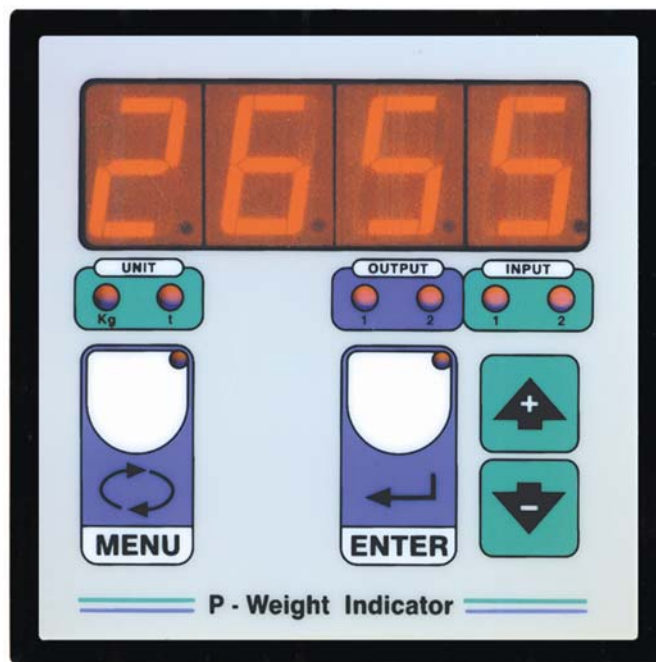




Installation user's manual ***version 5.1***

Warning!
electrical scheme
modified

P-WI 2 SET-POINT



SYMBOLS

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



Caution! Risk of electric shock.



Caution! This operation must be performed by skilled personnel.



Pay particular attention to the following instructions.



Further information.

WARRANTY

24 months from the date of the delivery note. Warranty covers only failures of defective components (due to construction defects or defects in materials) and includes replacement or repair of the components and related labor costs.

Warranty is automatically forfeited in the event of:

- tampering, deletion, removal of the identification label and/or serial number of the product
- misuse, transformation, alteration, repair of products not carried out by Laumas personnel

Laumas provides a 1-year warranty from the date of the delivery note on defects in material or manufacture of the battery.

GUIDELINES FOR PROPER DISPOSAL



**Sealed Lead Acid
Battery
Must be recycled
Properly**

PB

This symbol on the product or packaging indicates that:

- This is electrical/electronic equipment and cannot be disposed of as municipal solid waste, but must be delivered to a recycling center
- Improper use or disposal can pollute the environment or damage human health
- Non-compliance with these guidelines will be penalized in accordance with the regulations in force in the country of destination
- It is recommended to dispose of the packing and packaging as required by local regulations

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RECOMMENDATIONS FOR CORRECT INSTALLATION OF WEIGHT INDICATORS

- The entry into the cable board of cells must be independent (on one side or the other of the board) and directly connected to the terminal board of the device without breaking by bearing terminal boards or passing through troughs containing other cables.
- Use the " RC " filters on the instrument-driven coils of the remote control switches.
- Avoid inverter, if inevitable, use filters and separate with sheets.
- In case of 230VAC supply, use a 380/230VAC transformer avoiding to use the 380VAC phase and the neutral.
- The installer of the board is responsible for securing the electrical safety of the indicators.
- It is a good norm to let the indicators always switch on to prevent the formation of condensation.

OPERATION

Weight indicator with 2 set points that can be set by means of the keyboard (max value 9999), output on two voltage free contacts.

For weight equal or higher than the set-point values programmed the instrument will close the relevant contacts. The exchange for decreasing weights carried out taking in consideration the istheresys values set for this constants ("diF 1", "diF 2").

The instrument is equipped with one input for setting the tare to zero and one input for displaying the net and gross weight.

TECHNICAL FEATURES

Weight indicator installed in a DIN container (dimensions: 96 x 96 mm, depth 65 mm ; drilling template 91 x 91 mm).



The instrument is able to read up to 19.999 divisions, when the 9.999 value is reached the visualized weight will restart again from zero and will start blinking in order to inform that the above mentioned value has been passed.

POWER SUPPLY 230 VAC 50/60 Hz

CONSUMPTION 5 VA

2 SET-POINT settable by means keyboard, output on two voltage free contacts max115Vca 2A

FRONT PANEL PROTECTION IP64

DISPLAY semi-alphanumeric display 4 digits, 20 mm in seven segments

DECIMAL POINT (selectable) xxxx ; xxx.x ; xx.xx ; x.xxx

LOAD CELL CONNECTIONS maximum 4 load cells 350 ohm

LOAD CELL SUPPLY 5 VDC / 60 mA

INTERNAL DIVISIONS 20000

DISPLAY RANGE -999 ; +19999

MEASURE RANGE - 4 mV + 16.5 mV

READING RESOLUTION x 1 x 2 x 5

CONVERSION RATE 10 readings / sec.

LOGICAL OUTPUTS n. 2 (115Vca / 2A)

LOGICAL INPUTS n. 2

HUMIDITY (condensate free) max 90 %

STORAGE TEMPERATURE -20° + 70° C

OPERATING TEMPERATURE -10° + 50° C

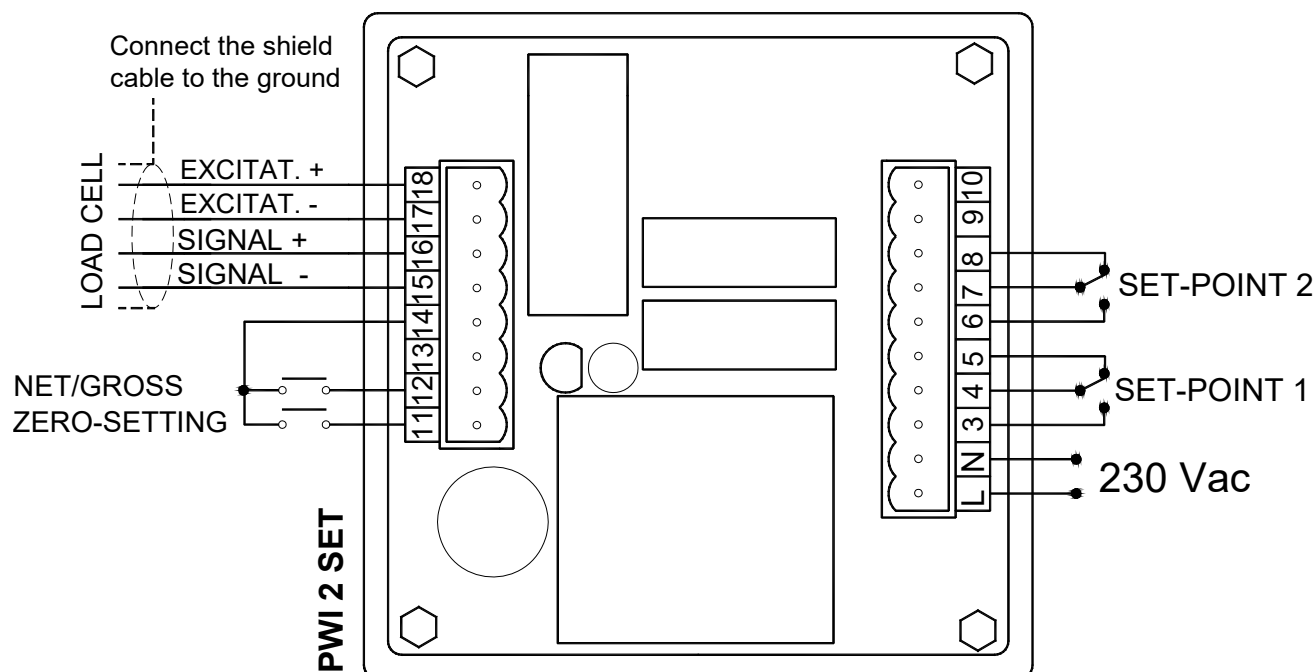
UNIT OF MEASURE kg or t

ELECTRICAL CONNECTIONS



WARNING: The procedures here below described have to be carried out by specialized personnel only. Be sure to switch off the instrument before carrying out any connections at all.

Connect the load cells by means of a terminal board in a water-proof junction box connecting the leads having the same colour; perform the same operation for the shields keeping them isolated from the ground or metallic parts connected with the ground. By means of a shielded cable with a section not lower than 0,5 mmq connect the terminal board to the P-WI instrument. The cable routing shall be far away from the power cables and possibly protected by a metal pipe.



INSTRUMENT START-UP

Switch on the instrument and wait for about 5 minutes until all the components will reach a steady temperature. Verify that the displayed weight is positive and that it increases if one subjects the container to a force weight. In case a negative value is displayed check the load cells connections and their correct installation (direction of charge). Check also that the container is correctly installed (tubes position, links, etc.).

TARE ZERO-SETTING

Make sure that the container is empty and press the  key, the "tArE " message will be displayed, keeping pressed  press the ENTER key at the same time and the tare will be set to zero.

It is also possible to set the tare to the zero by using the zero-setting external contact.

Warning: Turning off the instrument, the divisions set to zero by external contact will be lost.



Laboratory setting: "CELL" (); "nU-U" (); "rISO" ()

In this case the instrument has already been calibrated, proceed to "Instrument calibration check".



INSTRUMENT CALIBRATION CHECK:

Make sure that the container is empty and that the instrument displays zero. Place a significant quantity of product in the container (at least 50% of the maximum quantity of product that is to be weighed but in any case less than 9,999) and make sure that the instrument displays the correct value.

- If the displayed value is different from the weight known to be in the container (bigger than 1-2%), make sure that this is not due to mechanical causes and again check the electrical connections and the direction in which the load cells are mounted.

- If the difference in weight is negligible (about 1-2%), then proceed to CORRECTING DISPLAYED WEIGHT FROM KEYBOARD.



CORRECTING DISPLAYED WEIGHT FROM KEYBOARD (this operation is possible only if the print is disabled) :

Procedure subject to entry of access password (see "PASS" on page 7).

When the weight is displayed, press . The display will show "CAL 1". Hold down the key and press ENTER. The display will show the weight value blinking. Use the and keys to correct it and set the value of the real quantity loaded in the container. Press ENTER to confirm. The display will show "CAL 1" for an instant, then the correct value will appear.

If the display shows "ErrO" (error), this means that incorrect values have been set for the parameters "CELL" and "nU-U" (calibration has been tampered with). Repeat the calibration (see THEORETICAL CALIBRATION) restoring the laboratory setting.



In this case the instrument has not yet been calibrated, proceed to the theoretical calibration; tare zero-setting and Calibration check.



THEORETICAL CALIBRATION :

Procedure subject to entry of access password (see “PASS” on page 7).

Switch off the instrument, then switch it back on again while holding down the MENU key. The display will show “C.O.S.c.”, press ENTER twice and the display will show:

“dECP2, press ENTER and set the number of decimals (max. 3 decimals) using the  and  keys. Press ENTER to confirm and the display will show:

“nU-U” , press ENTER and set the load cell sensitivity (expressed in mV/V) using the  and  keys. Press ENTER to confirm. The display will now show:

“unit”, press ENTER and set the unit of measurement using the  and  keys: 0 = kg; 1 = t. Press ENTER to confirm. The display will now show “PASS”.

Press MENU to exit.

Press MENU and then press  several times until the display will show:

“CELL” , press ENTER and set 10% of the system’s full scale using the  and  keys (for example with 3 load cells of 100 kg , full scale = $100 \times 3 = 300.0$ kg ; 10% of 300.0 kg = 30.0 kg). Press ENTER to confirm. The display will show:

“rISO”, press ENTER and set the system resolution:

1 = resolution 1

2 = resolution 2 (the last digit of the weight moves in steps of two: 0, 2, 4, 6 . . .).

3 = resolution 5 (the last digit of the weight moves in steps of five: 0, 5, 10, 15 . . .).

Press ENTER to confirm and press MENU to return to the weight reading.

After the theoretical calibration, proceed as follows:

- Set the tare to zero (see paragraph TARE ZERO-SETTING).
- Check the instrument calibration (see paragraph INSTRUMENT CALIBRATION CHECK).
- If necessary, correct the displayed weight (see paragraph CORRECTING DISPLAYED WEIGHT FROM KEYBOARD).



If the display shows “ErrO” (error), this means that incorrect values have been set for the parameters “CELL” and “nU-U”. Check them and if necessary, repeat the Calibration.



SET POINT, ISTHERESYS AND CONSTANTS PROGRAMMING

During the weight displaying phase press the MENU key and the following will appear:

“SEt.1” , weight of the first set-point (max 9.999).

Press ENTER, set the value by using the  and the  keys and confirm with the ENTER key, the following will appear:

“diF.1” , istheresys of the first set-point.

Press ENTER, set the value using the  and the  keys, the relay condition will change for decreasing weight, it will be equal to the value programmed as SEt.1 minus the value programmed in this constant.

Confirm by pressing the ENTER key and the following will appear:

“SEt.2” , weight of the second set-point (max 9.999).

Press ENTER, set the value by using the  and the  keys, then confirm with the ENTER key, and the following will appear:

“diF.2” , istheresys of the second set-point.

Press ENTER, set the value using the  and the  keys, the relay condition will change for decreasing weight, it will be equal to the value programmed as “SEt.2” minus the value programmed in this constant.

Confirm by pressing the ENTER.



If the password is enabled (“PASS” = 0), access will be denied to the next constants programming. When the you have finished to programme “diF. 2”, confirm with ENTER to return to the weight reading.



If the password is disabled (“PASS” = 1), you will enter next constants programming and the display will show:

“StA” , print. Press ENTER and the following will appear:

0 = disabled print.

1= enabled print.

Set the value by using the  and the  keys, then confirm with the ENTER key, and the following will appear:

“FiLt” , filter (weight oscillations filter).

Press ENTER and set a value included between 0 and 9 seconds by using the  and the  keys.

PROTECTION PASSWORD

Switch off the instrument, then switch it back on again while holding down the MENU key. The display will show "C.O.S.c.", press  and the display will show:

"PASS" (access protection password). When the password is enabled, access can be restricted/denied to parameters programming and calibration functions.

Press ENTER to confirm and use the  and  keys to select:

0 = password enabled (access will be denied to parameters programming and calibration).

1 = password disabled.

Press ENTER, the message "dECP" will appear, press MENU to return to the weight reading.

ALARMS

"AL_ _ _ _": this alarm appears when excitation wires are disconnected, or no load cell is connected.

"SEGN" : this alarm appears when signal wires are disconnected or signal is higher than 15 mV.



WARNING: During the alarms displaying the relays are un-excited.

PRINT



THE PRINTER HAS TO BE SWITCH ON TOGETHER TO THE P-WI TO ALLOW THE INSTRUMENT RECOGNIZE THE PRINTER (SUPPLY THEM FROM THE SAME LINE).

If the printer is enabled (see the Constants programming) by pressing the  key the weight value will be printed with date and time.

Examples of printout:

LAU0 PESO = kg 1240
08:53 05-04-05

DECLARATION OF CONFORMITY – EU



SISTEMI DI PESATURA INDUSTRIALE - CELLE DI CARICO - BALANCE

LAUMAS Elettronica S.r.l.
Via I Maggio 6 - 43022 Montechiarugolo (PR) Italy
C.F. - P.IVA IT01661140341

Tel. (+39) 0521 683124
Fax (+39) 0521 681091

Email: laumas@laumas.it
Web: <http://www.laumas.com>

Fabbricante metrico Prot. N. 7340 Parma - R.E.A. PR N. 169833 - Reg. Imprese PR N.19393 - Registro Nazionale Pile
N. IT09060P00000982 - Registro A.E.E. N. IT08020000002494 - N. Mecc. PR 008385 - Cap. Sociale € 100.000 int. vers.

SISTEMA QUALITÀ CERTIFICATO UNI EN ISO 9001 - SISTEMA GESTIONE AMBIENTALE ISO 14001 - MODULO D: GARANZIA DELLA QUALITÀ DEL PROCESSO DI PRODUZIONE

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: PWI

Mark Applied	EU Directive	Standards
CE	2014/35/EU Low Voltage Directive	EN 61010-1:2010+A1:2019
CE	2014/30/EU EMC Directive	EN 61326-1:2013

Montechiarugolo (PR), 18/11/2022

LAUMAS Elettronica s.r.l.
M. Consonni
(Legal Representative)

DECLARATION OF CONFORMITY – UKCA



SISTEMI DI PESATURA INDUSTRIALE - CELLE DI CARICO - BALANCE

LAUMAS Elettronica S.r.l.
Via I Maggio 6 - 43022 Montechiarugolo (PR) Italy
C.F. - P.IVA IT01661140341

Tel. (+39) 0521 683124
Fax (+39) 0521 681091

Email: laumas@laumas.it

Web: <http://www.laumas.com>

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SISTEMA QUALITÀ CERTIFICATO UNI EN ISO 9001 - SISTEMA GESTIONE AMBIENTALE ISO 14001 - MODULO D: GARANZIA DELLA QUALITÀ DEL PROCESSO DI PRODUZIONE

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Models:PWI

Mark Applied	UK legislation	Standards
UK CA	Electrical Equipment (Safety) Regulations 2016	BS EN 61010-1:2010+A1:2019
UK CA	Electromagnetic Compatibility Regulations 2016	BS EN 61326-1:2013

Montechiarugolo (PR), 18/11/2022

LAUMAS Elettronica s.r.l.
M. Consonni
(Legal Representative)

On our website www.laumas.com there are videos on the guidelines for correct installation of weighing systems and video tutorials on configuring our transmitters and weight indicators.

All Laumas product manuals are available online. You can download the manuals in PDF format from www.laumas.com by consulting the Products section or the Download Area. Registration is required.

Think about the environment before you print!

CERTIFICATION OF THE ENVIRONMENTAL MANAGEMENT SYSTEM
in accordance with UNI EN ISO 14001.

Laumas contributes to environmental protection by saving on paper consumption.