WINOX-L/R

STAINLESS STEEL WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

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

Indicator-holder bracket and column
Desk version
Panel mounting

PROGRAM	LCD	RED LED
BASE	WINOXL-B	WINOXR-B
LOAD	WINOXL-C	WINOXR-C
UNLOAD	WINOXL-S	WINOXR-S
3 PRODUCTS	WINOXL-3	WINOXR-3
* 6 PRODUCTS	WINOXL-6	WINOXR-6
* 14 PRODUCTS	WINOXL-14	WINOXR-14
Multiprogram	WINOXL-MU	WINOXR-MU

* *External 8-relay modules included*

FIELDBUSES

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

Rev. 0.0

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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 United States and Canada standards

Complies with the Eurasian Customs Union standards

Equivalent of the CE marking for the United Kingdom

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 United Kingdom regulations for legal for trade use

NTEP - n_{max} 10000 - Class III/IIIL - Complies with United States regulations for legal for trade use

CERTIFICATIONS ON REQUEST

IP69K

Declaration of conformity + IP69K marking protection rating (only M16x1.5 cable glands versions)
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 (CE - UKCA)

Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

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

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 from www.laumas.com.

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).

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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.
  - IoT gateway for cloud connection via RS485.
- 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.
- 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.

Approved versions for legal for trade use

- 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.

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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	OIML	NTEP
Applied standards by region	EU: 2014/31/UE; OIML R76:2006; EN45501:2015 Russian Federation: GOST OIML R76-1-2011 United Kingdom: Non-automatic Weighing Instrument Regulations 2016 Australia: National Measurement Regulations 1999 New Zealand: Weights and Measures Regulations 1999	USA: 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)

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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 M16x1.5 cable glands. - Power supply included: 24 VDC/1 A - 100÷240 VAC input cable length: 3 m.	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. - D-SUB connectors. - Power supply included: 24 VDC/1 A - 100÷240 VAC input cable length: 3 m.	WINOX-D
	**X version**: **ATEX II 3GD (zone 2-22)** (CE - UKCA) **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 M16x1.5 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

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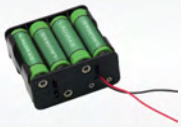
OPTIONS ON REQUEST

	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, X, IEX 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

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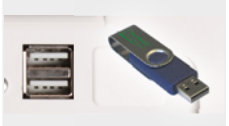
OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	INTERFACES AND FIELDBUSES	CODE
	**WiFi module** (2.4 GHz) 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 • • • • • •
	**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. ➔ *Not compatible with X and IEX versions.*	OPZWUSBDB9 B C S 3P 6P 14P • • • • • •

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

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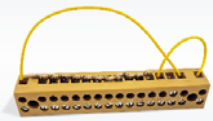
OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

		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). ➔ *Not compatible with X and IEX versions.*	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω). ➔ *Not compatible with X and IEX versions.*	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.*

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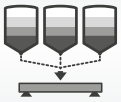
OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

			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	–	•	•	•	•	•

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