W100-NX

WEIGHT INDICATOR - WEIGHING AND BATCHING





DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 48x96x124 mm (drilling template: 45x92 mm).
- Semi-alphanumeric white LED display with signalling symbols.
- 4-key keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Removable screw terminal blocks.
- Cybersecurity: secure by design.

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.
- Bluetooth module for communication with Instrument Manager 2.0.

MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display and printer 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.
- Weight value printing with date and time via keyboard or external contact.
- Saving custom configuration.
- Data exchange via IoT protocols (OPC UA/MQTT).
- Alibi memory.
- The instrument can be configured and managed via the free Instrument Manager 2.0 app, available for Windows and Android (iOS in development).

BASE PROGRAM

- Setting setpoint values, hysteresis and acceptable weight range.
- Display of maximum and minimum weight values reached and temporary weight maintenance.

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.
- Batching start via external contact, keyboard or remotely.

FIELDBUSES

MODBUS RTU · EtherNet/IP · PROFINET · EtherCAT

LAUMAS S.r.l. • SALES DEPARTMENT: sales@laumas.it
Fax: (+39) 0521 681091 • Phone: (+39) 0521 683124

ISO 9001
ISO 14001

W100-NX

WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®

CERTIFICATIONS

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

UL Recognized component - Complies with United States and Canada regulations

Equivalent of the CE marking for the United Kingdom

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) - 40 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0.01 μV/d
Measurement range	±39 mV÷±625 mV
Usable load cells sensitivity	±7 mV/V÷±120 mV/V
Conversion rate	10÷1200 Hz
Fieldbus update rate	1000 Hz
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter	14 levels
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)
Wireless	Bluetooth module
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
	Working temperature	-20 °C +50 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

AVAILABLE VERSIONS

INTERFACES AND FIELDBUSES



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.



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.



2x PROFINET IO ports.
Type: RJ45 100Base-TX.
The instrument works as *device* in a PROFINET IO network.
S2 system redundancy functions and MRP Client (Media Redundancy Protocol).
Equipped with RS485 serial port.

OPTIONS ON REQUEST

ACCESSORIES

	IP65 panel gasket.
	Stainless steel adjustable bracket for wall and table mounting.
	Ethernet male/female extension cable with IP68 panel connector; length: 30 cm, sealing cap included.
	Ethernet male/male extension cable with IP68 connector; length: 5 m; Use in combination with Ethernet extension cable option with IP68 panel connector; length: 30 cm.
	ATEX kit: allows the instrument to be installed in the safe area and connected, without intrinsic safety barriers, to load cells or a junction box installed in Zone 2-22, in compliance with the ATEX Directive.

EXPANSIONS

	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.

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