WEIGHING INDICATOR

IPB 50

Available for version 1.05 or more

INSTRUCTION MANUAL

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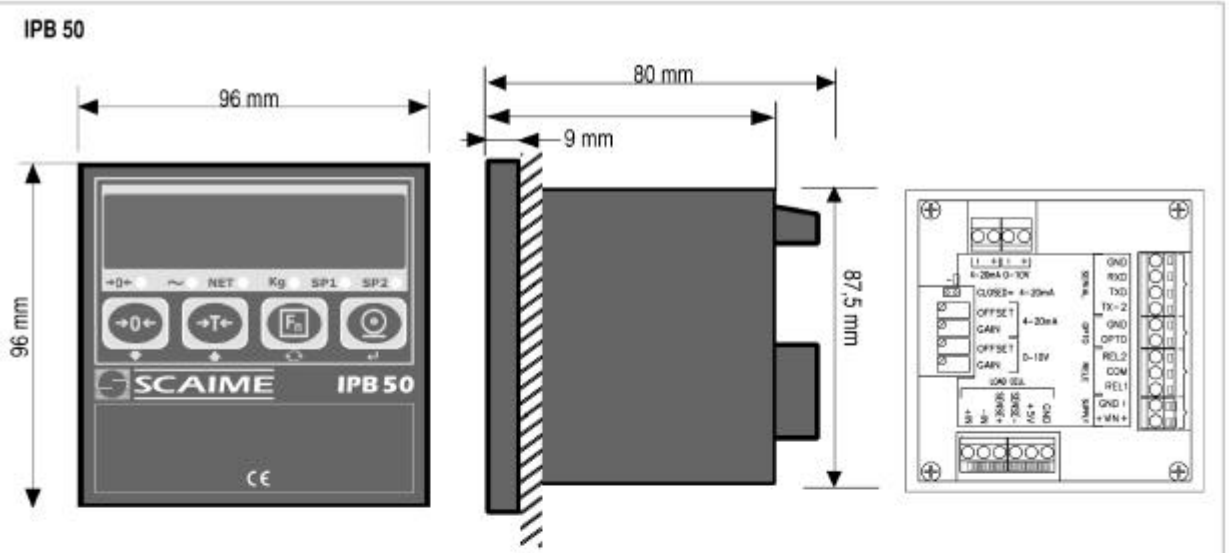
INTRODUCTION

This manual has been created to describe all functional capabilities of the **IPB50 indicator** and assist you during its installation and set up.
The IPB50 besides having all the functions of a high precision weight indicator has weight totalization and piece counting functions.
The IPB50 adapts to normal weighing applications in either industrial settings, such as during factory production processes, or that of commerce, such as legal for trade applications, also satisfying the frequently needed ability to transmit and print the data through its two serial ports.

Any attempt to repair or alter the unit can expose the user to the danger of electric shock and it will void our warranty. This instrument is covered under warranty provided that **THE USER HAS NOT, for any reasons, OPENED IT**. If any problem with the unit or system has been experienced please notify the manufacturer or the dealer from which the instrument was acquired.

Do not pour liquids on the indicator!
Do not use solvents to clean the indicator!
Do not expose instrument to either direct sun light or any heat sources!
Always mount the indicator and platform in a vibration free setting!
Read carefully and apply what is described on Page 4 !
Do not install in an environment with any risk of explosion!

SPECIFICATIONS



Dimensions de perçage : largeur 91 mm x hauteur 89 mm - Drilling template : 91 mm width x 89 mm height

CARACTERISTIQUES GENERALES - GENERAL SPECIFICATIONS	
Fonctions standard Standard fonctions	Tare, brut/net, zéro, impression, totalisation, enregistrement pesées, comptage Tare, gross/net, zero, printing, totalizing, validation, counting
Alimentation capteurs - Bridge excitation voltage (min 42 Ω)	5 Vdc
Tension minimale par échelon - Minimum division voltage value	0.8 µV
Signal d'entrée - Input signal	0.6 ... 3.2 mV/V
Compensation tare à vide - Dead weight compensation	3.2 mV/V max
Résolution interne - Internal resolution	16 bits
Classe de précision - Accuracy class **(Classe III, OIML R76)**	n ≤ 3000 d
Fréquence de mesure - Measurement frequency	50 mes./s
Affichage - Display	6 digits 15 mm LED
Plage de température compensée - Compensated temperature range	-10 ... + 40 °C
Alimentation - Power supply	12/24 Vdc
2 seuils réglables - 2 programmable set-points (relais / relay contact N.O)	24 Vdc/1A ou (or) 120 Vac/0.5 A
1 sortie série pour imprimante - 1 serial output port for printer	RS232 C
1 entrée/sortie série - 1 serial input/output port	RS232 C or RS485
1 entrée statique pour clavier déporté - 1 digital input for remote control	tare, zero, mode, print
FONCTIONS PROGRAMMABLES - PROGRAMMABLE FUNCTIONS	
Affichage Display	portée maximale, point décimal, pondération (1, 2, 5, 10, 20, 50) full scale, comma position, resolution (1, 2, 5, 10, 20, 50)
Programmation des seuils - Set-point programming	-
Paramètres de filtrage - Filtering parameters	programmable
Impression d'un numéro de ticket - Ticket serial number edition	-
Personnalisation de l'en-tête du ticket - Special ticket edition	-
OPTIONS - OPTIONS	
Sortie analogique tension - Analog voltage output (14 bits)	0-10 V sur brut (gross)/net
Sortie analogique courant - Analog current ouput (14 bits)	0-20 mA / 4-20 mA sur brut (gross)/net
Imprimante de tableau - Printer for panel mounting	DP190P
Adaptateur secteur externe - Power supply adapter	220 Vac / 12 Vdc

67 mm

POWER SUPPLY & START UP

The IPB50 is normally charged with a 12 to 25 Vdc (7W max.) tension supplied from an AC/DC external charger (supplied) which should be connected to the 230 Vac mains voltage. Safety norms must be respected for the connection to the main voltage including the use of a line, which has to be free from noise generated by other electronic equipment.

Do not connect other devices to the same outlet.
Don not step or squash the mains cable.

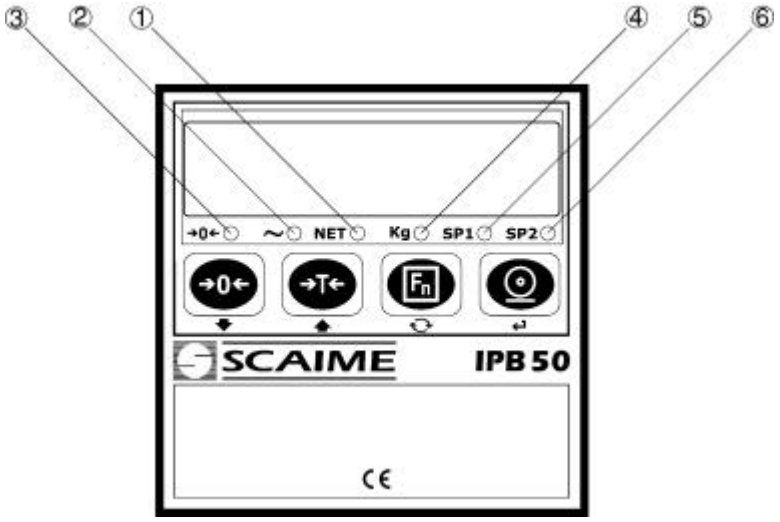
The instrument will first show a random number, then the code –X- Y.ZZ; where X indicates the keyboard type. X=0 means 4 key keyboard and Y.ZZ indicates the installed software version. Then, capacity and minimum division are shown. The instrument will perform an auto-test and warm up routine.
After few seconds the instrument will indicate ZERO, if the platform has been correctly installed and connected, and everything is ready to start a weigh procedure.

Possible messages :

_ _ _ _ _ _
over max capacité
_ _ _ _ _ _ the weigh is under the memorized zero

FRONT PANEL KEYS AND INDICATORS – IPB50

The front panel of the IPB50 is designed for quick but simple weighing applications. It consists of an LED display with 6 easy to read digits, 13 mm in height, 6 LED indicators, and below a 4 key, polycarbonate, water-resistant membrane .



1 If turned on, indicates that the weight shown is the net weight.

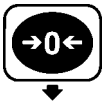
2 If turned off, indicates that the weight is stable and can be obtained.

3 If turned on, indicates that the weight detected by the weighing system is close zero, within ±¼ of the division.

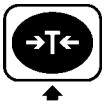
4 If turned on, indicates the unit of measure in use (kg).

5 If turned on, indicates the unit of measure in use (lb) or setpoint 1 is on.

6 If turned on, indicates the functional status of the instrument: peak, hold and piece counting operations or setpoint 2 is on.



Performs an automatic ZERO when the signalled weight is within (+/- 2%) of the total capacity. LED → **0** ← is on
Cancels a negative tare value resulting from a previous tare with the load now removed.



The displayed value of the weight present on the scale is stored as TARE and the display shows zero. **NET** LED turns on

Enables the operating Fn that was selected previously in the USER SET-UP function. By pressing it for several seconds, it is possible to immediately select a different operating Fn.

↵ Confirms each choice made in set-up menus. The **~** LED should be off
PRINT: Commands the data transmission of the serial port if a printer is connected

IPB50 BASIC FUNCTIONS

SEMI-AUTOMATIC TARE

By pressing the **TARE** key any weight value present on the display is zeroed, the "NET" LED will now turn on. To cancel the stored tare value, press **TARE** or **ZERO** without load. Each subsequent pressing of TARE will replace the previously stored value.
NOTE: The tare operations are disabled in the SETPOINT ON GROSS WEIGHT functioning Fn.

PRINTING

If a printer is connected to either instrument, by pressing the PRINT key, GROSS, TARE and NET weight will be printed. If no manual TARE was entered only the gross weight will be printed.
The print can be executed only with a weight stable and different from zero.
It is possible to select the language of the printouts .
Besides the described printouts, each single Fn can execute specific print (refer to FUNCTIONING).

TICKET NUMBER

In the printout it is possible to include the TICKET NO. (USER SET-UP parameter **ntlk**), a progressive number which increases every time the ↵/PRINT key is pushed; it may be any number between 1 and 65535 which is kept in memory even when the instrument is turned off.
To zero the TICKET NO. one must go to the "**ntlk**" parameter in USER SET-UP and select **rEStl** and push ↵.
The TICKET NO. is printed before the date/hour, and may be used in all functioning Fns and in the totalizer Fn it increases only with the resetting of the total.

PRINT OF HEADING

In order to enter the heading one needs the IPBC TOOL software; this allows to control through the PC the configurations of the IPB50 (using an optional connection cable with the bidirectional serial port). The programme screen is subdivided into metrological parameters, non metrological parameters, user SETUP, and heading. Following the instructions of this manual, it is possible to enter up to 4 lines of heading, each of 24 characters with a variable height (height 1 or height 2).
Within the user SETUP of the instrument, if one selects PrON or PrES, the following step displayed is "IntES": at this point, by confirming with ↵, it is possible to select:

Int SI Prints the heading if the total is 0 (in the totalization programme)
Int F1 Always prints the heading
Int nO Does not print the heading

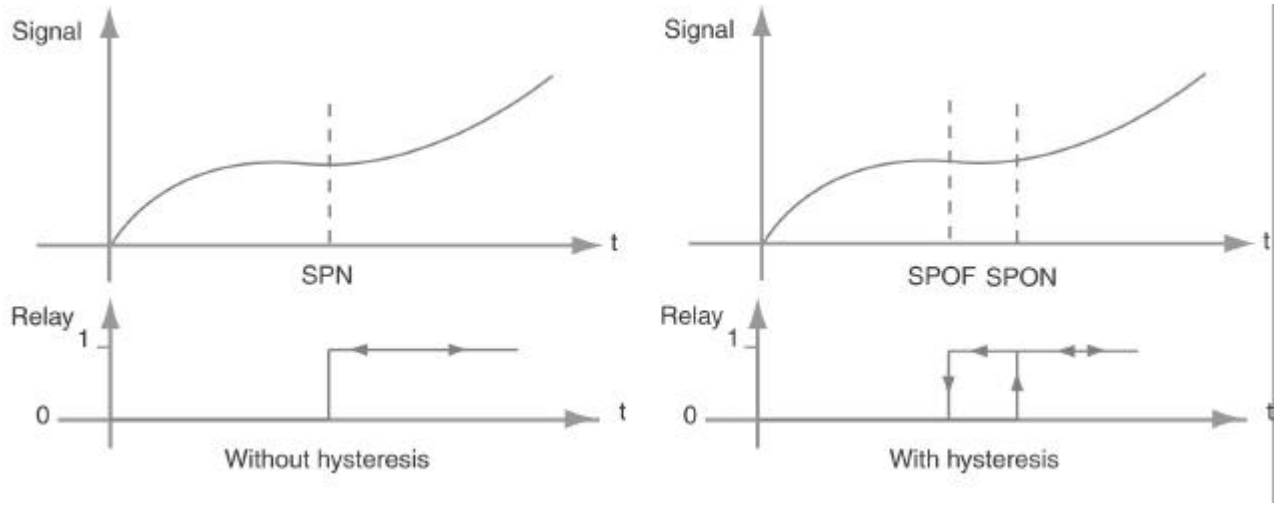
USER SET-UP "SEt"

If the user wishes to program any of these specific parameters, he must first enter into USER SET-UP by keeping ↵ pressed while turning the instrument on (pressing the ON key) until the display indicates "SEt."

The functions of the following keys, under USER SET-UP, allow the user to:

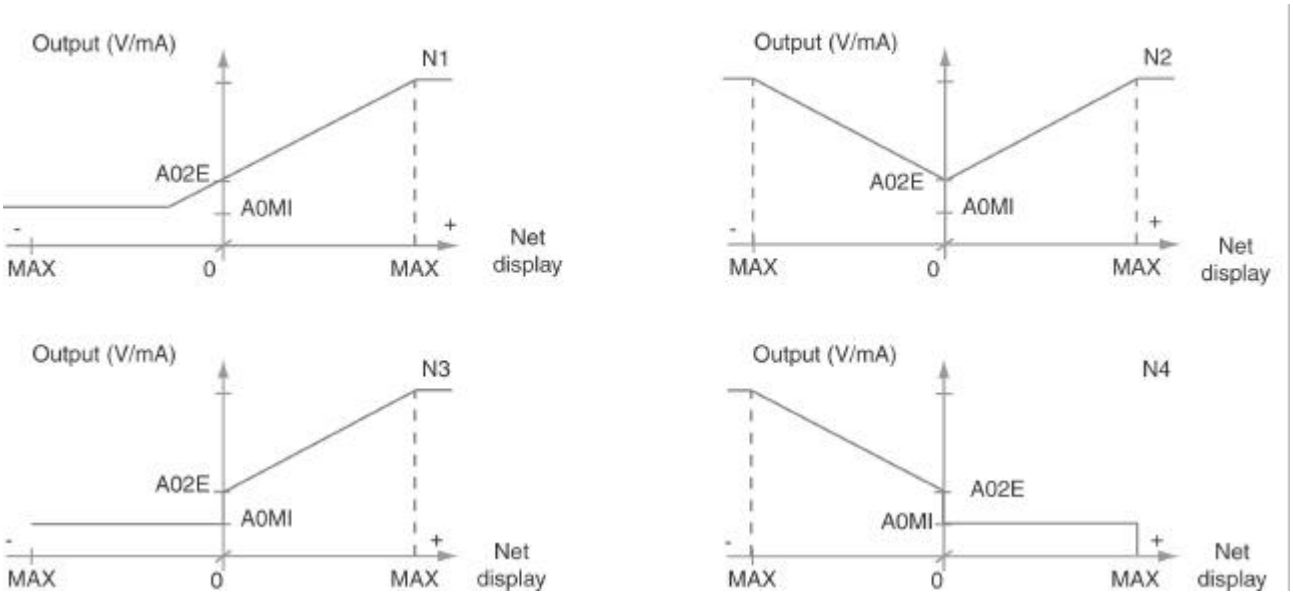
->0<-	Scan the programming steps.
↵	to enter the selected step and to store all values previously modified (has 2 functions).
->T<-	Scan the possible values of the parameters (in modifying)

Step	Display shows	What the symbol indicates
MoDE	*Std*	Weight indicator with kg / lb conversion activated
	ntgS	Weight indicator with Net /Gross conversion Fn.
	UISS	Weight indicator
	HLd	Weight indicator + HOLD function (holds last measured weight)
	PIC	Weight indicator + PEAK detection function (shows highest recorded weight)
	tot 0	Weight indicator + "totalizer" function accumulation
	tot S	Weight indicator + totalizer batch
	COUn	Weight indicator + counting function.
	StPG	Weight indicator + setpoint for gross weight
	StPn1	Weight indicator + setpoint for net weight only positif
	StPn2	Weight indicator + setpoint for net weight only negatif
	StPn3	Weight indicator + setpoint for net absolute weight
If StPG or StPn is selected		
CrL1	*r 1 nO*	first relay normally open
	r 1 nC	first relay normally closed
CrL2	*r 2 nO*	second relay normally opened
	r 2 nC	second relay normally closed
IstEr	**IstnO**	setpoint without hysteresis
	IstSI	setpoint with hysteresis



Analog output (option)

AOUt	***AO g***	Functioning with analog output on the gross weight
	AO n1	Functioning with analog output on the net weight (see below)
	AO n2	Functioning with analog output on the net weight "
	AO n1	Functioning with analog output on the net weight "
	AO n1	Functioning with analog output on the net weight "



Nota : If the setpoints are on the gross (StPG), the analog output on the net value is impossible.

AOMA Unscrew the OFFSET trimmer completely (50 turns).
once pressed ↵ the message AOMA starts to blink. Adjust the output in voltage at the desired value when the scale is at f.s. capacity through only the GAIN trimmer (rough adjustment) and the OFFSET trimmer (fine adjustment). Once the operation is finished, press any key.

AOZE once pressed ↵ the message AOZE starts to blink. With this step it is possible to adjust the output value of the analog interface when the scale displays a zero weight. The function of the keys are the following:

- ->0<-: forces the analog output at the minimum value;
- ->T<-: increases the output value of the analog interface in small increments
- Fn : increases the output value of the analog interface in a large increments
- ↵ : fine adjustment and advancement to the next step.

AOMI once pressed ↵ the AOMI message will start blinking. With this step it is possible to adjust the minimum output value of the analog interface. The keys have the same functions described in the previous step.

PrMO	*Pron*	If the indicator has been furnished with an optional printer, it is always on.
	PrES	The printer turns on only when a report has to be executed. To use only when the printer is equipped with a "BATTERY SWITCH".
	Prno	Printer off.

NOTE: If uses the RS485 output, it is necessary to set *Prno*.

Depending of the printer used

(*) IntES	Int no	does not print the heading
	Int SI	prints the heading if the total is zero (in reference to the totalization programs)*.
	IntF1	always prints the heading

* the selection of this data involves also the heading configuration (see the PRINT HEADING paragraph in the IPB50 BASIC FUNCTIONS chapter).

Depending of the printer used, if PrMO -> Pno, not displayed

dOM :	dOM 0	Prints date and time only after the weight TOTAL row.
	dOM 1	Prints date/time for every single totalizer and in the total weight.
ntlk	tlk 0	Doesn't print the progressive number on the ticket.
	tlk 1	Prints the progressive number on the ticket.
	rEStl	By pressing ↵ the ticket's progressive number is reset.
rlAt	ZerO	the totalization and the printing are reactivated with the return of zero of the net weight
	InSt	the totalization and the printing are reactivated with the weight is stable.

LOAd THIS STEP FINALIZES DATA STORAGE AND THE EXIT FROM SEt(up).Only once this step has been reached, all the modifications will be saved and stored in memory; after 10 seconds the indicator goes back to the operating Fn.

SELECTABLE OPERATING

In addition to the STANDARD weighing Fn, with the basic abilities of TARE deduction and transmission of data (to printer, PC, or remote unit), the IPB50 series indicators can perform one of the following selectable functions: SIMPLE DISPLAY, HOLD, PEAK, ACCUMULATION TOTALIZER, BATCHING TOTALIZER, PIECE COUNTING, STANDARD, NET/GROSS, GROSS WEIGHT SET POINT, NET WEIGHT SET POINT.
The user can select these operating. Refer to "USER SET-UP".

UISS (the tare value is lost when the IPB is switched off)
Press the key ->T<- to display the net Value 0 (led NET is turned ON)

HOLD (HLd)
Operating Fn similar to standard Fn, but when Fn is pressed, the value of the weight is held on the display, the "Hold" LED turns on, and the display shows HoLd alternately with the weight held value (every 5 sec). To release the weight value on the display, press Fn key again.

PEAK (PIC)
Operating Fn similar to standard Fn, but when Fn is pressed, the value of the maximum measured weight is held on the display, the "PIC" LED is on, and the display shows "-PIC-" (PEAK) alternating with the held weight value (every 5 sec). This feature is well suited for "break load" testing. Press Fn to enable the peak capturing function: the "PEAK" LED will turn on and the display will show the maximum detected weight, alternated with the writing PIC. To stop the test and return to standard operation press Fn key again. The weight value will be the maximum, before a fast decrease of the weight (i.e. measurement of the breaking strength). It's possible to set up the minimum time of the detectable weight peak. To program this threshold time, press the ↵ key for 5 sec. "- tP-" will appear on the display and a number corresponding to the minimum peak time in 0.01 seconds units. By pressing the ->T<- key the user can scroll time values 2, 5, 10, 20, 50,100, and 200. Press ↵ in order to confirm the selected value. The normal used value is 2 (fastest capture).
Nota : Select the value of the filter (Mode) at LO-1

ACCUMULATION TOTALIZER (tot 0)
In this operating, it is possible to sum sequential weighments. When Fn is pressed, the displayed weight accumulates into a total weight in the indicator's memory. In order to avoid repeating a particular weighments the Fn key activates only according to the "rIAt" parameter setting in the USER SETUP (determined by zero weight or instability).. If a printer is connected, the Fn key commands the printing of the weight value. After initiating a Horizontal Totalizer, pressing Fn also allows the user to temporarily view the number of weighments and the accumulated TOTAL weight at the moment (SUbtotal). If the length of the numeric value (of the accumulated total weight) is more than 5 digits the displayed weight value will occur in two steps.
To cancel the accumulated TOTAL press ↵: If a printer is connected, before zeroing, the total NET weight (or subtotal) is printed along with the number of weighments. When the display shows "ZERO", the Fn key is not enabled for totalization, only the accumulated total is displayed.

BATCH TOTALIZER (tot S)
This Fn prepares a sum for "recipe-batching." Similar to the previous accumulation totalizer, this totalizer proceeds by allowing the weight to accumulate on the scale without unloading the previous "ingredient". When Fn is pressed, the indicated weight is added to the subtotal, and the displayed weight returns to a value of zero.

PRINTING IN EITHER TOTALIZER

If a printer is connected, each pressing of Fn prints the progressive number of weighments, the GROSS weight the TARE weight and NET weight.

Each time you press PRINT, the TOTAL number of weighments, TOTAL NET weight, TICKET No and DATE/TIME (if selected and it depends of the printer) are printed.

CAUTION: all the totalized values are reset when the instrument is turned off.

PCS COUNTING (COUn)

Similar to standard Fn, we have the ability to count pieces placed on the scale, or in a container on the scale, by measuring only a small sample of the total, thus saving the user a good deal of time.

1) Place the empty container on the scale and press TARE to zero the displayed weight.
2) Check that the zero is on the display and press the Fn button: the counting function activates and the display asks the user for the quantity of sample pieces, to be chosen between 5, 10, 20, 50,100, and 200. The LED "kg" and "NET" are turned off and the displayed digits are flashing.
3) Press Fn the number of times needed to reach the desired sample size.
4) Put either on the platform or on the container the same quantity of reference pieces selected and press ↵ to confirm. The display shows “SAMP” while the IPB50 finds the APW (or APW Average piece weight). The PCS led turns on and the quantity on the platform is shown on the display.
5) Put the quantity to be counted on the platform. The display shows the PCS value.
6) Unload the scale, the APW will remain stored in memory for the next counting of pieces alike (no new SAMPLE operation is required). In this case, check the 0 PCS indication on display; otherwise press the TARE key.

NOTE: After the PCS counting step has been completed, and an APW value has been stored in memory, by pressing Fn once the WEIGHT of the pieces will be displayed. Pressing Fn a second time will display “**APW=**.” To see the APW value that the instrument has recorded, press ↵ two times. The first time that ↵ is pressed, the first 6 digits of the unit weight value will be displayed: only the digits before the decimal place (00000.00000). At the second pressing, of ↵, will display the digits of the unit weight values after the decimal place (00000.00000). Press Fn again to get back into counting Fn; the display will indicate: "- S – CP." Press ↵ to confirm the previously calculated APW value.

By pressing Fn, at anytime, it is possible to set up a new reference quantity: if a previous APW is already active, the display will indicate: "- S - CP": press Fn to acquire a new reference as described at point 2). During the REFERENCE calculation, ZERO key assumes escape function, to return in WEIGHT mode.

PCS COUNTING UNLOAD METHOD

1) Place a FULL container on the SCALE, zero the weight with TARE, and press Fn to select the desired Sample size.
2) Takes off the same quantity of pieces as selected for the SAMPLE value and press ↵ to confirm. The display will indicate SAMP while the IPB50 calculates the average piece weight (APW). The PCS LED will turn off and the display will indicate the negative selected quantity.
3) Continue removing pieces, and the quantity taken off will appear on the display.

MINIMUM WEIGHT OF THE SAMPLE

In order to achieve high accuracy in the APW's calculation, the Reference quantity’s weight should not be less than a minimum value dependant on the instrument's firmware. In such a case, after pressing ↵, the display will indicate: " *CP - L* " and the quantity will not be accepted. Press ->0<- to cancel this alarm status and repeat the procedure with a sufficient quantity.

VIEWING THE APW (**average piece Weight**)
After carrying out the reference operation it is possible to view on the display the calculated APW or the one manually inserted. While the scale shows the number of pieces, if one presses Fn, the display shows the WEIGHT on the weighing system; when one press Fn again the APW= is displayed. At this point by pressing ↵ once, the digits before the decimal place are shown, while pressing ↵ a second time the digits after the decimal place are shown.
For example, if the unit of measure of the scale is kg, after carrying out the reference operation, by pressing Fn twice the display shows APW=; if one now presses ↵ the digits of the APW before the decimal place are shown, 0 for example; by pressing ↵ again, the digits after the decimal place are shown, which could be 60000 for example; in this case the APW, or the weight of each piece is 0.60000 kg. To return to the counting function, press Fn (or ↵) again: the display will show "- S – CP"; now press ↵ to confirm and return to the counting function with the same APW previously calculated

PRINTING UNDER COUNTING Fn
If a printer is present, pressing the ↵key will print the values of GROSS weight, TARE weight, NET weight on the scale, the Quantity of PIECES (PCS) on the scale, plus the APW (calculated or entered by user) in kg, g, t, or lb. The ticket number is also printed (if enabled in the ntlk step of the USER SET-UP)

NOTE: If ↵is pressed with the scale in weight Fn (for instance by pressing Fn to exit counting Function), only the values of GROSS weight, TARE weight, NET weight on the scale will print.

STANDARD (Std)
Normal weighing Fn: by pressing "Fn" key the value is converted from kg to lbs and vice versa. Their relative LED displays the appropiate unit. Only this Fn has the ability to convert from kg to lbs and back again. However, the other Fns may be chosen in either unit of measure during configuration beforehand.

NET/GROSS (NtgS) (the tare value is lost when the IPB is switched off)
Press the key ->T<- to display the net Value 0 (led NET is ON), however with the Fn key having a net/gross switch. If there is a pre-set tare, by pressing the Fn key, for a 3 second interval, the gross weight is displayed, the net weight LED is turned off and the pre-set measuring units is flashing.
TAKE NOTE**:** While the gross weight is being viewed it is not possible to print.

SET POINT
StPG (setpoint on the gross it is not possible to tare) / StPn (setpoint on the net)
Press the Fn key to modify the values of the 2 setpoints.
Setpoints without hysteresis (IStno selected)
- The display shows " StP1 " (setpoint 1) press ↵ , the display shows the value of setpoint 1.
- Use the Fn key to choose the digit to be increased (BLINKING DIGIT), the scrolling of the digits takes place from right to left.
- Increase the value using the ->T<- key.
- When finished entering the values, confirm with ↵.
- The display shows " StP2 " (setpoint 2) press ↵ , the display shows the value of setpoint 2.
-- adjustment idem setpoint1.

Setpoints with hysteresis (IStnI selected)
one enters two SETPOINTS for each relay: a DISABLING one, which, (when the gross weight is lower than it, disables the appropriate relay); an ENABLING one, (when the gross weight is equal or greater than it, it enables the appropriate relay). By keeping pressed the ↵ key for about 3 seconds one enters the four SET POINT values (DISABLING and ENABLING of relay 1, DISABLING and ENABLING of relay 2):
- The display shows " SP1OF " (relay 1 DISABLING SETPOINT): press ↵ to enter the Step.
- Use the Fn key to choose the digit to be increased (BLINKING DIGIT), the scrolling of the digits takes place from right to left.

- Increase the value using the ->T<- key.
- When finished entering the values, confirm with ↵.
- The display shows " SP1On " (relay 1 ENABLING SETPOINT): enter the weight value as in the preceding SETPOINT and confirm with ↵.
- The display shows " SP2OF " (relay 2 DISABLING SETPOINT enter the weight value as in the preceding SETPOINT and confirm with ↵.
- The display shows " SP2On " (relay 2 ENABLING SETPOINT enter the weight value as in the preceding SETPOINT and confirm with ↵.

Example : SP1On = 1000.0 et SP1OF=999.0, the relays will be ON at 1000.0 and will be OFF at 999.0

NOTES

- The DISABLING SETPOINT must be less or equal to the ENABLING ones; if a high value is entered, the instrument will show an error message (Err) on the display; after this it will again propose the SETPOINTS until a correct value is entered.
- If a 0 value is entered, it only has effect on the ENABLING SETPOINTS; in other words, the relay is activated with the GROSS WEIGHT equal to zero and it is not disabled until the instrument is turned off.
- The status of the weight remains active on the present value also during the modification of the SETPOINTS, until the new value is confirmed.
- In this functioning Fn the tare operations are DISABLED.
- To set the initial status of the two relays, normally open (N.O.) or normally closed (N.C), refer to the USER SET-UP.

NOTES:

- The weight status remains active on the present value also during the modification of the SETPOINTS, until a new value is confirmed.
- To set the initial status of the two relays, normally open (N.O.) or normally closed (N.C), refer to the USER SET-UP.

ANALOG OUTPUT (optional)

In all function if the optional analog output is present, it is possible to use the 0-10V FIXED output and the 0-20 mA CONFIGURABLE output (jumper on the OPEN analog board), or in 4-20 mA (closed JUMPER). The voltage and the output current from the interface are proportional with the gross weight or with the net weight (selectable through the AOUt step of the user setup) present on the scale.
When the instrument is in underload, the analog output value is the minimum and when in overload, the analog output value is the maximum allowed.
IN THIS FUNCTION ONLY THE ZERO KEY IS ENABLED.
Note: the analogic output card is optional and can only be found on IPB50 with analog output.

ANALOG OUTPUT CALIBRATION

0 / 10 V

Connect the digital multimeter on the terminal board 0 – 10 V of the analog output (refer to terminal board connections on the IPB50's back).
Through the AOMA, AOZE, and AOMI steps, adjust the output voltage value which you prefer in respect to the f.s. capacity, with zero weight and the minimum value of the analog output.

0 / 20 mA

MAKE SURE THAT THE JUMPER, ON THE ANALOG BOARD IS OPENED.
Connect the digital multimeter on the terminal board 0 – 20 / 4 – 20 mA of the analog output (refer to terminal board connections on the IPB50's back).
Through the AOMA, AOZE, and AOMI steps, adjust the output voltage value which one wants in respect to the f.s. capacity, with zero weight and the minimum value of the analog output.

4 / 20 mA

MAKE SURE THAT THE JUMPER, ON THE ANALOGIC BOARD IS CLOSED.

Connect the digital multimeter on the terminal board 0 / 20 , 4 / 20 mA of the analog output (refer to terminal board connections on the IPB50's back).

Through the AOMA, AOZE, and AOMI steps, adjust the output voltage value which one wants in respect to the f.s. capacity, with zero weight and the minimum value of the analog output.

NOTE: IT IS NECESSARY FOR THE INSTRUMENT TO BE CALIBRATED.

Authorized Personnel Only

TECHNICAL CONFIGURATION (SET-UP ENVIRONMENT)

Entering the CONFIGURATION or "ConF" Fn of the IPB50 allows you to browse through a menu where it is possible to select all of the instrument's operating parameters or functions. It is composed of several steps. To enter into CONFIGURATION keep the ->0<- key pressed while turning on the instrument until the display shows "ConF", then release ->0<-. Press the ->0<- key, again, to display an identification number of the version program. Press the ->0<- key again to pass to the first parameter on the menu you can see a number (see nota below).

NOTE: THE METROLOGICAL PARAMETERS OF THE SETUP are normally NOT ACTIVATED.
To activate them it is necessary to open the instrument and insert the proper microswitch. (see DISPLAY BOARD CONNECTION SCHEME). If the instrument is LEGAL FOR TRADE, in order to open it one should take off the legalization seal on the rear of the indicator.
In the following description, the steps with METROLOGICAL PARAMETERS have this symbol (*)
In the Set-Up condition, the instrument keys allow the user to perform the following functions:

->0<-	Scrolls the programming steps in sequence. Use while searching for a value to modify.
↵ PRINT	Dual function: 1) "Enters" into the editing of the parameter selected with ->0<-. 2) Stores the modifications just performed during the current step and passes on to the next step.
->T<-	Dual function: ->T<- is used to scroll the configurable values while in the current step, and is used to increase a numerical value of a digit selected with Fn key
Fn	Changes the numerical value of a step by selecting the digit to be changed. (it moves forward/backward the selected digit) The digit selected is the flashing one. Use ->T<- to increase the value.

The display shows each step for which, below, you can find an explanation.
The symbol (!) shows the configuration normally set by the manufacturer relative to that step.

Note:

Displaying the raw counts. It is useful to check that the the load cell connection is done correctly. A correct operation will have a value greater than 0 with no load applied, and less than 65535 with the weight at full scale (scale's capacity). Press the "->0<-" key to pass to the following parameter.
WARNING: THE FOLLOWING OPERATIONS ARE TO BE CARRIED OUT ONLY DURING THE INITIAL CALIBRATION OF THE WEIGHING SYSTEM (otherwise the weighing system must be recalibrated).

1) In case the point value is equal to 0, carry out the calibration of zero through step tP 0 and check again the converter value with the unloaded scale.
2) In case the point value is equal to 65535 (at full scale capacity) go to step "Gain", choose a lower gain than what has been set; then go back to the step and check that the point value of the full scale capacity is under 65535. If isn't, repeat the operation.

ddFS (*) SCALE CAPACITY

This sets the capacity of the scale. Press ↵ and the display will indicate the stored value **(NOTE: the decimal point position will depend on the following step)**. Press ->T<- to scroll through the available choices 1000, 1500, 2000, 2500, 3000, 3200, 4000, 5000, 6000, 6500, 8000, 10000, 12000, 15000, 20000, 25000, 30000, 35000, 40000, 50000, 60000.
(!) 1.000

dECI (*) DECIMAL POINT POSITION

This step moves the position of the decimal point in the scale capacity value chosen from the previous step. (For example, the scale capacity value "15000" would become 1500.0, 150.00, 15.000 depending on which of the values: *"100000, 1.0, 1.00, or 1.000"* was selected respectively). The ->0<-s shown after the decimal point indicate the number of digits after the decimal point. The value "*100000*" selects "no decimal point".
(!) 1.000

ddES (*) SET MINIMUM SCALE DIVISION

This is the minimum difference between two consecutive scale values. When it is a fraction of **Kg**, it can be shown as **g**, tenth of a **g** or hundredth of a **g** by selecting one of the following value: 1, 2, 5, 10, 20, and 50. With the ->T<- key select a value and confirm it with the ↵ key.
(!) 1

Note: the maximum number of divisions that the instrument can display is 30.000. Therefore, if you insert a value of maximum load, the minimum division to be insert has to be:
maximum load / minimum division ≤ 30.000
If you insert a maximum load to 100000, the minimum division is 5 and if you try to insert 2, the instrument goes in alarm and the display shows Err. Until you insert an acceptable value, you can not go ahead with the set-up. By pressing ↵, the instrument automatically inserts an acceptable value.
If you want to insert a different decimal point position, by pressing ->0<-, the display LED shows dECI then press ↵, set the decimal point position and go ahead with the configurations step.

0n-0 (*) AUTO->0<- AT SWITCH ON

Enables (*AUtO*) or disables (*FrEE*) the ability of the instrument to acquire a gross zero automatically when the instrument is first switched on. When "*AUtO*" is enabled the display will be zeroing, if the gross weight value on the scale is less than +/- 10% of the maximum capacity.
(!) *AUtO*

tIM0 (*) ->0<- TRACKING TIME

The instrument periodically recalculates the zero when its variation does not exceed half the minimum scale division. This step sets the length of time after which a new zero can be automatically taken. It is possible to select values between 0 and 256 in increments of a tenth of a second.
(!) 10

In – Ir (*) TILT DETECTOR ENABLING AND INFRARED REMOTE CONTROL

The functioning of this parameter varies depending on the version of hardware of the indicator. If an inclination surveying device is connected, the tilt detector function can be enabled. In this case weighing is only possible if the scale stays within 2% of horizontal (the maximum inclination from level as defined by law).
This parameter is also used to enable the infrared remote control, if an infrared sensor is present.
NonE : No selected functions
Inc 1: function currently not managed
Inc 2: function currently not managed
Ir 4: function currently not managed
Ir 1: function currently not managed
(!) NonE

GAin (*) AMPLIFIER GAIN SELECTION

Sometimes it may be necessary to change the amplifier gain. Although the standard value is "1.0," the user can also select "0.5" or "1.5", "1.7" and "2".
(!) 1

GrAV (*) SELECTION OF THE GRAVITATIONAL ZONE OF USE

The gravitation coefficient varies from location to location throughout the earth's surface; therefore, its value is not a "constant". Because it varies between 9.75001 TO 9.84999m/s², the user has the ability to enter the five digits after the decimal point by first selecting ZONE 06 from the list of 6 available zones. For example if the gravitational value is 9.80123, enter 80123. (The other 5 Zones on this step of the instrument configuration are only valid for their corresponding locations within Italy - when selected, they automatically correct for variances in weight values due to differences in gravitational attraction). Because the values of these Zones are very unlikely to represent actual values in your location we suggest you obtain and enter the one for your area or an average of 9.8 m/s². Press the Fn key to select the digit to be modified and the ->T<- key to change the flashing digit.
(!) Zo 01

n tP (*) CALIBRATION POINT SELECTION

Number of calibration points (not counting the zero point): 1 or 2 to make the weighing system linear, if necessary. This allows the user to optimise the performance of a weighing system with a slight case of non-linearity.

tP 0 (*) (flashing) ZERO CALIBRATION

Your system without loads, press ↵ to perform the balance zero calibration (tP0 stop flashing), wait a few seconds for the sensor to memorize signal and the IPB will go to the next step. This function is useful in new calibrations or when a new weighing module is connected.

ddtI (*) 1ST CALIBRATION POINT SETTING

This step allows the user to enter the actual value of the reference weight that will be used for the 1st calibration point. Use the Fn and ->T<- keys to select and confirm with ↵.

tP I (*) (flashing) 1ST POINT CALIBRATION

Place a reference weight on the platform of the same value as the one programmed in the previous step "ddtI." Wait for the scale to stabilize, then confirm the calibration by pressing ↵ tP1 stop flashing) wait a few seconds for the indicator to memorize the signal and the IPB will go to the next step

ddt2 (*) 2ND CALIBRATION POINT SETTING (if *ntP =2*)

This step allows the user to enter the actual value of the reference weight that will be used for the 2nd calibration point. Use the Fn and ->T<- keys to select and confirm with ↵

tP 2 (*) (flashing) 2ND POINT CALIBRATION

Place a reference weight on the platform of the same value as the one programmed in the previous step "ddtI." Wait for the scale to stabilize, then confirm the calibration by pressing ↵,(tP2 stop flashing) wait a few seconds for the indicator to memorize the signal and the IPB will go to the next step

NOTE: If only one calibration point was set, steps "*ddt2*" and "*tP 2*" will not be available. If 2 calibration points were set, the second one must be greater than the first one. For a more reliable operation, calibrate the scale with a weight of at least 50% of the scale's maximum capacity.
CAUTION: For the IPB to memorize the (tP 0, tP 1, tP2 and CAL 0) require a few seconds to achieve stability on the scale; wait until the next step appears on the display before proceeding.

CAL-0 (*) (flashing) ZERO CALIBRATION

This step is useful only for calibrating the zero point when a permanent tare weight is added to the platform. Position the new fixed tare and press ↵ (CAL 0 stop flashing), wait a few seconds for the IPB memorize the signal and the IPB will go to the next step.

UnIt (*) MEASURE UNIT SELECTION

Allows user to select which unit of measure will be printed: *g / kg / t / Lb.*
(!) kg

M0dE FILTERING – DISPLAYING

The 9 possible programmable values are the following:
HI-**1** HI-**2** HI-**3** = maximum immunity to vibrations, the display update slower, but with longer gaps.
HS-**1** HS-**2** HS-**3** = medium filter, continuous variations of the weight.
L0-**1** L0-**2** L0-**3** = light filter the displayed value changes continuously - not recommended in weighing systems with over 3000 divisions of resolution.
The numbers **1, 2, 3** after the filter type indicate its effectiveness from weakest (1) to highest (3).

DInA DYNAMOMETER

Applications such as crane scales have particular requirements for obtaining stability and countering the tendency to change the value of weight displayed.
"DInA 0": Dynamometer operating Fn disabled.
"DinA 1": Dynamometer operation Fn enabled.
(!) 0

PrIn PRINTER SETUP

This feature enables or disables the printer
ALL = continuous transmission of the weight on the one-way serial output in the standard format of the transmission protocol (useful for connecting to PC when bi-directional serial output is already in use).
Pr - n0 = disables printer. ***(SET IF THE 485 TRANSMISSION IS USED)***
Pr – Lt1 = enables printer to use normal height characters.
Pr – Lt2 = enables printer to print date/time and normal height characters.
Pr – Ht1 = enables printer to print double height characters.
Pr - Ht2 = enables printer to print date/time and double height characters.
(!) Pr-no

PcMO DATA TRANSMISSION

This step is used to select the data transmission on the BI-DIRECTIONAL serial port.
OndE = *transmission on external command (PC).*
rIPE4 = *transmission to 4 digit remote display.*
rIPE6 = *transmission to 6 digit remote display*.
485 = *serial transmission* with communication protocol 485. If selected the indicator will prompt you
to insert the identification code (between 00 and 99).
ALL = *continuous transmission.*
StAb = *transmission at each weighing operation..*
(!) OndE

bAud SET BAUD RATE

Use this step to select one of the following Baud rates for the BI-DIRECTIONAL serial port:
150/300/600/1200/2400/4800/9600 Baud.
(!) 9600

bIt STOP DATA BIT
This is used to select one of the following communication protocols:
N-8-I / N-8-2 / N-7-2 / E-7-I / E-7-2.
(!) N-8-1

LAn9 LANGUAGE OF PRINTINGS
Use this StEP to select the language of printings: *En9L = English / FrAn = French / ItAL* = italian,
(!) ItAL

InPUt ASSIGN A KEY TO INPUT
You can assign a remote key function to the input connection. By doing so you emulate a key function by acting on the relative input, your choices are as follows:
nOnE (no key), ZErO (->0<- key), TArE (->T<- key), ModE (Fn key), EntEr (↵ key), StArt (lock the keys).
Input is good only when OPT, GND contact goes from open to close.
(!) nOnE

L0Ad (flashing) DATA STORAGE AND CONFIGURATION MENU EXIT
Once all the configuration operations have been set or modified, in order to save these, you must to select this step and press ↵. This is the only way to save the new data and return to normal operating mode .

INDICATION AND VISUALISATION FOR THE GEOGRAPHICAL ZONES OF USE -"g" VALUES -(COMPULSORY for legal for trade instruments used in Europe)

Since scales are gravities-sensitive instruments they are required to be coded (indicated by a special label) with a "Zone of use" denoting a relevant "g" value (coefficient for gravitational acceleration) for the scales geographical location. When the European legal for trade versions of the IPB50 is turned on, it displays the firmware version, the capacity, the graduations, then the **codified zone of gravity** (for 5 sec). It is also possible to recall the zone, by the following procedure:

1. While holding "->0<-" turn the IPB50 ON until "ConF" appears on the display.
2. Press "↵": the codified denomination of the zone of use will be displayed.
3. To exit from this visualisation of the zone, and to return to standard scale Fn, press "->0<-" more times to display " LOAd ": then press " ↵": the instrument will execute his start-up self test.

Because the weight values measured by these instruments are affected by the coefficient of "g" for the scale's geographical location, the IPB50 comes with a feature that allows the user to compensate for the differences of gravitational attraction between the calibration place and the place of use. During calibration the values for the calibration zone are programmed in a specific step. If the instrument has to work in a different geographic zone, than it's original one, it's necessary to modify it, by configuring the relative parameter. This avoids error in weight values from different forces of gravitational attraction.

NOTE: TABLE 1 below contains the correspondence between the zones of gravity, their associated values of "g" and the maximum number of divisions in case the instrument has already been configured and the user wishes to know which value of "g" the instrument has. This information is supplied for reference purposes only. In actual practice, instruments are usually calibrated prior to delivery to the end user with a value of "g" relevant to their geographic location. This was done by choosing "Zon 6" in Configuration and entering the specific value of g to 5 decimal places. See GrAV in of Configuration.
When the legal for trade version is turned on, after the type of software, capacity and minimum division, the gravitational zone of use is viewed for 5 sec.

TABLE 1 – Zone codes with associated g value (European Legal for Trade Scales)

code on the IPB50	g associated	divisions (max) III
Zo 01	9,80655 m/s²	**3000**
Zo 02	9,80237 m/s²	
Zo 03	9,80129 m/s²	
Zo 04	9,79819 m/s²	
Zo 05	9,80375 m/s²	
Zo 06	Manually enter "g" value	

SERIAL OUTPUTS

Serial outputs 1 and 2 are both in ASCII code, compatible with a wide range of printers, remote displays, PCs and other devices.

SERIAL OUTPUT 1: RS232 bi-directional (full duplex) for connections to PC and PLC. Available Baud rates are: 150, 300, 600, 1200, 2400, 4800, and 9600.

Connection between PC and IPB50 with RS232 **Connection with 485**

	PC 9pin (male)	**PC** 25pin (male)	**IPB50** Serial line (terminal board A)	**IPB50** Serial line
RX	2	3	3 TX	3 UX+
TX	3	2	2 RX	2 UX-
GND	5	7	1 GND	

The data transmission can be configured in 4 different Fns:

TRANSMISSION WITH EACH WEIGHING: (PCNO-< StAb) The value of the weight is automatically transmitted, even without pressing ↵ key, every time that weight reaches a stable state (LED " ~ " goes off).

TRANSMISSION ON DEMAND: (PcMO->OndE) Indicator sends data upon request from PC, PLC, or other instruments (see technical section). The transmission may be requested anytime without limits.

CONTINUOUS TRANSMISSION: (PCMO->ALL) It used with computers, remote displays and other devices, provides a continuous monitoring of weight data, with or without weight stability. If the instrument has an RS485 data output, the communication can take place at greater distances (greater than 100 m) than with the RS232; in this case the communication protocol is the same as that of the RS232 (without identifying code).

RS485 TRANSMISSION: (PCMO->485) This serial transmission it is used to connect more than one IPB50 to a PLC or PC. The indicator will ask to insert a two-digit identification code (from 00 to 99). The data transmission is upon request like the TRANSMISSION ON DEMAND.

NOTE: in case of RS485 transmission it is necessary to set like this:

USER SETUP	**TECHNICAL SETUP**
PrMo= Prno	**PrIn= Pr-no**

SERIAL OUTPUT 2 (not available if serial output 1 is in RS485 transmission): Only data output, used for transmission to a printer via TTL or RS232. Transmission controlled by the operator with the print key on the indicator. The command is disabled when the weight is not stable and when data is not valid.
It is possible, with step **PrIn** (enable printer), to set the weight data output in continuous transmission with a PC or PLC.
Transmission protocol: 1200 Baud Rate, n-8-1.
The chart below shows how to connect the IPB50 to a DP190 printer.

DP24 9pin (female)	DP190 terminal board	IPB50 Serial line terminal board A
5	GND	1 GND
3	RX	4 RX PRINTER

CONNECTION OF SERIAL OUTPUTS AND CONFIGURATION REQUIRES INFORMATION ABOUT PROCEDURES AND USER'S REQUIREMENTS.

TRANSMISSION

SERIAL PORT 1
Data can be transmitted from the serial port 1 in **4** ways, depending on Configuration during the *PcMO* step.

Continuous weight transmission (“*ALL”*)
The instrument transmits in a continuous way the weight value:
With Baud rate 9600 one can obtain up to 8 transmissions per second.
With Baud rate 4800 one can obtain up to 7 transmissions per second.

Weight transmission at each weighing operation (“*StAb”*)
Each time a weight on the scale becomes stable, a communication string is transmitted on the serial port 1 (see TRANSMISSION FNS)
For non legal for trade instruments:

The transmission takes place when the weight is stable and the net weight is > 0.
For more weight transmissions, the net weight most go back to ->0<- first.

Weight transmission requested from an external device in 485 (“*OndE” and 485*)
In this case the IPB50 must receive one of the three following commands from an external device before transmitting:

	OnDE	485
Read command:	"READ" + CR + LF	"CCREAD" + CR + LF
Answer:	see below	
TARE command:	"TARE" + CR + LF	"CCTARE" + CR + LF
Answer:	"ACK" ASCII (06H) if command is understood Nothing or "NACK" ASCII(15H) if command is not understood	
Zero command:	"ZERO" + CR + LF	"CCZERO" + CR + LF
Answer:	ACK" ASCII (06H) if command is understood Nothing or "NACK" if command is not understood	
Relay 1 Enabling Setpoint:	“STP1XXXXX” + CR + LF	"CCSTP1XXXXX” + CR + LF
Answer:	ACK" ASCII (06H) if command is understood Nothing or "NACK" if command is not understood	
Relay 2 Enabling Setpoint:	“STP2XXXXX” + CR + LF	“CCSTP2XXXXX” + CR + LF
Relay 1 Disabling Setpoint:	"SP1OXXXXX" + CR + LF	"CCSP1OXXXXX" + CR + LF
Relay 2 Disabling Setpoint	"SP2OXXXXX" + CR + LF	"CCSP2OXXXXX" + CR + LF

Nota: SP1O and SP2O if not necessary if setpoint without hysteresis.

The Read command transmits the weight, while the TARE and ZERO commands are the same as those available on the keyboard.
With Baud rate at 9600 and at 4800 one can carry out up to 7 requests per second.

The CC command is a number code (between 00 and 99) that identifies the IPB50 when protocol 485 is selected.
If the request takes place cyclically, it is possible to acquire the weight with a 3,5 Hz frequency.

Transmission protocol: weight data transmission on a serial port takes place as follows:

"CChh,kk,pppppppp,uu" + CR + LF

where: CC = IPB50 code when protocol 485 is selected. The code is a number between 00 and 99.

hh = UL Underload (exceeds negative weight limit)
OL Overload (exceeds weight limit)
ST Stability (weight stable)
US Instability (weight not stable)

kk = NT Net Weight
GS Gross Weight

pppppppp = 8 digits (including any sign and decimal point) which identify the weight. Not significant digits are replaced with 0 (ex. 0001.000).

uu = Unit of measurement "kg" "g" "t" "lb"
CR = Carriage Return
LF = Line Feed

If a ->T<- WEIGHT has been entered, the weight transmitted is the NET WEIGHT; while if not, the GROSS WEIGHT is transmitted. The instrument displays OVERLOAD (¯ ¯ ¯ ¯) when the gross weight is over the full-scale capacity + 9 divisions (9e). For example a scale with a capacity of 6000 kg and a division of 1 g, the weight is in OVERLOAD when the gross weight is over 6.009 kg (6.000 + 0.009). The scale displays UNDERLOAD(_ _ _ _) when there is a negative gross weight on the scale.

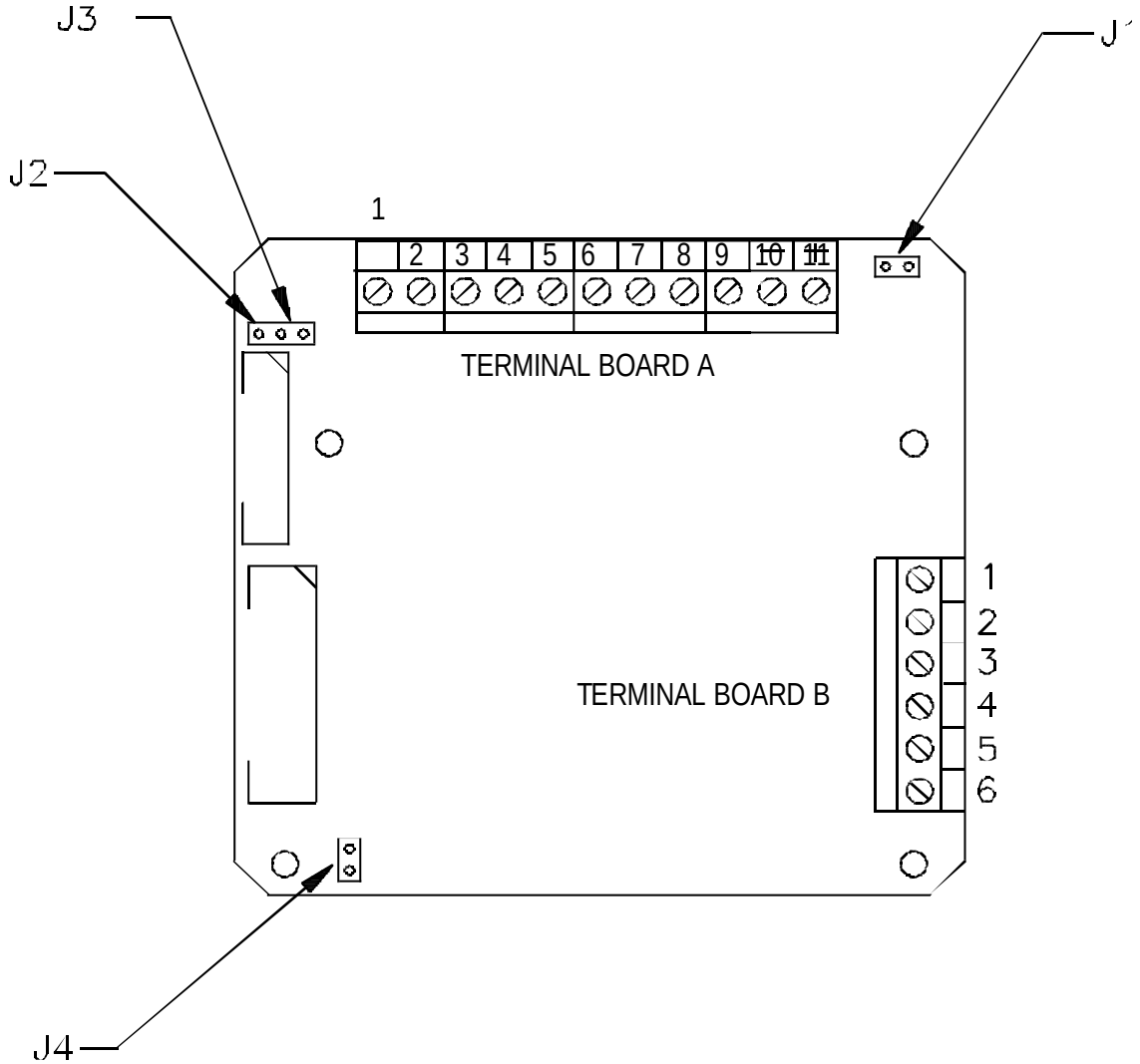
In the CONTINUOUS transmission Fn through EXTERNAL COMMAND or WITH EVERY WEIGHING, the string transmitted from the indicator is relative to the weight displayed:

GROSS WEIGHT DISPLAYED	**TRANSMITTED STRING**
UNDERLOAD	UL, GS,-0000000,uu+CR+LF where 0000000 are 7 zeros or 6 zeros + the decimal point of the scale.
NEGATIVE WEIGHT	hh,GS,-ppppppp,uu+CR+LF
WEIGHT ≥ 0 AND < OVERLOAD	hh,GS,pppppppp,uu+CR+LF
OVERLOAD	OL,GS,00000000,uu+CR+LF where 000000 are 8 or 7 zeros + the decimal point of the scale.

NET WEIGHT DISPLAYED	**TRANSMITTED STRING**
UNDERLOAD	UL, NT,-0000000,uu+CR+LF where 0000000 are 7 zeros or 6 zeros + the decimal point of the scale.
NEGATIVE WEIGHT	hh,NT,-ppppppp,uu+CR+LF
WEIGHT ≥ 0 AND < OVERLOAD	hh,NT,pppppppp,uu+CR+LF
OVERLOAD	OL,NT,00000000,uu+CR+LF where 0000000 are 8 or 7 zeros + the decimal point of the scale.

SERIAL PORT 2 This port is only available in RS232 or TTL output.
The transmission protocol is fixed at: 1200 rate Baud, n-8-1

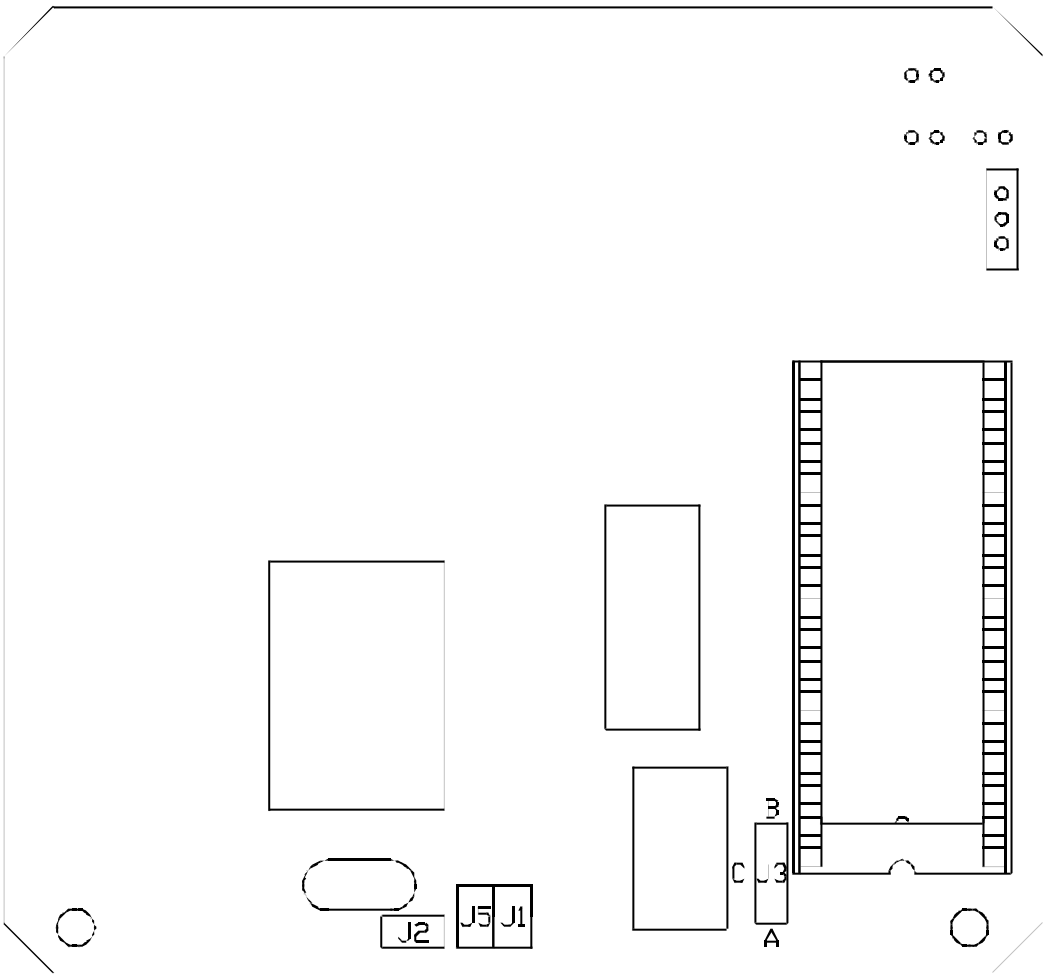
IPB50 CONNECTION



SERIAL		RS485	LOAD CELL		only for 4 wires sensor
1	GND RS232	GND TTL	1	EXCITATION -	1 → 2
2	RX PC	UX-	2	EXCITATION +	3 → 4
1	TX PC	UX+	3	SENSE -	
2	TX PRN	TX PRNT TTL	4	SENSE +	
INPUT/OUTPUT			5	SIGNAL -	
3	GND INPUT		6	SIGNAL +	
4	INPUT				
5	RELAY 2				
6	COMMON RELAY				
7	RELAY 1				
POWER SUPPLY					
8	GND (O Vdc)				
9	12 to 25 Vdc				

J1 INPUT FOR IPB50 “ON” BUTTON
J2 IF CLOSED, PRINTER CONNECTION WITH RS232
J3 IF CLOSED, PRINTER CONNECTION WITH TTL
J4 INPUT FOR TILT SENSOR
Nota:
All the connection GND are connected together
SENSE + AND EXCITATION + / SENSE - AND EXCITATION - must be connected together with 4 wires sensor

DISPLAY BOARD CONNECTION



J1 = EEPROM INITIALISATION AND ACTIVATION OF DEFAULT PARAMETERS

J2 = IF CLOSED, IT ENABLES IN CONFIGURATION THE ACCESS TO METHROLOGICAL PARAMETERS

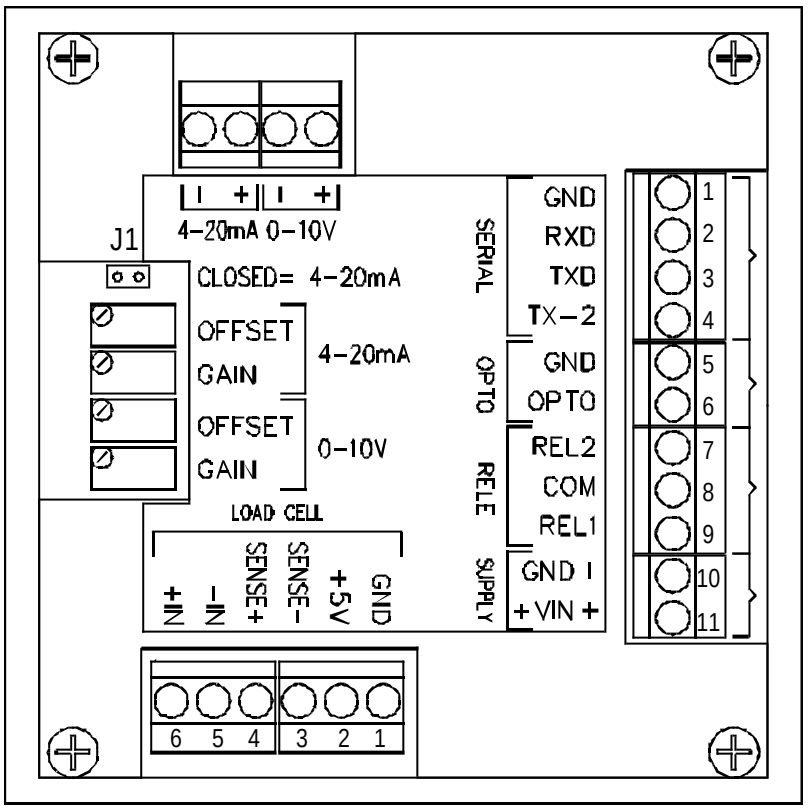
J3: AC CLOSED EPROM MEMORY
BC CLOSED MEMORY FLASH

J5 = NO FUNCTION

IPB50 CONNECTION (OPTIONAL ANALOG OUTPUT)

ANALOG OUTPUTS
4-20mA/0-20mA (configurable through J1)
0-10 V (fixed)

ANALOG OUTPUT TRIMMERS



TERMINAL BOARD A

TERMINAL BOARD B

TERMINAL BOARD A:

SERIAL RS232 RS485

1	GND RS232	GND TTL
2	RX PC	UX-
3	TX PC	UX+
4	TX PRN	TX PRN TTL

INPUT/OUTPUT Function

5	GND INPUT
6	INPUT
7	RELAY 2
8	COMMON RELAY
9	RELAY 1

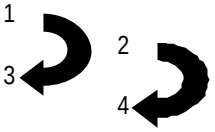
EXCITATION

10	GND (O Vdc)
11	12 – 25 Vdc

TERMINAL BOARD B:

LOAD CELL only for 4 wires sensor

1	EXCITATION -	1
2	EXCITATION +	2
3	SENSE -	3
4	SENSE +	4
5	SIGNAL -	
6	SIGNAL +	



ANALOG OUTPUT JUMPER (J1)

OPEN = 0 / 20 mA
CLOSED = 4 / 20 mA

Nota:
All the connection GND are connected together
SENSE + AND EXCITATION + / SENSE - AND EXCITATION - must be connected together with 4 wires sensor
Max load for analog output 0/20 or 4/20mA : 500 OHM. You must not have the + and – input reading system connected at the GND. (risk of destruction of the current output)

EXAMPLES OF IPB50 PRINTOUTS WITH DP190 PRINTER

```
REGISTER # 5
WEIGHING NR.                0001
GROSS                    0,572 kg

REGISTER # 5
WEIGHING NR.                0002
GROSS                   3,016.kg
TARE                     1,434 kg
NET                      1,582 kg

REGISTER # 5
WEIGHING NR.                0002
TOTAL NET                2,154 kg
TICKET NR.                  00002
12:03  08-01-02
```

Totalizer Fn With Register
(tot o, tot s)

```
JOHN BLACK
BRISTOL
CRAVEN ROAD N 5
TEL. 555/24773211
GROSS                    5,124 kg
PRE. TARE                1,350 kg
NET                      3,774 kg
TICKET NR.                  00003
12:41  08-01-02
```

Indicator in Standards Fn
(UISS, Std, ntgS)

```
GROSS                    3,330 kg
PCS                         1009
APW                  0,00330 kg
ID1                         1326
ID2                          954
12:11  08-01-02
```

Piece Counting Fn
(COUn)

```
GROSS (HOLD)             2,160 kg
ID1                         5931
12:06  08-01-02
```

Hold Fn
(HLd)

```
GROSS (PEAK)             0,726 kg
ID1                         5931
ID2                         9863
12:09  08-01-02
```

Peak Fn
(PIC)