ENGLISH ENGLISH ENGLISH ENGLISH

Installation and User Manual

version 1.01

WDESK-BR/BL
WINOX-BR/BL
WTAB-BR/BL

Weighbridge

CE **2004/108/EC**

EN55022 EN61000-6-2 EN61000-6-4

SYSTEM IDENTIFICATION

KEY TO SYMBOLS

Below are the symbols used in the manual to draw the reader's attention:

Warning! Risk of electrocution.

Warning! This operation must be performed by skilled workers.

Read the following indications carefully.

Further information.

GUARANTEE

24 months from the delivery document date. The guarantee covers only defected parts and includes the replacement parts and labour. All shipping and packing costs are paid by the customer. It is possible to have the repair in guarantee on condition that the returned product has not been transformed, damaged or repaired without authorization. No guarantee is applicable on returned products without the original label and/or serial number. No guarantee against misuse.
Batteries: Laumas provides 1 year guarantee from the date of delivery note, against material defects or battery manufacturing faults.

Disposal of Waste Equipment by Users in Private Households in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. It is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help preserve natural resources and protect human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local waste disposal Authority or the equipment retailer.

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USER WARNINGS

RECOMMENDATIONS FOR THE PROPER USE OF WEIGHING INSTRUMENT

- Keep away from heat sources and direct sunlight
- Repair the instrument from rain (except special IP versions)
- Do not wash with water jets (except special IP versions)
- Do not dip in water
- Do not spill liquid on the instrument
- Do not use solvents to clean the instrument
- Do not install in areas subject to explosion hazard (except special Atex versions)

RECOMMENDATIONS FOR CORRECT INSTALLATION OF WEIGHING INSTRUMENTS

The terminals indicated on the instrument's wiring diagram to be connected to earth must have the same potential as the weighed structure (same earthing pit or earthing system). If you are unable to ensure this condition, connect with an earthing wire the terminals of the instrument (including the terminal – SUPPLY) to the weighed structure.

The cell cable must be individually led to its panel input and not share a conduit with other cables; connect it directly to the instrument terminal strip without breaking its route with support terminal strips.

Use "RC" filters on the instrument-driven solenoid valve and remote control switch coils.

Avoid inverters in the instrument panel; if inevitable, use special filters for the inverters and separate them with sheet metal partitions.

The panel installer must provide electric protections for the instruments (fuses, door lock switch etc.).

It is advisable to leave the equipment always switched on to prevent the formation of condensation.

MAXIMUM CABLE LENGTHS

- RS485: 1000 metres with AWG24, shielded and twisted cables
- RS232: 15 metres for baud rates up to 19200
- Analog current output: up to 500 metres with 0.5 mm^2 cable
- Analog voltage output: up to 300 metres with 0.5 mm^2 cable

RECOMMENDATIONS FOR CORRECT INSTALLATION OF THE LOAD CELLS

INSTALLING LOAD CELLS: The load cells must be placed on rigid, stable in-line structures; it is important to use the mounting modules for load cells to compensate for misalignment of the support surfaces.

PROTECTION OF THE CELL CABLE: Use water-proof sheaths and joints in order to protect the cables of the cells.

MECHANICAL RESTRAINTS (pipes, etc.): When pipes are present, we recommend the use of hoses and flexible couplings with open mouthpieces with rubber protection; in case of hard pipes, place the pipe support or anchor bracket as far as possible from the weighed structure (at a distance at least 40 times the diameter of the pipe).

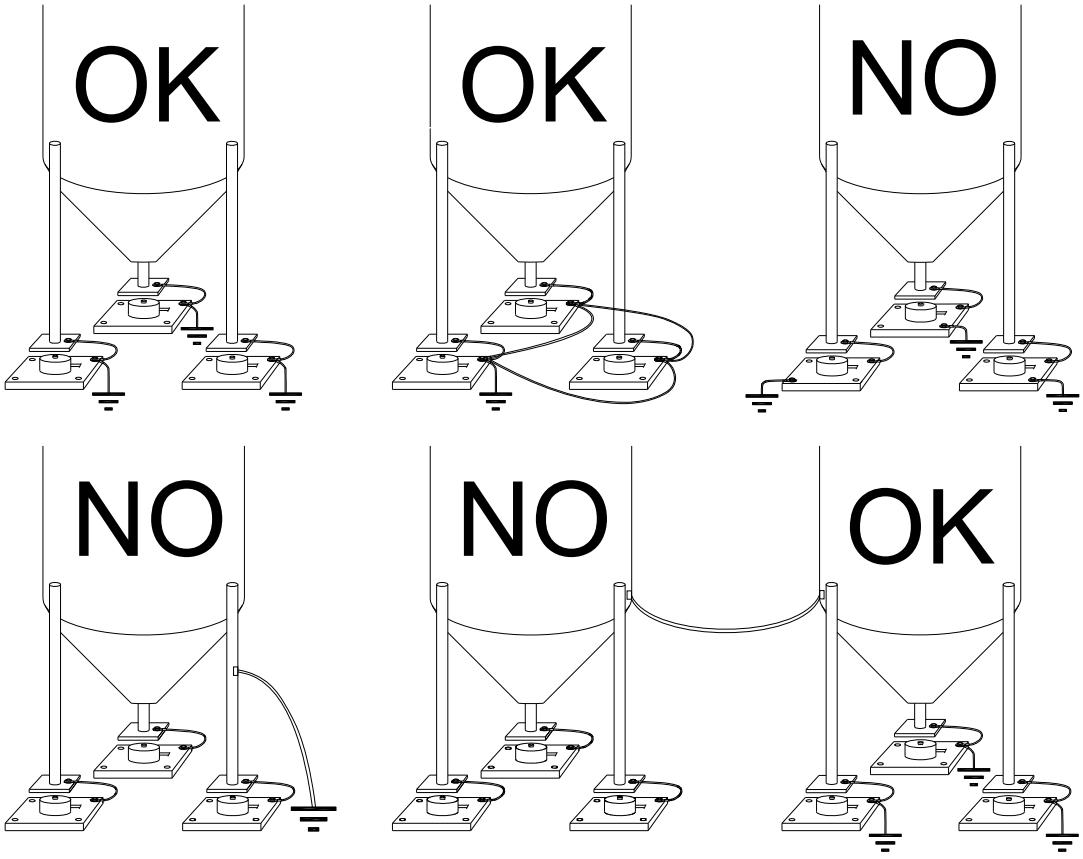
CONNECTING SEVERAL CELLS IN PARALLEL: Connect several cells in parallel by using - if necessary - a watertight junction box with terminal box. The cell connection extension cables must be shielded, led individually into their piping or conduit and laid as far as possible from the power cables (in case of 4-wire connections, use cables with 4x1 mm^2 minimum cross-section).

WELDING: Avoid welding with the load cells already installed. If this cannot be avoided, place the welder ground clamp close to the required welding point to prevent sending current through the load cell body.

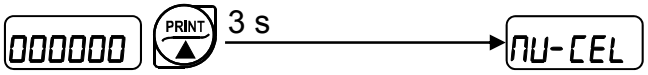
WINDY CONDITIONS - KNOCKS - VIBRATIONS: The use of weigh modules is strongly recommended for all load cells to compensate for misalignment of the support surfaces. The system designer must ensure that the plant is protected against lateral shifting and tipping relating to: shocks and vibration; windy conditions; seismic conditions in the installation setting; stability of the support structure.

EARTHING THE WEIGHED STRUCTURE: By means of a copper wire with suitable cross-section, connect the cell upper support plate with the lower support plate, then connect all the lower plates to a single earthing system. Electrostatic charges accumulated because of the product rubbing against the pipes and the weighed container walls are discharged to the ground without going through or damaging the load cells. Failure to implement a proper earthing system might not affect the operation of the weighing system; this, however, does not rule out the possibility that the cells and connected instrument may become damaged in the future. It is forbidden to ensure earthing system continuity by using metal parts contained in the weighed structure.

FAILURE TO FOLLOW THE INSTALLATION RECOMMENDATIONS WILL BE CONSIDERED A MISUSE OF THE EQUIPMENT



LOAD CELL INPUT TEST (QUICK ACCESS)



From the weight display, press ▲ for 3 seconds; the response signal of the load cells is displayed, expressed in mV with four decimals.

LOAD CELL TESTING

Load cell resistance measurement (use a digital multimeter):

- Disconnect the load cells from the instrument and check that there is no moisture in the cell junction box caused by condensation or water infiltration. If so, drain the system or replace it if necessary.
- The value between the positive signal wire and the negative signal wire must be equal or similar to the one indicated in the load cell data sheet (output resistance).
- The value between the positive excitation wire and the negative excitation wire must be equal or similar to the one indicated in the load cell data sheet (input resistance).
- The insulation value between the shield and any other cell wire and between any other cell wire and the body of the load cell must be higher than 20 Mohm.

Load cell voltage measurement (use a digital multimeter):

- Take out the load cell to be tested from underneath the container, or alternatively, lift the container support.
- Make sure that the excitation of two wires of the load cell connected to the instrument (or amplifier) is 5 VDC ±3%.
- Measure the response signal between the positive and the negative signal wires by directly connecting them to the tester, and make sure that it is comprised between 0 and 0.5 mV.
- Apply load to the cell and make sure that there is a signal increment.

IF ONE OF THE ABOVE CONDITIONS IS NOT MET, PLEASE CONTACT THE TECHNICAL ASSISTANCE SERVICE.

MAIN SPECIFICATIONS OF THE INSTRUMENT

Indicator with 6-wire load cell input installable on table (WDESK model: panel front, wall or column mounting); 19-key membrane keypad, with buzzer, real-time clock/calendar with buffer battery.
Two serial ports (RS485 and RS232) for connection to: PC/PLC up to 32 instruments (max 99 with line repeaters) by ASCII Laumas or ModBus R.T.U. protocol, remote display, printer.
The instrument may manage:

- up to 254 simultaneous lorries.
- up to 10000 weighed values that can saved in Alibi Memory (optional);
- up to 999 Preset Tares retrievable via a numeric code.

Display:

Model	Display	Digit height	LED or signalling symbols
WDESK-BR WINOX-BR WTAB-BR	Red LED, 6 digits, 7 segments, semi-alphanumeric	20 mm	16
WDESK-BL WINOX-BL WTAB-BL	Backlit LCD, 6 digits, 7 segments, semi-alphanumeric	20 mm	max 46

Dimensions:

WDESK	Version	Max. encumbrance	Drilling
	**D** – D-Sub tray IP40 protection rating	122x226x189 mm (connectors included)	96x186 mm
	Wall installation with bracket (can also be installed on table)	122x230x250 mm approx. (bracket included)	

WINOX	Type of connectors	Max. encumbrance
	**D** – D-Sub tray (table) IP40 protection rating Power supply included	206x286x85 mm (connectors included)

WTAB	Version	Max. encumbrance
	IP40 protection rating	315X315X180 mm (connectors included)

BUFFER BATTERY

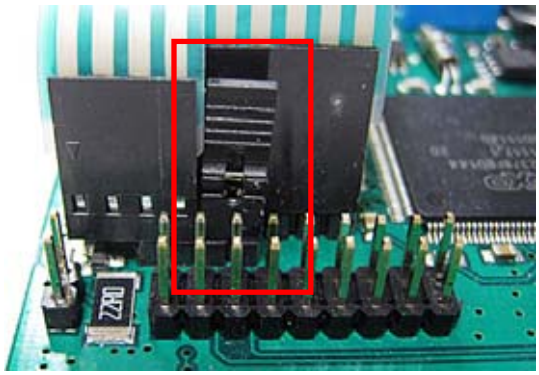
The instrument is equipped with an internal battery that allows to keep active the internal clock even in the event of power failure.

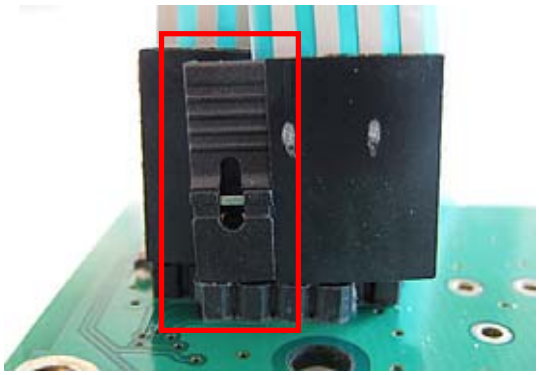
At the first start and after long periods of inactivity, leave the instrument on for at least 12 hours to fully charge the battery.

AFTER A BLACKOUT

After a blackout the instrument DOES NOT come on again automatically, you have to press ON.
To guarantee an automatic restart after a blackout, disable the ON key as follows:

- disconnect power supply and open the instrument;
- identify flat connectors coming from the keypad on the main board;
- extract the 4-pole connector;
- short-circuit the following pins using the unused jumper inside the instrument:
  - WDESK: the two pins further in compared to the main board (see picture to the left);
  - WTAB / WINOX: the two outer pins compared to the main board (see picture to the right);
- connect the 4-pole flat to the two pins still free complying with initial orientation.





TECHNICAL SPECIFICATIONS

115/230 VAC power supplier included in the supply.

POWER SUPPLY and CONSUMPTION **(VDC)**	12/24 VDC ±10%; 6 W (standard)
NO. OF LOAD CELLS IN PARALLEL and SUPPLY	max 8 (350 ohm); 5 VDC / 120 mA
LINEARITY	< 0.01% F.S.
THERMAL DRIFT	< 0.0005% F.S./°C
A/D CONVERTER	24 bit (16000000 points)
MAX DIVISIONS (with measurement range: ±10 mV = sens. 2 mV/V)	±999999
MEASUREMENT RANGE	±39 mV
MAX SENSITIVITY OF USABLE LOAD CELLS	±7 mV/V
MAX CONVERSIONS PER SECOND	300 conversions/second
DISPLAY RANGE	±999999
NO. OF DECIMALS / DISPLAY INCREMENTS	0÷4 / x 1 x 2 x 5 x 10 x 20 x 50 x 100
DIGITAL FILTER / READINGS PER SECOND	0.012÷7 s / 5÷300 Hz
RELAY LOGIC OUTPUTS	N.5 - max 115 VAC; 150 mA
LOGIC INPUTS	N.3 - optoisolated 5 - 24 VDC PNP
SERIAL PORTS	RS485, RS232
BAUD RATE	2400, 4800, 9600, 19200, 38400, 115200
HUMIDITY (non condensing)	85%
STORAGE TEMPERATURE	-30°C +80°C
WORKING TEMPERATURE	-20°C +60°C

ELECTRICAL CONNECTIONS

BASIC INFORMATION

- Connect the metal structure of the weighbridge and the external screw (placed at the rear of the instrument) to the same earthing system to obtain an equipotential connection.
- It is possible to supply up to eight 350 ohm load cells or sixteen 700 ohm load cells.
- For 4-wire load cells, make a jumper between EX- and REF- and between EX+ and REF+.
- Connect terminal "– SUPPLY" to the RS485 common of the connected instruments in the event that these receive alternating current input or that they have an optoisolated RS485.
- In case of an RS485 network with several devices it is recommended to activate the 120 ohm termination resistance on the two devices located at the ends of the network, as described in section **RS485 SERIAL CONNECTION.**

KEY TO CONNECTORS

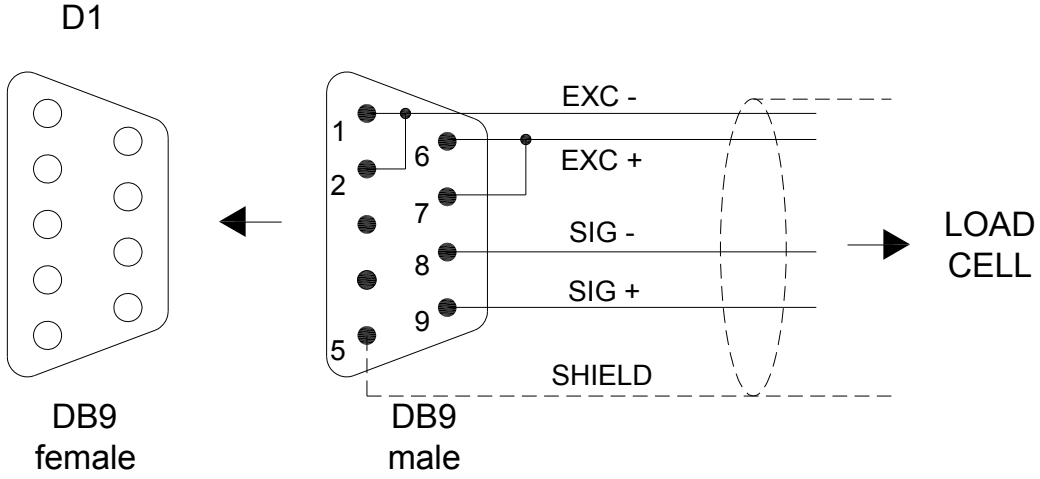
Connector	Pin	Signal
P1 Power supply		+SUPPLY (12/24 VDC)
		-SUPPLY (12/24 VDC)
D1 Female Load cell	1	-LOAD CELL EXCITATION (-Exc)
	2	-LOAD CELL REF/SENSE
	3	
	4	
	5	LOAD CELL SHIELD
	6	+LOAD CELL EXCITATION (+Exc)
	7	+LOAD CELL REF/SENSE
	8	-LOAD CELL SIGNAL (-Sig)
	9	+LOAD CELL SIGNAL (+Sig)
D3 Male I/O	1	OUTPUT No.1 (max 24 V)
	2	OUTPUT No.2 (max 24 V)
	3	OUTPUT No.3 (max 24 V)
	4	OUTPUT No.4 (max 24 V)
	5	OUTPUT No. 5 (max 24 V)
	6	OUTPUT COMMON (max 24 V)
	7	INPUT No.1 (+VDC min 5 V max 24 V)
	8	INPUT No.2 (+VDC min 5 V max 24 V)
	9	INPUT No. 3 (+VDC min 5 V max 24 V)
	10	INPUT COMMON (-VDC 0 V)
	11	
	12	
	13	
	14	
	15	

D4 Male RS232 serial port	1	
	2	RS232: RXD
	3	RS232: TXD
	4	
	5	RS232: SHIELD, GND
	6	
	7	
	8	
	9	
D5 Male RS485 serial port	1	+12/24 VDC OUT
	2	-12/24 VDC OUT
	3	
	4	RS485: +
	5	RS485: SHIELD, GND
	6	RS485: -
	7	RS485: -
	8	
	9	RS485: +

If the integrated printer is available, port RS485 (D5) is not available.

CONNECTION TO 4-WIRE LOAD CELLS

For 4-wire cells it is necessary to connect D1.1 with D1.2 and D1.6 with D1.7.



KEY, LED AND SYMBOLS FUNCTIONS

KEYS

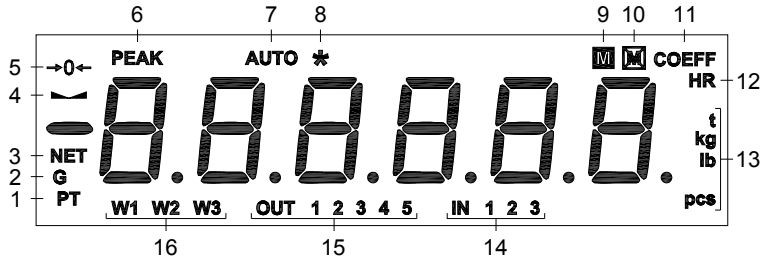
KEY	Short press	Long press (3 s)	Into menus
ON OFF	Power-on	Power-off	
→0← ESC	Semi-automatic zero		Cancel or return to previous menu
TARE ◀	Gross → Net	Net → Gross	Select figure to be modified.
PTARE ▶	Setting preset tare		Select figure to be modified.
PRINT ▲	Print menu	mV load cell test	Modify selected figure or go to previous menu item.
DB ▼	Database menu		Modify selected figure or go to next menu item.
MENU Enter	Progressive menu printouts, totals, open weighings		Confirm or enter in submenu
MENU Enter + →0← ESC	Setting general parameters (press MENU Enter immediately followed by →0← ESC)		
IN	Truck Entrance		
OUT	Truck Exit		

LED: WDESK-BR / WINOX-BR / WTAB-BR

LED	Function
POWER	power supply available
NET	net weight (semi-automatic tare or preset tare)
→0←	zero (deviation from zero not more than ±0.25 divisions)
▁◢▁	stability
kg	unit of measure: kg
g	unit of measure: g
W1	not used
W2	
W3	
INPUT 1	LED lit: input 1 closed
INPUT 2	LED lit: input 2 closed
INPUT 3	LED lit: input 3 closed
R1/P1	LED lit: output 1 closed
R2/P2	LED lit: output 2 closed
R3/P4	LED lit: output 3 closed
R4/P8	LED lit: output 4 closed
R5	LED lit: output 5 closed

Into menus LEDs light up in sequence to indicate that it is not displaying a weight.

SYMBOLS: WDESK-BL / WINOX-BL / WTAB-BL



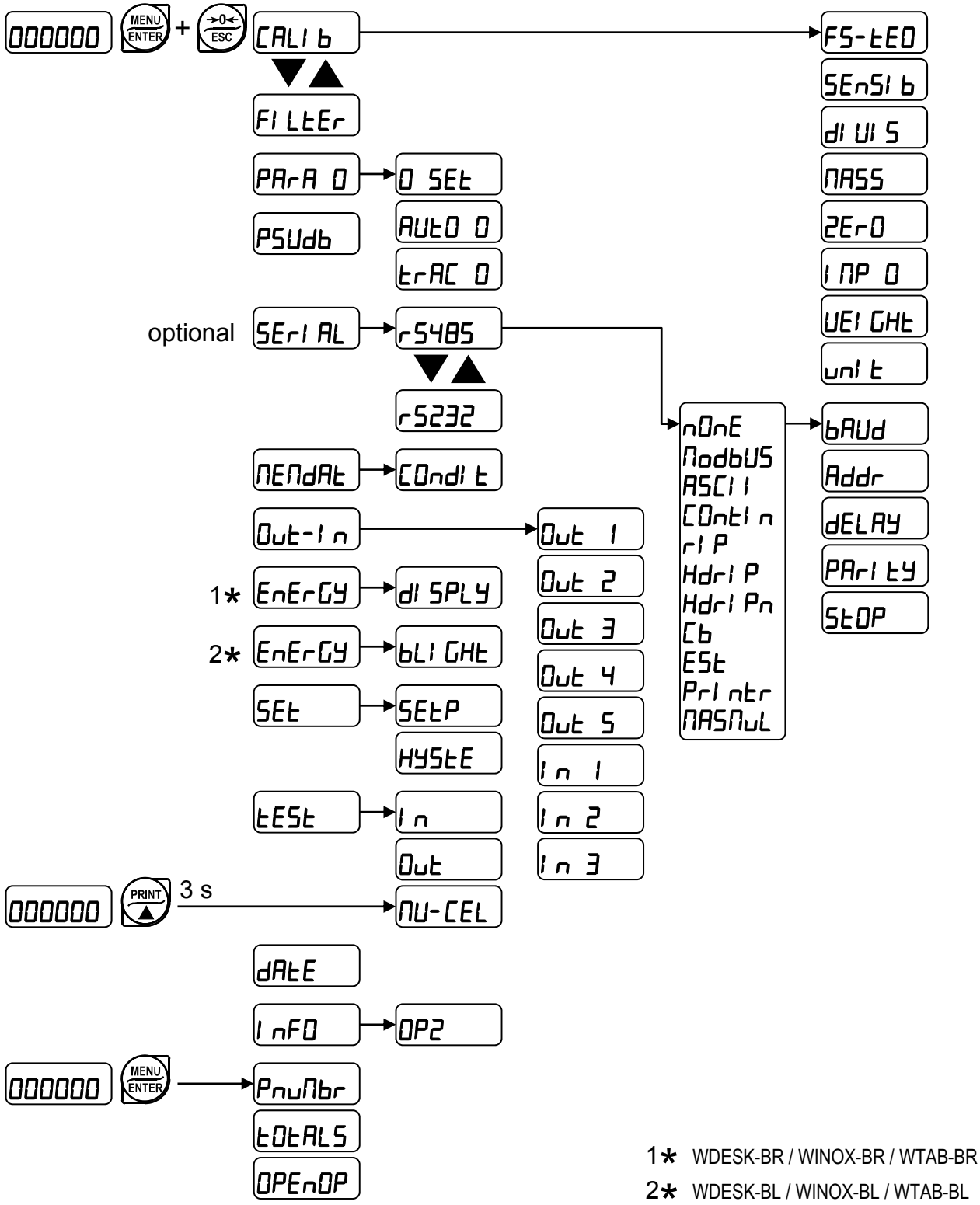
Symbol	Function
LED POWER	power supply available
1	preset tare enabled
2	gross weight
3	net weight (semi-automatic tare or preset tare)
4	stability
5	zero (deviation from zero not more than +/-0.25 divisions)
6	peak function enabled
7	not used
8	value displayed is not a weight
9	not used
10	not used
11	not used
12	not used
13	unit of measure reading
14	the number displayed indicates that the corresponding input is closed
15	the number displayed indicates that the corresponding output is closed
16	not used

Into menus symbol 8 is on to indicate that it is not displaying a weight.

MENU MAP

Into menus changes are applied right after pressing the ENTER key (no further confirmation is required).

SYSTEM PARAMETERS



1* WDESK-BR / WINOX-BR / WTAB-BR

2* WDESK-BL / WINOX-BL / WTAB-BL

INSTRUMENT COMMISSIONING

To turn on the instrument press ON. To turn it off press OFF for about 3 seconds: when *OFF* appears release the key.
After a blackout the instrument DOES NOT come on again automatically, you have to press ON.
To guarantee an automatic restart after a blackout, disable the ON key (see section **AFTER A BLACKOUT**).

Upon switch-on, the display shows in sequence:
- *111111* → *999999* (ONLY in case of approved program);
- instrument model (e.g.: *UdSH* or *UI nH* or *UtAb*);
- *SU* followed by the software code (e.g.: *SU 5*);
- program type: *br1 dgE* (bridge);
- *r* followed by the software version (e.g.: *r 1.01.00*);
- *HU* followed by the hardware code (e.g.: *HU 238*);
- serial number (e.g.: *13000 1*);

Check that the display shows the weight and that when loading the load cells there is an increase in weight. If there is not check and verify the connections and correct positioning of the load cells.

- **If the instrument has already been theoretical CALIBRATED** (plant system identification tag present on the instrument and on the cover: load cell's rated data already entered):
  - Reset to zero (see section **TARE WEIGHT ZERO SETTING**).
  - Check the calibration with sample weights and correct the indicated weight if necessary (see section **REAL CALIBRATION (WITH SAMPLE WEIGHTS)**).

- **If the instrument HAS NOT BEEN CALIBRATED** (missing plant system identification tag) proceed with calibration:
  - If load cells data are unknown, follow the procedure in section **REAL CALIBRATION (WITH SAMPLE WEIGHTS).**
  - Enter the rated data of load cells following the procedure given in section **THEORETICAL CALIBRATION.**
  - Reset to zero (see section **TARE WEIGHT ZERO SETTING**).
  - Check the calibration with sample weights and correct the indicated weight if necessary (see section **REAL CALIBRATION (WITH SAMPLE WEIGHTS)**).

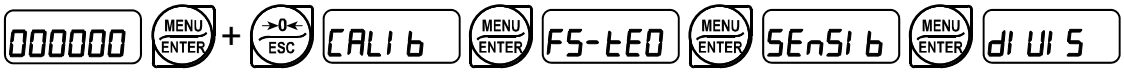
- Select the printer model used (see section **SERIAL COMMUNICATION SETTING**).
- Set instrument's clock with current date and time (see section **DATE AND TIME SETTING**).

PROGRAMMING OF SYSTEM PARAMETERS

From the weight display, press simultaneously keys MENU and ESC to access the parameter setting.

MENU/ENTER: to enter a menu/confirm the data entry.
▲ ▼: to modify the displayed figure or menu item.
◄ ►: to select a new figure.
ESC: to cancel and return to the previous menu.

THEORETICAL CALIBRATION



This function allows the load cell rated values to be set.

To perform the theoretical calibration set the following parameters in sequence:

- FS-tEO (Default: dEMo)**:** The **system full scale** is given by one cell capacity multiplied by the number of cells used. Example: 4 cells of 1000 kg → FULL SCALE = 1000 x 4 = 4000. The instrument is supplied with a theoretical full scale value dEMO corresponding to 10000. To restore factory values, set 0 as full scale.
- SEnSIb (Default: 2.00000 mV/V): **Sensitivity** is a load cell rated parameter expressed in mV/V. Set the average sensitivity value indicated on the load cells. It's possible to set a value between 0.50000 and 7.00000 mV/V. Example of 4-cell system with sensitivity: 2.00100, 2.00150, 2.00200, 2.00250; enter 2.00175, calculated as (2.00100 + 2.00150 + 2.00200 + 2.00250) / 4.
- dIUIS**:** The **division** (resolution) is the minimum weight increment value which can be displayed. It is automatically calculated by the system according to the performed calibration, so that it is equal to 1/10000 of full scale. It can be changed and be variable between 0.0001 and 100 with x1 x2 x5 x10 increments.

- By modifying the theoretical full scale, the sensitivity or divisions, the real calibration is cancelled and the theoretical calibration only is considered valid.
- If the theoretical full scale and the recalculated full scale in real calibration (see section **REAL CALIBRATION (WITH SAMPLE WEIGHTS)**) are equal, this means that the calibration currently in use is theoretical; if they are different, the calibration in use is the real calibration based on sample weights.
- By modifying the theoretical full scale, the sensitivity or divisions and all the system's parameters containing a weight value will be set to default values (setpoint, hysteresis, etc.).

MAXIMUM CAPACITY

000000 (MENU ENTER) + (→0← ESC) CALI b (MENU ENTER) FS-tEO ▼ ▲ MASS

MASS: Maximum displayable weight (from 0 to max full scale; default: 0). When the weight exceeds this value by 9 divisions, the display shows ------. To disable this function, set 0.

TARE WEIGHT ZERO SETTING

000000 (MENU ENTER) + (→0← ESC) CALI b (MENU ENTER) FS-tEO ▼ ▲ 2Er0

This menu may also be accessed directly from the weight display, holding down the →0← key for 3 seconds.

Perform this procedure after having set the THEORETICAL CALIBRATION data.

Use this function to set to zero the weight of the empty system after commissioning and then later on to compensate zero variations due to the presence of product residues.
Procedure:

- Confirm the message 2Er0 by pressing ENTER.
- The weight value to be set to zero is displayed. In this phase all of the LEDs are flashing.
- Confirming once again, the weight is set to zero (the value is stored to the permanent memory).
- Press ▲ to display the value of the total weight reset by the instrument, given by the sum of all of the previous zero settings.

ZERO VALUE MANUAL ENTRY

000000 (MENU ENTER) + (→0← ESC) CALI b (MENU ENTER) FS-tEO ▼ ▲ INP 0

WARNING: Perform this procedure only if it's not possible to reset the weighed structure tare, for example because it contains product that cannot be unloaded.

Set in this parameter the estimated zero value (from 0 to max 999999; default: 0).

REAL CALIBRATION (WITH SAMPLE WEIGHTS)

000000 MENU/ENTER + →0← ESC CALIb MENU/ENTER FS-tEO ▼ ▲ UEIGHt

After having performed the THEORETICAL CALIBRATION and TARE WEIGHT ZERO SETTING, this function allows correct calibration to be done using sample weights of known value and, if necessary, any deviations of the indicated value from the correct value to be corrected.

Load onto the weighing system a sample weight, which must be **at least 50%** of the maximum quantity to be weighed.
By confirming the message UEIGHt the flashing value of the weight currently on the system is displayed. In this phase all of the LEDs are off. Adjust the value on display by using the arrow keys if necessary. After confirming, the new set weight will appear with all the LEDs flashing.
After an additional confirmation, the message UEIGHt will be restored and by repeatedly pressing the key ESC the weight will once again be displayed.

Example: for a system of maximum capacity 1000 kg and 1 kg division, two sample weights are available, one of 500 kg and the other one of 300 kg. Load both weights onto the system and correct the indicated weight to 800. Now remove the 300 kg weight, the system must show 500; remove the 500 kg weight too; the system must read zero. If this does not happen, it means that there is a mechanical problem affecting the system linearity.

WARNING: identify and correct any mechanical problems before repeating the procedure.

- If theoretical full scale and recalculated full scale in real calibration are equal, it means that the theoretical calibration is currently in use; otherwise, the real calibration based on sample weights is in use.
- If the correction made changes the previous full scale for more than 20%, all the parameters with settable weight values are reset to default values.

LINEARISATION OPTION ON MAX 5 POINTS:
It is possible to perform a linearisation of the weight repeating the above-described procedure up to a maximum of five points, using five different sample weights. The procedure ends by pressing the ESC button or after entering the fifth value; at this point it will no longer be possible to change the calibration value, but only to perform a new real calibration. To perform a new calibration, should return to the weight display and then re-entering into the calibration menu.
By pressing ▲ after having confirmed the sample weight that has been set, the full scale appears, recalculated according to the value of the maximum sample weight entered and making reference to the cell sensitivity set in the theoretical calibration (SEnSIb).

FILTER ON THE WEIGHT

000000 (MENU/ENTER) + (→0←/ESC) CALIb ▼ ▲ FILtEr

Setting this parameter allows a stable weight display to be obtained.
To increase the effect (weight more stable) increase the value (from 0 to 9, default 4).
As seen in the diagram:

- By confirming the FILtEr message, the currently programmed filter value is displayed.
- By changing and confirming the value, the weight is displayed and it will be possible to experimentally verify its stability.
- If stability is not satisfactory, confirming brings back the message FILtEr and the filter may be modified again until an optimum result is achieved.

The filter enables to stabilise a weight as long as its variations are smaller than the corresponding "response time". It is necessary to set this filter according to the type of application and to the full scale value set.

FILTER VALUE	Response times [ms]	Display and serial port refresh frequency [Hz]
0	12	300
1	150	100
2	260	50
3	425	25
4 (default)	850	12.5
5	1700	12.5
6	2500	12.5
7	4000	10
8	6000	10
9	7000	5

ANTI PEAK

When the weight is stable, the anti peak filter removes any sudden disturbances with a maximum duration of 1 second. Confirm the filter on the weight with ENTER and select one of the following options:

- AntPOn: anti peak filter enabled (default);
- AntPOF: anti peak filter disabled.

RESETTABLE WEIGHT SETTING FOR SMALL WEIGHT CHANGES

0 SEt (from 0 to max full scale; default: 300; considered decimals: 300 – 30.0 – 3.00 – 0.300): this parameter indicates the maximum weight value resettable by external contact, keypad or serial protocol.

AUTOMATIC ZERO SETTING AT POWER-ON

AUtO 0 (from 0 to max 20% of full scale; default: 0): If at switch-on the weight value is lower than the value set in this parameter and does not exceed the **0 SEt** value, the weight is reset. To disable this function, set 0.

ZERO TRACKING

trAC 0 (from 1 to 5, default: **nOnE**): When the weight value is stable and, after a second, it deviates from zero by a figure in divisions smaller or equal to the figure in divisions set in this parameter, the weight is set to zero. To disable this function, set **nOnE**.
Example: if the parameter **dI UI 5** is set to 5 and **trAc 0** is set to 2, the weight will be automatically set to zero for variations smaller than or equal to 10 (**dI UI 5** x **trAC 0**).

SETTING UNITS OF MEASURE

000000 (MENU/ENTER) + (→0←/ESC) CALIb (MENU/ENTER) FS-tEO ▼ ▲ unit

These are the available units of measure:

HI LOG: kilograms
G: grams
t: tons
Lb: pounds
nEUton: newtons
LI trE: litres
bAr: bars
AtM: atmospheres
PI ECE: pieces
nEU-M: newton metres
HI LO-M: kilogram metres
OtHEr: other generic units of measure not included in the list

If the print function is enabled, the symbol corresponding to the selected unit of measure will be printed after the measured value.

OUTPUTS AND INPUTS CONFIGURATION

000000 (MENU/ENTER) + (→0←/ESC) CALIb ▼ ▲ Out-In (MENU/ENTER) OUt 1 ... OUt 5 (MENU/ENTER) In 1 ... In 3

OUTPUTS

The outputs are set by default as follows:
- OUT1: OPEn / GrEEn.
- OUT2: OPEn / rEd.
- OUT3, 4, 5: OPEn / SEt / GrOSS / POSnEG / OFF.

Possible operation modes:
- OPEn **(normally open)**: the relay is de-energised and the contact is open when the weight is lower than the programmed setpoint value; it closes when the weight is higher than or equal to the programmed setpoint value.
- CLOSE **(normally closed)**: the relay is energised and the contact is closed when the weight is lower than the programmed setpoint value; it opens when the weight is higher than or equal to the programmed setpoint value.

- SEt: the contact will switch on the basis of weight, according to setpoint (see section **SETPOINT PROGRAMMING**).

- PLC: the contact will not switch on the basis of weight, but is controlled by remote protocol commands.
- StAbLE: relay switching occurs when the weight is stable.
- GrEEn: (OUT 1 only): connect to the green light of the signal station.
- rEd: (OUT2 only): connect to the red light of the signal station.

If the operation mode SEt is selected, the following options are also active:
- GrOSS: the contact will switch on the basis of gross weight.
- nEt: the contact will switch on the basis of net weight (If the net function is not active, the contact will switch on the basis of gross weight).

- POSnEG: relay switching occurs for both positive and negative weight values.
- POS: relay switching occurs for positive weight values only.
- nEG: relay switching occurs for negative weight values only.

By confirming with ENTER the setpoint operation can be set to the value 0:
- OFF: relay switching will not occur if the setpoint value is 0.
- On:
    - setpoint = 0 and switching = POSnEG: relay switching occurs when the weight is 0; the relay will switch again when the weight is different from zero, taking hysteresis into account (both for positive and for negative weights).
    - setpoint = 0 and switching = POS: relay switching occurs for a weight higher than or equal to 0, the relay will switch again for values below 0, taking hysteresis into account.
    - setpoint = 0 and switching = nEG: relay switching occurs for a weight lower than or equal to 0, the relay will switch again for values above 0, taking hysteresis into account.

INPUTS

Default: input 1 = HEY In input 2 = HEYOUt input 3 = PrInt

Possible operation modes:
- nE-LO (NET/GROSS): by closing this input for no more than one second, it's making an operation of SEMI-AUTOMATIC TARE and the display will show the net weight. To display the gross weight again, hold the NET/GROSS input closed for 3 seconds.
- 2Er0: by closing the input for no more than one second, the weight is set to zero (see section **WEIGHT ZERO-SETTING FOR SMALL VARIATIONS (SEMI-AUTOMATIC ZERO)**).
- PLC: closing the input no operation is performed, the input status may however be read remotely by way of the communication protocol.
- COntIn: closing the input for max one second the weight is transmitted over the serial connection according to the fast continuous transmission protocol only once (**only if COntIn is set in the item SErIAL**).
- PrInt**:** when the input is closed the data are sent for printing if in the communication protocol of either serial port the parameter PrInt is set. If the alibi memory is active, data storage is carried out too.
- HEY In**:** replicates the function of IN.
- HEYOUt**:** replicates the function of OUT.

SEMI-AUTOMATIC TARE (NET/GROSS)

THE SEMI-AUTOMATIC TARE OPERATION IS LOST UPON INSTRUMENT POWER-OFF.

To perform a net operation (SEMI-AUTOMATIC TARE), close the NET/GROSS input or press the TARE f key for less than 3 seconds. The instrument displays the net weight (just set to zero) and the NET LED lights up. To display the gross weight again, keep the NET/GROSS input closed or press TARE for 3 seconds.
This operation can be repeated many times by the operator to allow the loading of several products.

Example:
Put the box on the scale, the display shows the box weight; press TARE, the display shows the net weight to zero; introduce the product in the box, the display shows the product weight. This operation can be repeated several times.

While the net weight is displayed, keep ▲ pressed to display gross weight. When the key is released the net weight will be displayed again.

The semi-automatic tare operation is not allowed if the gross weight is zero (the display shows *I nZEr0***).**

PRESET TARE (SUBTRACTIVE TARE DEVICE)

It is possible to manually set a preset tare value to be subtracted from the display value provided that the P-tArE ≤ max capacity condition is verified. In multi-interval instruments, the max permitted value is Max1 (max capacity of range 1).

By default the instrument shows the last programmed preset tare value: to apply it press ENTER.
After setting the tare value, going back to the remote display, the display shows the net weight (subtracting the preset tare value) and the NET LED lights up to show that a tare has been entered. To delete a preset tare and return to gross weight display, hold down TARE for about 3 seconds or keep the NET/GROSS input (if any) closed for the same length of time (3 seconds). The preset tare value is set to zero. The NET LED is turned off when the gross weight is displayed once again.

While the net weight is displayed, keep ▲ pressed to display the preset tare. When the key is released the net weight will be displayed again.

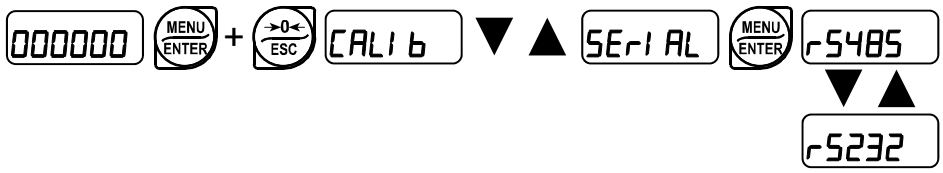
- **IF A SEMI-AUTOMATIC TARE (NET) IS ENTERED, IT IS NOT POSSIBLE TO ACCESS THE ENTER PRESET TARE FUNCTION.**
- **IF A PRESET TARE IS ENTERED, IT'S STILL POSSIBLE TO ACCESS THE SEMI-AUTOMATIC TARE (NET) FUNCTION. THE TWO DIFFERENT TYPES OF TARE ARE ADDED.**

ALL THE SEMI-AUTOMATIC TARE (NET) AND PRESET TARE FUNCTIONS WILL BE LOST WHEN THE INSTRUMENT IS TURNED OFF.

SEMI-AUTOMATIC ZERO (WEIGHT ZERO-SETTING FOR SMALL VARIATIONS)

By closing the SEMI-AUTOMATIC ZERO input, the weight is set to zero; alternatively, by pressing the →0← key for less than 3 seconds, the SEt0rEP message is displayed for 3 seconds, by pressing ENTER the weight is set to zero.
This function is only allowed if the weight is lower than the 0 SEt value (see section **RESETTABLE WEIGHT SETTING FOR SMALL WEIGHT CHANGES**), otherwise the alarm E ----- appears and the weight is not set to zero.

SERIAL COMMUNICATION SETTING



- nOnE: it disables any type of communication (default).
- ModbUS: MODBUS-RTU protocol; possible addresses: from 1 to 99 (see Communication protocols manual – BASE program).
- ASCII : ASCII bidirectional protocol; possible addresses: from 1 to 99 (see Communication protocols manual – BASE program).
  - MOdU60
  - MOd td
- COntI n: continuous weight transmission protocol (see Communication protocols manual – BASE program), at the frequency set in HErt2 item (from 10 to 300).
  - MOd t (set: PArIty = nOnE, StOP = 1).
  - MOd td (set: PArIty = nOnE, StOP = 1).
- rI P: continuous weight transmission protocol to RIP5/20/60, RIP50SHA, RIPLED series remote displays; the remote display shows the net weight or gross weight according to its settings (set: bAUd = 9600, PArIty = nOnE, StOP = 1).
- HdrI P: continuous weight transmission protocol to RIP675, RIP6125C series remote displays; the remote display shows the net weight or gross weight according to its settings (set: bAUd = 9600, PArIty = nOnE, StOP = 1).
- HdrI Pn: continuous weight transmission protocol to RIP675, RIP6125C series remote displays (set: bAUd = 9600, PArIty = nOnE, StOP = 1).
  When the remote display is set to gross weight:
  - if the instrument displays the gross weight, the remote display shows the gross weight.
  - if the instrument shows the net weight, the remote display shows the net weight alternated with the message nEt.
- Cb: CB transmission protocol.
- ESt: EXTENDED transmission protocol.
- MASMuL: communication with CLM8 intelligent junction box.
- PrIntr: printer.

  - bAUd: transmission speed (2400, 4800, 9600, 19200, 38400, 115200; default: 9600).
  - Addr: instrument address (from 1 to 99; default: 1).
  - HErt2: maximum transmission frequency (10 – 20 – 30 – 40 – 50 – 60 – 70 – 80 – 100 – 200 – 300; default: 10); to be set when the COntI n transmission protocol is selected.
    Maximum setting frequency **(HErt2)**:
    - 20 Hz with minimum baud rate 2400 baud.
    - 40 Hz with minimum baud rate 4800 baud.
    - 80 Hz with minimum baud rate 9600 baud.
    - 100 Hz with minimum baud rate 19200 baud.
    - 200 Hz with minimum baud rate 38400 baud.
    - 300 Hz with minimum baud rate 38400 baud.

- dELAY: delay in milliseconds which elapses before the instrument replies (from 0 to 200 ms; default: 0).
- PArIty:
  - nOnE: no parity (default).
  - EUEn: even parity.
  - Odd: odd parity.
- StOP: stop bit (1 – 2; default: 1).
- EMPtY: number of blank lines between one printout and the next.
- HEAdEr: printing of custom heading from PC (YES – nO; default: nO).
- LAnG: selecting the language for printouts:
  - ItA: Italian (default).
  - EnG: English.
  - Fr: French.
  - ESP: Spanish.
- nCOPY: number of copies for each printout; after the first printout press ENTER to print the next copies or press ESC to stop printing.
- PrtMOd: connected printer type:
  - PLUSII (default) Custom PLUSII: printer integrated in the WTAB.
  - StAUt: Laumas STAVT.
  - tMU295: Epson TM-U295.
  - LH300: Epson LX-300.
  - HUbEII : Custom KubeII.
  - StAUQ: Laumas STAVQ: printer integrated in the WTAB.
- EJECt: (for LX300 only): paper ejection after printing.

For more information about protocols and methods of communication, see manual Protocols for series W CE-M approved.

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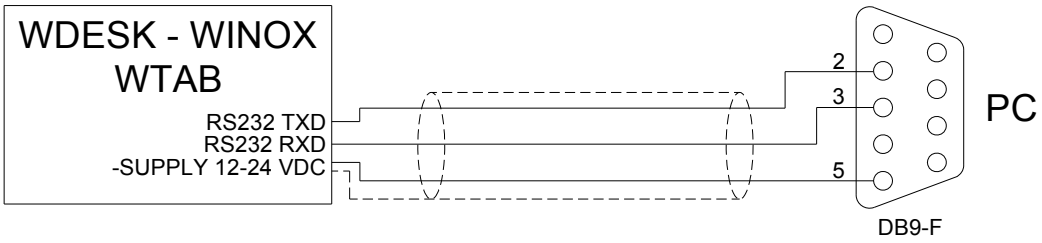
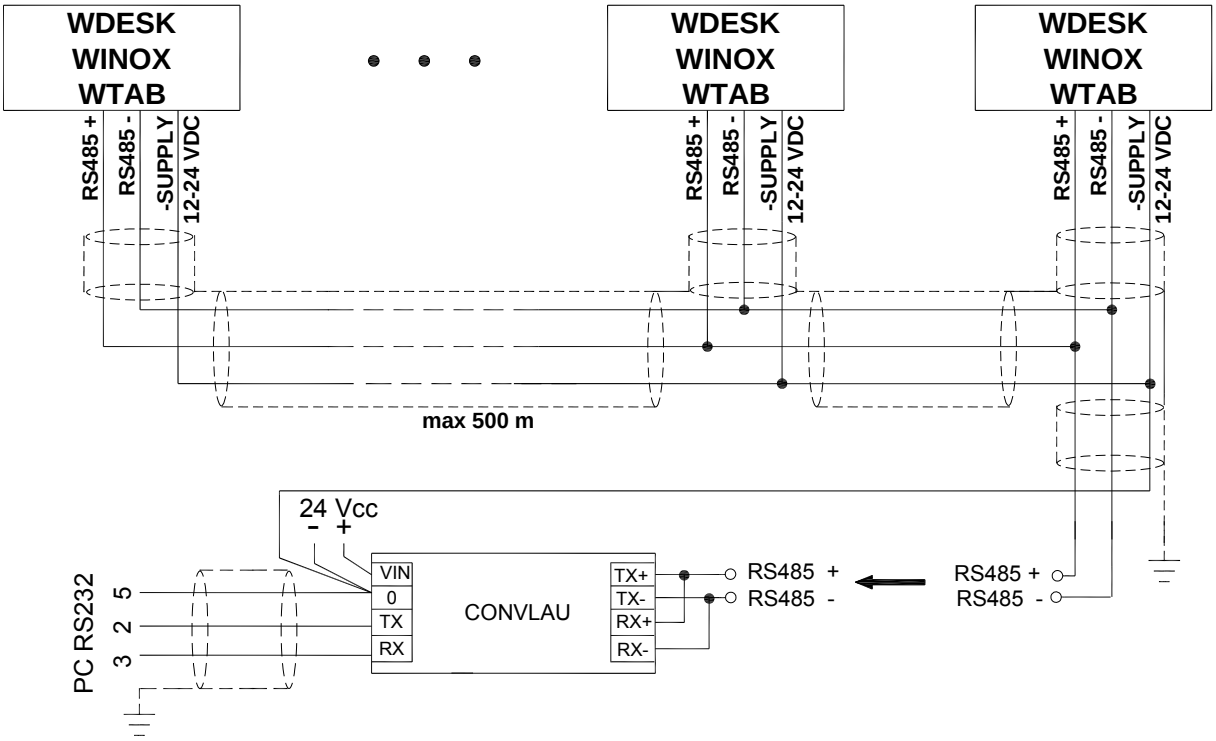
RS232 SERIAL COMMUNICATION



RS485 SERIAL COMMUNICATION



If the RS485 network exceeds 100 metres in length or baud-rate over 9600 are used, two terminating resistors are needed at the ends of the network. Two 120 ohm resistors must be connected between the "+" and "–" terminals of the line, on the terminal strip of the furthest instruments. Should there be different instruments or converters, refer to the specific manuals to determine whether it is necessary to connect the above-mentioned resistors.

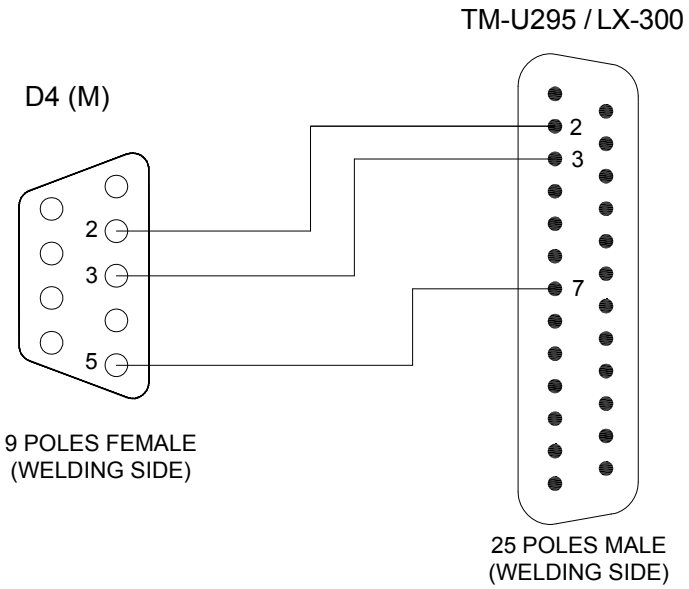
DIRECT CONNECTION BETWEEN RS485 AND RS232 WITHOUT CONVERTER

Since a two-wire RS485 output may be used directly on the RS-232 input of a PC or remote display, it is possible to implement instrument connection to an RS-232 port in the following manner:

INSTRUMENT		RS232
RS 485 **–**	→	RXD
RS 485 **+**	→	GND

This type of connection allows A SINGLE instrument to be used in a ONE WAY mode.

CONNECTION WITH TM-U295 / LX-300



STORAGE CONDITIONS AND WEIGHINGS PRINTING

000000 MENU/ENTER + →0← ESC CALIb ▼ ▲ MENdAt MENU/ENTER CONdIt

- dEFAUL: factory settings restore: the weight must vary compared to the last stored weight and must be stable; confirmation is requested (SUrE?),press ENTER to proceed or press ESC to cancel.
- tO MIn: the weight must fall below the minimum weight (20e) for a new storage to be carried out; select YES or nO to enable or disable the control.
- CHAnGE: the weight must be changed compared to the previous one for a new storage to be carried out; select YES or nO to enable or disable the control.
- StAbLE: the weight must be stable for a new storage to be carried out; select YES or nO to enable or disable the control.

TEST

000000 MENU/ENTER + →0← ESC CALIb ▼ ▲ tESt

- **Input Test:**

  I n: ensure that for each open input 0 is displayed, 1 is displayed when the input is closed.
- **Output Test:**

  Out: setting 0 ensure that the corresponding output opens. Setting 1 ensure that the corresponding output closes.
- **Millivolt Test:**

  MV-CEL: displays the load cell response signal in mV with four decimals.

ENERGY SAVING

WDESK-BR, WINOX-BR, WTAB-BR

- On (default): display always on;
- CHAnGE: the display enters energy saving mode after about one minute of no activity; pressing a key or a weight change turns normal operations on again.

WDESK-BL, WINOX-BL, WTAB-BL

- On: back-lighting on;
- OFF: back-lighting off;
- CHAnGE: back-lighting goes off after about one minute of no activity; pressing a key or a weight change turns it on again.

WTAB

- On (default): the integrated printer is always on;
- OnPrt: the integrated printer only turns on when printing

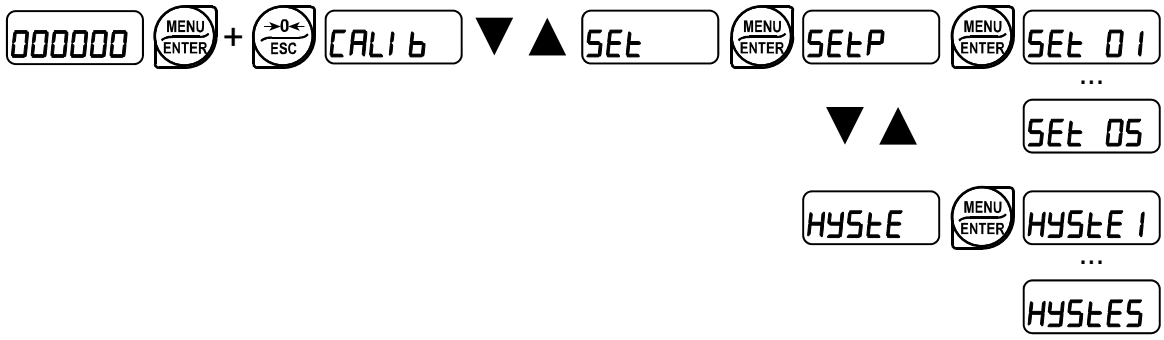
DATE AND TIME SETTING

When selecting the dAtE item in the main menu, access is obtained to the date and time display menu.
Pressing ENTER several times scrolls through days - months – years, hours and – minutes; press ◄ and ► to select the figure to change; press ▲ and ▼ or the numerical keypad to change the figure; pressing ENTER you can confirm and go to the next menu.

INFO MENU

OP2: active options are displayed.

SETPOINT



- **SEt 01...05** (from 0 to max full scale; default: 0): setpoint; relay switching occurs when the weight exceed the value set in this parameter. The type of switching is settable (see section **OUTPUTS AND INPUTS CONFIGURATION**).

- **HYStE 1...5** (from 0 to max full scale; default: 0): hysteresis, value to be subtracted from the setpoint to obtain contact switching for decreasing weight. For example with a setpoint at 100 and hysteresis at 10, the switching occurs at 90 for decreasing weight.

These values are set to zero if the calibration is changed significantly (see sections **THEORETICAL CALIBRATION** and **REAL CALIBRATION (WITH SAMPLE WEIGHTS)**).

PROGRESSIVE PRINTOUTS, TOTALS, OPEN WEIGHINGS

From the weight display, press MENU to access the menu.

MENU/ENTER:	to enter a menu/confirm the data entry.
▲ ▼:	modify the displayed figure or menu item.
◄ ►:	select a new digit.
ESC:	to cancel and return to the previous menu.

PROGRESSIVE PRINTOUTS

CLEAr: reset the progressive printouts taking it back to 1. Before performing the operation, the **SUrE?** deletion confirmation is requested; confirm again with ENTER or press ESC to cancel the command.

TOTALS

000000 (MENU ENTER) PnuNbr ▼ ▲ tOtALS

SHOU: display the totals in the following sequence (press ENTER to pass to the next step):

- Message LOAdEd.
- Total loaded, divided by 100 to make it displayable also when it is a big number.
- Date when the total loaded was deleted last.
- Message UnLOAd.
- Total unloaded, divided by 100 to make it displayable also when it is a big number.
- Date when the total unloaded was deleted last.

To print the totals see section **PRINTING EXAMPLES**.

CLEAr: delete the totals; before performing the operation, the SUrE? deletion confirmation is requested; confirm again with ENTER or press ESC to cancel the command.

The totals are deleted automatically when they exceed the value 99999999.

OPEN WEIGHINGS

000000 (MENU ENTER) PnuNbr ▼ ▲ OPEnOP

SHOU: display in sequence the codes of the open weighings, which means the double weighing operations for which the second weighing has not been carried out yet (exit of the lorry); press ENTER several times to scroll them.

To print the open weighings see section **PRINTING EXAMPLES**.

CLEAr: cancel the open weighings; before performing the operation, the SUrE? deletion confirmation is requested; confirm again with ENTER or press ESC to cancel the command.

LORRY DATABASE

The lorry database allows you to associate a preset tare value (weight of the empty lorry) to a database index. This value may be subsequently recalled rapidly and used to perform a single weighing operation (see section **SINGLE WEIGHING USING THE DATABASE**).

DATABASE MODIFICATION

Hold down the DB key until you see Ind000.
Enter the index to be associated to the lorry with the numerical keypad.
Press ENTER.
The display will showP-tArE (for Preset Tare).
Press ENTER.
With the numerical keypad enter the preset tare value to be associated to the lorry.
Confirm with ENTER.

PASSWORD ON THE DATABASE

A password can be set to protect the database from unauthorised changes, through a settable password.
If the password is not active when accessing the menu (factory setting), the display shows OFF.
Set the desired password with the numerical keypad and confirm with ENTER.
Upon accessing the database in change mode again (see previous section), the display will show 000000 and the user will enter the password.
If a wrong password is entered, the message noPSU will appear and the access to the database will be in read-only mode.
To change or disable the password after enabling it, access the PSUdb menu once again.

- The display shows 000000; enter the password and confirm with ENTER.
- The display shows PSU 0H; it is now possible to change the password.
- To disable the password enter 000000.
- If the password is lost enter 14556 for the emergency unlock.

DOUBLE WEIGHING (ENTRY/EXIT)

For this type of operation **two weighings** per lorry are required:

1. upon the lorry entering, its weight is recorded and a numeric code is automatically associated to it;
2. upon the lorry leaving, the operator enters the numeric code assigned during the first weighing (it allows the lorry identification), records the weight when leaving and calculates the difference between the two weighed values; the actual quantity of the material loaded onto or unloaded from the lorry is thus obtained.

1. FIRST WEIGHING (ENTRY)

The lorry goes onto the weighbridge.
When the weight is stable (stability LED on), press IN.
The instrument automatically associates a code to the lorry and displays it preceded by the letter C.The instrument saves the weighed value in the memory and sends it for printing.

2. SECOND WEIGHING (EXIT)

After loading or unloading, the lorry goes on the weighbridge.
When the weight is stable (stability LED on), press OUT.
If only one “outstanding” lorry is present, which means a lorry that made the first weighing, the instrument automatically retrieves its code; otherwise it requests CodE? and the operator enters the lorry code with the numerical keypad and confirms with ENTER.
The system retrieves the corresponding first weighed value from the memory and calculates the difference between the two weighed values: if the second weighed value is lower than the first, the material was unloaded and the instrument shows the unloaded weight preceded by the letter U for “Unloaded”; if the second weighed value is greater than the first, the material was loaded and the instrument shows the loaded weight preceded by the letter L for “Loaded”.
The instrument saves the weighed value in the memory and sends it for printing.

NOTES: Operation with double weighing is only possible with the gross weight. The codes range from 1 to 254. It is thus possible to have up to 254 weighings open at the same time ("outstanding” lorries that have been weighed for the first time but not the second time).
Once code 254 is used the instrument automatically searches for the first free code (not connected to an open weighing) starting back from 1.
To have the code restart from 1, delete the open weighings (see section **OPEN WEIGHINGS**), even if there are no open weighings.
To display, print or delete the open weighings, see sections **OPEN WEIGHINGS** and **PRINTING EXAMPLES.**
The totals are updated every time a second weighing is completed. To display, print or delete the totals, see sections **TOTALS** and **PRINTING EXAMPLES**.
The conditions that allow a new weighing to be carried out can be set (see section **STORAGE CONDITIONS AND WEIGHINGS PRINTING**).

SINGLE WEIGHING

In this case **the lorry is weighed once**: the weight of the empty lorry is used as preset tare; the value may be entered on the spot or retrieved from the lorry database.

SINGLE WEIGHING WITHOUT USING THE DATABASE

The lorry goes onto the weighbridge.
Press PTARE, enter the weight of the empty lorry (preset tare) using the numerical keypad, confirm with ENTER.
The display shows the weight of the material loaded onto the lorry (net weight).
Press IN if the lorry is entering (the material will be unloaded).
Press OUT if the lorry is leaving (the material will be loaded).
The display shows the weight of the material preceded by the letter U for "Unloaded" if unloaded, letter L for "Loaded" if loaded.
The instrument saves the weighed value in the memory and sends it for printing.
The instrument automatically goes back to showing the gross weight.

SINGLE WEIGHING USING THE DATABASE

The lorry goes onto the weighbridge.
Press DB the display shows I nd000.
With the numerical keypad enter the database index associated to the lorry (the weight of the empty lorry must have already been entered previously as preset tare in the database, see section **LORRY DATABASE**).
Press ENTER.
The instrument applies the preset tare read from the database and shows the weight of the material loaded onto the lorry (net weight).
Press IN if the lorry is entering (the material will be unloaded).
Press OUT if the lorry is leaving (the material will be loaded).
The display shows the weight of the material preceded by the letter U for "Unloaded" if unloaded, letter L for "Loaded" if loaded.
The instrument saves the weighed value in the memory and sends it for printing.
The instrument automatically goes back to showing the gross weight.

NOTES: Operation with single weighing is only possible with the net weight. The totals are updated every time a weighing is completed. To display, print or delete the totals, see sections **TOTALS** and **PRINTING EXAMPLES**. The conditions that allow a new weighing to be carried out can be set (see section **STORAGE CONDITIONS AND WEIGHINGS PRINTING**).

DOUBLE WEIGHING (ENTRY/EXIT) WITH TRAILER

This type of operation allows the weighing of a lorry consisting of tractor and trailer.
Four weighing operations per lorry are required:

1 and 2: when the lorry arrives (first weighing), the weights of the tractor and trailer are recorded and a numeric code is automatically associated to the lorry;

3 and 4: upon the lorry leaving (second weighing) the operator enters the numeric code assigned during the first weighing (it allows the lorry identification), records the weights of the tractor and trailer when leaving and calculates the difference between the two weighed values; the actual quantity of the material loaded onto or unloaded from the lorry is thus obtained.

The operations must be carried out by following the sequence described.

1. FIRST WEIGHING OF THE TRACTOR (ENTRY)

The tractor goes onto the weighbridge.
When the weight is stable (stability LED on), hold the IN key pressed until you see trAIL r (Trailer = it indicates the tractor + trailer function); press ENTER.
The instrument saves the weighed value in the memory and shows StOrEd (printing takes place after the subsequent first weighing of the trailer).

2. FIRST WEIGHING OF THE TRAILER (ENTRY)

The trailer goes onto the weighbridge.
When the weight is stable (stability LED on), press IN.
The instrument automatically associates a code to the lorry (valid for both the tractor and the trailer) and shows it preceded by letter C.
The instrument saves the weighed value in the memory and sends the receipt of the first weighting for printing with the data of the tractor (marked with the letter A) and the trailer (marked with B).

3. SECOND WEIGHING OF THE TRACTOR (EXIT)

After loading or unloading the lorry, the tractor goes back on the weighbridge.
When the weight is stable (stability LED on), press OUT.
If only one “outstanding” lorry is present, which means a lorry that made the first weighing, the instrument automatically retrieves its code; otherwise it requests CodE? and the operator enters the lorry code with the numerical keypad and confirms it with ENTER.
The instrument saves the weighed value in the memory and shows StOrEd (printing takes place after the subsequent second weighing of the trailer).

4. SECOND WEIGHING OF THE TRAILER (EXIT)

The trailer goes onto the weighbridge.
When the weight is stable (stability LED on), press OUT.
The system recovers the weights regarding the first weighing from the memory (tractor and trailer).
If the second weighing (tractor + trailer) is lower than the first (tractor + trailer), the material was unloaded; the instrument shows the unloaded weight preceded by the letter *U* for "Unloaded".
If the second weighing (tractor + trailer) is greater than the first (tractor + trailer), the material was loaded; the instrument shows the loaded weight preceded by the letter *L* for "Loaded".
The instrument saves the weighed value in the memory and sends the receipt of the second weighting for printing with the data of the tractor and the trailer.

NOTES: Operation with double weighing is only possible with the gross weight. The codes range from 1 to 254. It is thus possible to have up to 254 weighings open at the same time ("outstanding" lorries that have been weighed for the first time but not the second time).
Once code 254 is used the instrument automatically searches for the first free code (not connected to an open weighing) starting back from 1.
To have the code restart from 1, delete the open weighings (see section **OPEN WEIGHINGS**), even if there are no open weighings.
To display, print or delete the open weighings, see sections **OPEN WEIGHINGS** and **PRINTING EXAMPLES.**
The totals are updated every time a second weighing is completed. To display, print or delete the totals, see sections **TOTALS** and **PRINTING EXAMPLES**.
The conditions that allow a new weighing to be carried out can be set (see section **STORAGE CONDITIONS AND WEIGHINGS PRINTING**).

SINGLE WEIGHING WITH TRAILER

In this case only **two weighing operations are performed** (tractor and trailer): the weights of the empty tractor and trailer are used as preset tare; the value is entered on the spot or saved in the lorry database.

SINGLE WEIGHING WITHOUT USING THE DATABASE

- The tractor goes onto the weighbridge.
  Press PTARE, enter the weight of the empty tractor (preset tare) via the numerical keypad, confirm with ENTER.
  The display shows the weight of the material loaded onto the tractor (net weight).
  Hold the IN key pressed if the lorry is entering (the material will be unloaded), `trAI Lr` appears (Trailer = it indicates the tractor + trailer function), press ENTER.
  Hold the OUT key pressed if the lorry is leaving (the material has been loaded), `trAI Lr` appears (Trailer = it indicates the tractor + trailer function), press ENTER.
  The instrument saves the weighed value in the memory and shows `StOrEd` (printing takes place after the subsequent weighing of the trailer).
  The instrument automatically goes back to showing the gross weight.

– The trailer goes onto the weighbridge.
  Press PTARE, enter the weight value of the empty trailer (preset tare) via the numerical keypad, confirm with ENTER.
  The display shows the weight of the material loaded onto the trailer (net weight).

Press IN if the lorry is entering (the material will be unloaded).
Press OUT if the lorry is leaving (the material will be loaded).
The display shows the total weight (tractor + trailer) of the material preceded by the letter U for "Unloaded" if unloaded, letter L for "Loaded" if loaded.
The instrument saves the weighed value in the memory and sends it for printing.
The instrument automatically goes back to showing the gross weight.

SINGLE WEIGHING USING THE DATABASE

– The tractor goes onto the weighbridge.
  Press DB, the display shows I ndDDD.
  With the numerical keypad enter the database index associated to the tractor (the weight of the empty tractor and trailer must have already been entered previously in the database in two separate indexes, see section **LORRY DATABASE**).
  Press ENTER.
  The instrument applies the preset tare read from the database and shows the weight of the material loaded onto the tractor (net weight).
  Hold the IN key pressed if the lorry is entering (the material will be unloaded), trAI Lr appears (Trailer = it indicates the tractor + trailer function), press ENTER.
  Hold the OUT key pressed if the lorry is leaving (the material has been loaded), trAI Lr appears (Trailer = it indicates the tractor + trailer function), press ENTER.
  The instrument saves the weighed value in the memory and shows StOrEd (printing takes place after the subsequent weighing of the trailer).
– The trailer goes onto the weighbridge.
  Press DB, the display shows I ndDDD.
  With the numerical keypad enter the database index associated to the trailer.
  The instrument applies the preset tare read from the database and shows the weight of the material loaded onto the trailer (net weight).

Press IN if the lorry is entering (the material will be unloaded).
Press OUT if the lorry is leaving (the material will be loaded).
The display shows the weight of the material preceded by the letter U for "Unloaded" if unloaded, letter L for "Loaded" if loaded.
The instrument saves the weighed value in the memory and sends it for printing.
The instrument automatically goes back to showing the gross weight.

NOTES: Operation with single weighing is only possible with the net weight. The totals are updated every time a weighing is completed. To display, print or delete the totals, see sections **TOTALS** and **PRINTING EXAMPLES**.
The conditions that allow a new weighing to be carried out can be set (see section **STORAGE CONDITIONS AND WEIGHINGS PRINTING**).

MULTIPLE WEIGHING

In this mode, **up to 255 weighing operations** can be performed on the same lorry by calculating the difference with the previous weighed value each time. This function may be useful for lorries fitted with more than one compartment in case you wish to know the weight of the material in each individual compartment or if various subsequent loading and unloading operations are carried out.

1. FIRST MULTIPLE WEIGHING

The lorry goes onto the weighbridge.
When the weight is stable (stability LED on), keep the IN key pressed until you see trAI Lr; press ▲ or ▼ to display MULt.
Press ENTER.
The instrument saves the weighed value in the memory and sends it for printing.

2. SUBSEQUENT WEIGHINGS

After loading or unloading, the lorry goes on the weighbridge.
When the weight is stable (stability LED on), press OUT.
If only one "outstanding" lorry is present, which means a lorry that made the first weighing, the instrument automatically retrieves its code; otherwise it requests CodEP and the operator enters the lorry code with the numerical keypad and confirms it with ENTER.
The system retrieves the previous weighed value from the memory and calculates the difference between the two weighed values: if the weighed value is lower than the previous one, the material was unloaded and the instrument shows the unloaded weight preceded by the letter U for "Unloaded"; if the weighed value is greater than the first, the material was loaded and the instrument shows the loaded weight preceded by the letter L for "Loaded".
The instrument saves the weighed value in the memory and sends it for printing.
Up to 255 weighings can be made by repeating the sequence in this section.

3. WEIGHING CLOSING

Keep the OUT key pressed until you see trAI Lr; press ▲ or ▼ to display MULtI .
Press ENTER.
If only one "outstanding" lorry is present, which means a lorry that made the first weighing, the instrument automatically retrieves its code; otherwise it requests CodEP and the operator enters the lorry code with the numerical keypad and confirms it with ENTER.
The display shows CLEAr and the weighing is closed.

NOTES: Operation is only possible with the gross weight. The totals are updated every time a weighing is completed after the first one. To display, print or delete the totals, see sections **TOTALS** and **PRINTING EXAMPLES**.
The conditions that allow a new weighing to be carried out can be set (see section **STORAGE CONDITIONS AND WEIGHINGS PRINTING**).

SIGNAL STATION

A red-and-green-light signal station may be piloted from the relay outputs of the instrument already active by default according to the factory settings. To enable it, select:

- Function GrEEn for OUT 1 and connect OUT 1 to the green light of the signal station.
- Function rEd for OUT2 and connect OUT2 to the red light of the signal station.

For more details on how to set the output functions see section **OUTPUTS AND INPUTS CONFIGURATION.**

In standby mode the signal station is off.
Enabling takes place when the lorry goes on the weighbridge, i.e. when the weight exceeds the minimum weight (20e): the red light turns on to warn the driver to halt the vehicle once on the weighbridge.
Once the weighing has been completed and saved, the red light turns off and the green light comes on and gives the go ahead.
When the weight goes below the minimum weight (20e) once again, the green light turns on and the signal station returns to the standby mode.

ALARMS

ErCEL: the load cell is not connected or is incorrectly connected; the load cell signal exceeds 39 mV; the conversion electronics (AD converter) is malfunctioning; the load cell is a 4-wire and there are no jumpers between EX- and REF- and between EX+ and REF+.

Er OL: the weight display exceeds 110% of the full scale.

Er Ad: internal instrument converter failure; check load cell connections, if necessary contact technical assistance.

------: the weight exceeds the maximum capacity by 9 divisions.

Er OF: maximum displayable value exceeded (value higher than 999999 or lower than -999999).

t-----: weight too high: zero setting not possible.

MAX-PU: this message appears in the sample weight setting, in real calibration, after the fifth sample weight value has been entered.

Error: the value set for the parameter is beyond the permitted values; press ESC to quit the setting mode leaving the previous value unchanged. Examples: a number of decimals is selected for full scale which exceeds the instrument's display potential; value above the maximum setting value; the weight value set in sample weight verification does not match the detected mV increase; the analog output correction goes beyond the permitted limits.

bLOC: lock active on menu item, keypad or display.

nOdI SP: It's not possible to display properly the number because is greater than 999999 or less than -999999.

bAtrtC: buffer battery low, loss of date and time of Real-Time Clock. Confirm with ENTER to continue; leave the instrument on for at least 12 hours to charge the battery, if the alarm persists contact technical assistance.

dAtEP: an incorrect date has been detected: go into the related menu to check and correct it.

unStbL: unstable weight: zero-setting or net weight not possible. The weight cannot be recorded.

nCHAnG: weight has not changed: not possible to print or save.

n0 MIn: the weight did not go below the minimum weight: it is not possible to print it or save it.

FULL: no code available; close at least one weighing or delete the open weighings to continue

n0C0dE: second weighing: the operator entered a code that is not connected to a first weighed value.

EntEr: press ENTER to print the next copy of the receipt, press ESC to stop printing the subsequent copies.

noPSU: wrong password entered to change the database.

In: the instrument is waiting for the IN key to be pressed to complete the weighing.

OUt: the instrument is waiting for the OUT key to be pressed to complete the weighing.

P-tArE: the instrument is waiting for a Preset Tare to continue.

EMPtY: the operator recalled an empty index of the database.

Serial protocol alarms:

	ErCEL	Er 0L	Er Ad	------	Er 0F	t-----	------
MODE							
Bit LSB	76543210 **xxxxxxx1**	76543210 **xxxx1xxx**	76543210 **xxxxxx1x**	76543210 **xxxxx1xx**	76543210 On gross: **xxx1xxxx** On net: **xx1xxxxx**	The response to the zero command is a 'value not valid' error (error code 3)	76543210 **x1xxxxxx**
Status Register MODBUS RTU							
ASCII	**__0-F_**	**__0-L_**	**__0-F_**	**__0-L_**	**__0-F_**	**&aa#CR**	**__0-L_**
RIP *	**__0-F_**	**__0-L_**	**__0-F_**	**__0-L_**	**__0-F_**	**__0-F_**	**__0-L_**
HDRIP-N	**_ERCEL**	**_ER_0L**	**_ER_AD**	######	**_ER_0F**	**0__SET**	######
CONTIN	**_ERCEL**	**_ER_0L**	**_ER_AD**	^^^^^^	**_ER_0F**	**0__SET**	^^^^^^

*** For RIP remote displays, if the message exceeds 5 digits the display reads ------.**

If the CLM8 intelligent junction box is used, check the dedicated alarms (see section **ADDITIONAL ALARMS**).

PRINTING EXAMPLES

If the printer has been set (see section **SERIAL COMMUNICATION SETTINGS**), from the weight display press the PRINT key for less than 3 seconds:

- UEI GHt: printing of the displayed weight (the totals are not updated).
- OPEnOP: print the open weighings (Open Operations). See section **OPERATION WITH DOUBLE WEIGHING (ENTRY/EXIT).**
- tOtALS: print the totals (see section **TOTALS**).
- rEPrt: re-print the last weighing made.

The printing examples below refer to the Custom PLUSII printer, integrated in the WTAB model; the printouts with the other supported printers show wider texts in case the number of characters per available row is higher.

WEIGHING PRINTOUTS

First weighed value (see section **FIRST WEIGHED VALUE (ENTRY)**)

```
------------------------
24/01/13        09:58:01
PRINTOUT NUMBER          7          Progressive printouts

CODE                     3
INCOMING:    15000 kg
```

Second weighed value (see section **SECOND WEIGHED VALUE (EXIT)**)

```
------------------------
24/01/13        10:15:01
PRINTOUT NUMBER          8          Progressive printouts

CODE                     3
INCOMING:       15000 kg

OUTGOING:       25000 kg
------------------------
LOADED:         10000 kg
```

Single weighing (see section **OPERATION WITH SINGLE WEIGHING**)

```
------------------------
24/01/13        10:30:01
PRINTOUT NUMBER       19

UNLOADED:N      11000 kg
G               26000 kg
PT              15000 kg
DB                    91
```

Progressive printouts

Net weight
Gross weight
Preset tare
Lorry database index (if used)

Generic weight printout (from the PRINT key)

```
------------------------
24/01/13        10:31:01

G               26000 kg
N               11000 kg
PT              15000 kg
```

Net weight
Gross weight
Preset tare

COMPLEX FUNCTIONS PRINTOUTS

First weighed value tractor + trailer (see section **FIRST WEIGHED VALUE TRAILER (ENTRY)**)

```
------------------------
24/01/13        10:35:03
PRINTOUT NUMBER       20

CODE                   4
ENTRY A:        26000 kg
ENTRY B:        27000 kg
ENTRY A+B:      53000 kg
```

Progressive printouts

Tractor weight
Trailer weight
Tractor + trailer weight

Second weighed value tractor + trailer (see section **SECOND WEIGHED VALUE TRAILER (EXIT)**)

```
------------------------
24/01/13        10:37:03
PRINTOUT NUMBER       21

CODE                   4
ENTRY A:        26000 kg
ENTRY B:        27000 kg
ENTRY A+B:      53000 kg

EXIT A:         15000 kg
EXIT B:         11000 kg
EXIT A+B:       26000 kg
------------------------
UNLOADED:       27000 kg
```

Progressive printouts

Tractor first weighed value
Trailer first weighed value
Tractor + trailer first weighed value

Tractor second weighed value
Trailer second weighed value
Tractor + trailer second weighed value

First multiple weighed value (see section **FIRST MULTIPLE WEIGHED VALUE**)

```
------------------------
24/01/13        10:40:01
PRINTOUT NUMBER       22
CODE                   5
WEIGHED VALUE 1 15000 kg
```

Progressive printouts

Multiple weighed value after the first (see section **SUBSEQUENT WEIGHED VALUES**)

```
------------------------
24/01/13        10:45:01
PRINTOUT NUMBER       23

CODE                   5
WEIGHED VALUE 1 15000 kg

WEIGHED VALUE   18000 kg
------------------------
LOADED:          3000 kg
```

Progressive printouts

Open weighings (see section **OPEN WEIGHINGS**)

```
24/01/13        10:14:20

OPEN WEIGHINGS
-----------------------
24/01/13        09:58:01
CODE                 3
INCOMING:       15000 kg
-----------------------
24/01/13        09:59:01
CODE                 4
INCOMING:       16000 kg
-----------------------
24/01/13        10:10:01
CODE                 7
INCOMING:       22000 kg
-----------------------
OPEN WEIGHING        3
```

Total number of open weighings

Totals (see section **TOTALS)**

```
-----------------------
24/01/13        10:45:01
PRINTOUT NUMBER     23

CODE                 5
WEIGHED VALUE 1 15000 kg

WEIGHED VALUE 2  18000 kg
-----------------------
LOADED:           3000 kg

24/01/13        10:15:20

TOTALS
WITHOUT LEGAL VALUE
-----------------------
LOADED:         30000 kg
WEIGHING             3
FROM
24/01/13        09:00:20
-----------------------
UNLOADED:       22000 kg
WEIGHINGS            2
FROM
24/01/13        09:00:20
```

Progressive printouts

Total number of loading weighings

Date when the loading total was deleted last

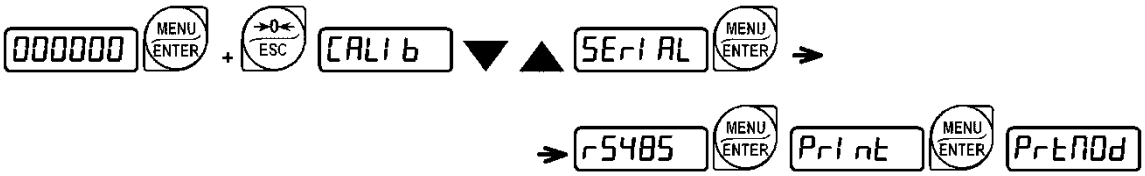
Total number of unloading weighings

Date when the unloading total was deleted last

OPZWTABSTA: PLUSII INTEGRATED PRINTER

Instrument
WTAB

From the weight display press the **MENU** and **ESC** buttons at the same time and select the printer on RS485 port:



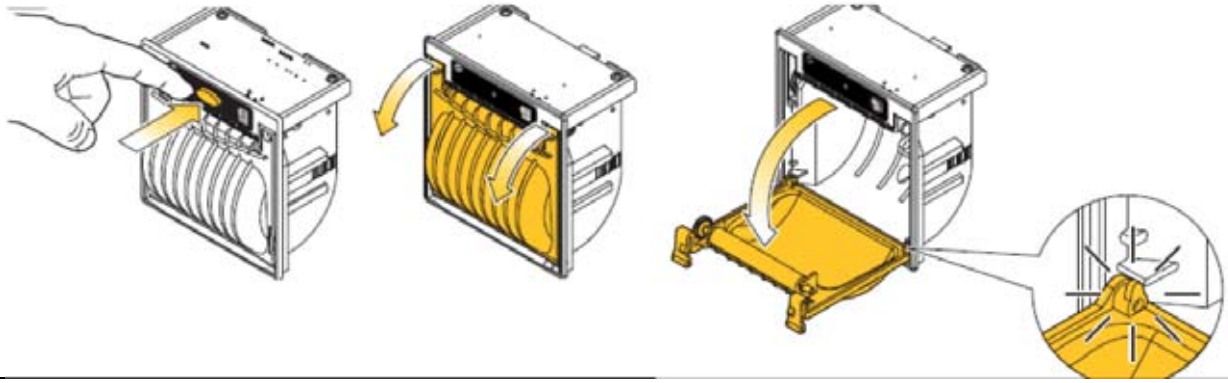
select PLuSII ;

LED/KEY FUNCTION

1. OPEN key: if lit indicates that the printer is on; press to open the paper roll compartment.
2. FEED key: press to advance the paper.

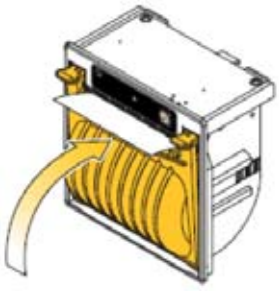
PAPER ROLL REPLACEMENT

1. Open the paper roll compartment by keeping pressed the OPEN key and using the two opening notches.

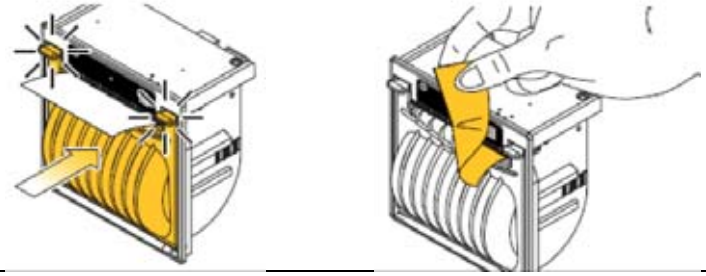


2. Place the paper roll making sure that it unrolls in the proper direction as shown.

3. Take out the paper and close the cover.



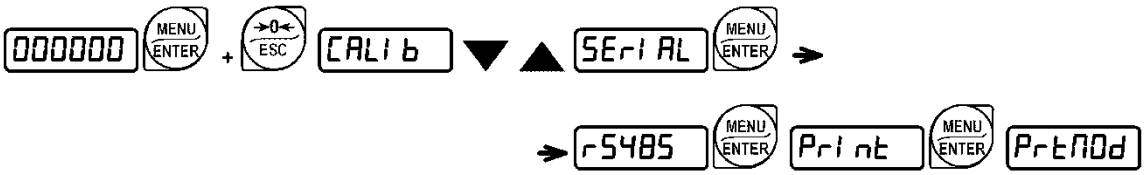
4. Push on the plastic cover to lock it and tear off the exceeding paper using the jagged edge.



OPZWTABSTAVQ: STAVQ INTEGRATED PRINTER

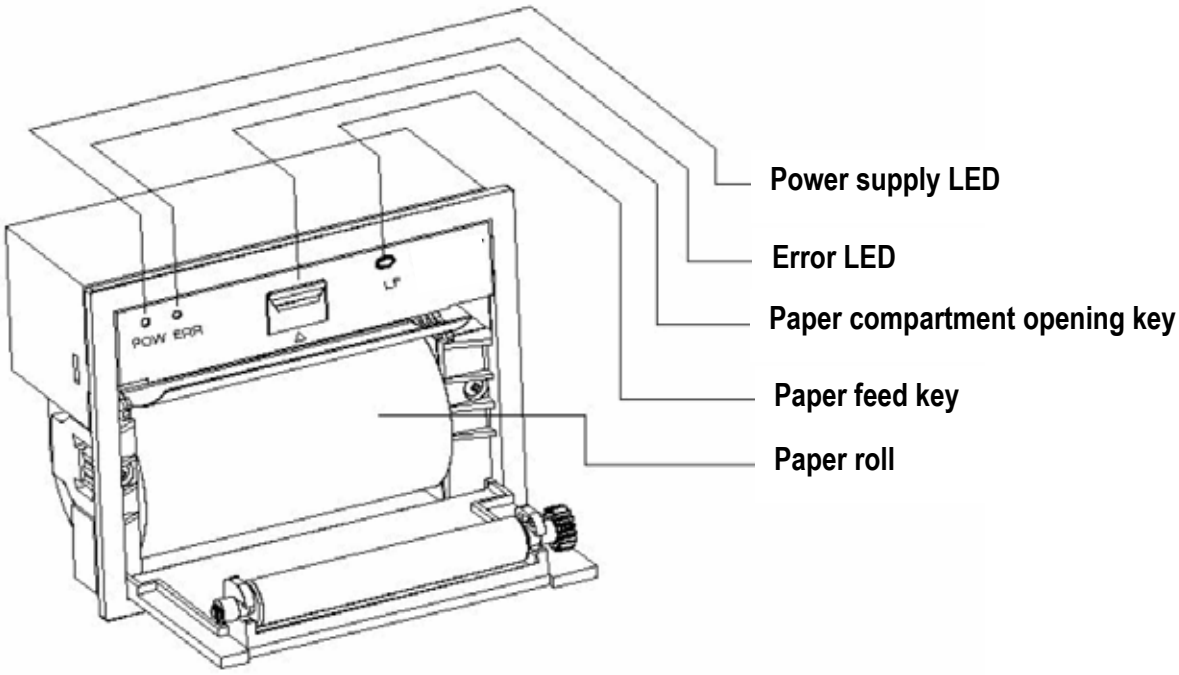
Instrument
WTAB

From the weight display press the **MENU** and **ESC** buttons at the same time and select the printer on RS485 port:



select STAVQ;

LED/KEY FUNCTION



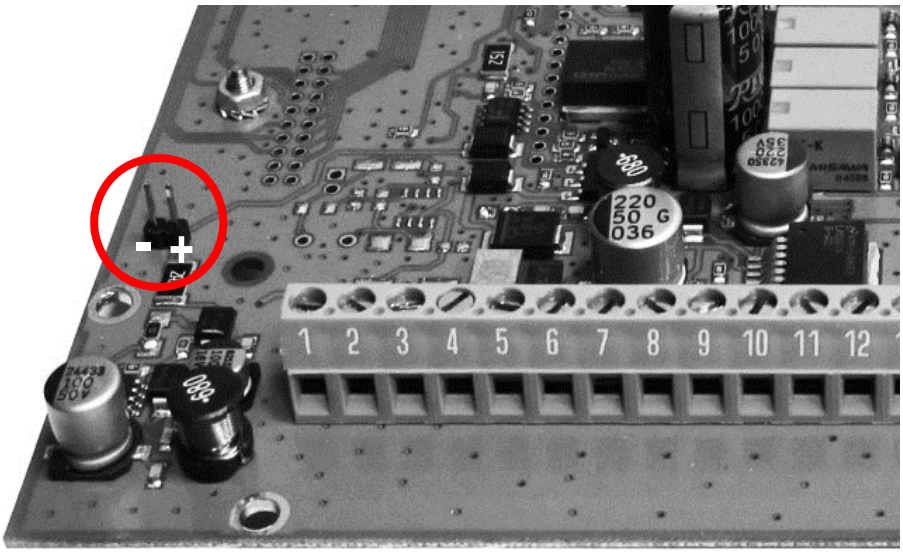
PAPER ROLL REPLACEMEN

Open the paper compartment with the special key and insert the roll as shows in the figure above, with a small strip of paper sticking out.

Instrument
WINOX / WTAB

- 12.2 V rechargeable lead battery with 2.2 Ah capacity, which is supplied already installed in the instrument.
- Use the functions of the *EnErGY* menu to optimize battery lifetime (see section **ENERGY SAVING**).
- The battery is recharged automatically every time the instrument is powered from an external power source (Power LED is on). A full charge takes about 20 hours.
- The instrument may be left connected to the external power source and this will not damage the battery.

CONNECTING THE BATTERY TO THE INSTRUMENT



- : black cable
+: red cable

WINOX-BR, WTAB-BR

- The instrument indicates that the battery is low by displaying the *LOUbAt* message alternated with the weight display.
- When the battery is too low, the instrument displays *LOUbAt* for 2 seconds and then turns off automatically.

Mode	Maximum operating time (hours)
no. 1 load cell (350 ohm), energy saving disabled	18
no. 1 load cell (350 ohm), energy saving enabled	20
no. 4 load cell (350 ohm), energy saving disabled	14
no. 4 load cell (350 ohm), energy saving enabled	16

The battery charge level is displayed by means of the following icon:

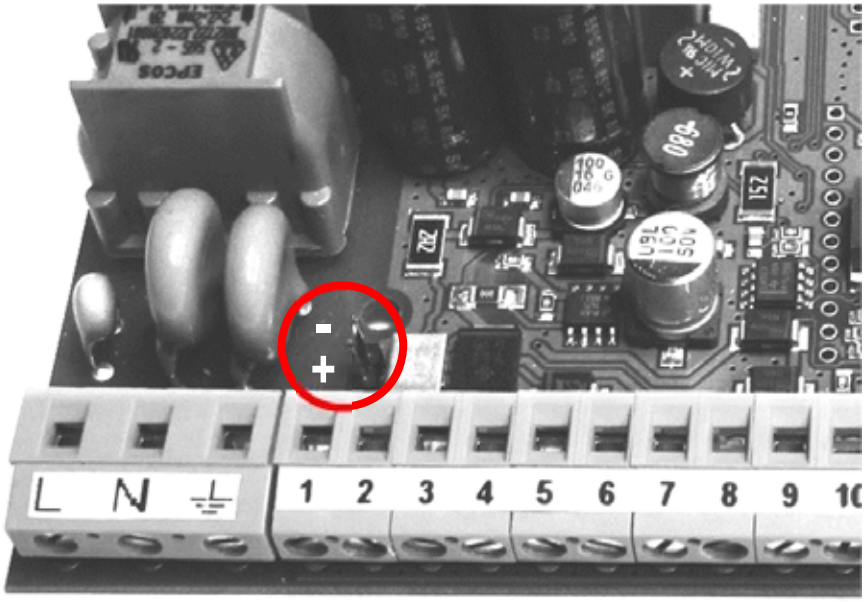
- 3 marks: battery charge level between 70% and 100%.
- 2 marks: battery charge level between 30% and 70%.
- 1 mark: battery charge level between 20% and 30%.
- 1 blinking mark: battery charge level below 20%.
- The instrument indicates that the battery is low by displaying the LOUBAt message alternated with the weight display.
- When the battery is too low, the instrument displays LOUBAt for 2 seconds and then turns off automatically.

Mode	**Maximum operating time (hours)**
no. 1 load cell (350 ohm), energy saving disabled	18
no. 1 load cell (350 ohm), energy saving enabled	20
no. 4 load cell (350 ohm), energy saving disabled	14
no. 4 load cell (350 ohm), energy saving enabled	16

Instrument
WDESK

- Battery pack made up of 8 1.2 V NiMh rechargeable elements, type AA, 2.5 Ah capacity, which is supplied already installed in the instrument.
- Use the functions of the EnErGY menu to optimize battery lifetime (see section **ENERGY SAVING**).
- The battery is recharged automatically every time the instrument is powered from an external power source (Power LED is on). A full charge takes about 20 hours.
- The instrument may be left connected to the external power source and this will not damage the battery

CONNECTING THE BATTERY TO THE INSTRUMENT



- : black cable
+: red cable

WDESK-BR

- The instrument indicates that the battery is low by displaying the LOUbAt message alternated with the weight display.
- When the battery is too low, the instrument displays LOUbAt for 2 seconds and then turns off automatically.

Mode	Maximum operating time (hours)
no. 1 load cell (350 ohm), energy saving disabled	14
no. 1 load cell (350 ohm), energy saving enabled	16
no. 4 load cell (350 ohm), energy saving disabled	13
no. 4 load cell (350 ohm), energy saving enabled	15

The battery charge level is displayed by means of the following icon:

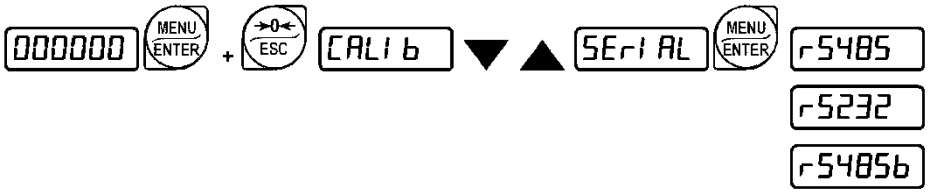
- 3 marks: battery charge level between 70% and 100%.
- 2 marks: battery charge level between 30% and 70%.
- 1 mark: battery charge level between 20% and 30%.
- 1 blinking mark: battery charge level below 20%.
- The instrument indicates that the battery is low by displaying the LOUbAt message alternated with the weight display.
- When the battery is too low, the instrument displays LOUbAt for 2 seconds and then turns off automatically.

Mode	Maximum operating time (hours)
no. 1 load cell (350 ohm), energy saving disabled	14
no. 1 load cell (350 ohm), energy saving enabled	16
no. 4 load cell (350 ohm), energy saving disabled	13
no. 4 load cell (350 ohm), energy saving enabled	15

OPZW1RS485: ADDITIONAL RS485 PORT

Additional communication port, which supports all protocols of the instrument.

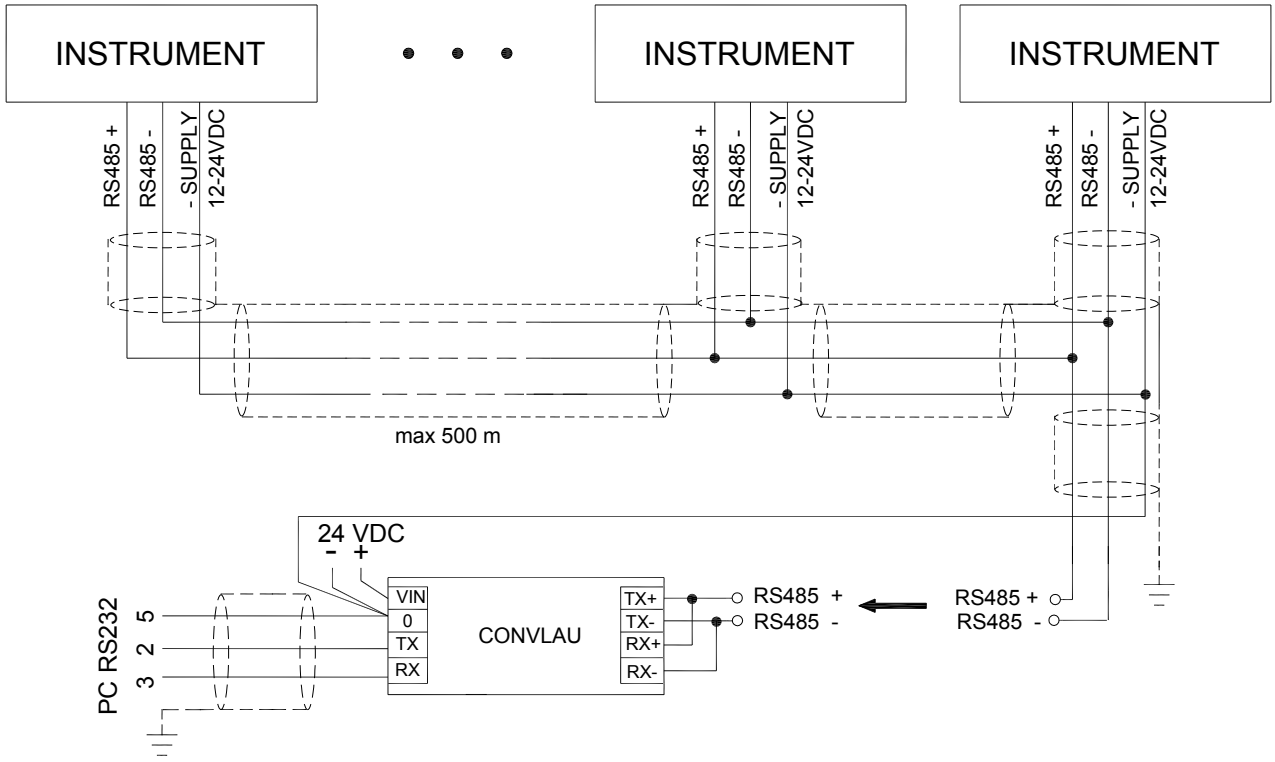
From the weight display, press simultaneously **MENU** and **ESC** keys and proceed in the following way:



Select the parameter r5485b, confirm with **ENTER** to access the port setting (see section **SERIAL COMMUNICATION SETTING**).

RS485 SERIAL COMMUNICATION

If the RS485 network exceeds 100 metres in length or baud-rate over 9600 are used, two terminating resistors are needed at the ends of the network. Two 120 ohm resistors must be connected between the "+" and "–" terminals of the line, on the terminal strip of the furthest instruments. Should there be different instruments or converters, refer to the specific manuals to determine whether it is necessary to connect the above-mentioned resistors.



INSTRUMENT	Connector	Pin	Signal	Internal terminal	Internal colour
WDESK-D WINOX-D WTAB	D6 Male RS485 serial port	1			
		2			
		3			
		4	RS485: +	4	yellow
		5	RS485: SHIELD, GND	8	black
		6	RS485: -	3	blue
		7	RS485: -	3	blue
		8			
		9	RS485: +	4	yellow

USE WITH CLM8 INTELLIGENT JUNCTION BOX

WARNING: the weight indicator must be properly configured before operating in combination with the intelligent junction box (see section **DATA DELETION AND PROGRAM SELECTION**).

When the indicator is used in combination with the CLM8, the load cells are connected to the junction box, which transmits the weight to the indicator; all the operations of calibration, zeroing, equalization and channel selection can be performed remotely through the indicator.

CONNECTION TO CLM8

If there is no integrated printer, use the **RS485** port.

SIGNAL	CLM8	Weighbridge indicator (D5)
RS485 +	17	4
RS485 -	18	6
SHIELD	22	5

If there is the integrated printer, use the **RS485b** additional port.

SIGNAL	CLM8	Weighbridge indicator (D6)
RS485 +	17	4
RS485 -	18	6
SHIELD	22	5

For connections less than 15 meters, the **RS232** port can be used.

SIGNAL	CLM8	Weighbridge indicator (D4)
TXD	20	2
RXD	19	3
SHIELD	22	5

Weight indicator configuration

Configure, on the serial port used, the MANUAL protocol with the following parameters:

bAUd = 9600 PAr I tY = nOnE StOP = 1

By default, the CML8 remote control is configured on RS485 port (D5 connector).

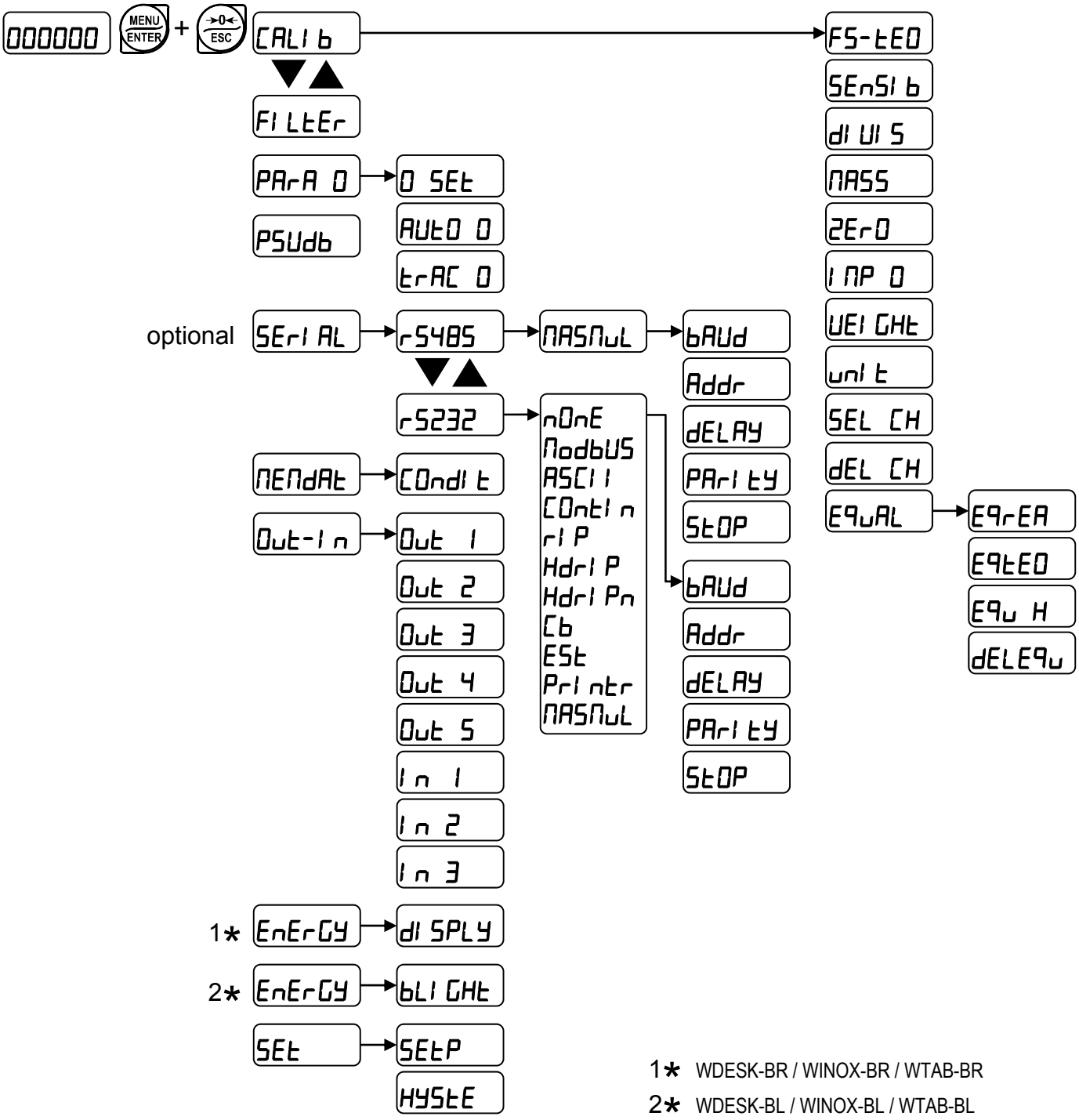
CLM8 intelligent junction box configuration

Configure, on the RS485 serial port, the MODBUS protocol with the following parameters:

bAUd = 9600 PAr I tY = nOnE StOP = 1

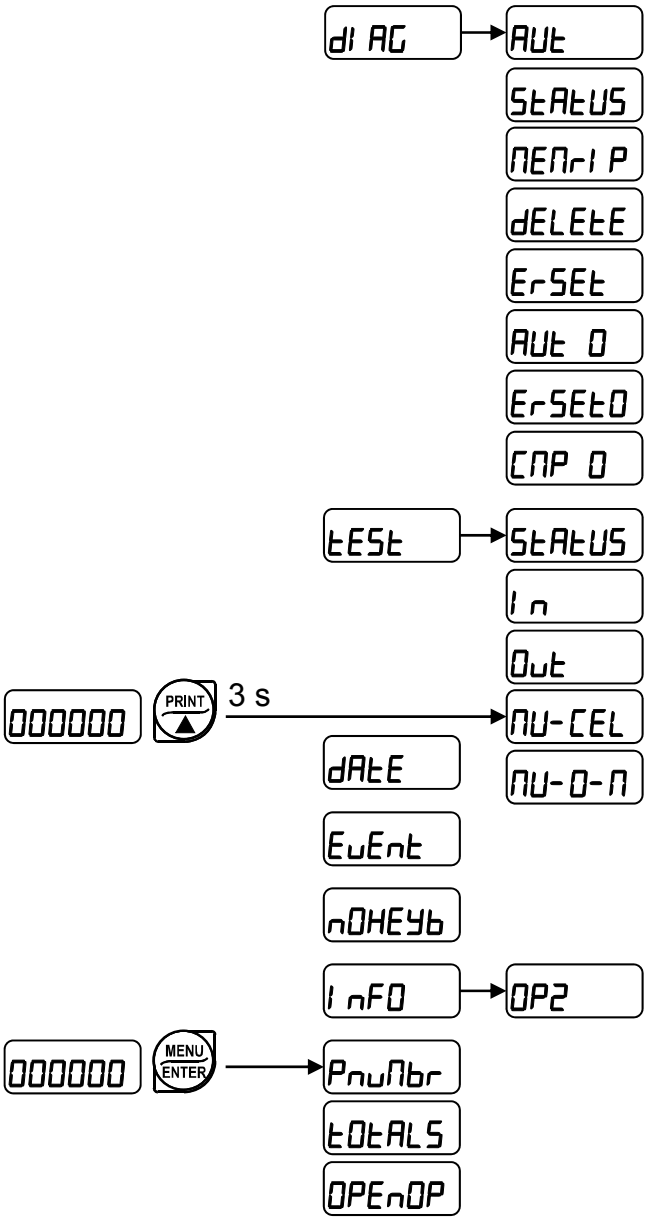
MENU MAP

Into menus changes are applied right after pressing the ENTER key (no further confirmation is required).



1* WDESK-BR / WINOX-BR / WTAB-BR

2* WDESK-BL / WINOX-BL / WTAB-BL


diAG
AUt
StAtUS
MEMrIP
dELEtE
ErSEt
AUt 0
ErSEt0
CAP 0
tESt
StAtUS
In
Out
000000
PRINT
3 s
MU-CEL
dAtE
MU-0-M
EuEnt
nOHEYb
InFO
OP2
000000
MENU
ENTER
PnuNbr
tOtALS
OPEnOP

PROGRAMMING OF SYSTEM PARAMETERS

From the weight display, press simultaneously keys MENU and ESC to access the parameter setting.

MENU/ENTER:	to enter a menu/confirm the data entry.
▲ ▼:	to modify the displayed figure or menu item.
◄ ►:	to select a new figure.
ESC:	to cancel and return to the previous menu.

CLM8 REMOTE CONTROL

The following functions of CLM8 can be performed remotely through the weight indicator; refer to the related sections of the CLM8 user manual:

- INSTRUMENT COMMISSIONING
- TARE WEIGHT ZERO SETTING
- CONFIRMATION AND CHANGE OF ACTIVE CHANNELS
- EQUALIZATION
- FILTER ON THE WEIGHT
- ANTI PEAK
- AUTOMATIC DIAGNOSTICS OF LOAD DISTRIBUTION
- LOAD DIAGNOSTICS
- DIAGNOSTICS ON ZERO
- TEST
- EVENTS LOG

WARNING: when using the weight indicator to manage the intelligent junction box, take into account the following:

- **the weight indicator display replicates exactly what would be displayed on the CLM8 display;**
- **use the DB/▼ key instead of TARE/◄.**

CLM8 KEYPAD LOCKING

YES: keypad locked.
nO: keypad unlocked.

ADDITIONAL ALARMS

nOCEL: no load cell detected, check the connections.

ErCELr: the references are not connected or are incorrectly connected; the load cell is a 4-wire and there are no jumpers between EX- and REF- and between EX+ and REF+.

ErCEL 1: the load cell is not connected or is incorrectly connected (the number indicates the channel on which the error is detected).

tUI CE: the current load cell has already been equalized; press ENTER to go back to the previous step and move the sample weight on the next load cell.

LOAd: the sample weight was not loaded or is too light.

ErdI AC: the load percentage error is higher than the value set in parameters ErSEt or ErSEtO; press ENTER to cancel the alarm.

Er CON: CLM8 is not responding, check connections and serial ports settings.

Er rES: CLM8 responds incorrectly, check connections and serial ports settings.

ErUArt: CLM8 is not responding, check connections and serial ports settings.

SYnC: the instrument is synchronizing with CLM8, wait for the end of the operation.

RESERVED FOR THE INSTALLER

MENU LOCKING

Through this procedure, it's possible to block the access to any menu on the instrument.
Select the menu that you wish to lock:

000000 (MENU ENTER) CALIb press ESC and ◄ simultaneously for 3 seconds, the display shows C.CALIb (the left point on the text indicates that this menu item is now locked). If the operator tries to enter this menu, the access is denied and the display shows bLOC.

MENU UNLOCKING

000000 (MENU ENTER) C.CALIb press ENTER and ▲ simultaneously for 3 seconds, the display shows CALIb (the left point on the text is off to indicate that this menu item is unlocked).

TEMPORARY MENU UNLOCKING

000000 (MENU ENTER) C.CALIb press ▲ and ◄ simultaneously for 3 seconds: it is now possible to enter and modify all menus including those which are locked. By returning to weight display, the menu lock is restored.

DATA DELETION AND PROGRAM SELECTION

To access this menu item, a qualified access is required (see section ACCESS TO LEGALLY RELEVANT PARAMETERS)

WARNING: operations must only be performed after contacting technical assistance.
After each operation the display shows donE, press ENTER to continue.
By pressing ESC the procedure is cancelled and no changes are made.

Upon instrument power-on hold down the ESC key until the display shows PrOG, then proceed as follows:

CONSTANTS RESTORE (does not erase the calibration): confirm PrOG, use arrow keys to select PASSU, set code 6935 and confirm.

PROGRAM SELECTION: confirm PrOG and use the arrow keys to select the desired program:
brI dGE: weighbridge program

After confirming the choice of the program, the user must choose its approval state among the following possible choices:

nOtLEG: not approved program
LEGAL: approved program, single interval (Dir. 2009/23/EC, art. 1)
LEGnI : approved program, multi-interval (Dir. 2009/23/EC, art. 1)
LEGnr: approved program, multiple range (Dir. 2009/23/EC, art. 1)

When the indicator is used in combination with the CLM8, the approval state set on both instruments must be the same.

After selecting the approval state, the user must configure the connection to the CLM8 intelligent junction box:

EStYES: intelligent junction box connected to the instrument.
ESTnO: no intelligent junction box connected.

By confirming, the instrument is restored to default and data is erased.

If you do not have a specific manual for the newly set program, you can request it to technical assistance.

KEYPAD OR DISPLAY LOCKING

Press ESC immediately followed by ▲ hold them down for about 5 seconds (this operation is also possible via the MODBUS and ASCII protocols):

- FrEE: no lock.
- HEY: keypad lock: if active, when a key is pressed the message bLOC is displayed for 3 seconds.
- dI SP: keypad and display lock: if active, the kaypad is locked and the display shows the instrument model (weight is not displayed); by pressing a key the display shows bLOC for 3 seconds.

DECLARATION OF CONFORMITY CE

LAUMAS ELETTRONICA

SISTEMI DI PESATURA INDUSTRIALE - CELLE DI CARICO

CERTIFICAZIONE DEL SISTEMA DI GARANZIA DELLA QUALITÀ DELLA PRODUZIONE

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EC-Konformitätserklärung
EC- Déclaration de conformité
EC-Dichiarazione di conformità
EC- Declaração de conformidade
EC-Deklaracja zgodności

EC-Declaration of Conformity
EC-Declaración de Conformidad
EC-Conformiteitverklaring
EC- Prohlášení o shode
EC-Заявление о соответствии

I	Dichiarazione di conformità	Dichiariamo che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.
GB	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms with the following standards.
E	Declaración de conformidad	Manifestamos en la presente que el producto al que se refiere esta declaración está de acuerdo con las siguientes normas
D	Konformitäts-erklärung	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
F	Déclaration de conformité	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
CZ	Prohlášení o shode	Tímto prohlašujeme, že výrobek, kterého se toto prohlášení týká, je v souladu s níže uvedenými normami.
NL	Conformiteit-verklaring	Wij verklaren hiermede dat het product, waarop deze verklaring betrekking heeft, met de hierna vermelde normen overeenstemt.
P	Declaração de conformidade	Declaramos por meio da presente que o produto no qual se refere esta declaração, corresponde às normas seguintes.
PL	Deklaracja zgodności	Niniejszym oświadczamy, że produkt, którego niniejsze oświadczenie dotyczy, jest zgodny z poniższymi normami.
RUS	Заявление о соответствии	Мы заявляем, что продукт, к которому относится данная декларация, соответствует перечисленным ниже нормам.

Models: WDESKBR, WDESKBL, WINOXBR, WINOXBL, WTABBR, WTABBL

Mark Applied	EU Directive	Standards
	2006/95/EC Low Voltage Directive	*Not Applicable (N/A)* for VDC type EN 61010-1 for 230/115 VAC type
	2004/108/EC EMC Directive	EN 55022 EN 61000-6-2 EN 61000-6-4 EN 61000-4-2/3/4/5/6
(only if "M" mark is applied)	**2009/23/EC** NAWI Directive	EN 45501:1992 OIML R76-1:2006

Montechiarugolo (PR), 28/05/2015

LAUMAS Elettronica s.r.l.
M. Consonni (***RCQ***)