

WEIGHT INDICATOR, STAINLESS STEEL



WEIGHT
INDICATOR

Type: **L-WINOX-L**

- BACKLIT LCD, 6 DIGITS OF 20 mm
- 5 RELAYS · 3 INPUTS
- BASE OR DOSING PROGRAM
- AISI 304 · IP68

RS485

Display

IP68

ORDERING

Program	L-WINOXL-B base · -C load · -S unload · -3, -6, -14 products · -MU Multiprogram
Version	P with cable glands, Q for the panel front, D as a table instrument with D-SUB, X for ATEX and IEX for IECEx, zones 2 and 22
Interfaces	WiFi module, extra RS485, analogue output, CANopen, DeviceNet, Profibus DP, Ethernet/IP, Ethernet TCP/IP, Modbus/TCP, Profinet IO, USB
Extensions	external relay modules, alibi memory, weight reading from 0 ... 10 V or 4 ... 20 mA, PC data transfer

Program, version and options belong together: several options exclude one another or take away an input and an output, and not every option fits every program. The manufacturer document carries the compatibility per program; please state the combination and octogon will check it. An octogon order code has not yet been defined.



OVERVIEW

The WINOX-L is a weight indicator in a stainless steel AISI 304 housing with a backlit LCD of six semi-alphanumeric digits, 20 mm high, and forty-six message symbols. Six keys, a clock with a backup battery and two serial ports make it a complete instrument: RS485 and RS232 carry the weight to a PLC, to a printer or to a remote display, and up to thirty-two instruments share one line — up to ninety-nine with amplifiers. Five relay outputs follow setpoints or the protocol, three optoisolated inputs are read back over it. What the device does is decided by its program: BASE counts pieces and totals weighings, while the dosing programs — load, unload, 3, 6 or 14 products — hold up to ninety-nine recipes, compute the in-flight material themselves, watch the tolerance and resume a batch after a power failure. A Multiprogram version leaves that choice to the installer. The instrument comes in five forms, from the IP68 housing with cable glands to the panel version with removable terminal strips, and reads up to eight load cells of 350 Ω .

MEASUREMENT AND DISPLAY	OUTPUTS, PORTS AND DEVICE
• A/D 24 bit (16 000 000 digits), 4.8 kHz • Up to 8 load cells of 350 Ω, 4- or 6-wire • Cell supply 5 V DC / 120 mA • Measure range $\pm$ 39 mV, sensitivity $\pm$ 7 mV/V • 300 conversions per second • Linearity < 0.01 % of full scale • Thermal drift < 0.0005 % of full scale per $^{\circ}$C • Digital filter 10 levels, 5 ... 300 Hz	• 5 relay outputs, max. 115 V AC / 150 mA • 3 optoisolated PNP inputs, 5 ... 24 V DC • RS485 and RS232 · fieldbuses on request • Analogue output 16 bit, optoisolated, option • Backlit LCD, 6 digits of 20 mm, 46 symbols • 6 keys, clock with backup battery • Supply 12 ... 24 V DC $\pm$ 10 %, 6 W • IP68 · 286 x 206 x 108 mm in version P

TECHNICAL DATA

LOAD CELLS AND MEASUREMENT

Number of load cells	up to 8 of 350 Ω · 4- or 6-wire · 16 of 700 Ω
Load cell supply	5 V DC / 120 mA
A/D converter	24 bit (16 000 000 digits) · 4.8 kHz · 300 conversions per second
Measure range	± 39 mV · cell sensitivity ± 7 mV/V
Increments	$\pm 999999 \cdot 0.01$ μ V/d at ± 10 mV and 2 mV/V
Linearity	< 0.01 % of full scale · thermal drift < 0.0005 % per °C
Digital filter	10 levels · 5 ... 300 Hz

PROGRAMS AND FUNCTIONS

BASE	piece counter · total of the weighings · setpoint and hysteresis · use as a remote display with setpoint
Dosing	up to 99 recipes · automatic in-flight computation · tolerance check · slow and pulse dosing for high accuracy · resume after a power failure · total consumption stored
Programs	BASE, load, unload, 3, 6 or 14 products — Multiprogram leaves the choice to the installer
Calibration	theoretical by keyboard, or real with sample weights and linearization over up to 8 points
Zero, tare and print	tare zero setting · automatic zero at power-on · gross weight zero tracking · semi-automatic and preset tare · peak value · printing of gross, net and tare with date and time

OUTPUTS, INPUTS AND PORTS

Relay outputs	5 — max. 115 V AC / 150 mA, or max. 30 V AC and 60 V DC / 150 mA · driven by setpoints or by protocol · 4 outputs with the analogue output
Digital inputs	3 optoisolated PNP, 5 ... 24 V DC · 2 inputs with the analogue output
Analogue output	optoisolated, 16 bit = 65535 increments — 0 ... 20 mA, 4 ... 20 mA up to 300 Ω , 0 ... 10 V, 0 ... 5 V, ± 10 V, ± 5 V from 10 k Ω (option)
Serial ports	RS485 and RS232 · ModBus RTU, ASCII or continuous one way transmission · direct RS485 to RS232 without a converter
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 bit/s
Cable length	RS485 1000 m · RS232 15 m up to 19200 bit/s · analogue 500 m in current, 300 m in voltage

SUPPLY AND ENVIRONMENT

Supply and consumption	12 ... 24 V DC ± 10 % · 6 W · on request 115 / 230 V AC, 50 / 60 Hz, 6 VA
Power supply	external LPS or class 2 · 24 V DC / 1 A unit included with the versions P and D
Humidity and storage	85 %, no condensation · storage -30 ... +80 °C
Working temperature	-20 ... +60 °C · -10 ... +40 °C for the approved use
Housing	stainless steel AISI 304 · IP68 in the versions P, X and IEX, IP40 with an IP68 front in the version D, IP68 front in the version Q

DISPLAY AND VERSIONS

Display	backlit LCD, 6 semi-alphanumeric digits of 20 mm · 46 message symbols · 6 keys · clock and calendar with backup battery
Versions P, X, IEX	286 × 206 × 108 mm · IP68 · 6 glands M16 × 1.5 · P with power supply, X with ATEX II 3GD, IEX with IECEx, zones 2 and 22
Version Q	286 × 206 × 96 mm · IP68 front · removable terminals
Version D	286 × 85 × 206 mm · table instrument · IP40, IP68 front · D-SUB
Panel cut-out	248 × 160 mm, every version



TERMINALS

1	not used	13	Output no. 3
2	Input no. 3 · or +analogue output (0...20 / 4...20 mA)	14	Output no. 4
3	Output no. 5 · or +analogue output (0...10 V)	15	Outputs common
4	Option E/EC · or –common of the analogue output	16	Input no. 1 (+5 ... 24 V DC)
5	RS485: –	17	Input no. 2 (+5 ... 24 V DC)
6	RS485: +	18	Inputs common (0 V)
7	+Power supply (12 / 24 V DC)	19	–Load cell excitation (–EX) · shield
8	–Power supply · shield and GND RS232/RS485	20	+Load cell excitation (+EX)
9	RS232: TXD	21	+REF / SENSE load cell
10	RS232: RXD	22	–REF / SENSE load cell
11	Output no. 1	23	–Signal load cell
12	Output no. 2	24	+Signal load cell

The legend is that of the versions P, Q, X and IEX (manual pages 11 and 12). For 4-wire cells jumper EX– with REF– and EX+ with REF+. With the analogue output the terminals 2 and 3 carry it instead, and input 3, output 5 and the option E/EC are then not available. The version D has D-SUB connectors instead; the manual gives their pins in a table of its own.

ACCESSORIES AND OPTIONS

Brackets and column	adjustable stainless steel bracket for wall and table · ABS bracket for the column · fixing bracket for the panel front · stainless steel column Ø 38 × 700 mm with a painted or stainless steel foot bracket
Power	115 / 230 V AC for the version P · 24 V DC / 1 A units · 12.2 V lead battery of 2.8 Ah for up to 16 hours · NiMH pack for the ATEX version
Relay modules	external 5-relay module up to 115 V AC / 2 A · external 8-relay modules for 1 ... 6 and 7 ... 14 products
Software	free Instrument Manager · web app with WiFi or Ethernet TCP/IP · PROG DB with the USB and PC data options

The lead battery does not fit the versions D, X and IEX, the NiMH pack not the versions Q and D, and neither fits the 115 / 230 V AC supply — which in turn fits only the version P and is not compatible with the EAC certification.

COMPLIANCE

 RS485	Serial ports	RS485 up to 1000 m and RS232 up to 15 m — ModBus RTU, ASCII, continuous transmission
 Display	Display	backlit LCD, 6 digits of 20 mm · 46 message symbols · 6 keys
 IP68	Protection	IP68 in the versions P, X and IEX · IP68 front in the versions Q and D · IP69K on request

The manufacturer names OIML R76:2006 class III with 3 × 10000 increments and 0.2 µV/VSI, OIML R61 (MID), UL for the USA and Canada, NTEP with nmax 10000 in class III/IIIL, and the rules of the Eurasian customs union, Russia, Australia, New Zealand and the United Kingdom. X is marked ATEX, IEX IECEx.



DIMENSIONS (mm)

