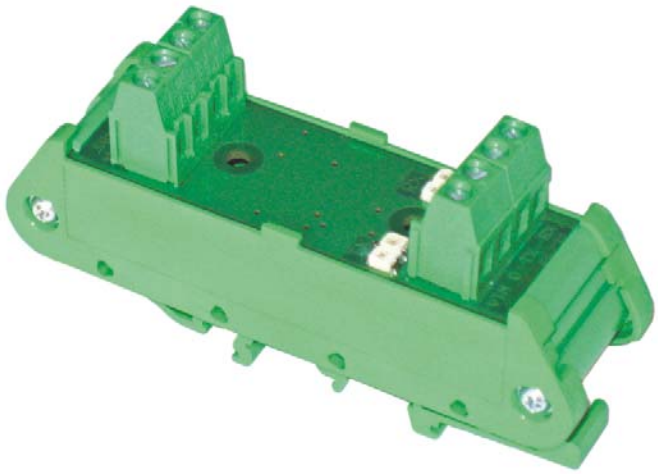
	DESCRIPTION	CODE
	Rechargeable external lead battery. ▪ 12 V - 2800 mAh capacity ▪ IP67 polycarbonate box 160x80x85 mm with transparent cover (4 fixing holes Ø4 mm; centre distance: 152x122 mm). ▪ Battery charger. ▪ 26 hours operating time*.	BATEXT
	Rechargeable internal NiMH battery. ▪ 8 elements - 1.2 V - AA type - 2450 mAh capacity. ▪ Supplied already installed in the instrument, with external dedicated switch; overall box dimensions: 190x80x65 mm. ▪ 24 hours operating time*.	OPZBATTWF

** Approx. maximum operating time for typical use with fully charged battery, with 4 load cells (350 ohm) and energy saving mode enabled.*

The Company reserves the right to make changes to the technical data, drawings and images without notice.

CONVLAU

RS485-RS232 CONVERTER



DESCRIPTION

- The converter connects a RS485 instrument to a PC or PLC equipped with RS232 serial port.
- Automatic receive/transmission selection (RS485 half duplex) or fixed (RS422 full-duplex).
- Back panel mounting on Omega/DIN rail or waterproof junction box.
- 4 LED indicano lo stato attivo di ricezione/trasmissione dati RS232, la presenza dell'alimentazione e la presenza di collegamento RS232.
- 4 LEDs indicate the active RS232 data reception/transmission status, the presence of power supply and the presence of RS232 connection.
- Dimensions : 30x90x50 mm.

TECHNICAL FEATURES

Power supply and consumption	5÷26 VDC ±15%; 0.5W
RS232 serial port	
Baud rate	115200 (bit/s)
Cable lenght	15 m
RS485 serial port	
Baud rate	115200 (bit/s)
Cable lenght	1200 m / 9600 (bit/s)
Complying to standards	EN55022:2010 - EN61000-6-2:2005 - EN6100-6-4:2007
Humidity (condensate free)	85%
Storage temperature	-20°C +60°C
Working temperature	-10°C +50°C

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

CONV

RS232-RS485-USB CONVERTERS

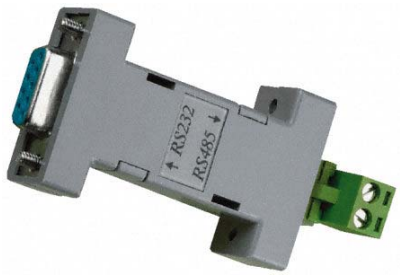
RS232 RS485 USB

CONVUSB

USB to RS232 Converter

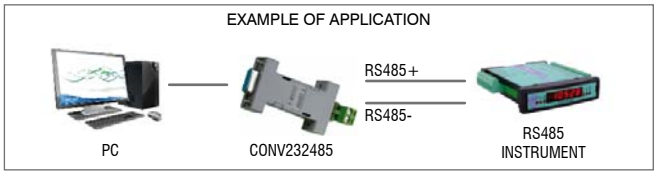
- RS232 additional PC port.
- System requirements: WIN 98 SE - 2000 - XP - Mac OS V8.6 or higher.
- USB 1.1 standard compatible.
- 9-pin D-SUB connector.
- Baud rate: >1 Mbit/s.

CONV232485



RS232-RSRS485 Converter

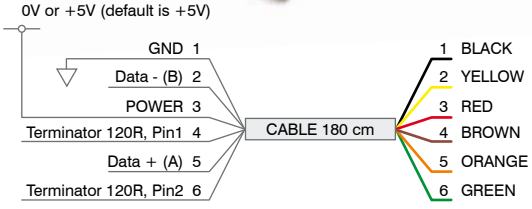
- Connects up to 32 devices with RS485 interface to RS232 port.
- Equipped with RS232 DB9 female connector and 2-pin RS485 extractable terminal board.
- Automatic receive/transmission selection (RS485 half duplex).
- Powered by RS232 port.
- Maximum current: 10 mA.
- Baud rate: 115200 baud.
- Maximum distance: 1200 m.
- Working temperature: -10°C ÷ 45°C.



CONVUSB485

USB-RS485 Converte cable

- Connects devices with RS485 terminal board to a USB port.
- Automatic receive/transmission selection (RS485 half duplex). The host recognizes the CONVUSB485 as an additional virtual serial port (VCP = virtual COM port) via USB drivers; the drivers are always updated and available for all versions of: Windows, MacOS and Linux. Should you not use a virtual serial port, a DLL library is available to be integrated into your application software.
- 2 LEDs indicate the active reception / transmission status.
- USB 2.0 full speed standard compatible.
- Powered by USB port.
- Maximum current: 250 mA.
- Cable lenght: 180 cm.
- Baud rate: 300 bit/s ÷ 300 Mbit/s.
- Working temperature: -40°C ÷ 85°C.



The Company reserves the right to make changes to the technical data, drawings and images without notice.

RIP6100IP65

REMOTE DISPLAY

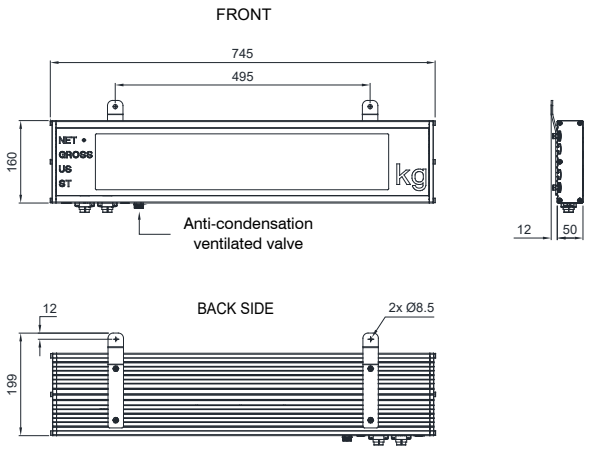
RS485
RS232

IP65

DESCRIPTION

- Remote display with big digits display for external use, suitable for wall mounting.
- 6-digit semi-alphanumeric red LED display (95 mm height).
- 4 signalling LED.
- Red/green traffic light function.
- Anodized aluminum profile box.
- IP65 protection rating.
- Serial ports for transmission protocol.
- Configuration from PC via RS232 serial port.
- 15 settable addresses.
- Brightness control.
- Anti-condensation ventilated valve to regulate humidity and pressure.
- Connectors, power cable (length: 1.3 m) and brackets for wall mounting included.

DIEMENSIONS



TECHNICAL FEATURES

Power supply and consumption	110÷240 VAC; <10 VA
Serial ports	RS232, RS485
Baud rate	9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +60 °C
Working temperature	-10 °C +50 °C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Sun and rain protection.	RIP6100IP65SHIELD

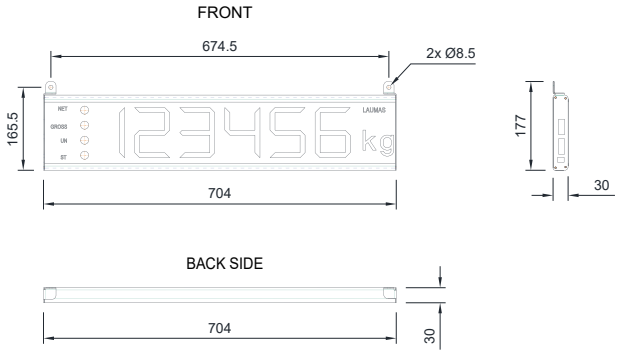
RIP6100
REMOTE DISPLAY

RS485
RS232

DESCRIPTION

- Remote display with big digits display, suitable for wall mounting.
- 6-digit semi-alphanumeric red LED display (100 mm height).
- 4 signalling LED.
- Aluminum profile box.
- IP30 protection rating.
- Serial ports for transmission protocol.
- Configuration from PC via RS232 serial port.
- 15 settable addresses.
- Connectors, power supply (cable length: 1.2 m) and brackets for wall mounting included.

DIEMENSIONS



TECHNICAL FEATURES

Power supply	12 VDC; 1.5 A
Serial port	RS232, RS485
Baud rate	9600 (bit/s)
Humidity (condensate free)	80%
Storage temperature	-10 °C +60 °C
Working temperature	-10 °C +50 °C

RIPDOSMANHA

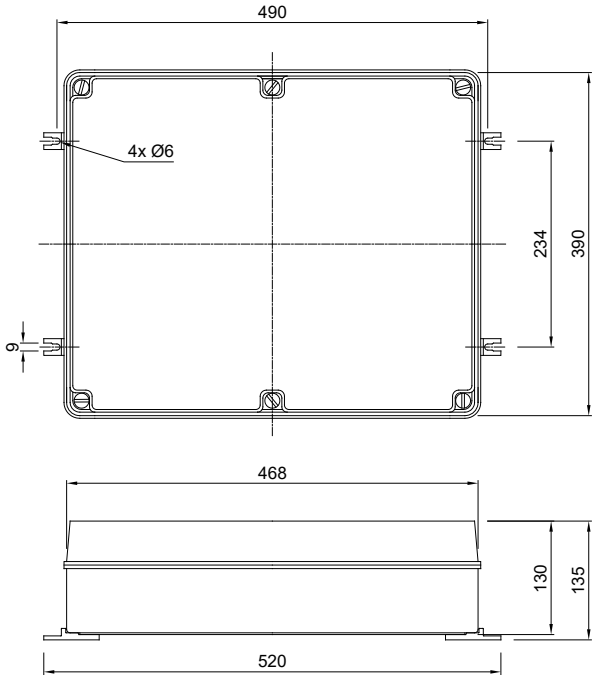
REMOTE DISPLAY FOR WR SERIES INSTRUMENTS

RS232
RS422

DESCRIPTION

- Remote display for connection to WR instruments, suitable for wall mounting.
- Semi-alphanumeric red LED display, two-line by 8-digit (57 mm height).
- Plastic box.
- IP56 protection rating.
- Serial ports for transmission protocol.
- Enables the operator to perform a guided manual batching: the first line indicates the formula's number and the gross weight; the second line indicates the product's number and the quantity to be batched, that decreases to zero during the product loading.

DIEMENSIONS



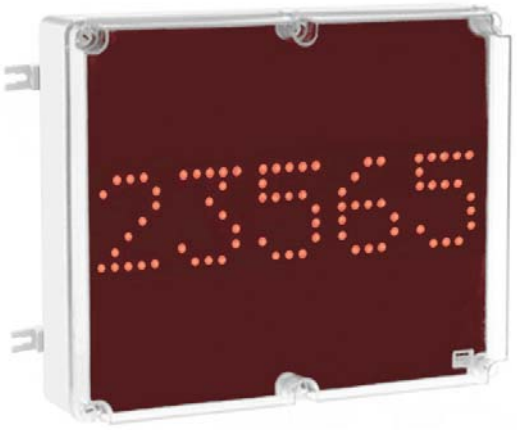
TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC; 30 W
Serial ports	RS232, RS422
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C ÷ +50 °C
Working temperature	-10 °C ÷ +40 °C

RIPLED5100

REMOTE DISPLAY

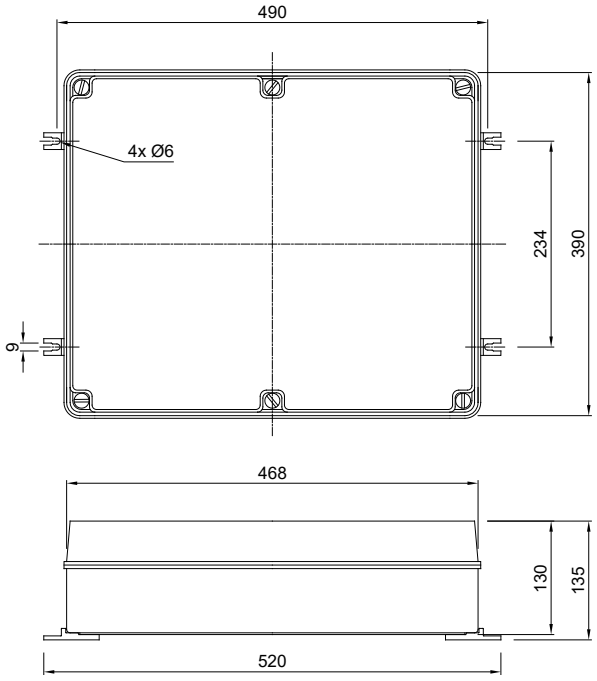
RS232
RS422



DESCRIPTION

- Remote display with big digits display, suitable for wall mounting.
- Dot-matrix alphanumeric display, 5-digit (100 mm height).
- Plastic box.
- IP56 protection rating.
- Serial ports for transmission protocol.
- Brightness control.
- Power supply included.

DIEMENSIONS



TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC; 20 W
Serial ports	RS232, RS422
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C ÷ +50 °C
Working temperature	-10 °C ÷ +40 °C

RIP550SHA

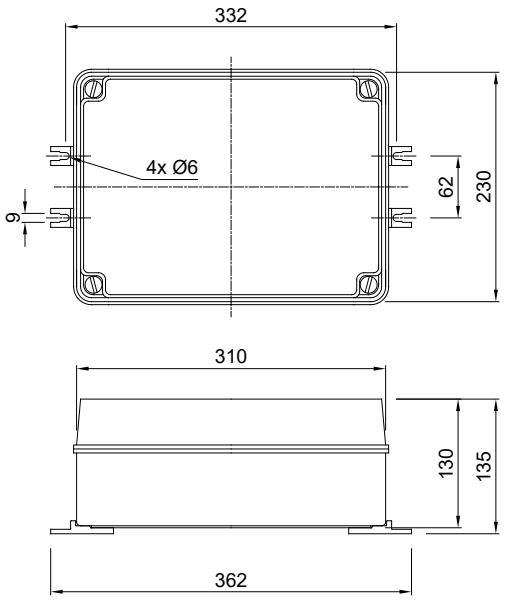
REMOTE DISPLAY

RS232
RS422

DESCRIPTION

- Remote display with big digits display, suitable for wall mounting.
- 5-digit semi-alphanumeric red LED display (57 mm height).
- Plastic box.
- IP56 protection rating.
- Serial ports for transmission protocol.

DIEMENSIONS



TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC; 10 W
Serial ports	RS232, RS422
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +50 °C
Working temperature	-10 °C +40 °C

HDRIP675Y

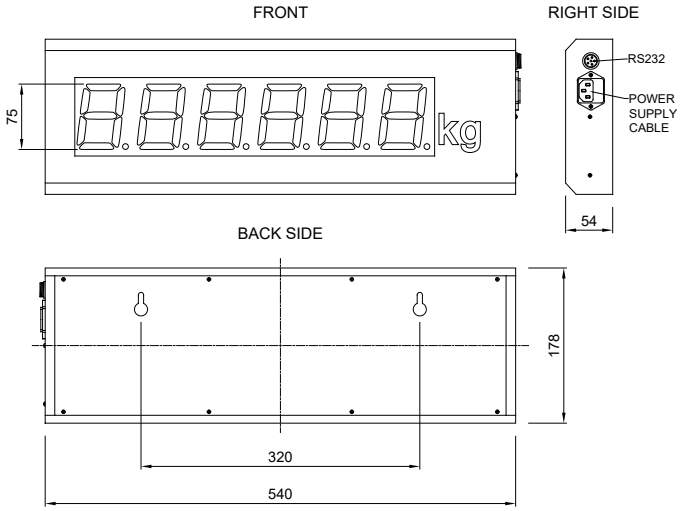
REMOTE DISPLAY FOR WETOIML/WEIOIML SERIES INSTRUMENTS

RS232

DESCRIPTION

- Remote display for connection to instruments WEIOIML and WETOIML.
- 6-digit semi-alphanumeric red LED display (75 mm height).
- Painted sheet metal box.
- IP40 protection rating.
- Serial port for transmission protocol.
- 230 VAC power cable (length: 1.5 m) and RS232 serial connection cable (length: 10 m) included.

DIEMENSIONS



TECHNICAL FEATURES

Power supply and consumption	230 VAC; 25 VA
Serial ports	RS232
Baud rate	9600 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-10 °C +50 °C
Working temperature	0 °C +40 °C

ISO 9001
ISO 14001

STAVT-II

POS THERMAL PRINTER

LAUMAS®

RS232

DESCRIPTION

- POS thermal printer, 32 column.
- RS232 serial port.
- Clock/calendar.
- Paper end sensor.
- Barcode printing in CODE39 format.
- The printer can store an image to use for customizing receipts (software included).
- Scope of delivery: printer, RS232 cable, programming cable, 110/240 VCA power supply, CD-ROM.

TECHNICAL FEATURES

Power supply	7.5 VDC; 2 A
Dimensions	122x93x150 mm
Resolution	8 dots/mm - 384 dots/line
Paper width	57 ±0.5 mm
Paper roll diameter	max 60 mm
Serial ports	RS232
Net weight	400 g
Gross weight	950 g
Operating humidity	10% - 80%
Working temperature	0 °C +50 °C
Storage temperature	-20 °C +60 °C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Thermal paper roll for weight/price/amount scales.	CARTAFISC
	Thermal paper roll.	CARTASTAVT
	Thermal adhesive paper roll.	CARTAFISCADEN

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

STAVP
THERMAL PANEL PRINTER

RS232

DESCRIPTION

- Thermal panel printer, 32 column.
- RS232 serial port.
- TTL port.
- Paper end sensor.
- Barcode printing in CODE39 format.
- The printer can store an image to use for customizing receipts (software included).
- Scope of delivery: printer, mounting brackets, RS232 cable, TTL cable, programming cable, power cable, 115/230 VCA power supply, CD-ROM.

TECHNICAL FEATURES

Power supply	5÷8.5 VDC; 3 A
Dimensions	111x64x68 mm
Drilling template	103x57 mm
Resolution	8 dots/mm - 384 dots/line
Paper width	57 ±0.5 mm
Paper roll diameter	max 40 mm
Serial ports	RS232, TTL
Net weight	300 g
Gross weight	400 g
Operating humidity	20% - 80%
Working temperature	0 °C +50 °C
Storage temperature	-20 °C +70 °C

OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Stabilized power supply 24 VDC/5 VDC, 5 A - 19÷36 VDC, 1.6 A input	ALI24V5VDC5A
	Thermal paper roll.	CARTASTAVT
	Adhesive thermal paper roll.	CARTAFISCADEN

The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Россия (495)268-04-70
Киргизия (996)312-96-26-47
Казахстан (7172)727-132

Эл. почта mfd@nt-rt.ru || Сайт: https://laumas.nt-rt.ru/