USER MANUAL
WEIGHT INDICATORS

DGT: INDICATOR, REPEATER, TRANSMITTER OF WEIGHT

Indicators for bench or panel applications.

INDEX

1. INTRODUCTION

The purpose of this manual is to help the user get to know the weight indicator's various functioning modes, the keys' functions and the display indications. It is possible that one may incur into the phrase **"TECH.MAN.REF."**: this means that an advanced function is being described (therefore, for the technical personnel) and which is further explained in the corresponding technical manual.

We advise to carefully follow the instructions for programming the weight indicator; by taking actions not indicated this manual, one could cause the scale to not work properly.

In addition to having all the characteristics of a high precision scale, the indicator has the unit of measure conversion function, switching in the display, net/gross weight, set point on gross weight/net weight/pieces, in/out weigh, multiscale repeater, alibi memory, hold function, peak detector, weighs totaliser and piece counter.

These features make it suitable for industrial use as well as for legal for trade use in relation with third parties and in commerce, satisfying the frequently needed ability to transmit and print the data through its two bidirectional serial ports.

This manual has been made as carefully and exactly as possible; in any case, your suggestions are always welcome.

⚠ WARNING ⚠

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 **IT HAS NOT BEEN OPENED BY THE USER** for any reason. If any problem with the unit or system has been experienced please notify the manufacturer or the dealer from which the instrument was acquired.

!!WARNING!!
For ATEX version please read carefully the ATEX attachment in the end of this manual

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!

All indicator connections must be made respecting the norms applicable to the zone and environment in which it will be installed.

Read carefully & apply what described in the POWER SUPPLY & START-UP section!

Do not install in an environment with any risk of explosion!(except ATEX3GD version)

RECYCLING INSTRUCTION

The crossed-out wheeled bin on the product means that at the product end of life, it must be taken to separate collection or to the reseller when a new equivalent type of equipment is purchased. The adequate differentiated refuse collection in having the product recycled, helps to avoid possible negative effects on the environment and health and supports the recycling of the materials of which the equipment is made. The unlawful disposal of the product by the user will entail fines foreseen by the current regulations.

2. SYMBOLS

To call the attention of the user, the following symbols are used both in the manual and on the instrument itself:

⚠️   Warning! This operation must be performed only by qualified personal

CE   CE CONFORMITY

Ⓘ Ⓘ Ⓘ   IDENTIFIES THE CLASS OF PRECISION

"TECH.MAN.REF."   means that an advanced function is being described (therefore for the technical personnel) which will be further explained in the corresponding technical manual.

3. INSTALLATION

3.1 DGT1S CASE AND DIMENSIONS

The indicator has a plastic case, whose external dimensions are shown in Figure 4.1.
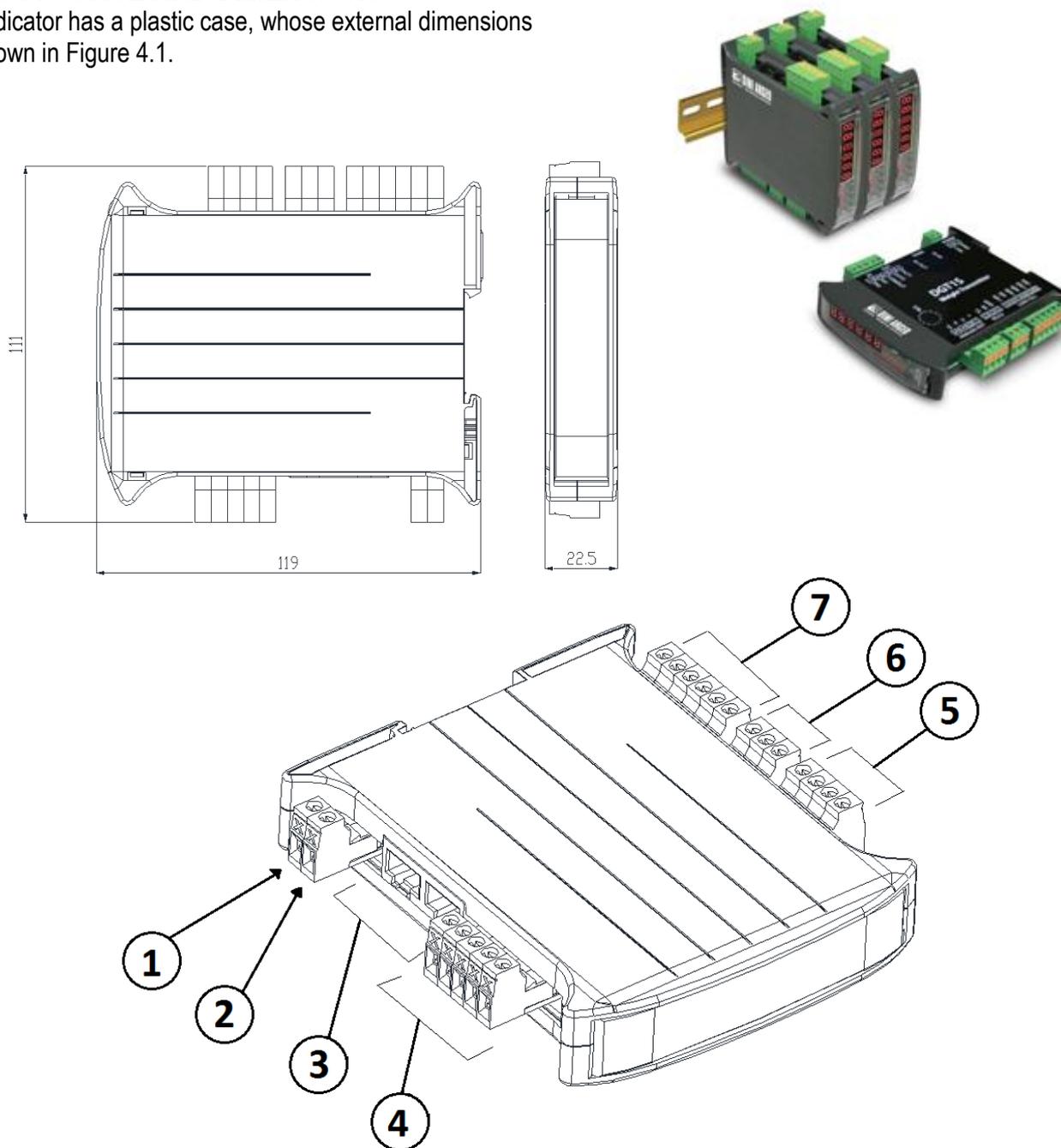
Figura 4.1 – *Measurements and dimensions in mm*
1 GND power supply input
2 (+) 12 / 24 Vdc power supply input
3 Connection for serial line RS485.
4 Inputs/outputs
5 Analog output.
6 Connection for serial line RS232.
7 Connection for load cell.

3.2 DGT1 CASE AND DIMENSIONS

The indicator has a plastic case, whose external dimensions are shown in Figure 4.2.

Figura 4.2 – *Measurements and dimensions in mm*
1 (+) 12 / 24 Vdc power supply input
2 GND power supply input
3 Connection for serial line RS485.
4 Analog output.
5 Connection for serial line RS232.
6 Connection for load cell.

3.3 DGT4 CASE AND DIMENSIONS

The indicator has a plastic case, whose external dimensions are shown in Figure 4.3.

Figure 4.3 – *Measurements and dimensions in mm*
1 (+) 12 / 24 Vdc power supply input
2 GND power supply input
3 Connections for serial lines / inputs / outputs
4 Connections for load cells

The instrument may be installed on the wall or on the panel on the DIN bar.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

3.4 DGT60 CASE AND DIMENSIONS

The indicator has a STAINLESS STEEL case, whose external dimensions are shown in Figure 4.4 and 4.5.

MODEL WITH FIXED BRACKET (STANDARD FITTING)
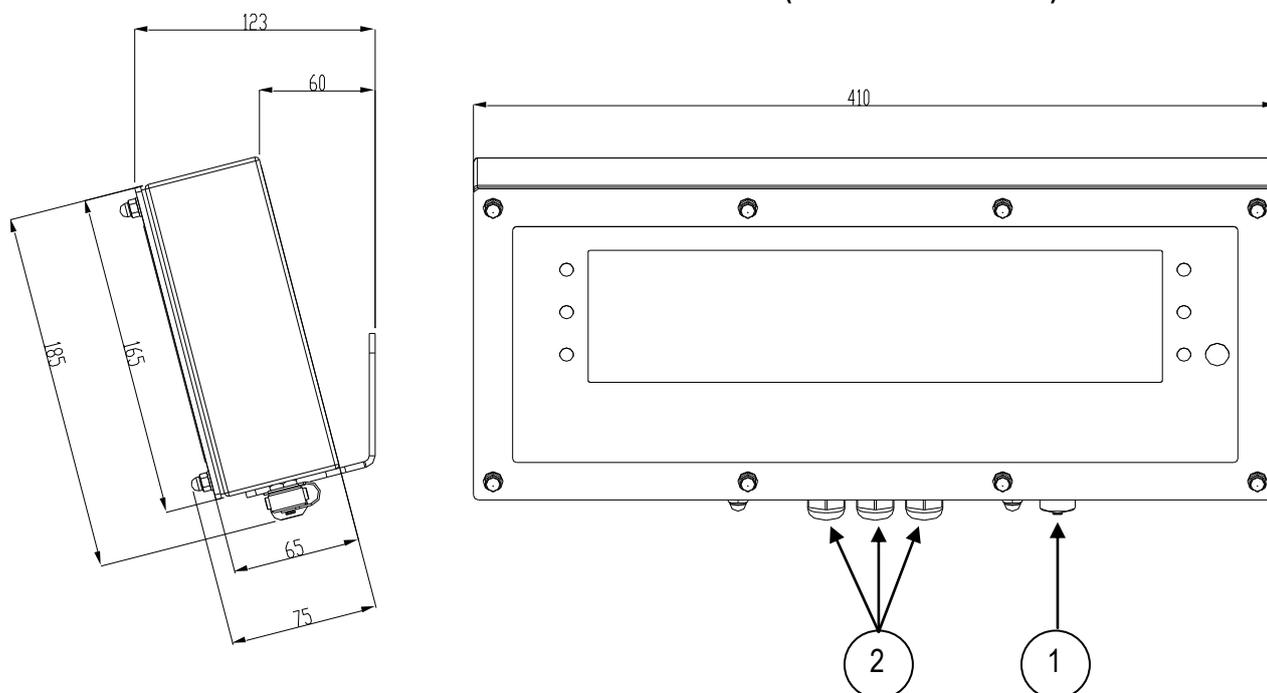
Figure 4.4 – *Measurements and dimensions in mm*

MODEL WITH "STFR" ADJUSTABLE BRACKET (OPTIONAL)

Figure 4.5 – *Measurements and dimensions in mm*
1 Power supply input.
2 Available for load cells / serial lines / inputs / outputs

The instrument may be installed on the wall.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

3.5 DGT100 CASE AND DIMENSIONS

The indicator has a STAINLESS STEEL case, whose external dimensions are shown in Figure 4.6 and 4.7.
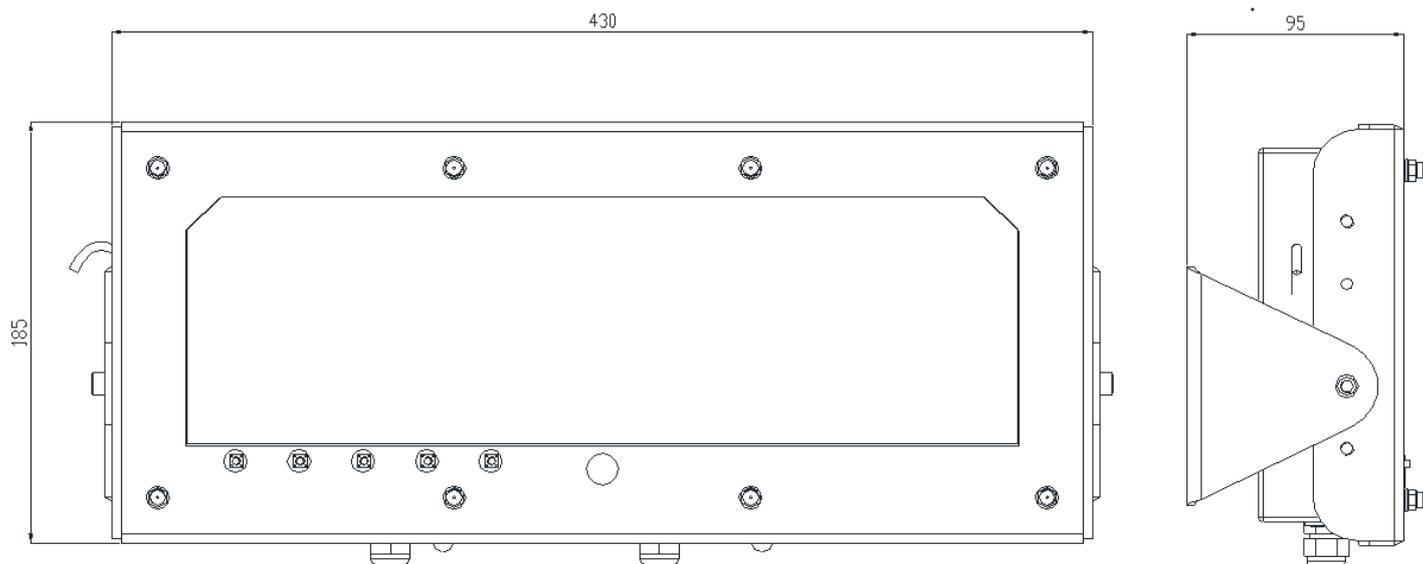
Figure 4.6 – *Measurements and dimensions in mm*

Figure 4.7 – *Measurements and dimensions in mm*
1 Power supply input.
2 Available for load cells / serial lines / inputs / outputs

The instrument may be installed on the wall.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

3.6 DGTQ CASE AND DIMENSIONS

The indicator has a plastic case, whose external dimensions are shown in Figure 4.8.
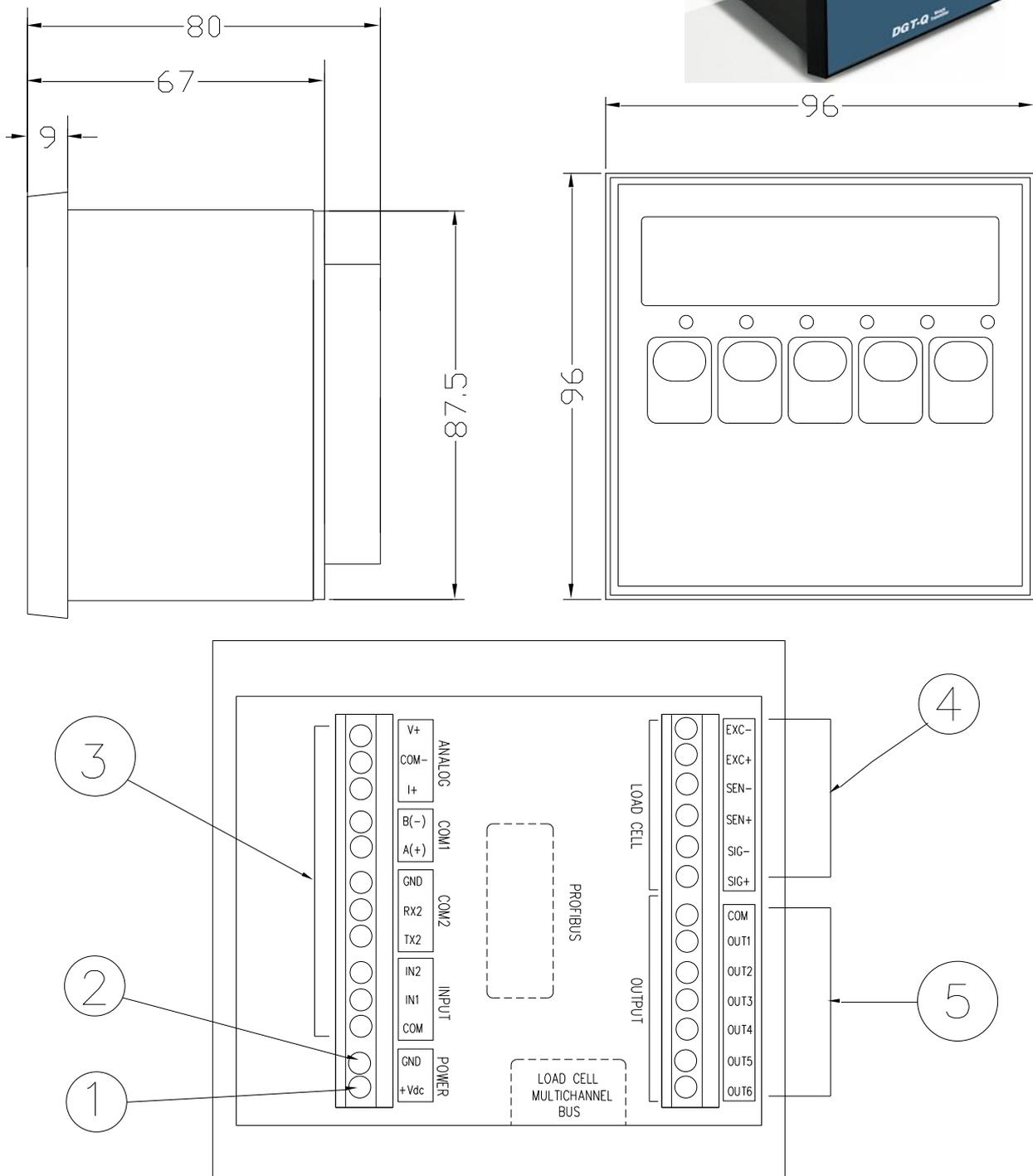
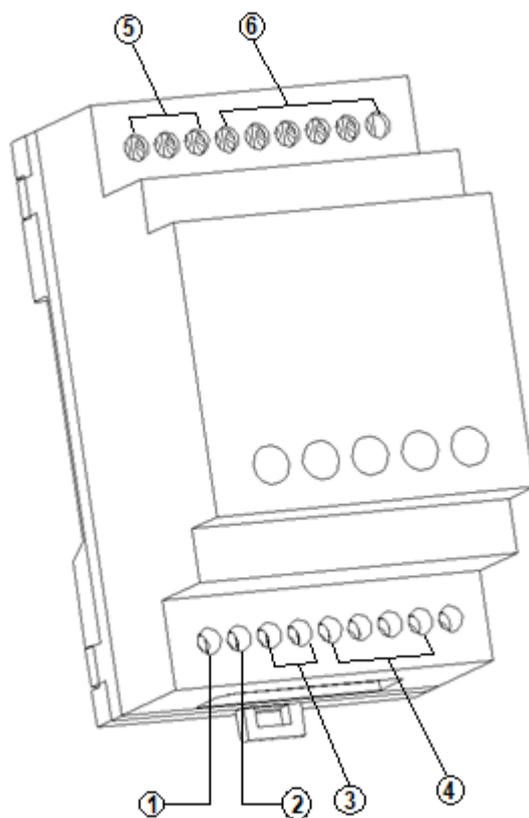**Figure 4.8 –** *Measurements and dimensions in mm*
1) Power supply cable input
2) GND power supply input
3) Connections for serial lines / inputs / analogic output
4) Connection for load cell
5) Connections for outputs

The instrument may be installed on the panel.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

3.7 DGTP CASE AND DIMENSIONS

The indicator has a plastic case, whose external
dimensions are shown in Figure 4.9.

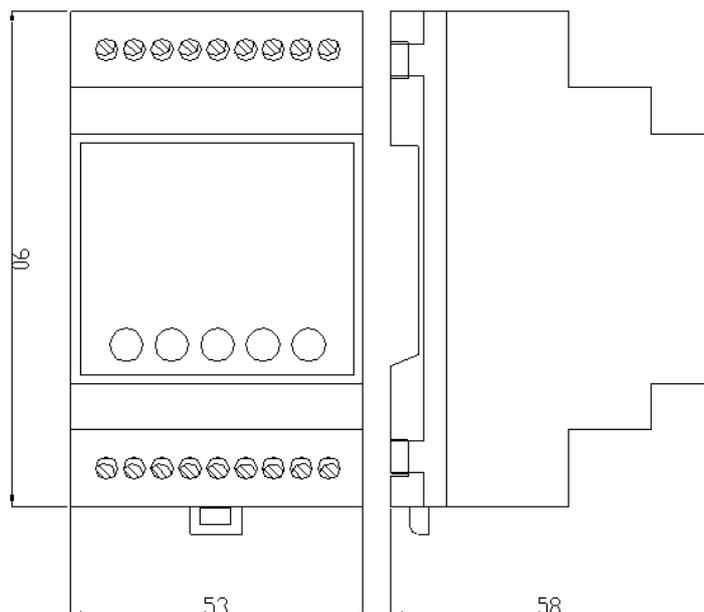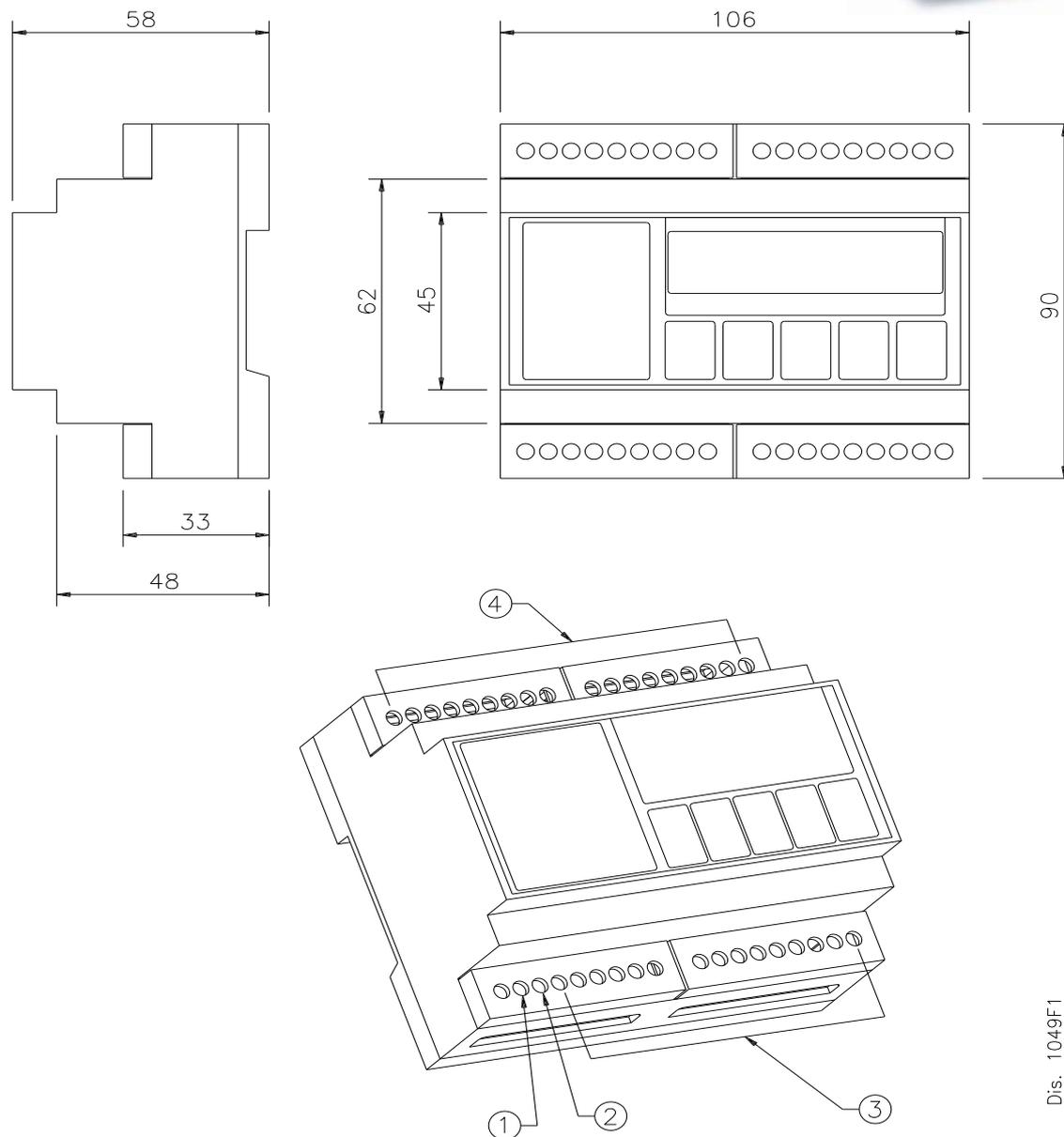**Figure 4.9 –** *Measurements and dimensions in mm*
1) Power supply cable input.
2) GND power supply input.
3) Connections for serial lines / analogic output.
4) Connection for load cell.
5) Connections for inputs / outputs.

The instrument may be installed on the panel.
**NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable
to attach it in the appropriate space on the indicator, so that it can be identified.**

3.8 DGTPK CASE AND DIMENSIONS

The indicator has a PAINTED STEEL case, whose external dimensions are shown in Figure 4.10.

Figure 4.10 – *Measurements and dimensions in mm*
1) Power supply cable input.
2) Available for load cells / serial lines / inputs / outputs
3) RJ45 connector

The instrument may be installed on the wall.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

3.9 DGT20 CASE AND DIMENSIONS

The indicator has a PAINTED STEEL case, whose external dimensions are shown in Figure 4.11.
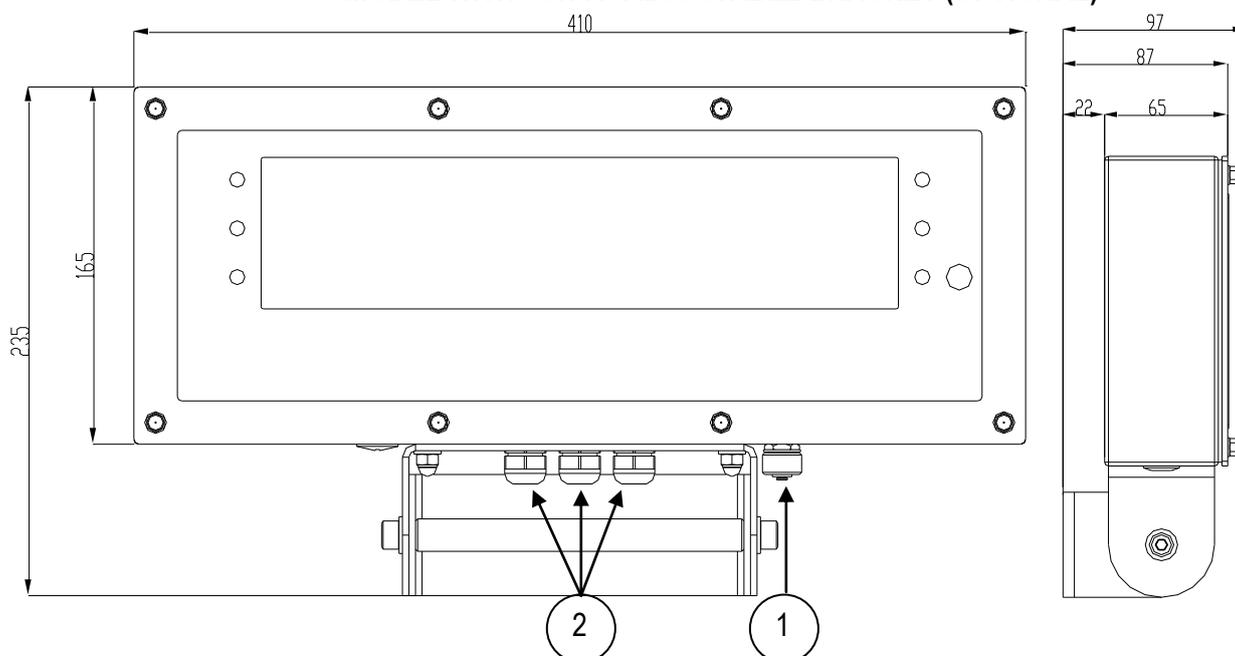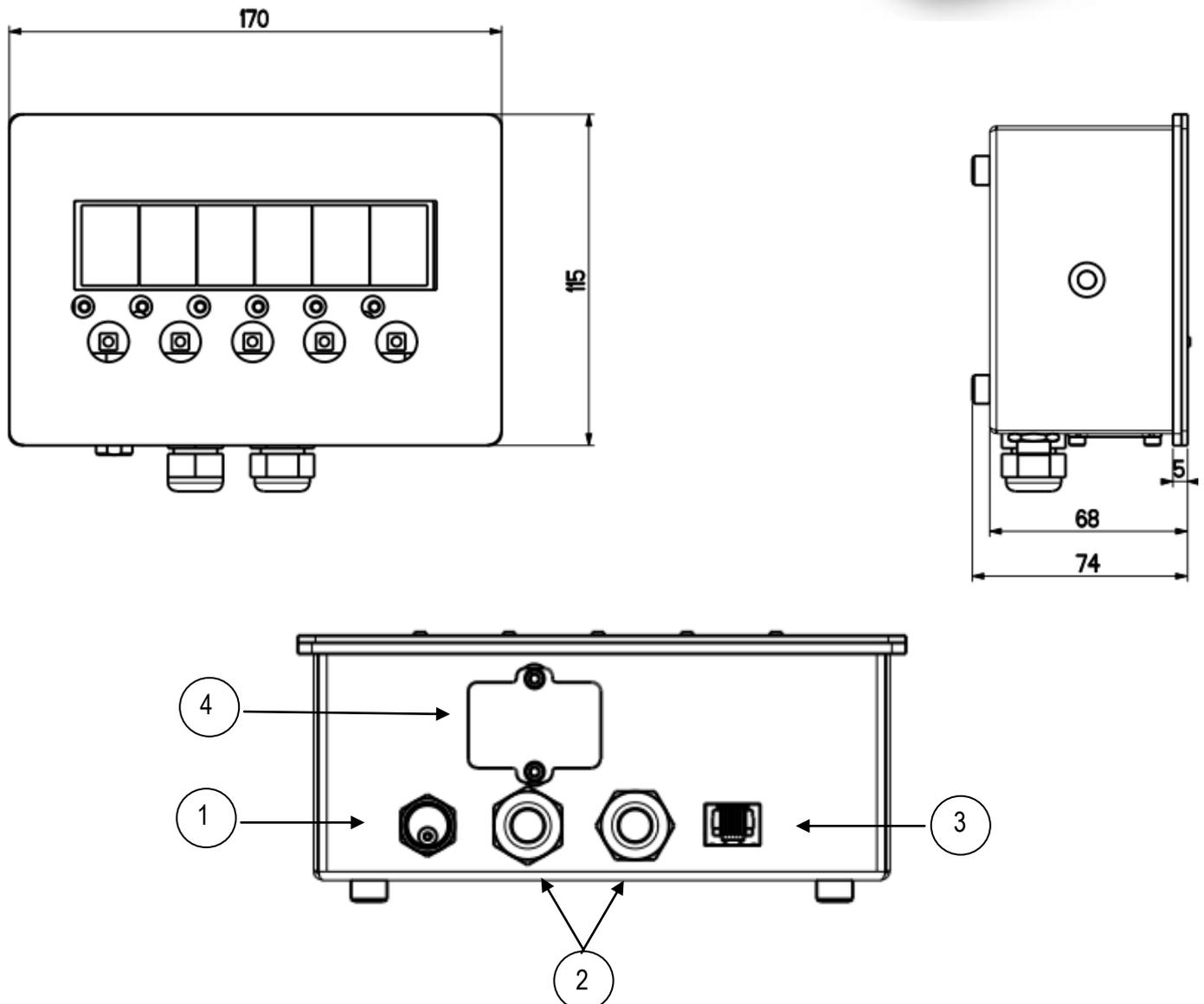
Figure 4.11 – *Measurements and dimensions in mm*
1) Power supply cable input.
2) Available for load cells / serial lines / inputs / outputs
3) RJ45 connector
4) Profibus
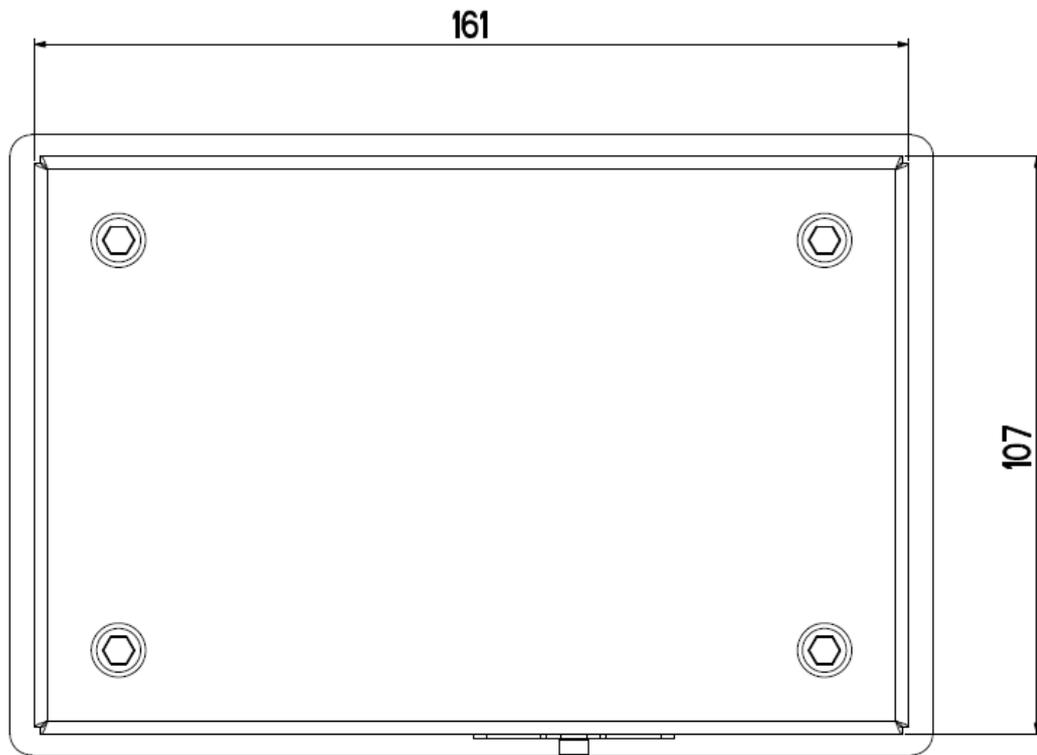
Figure 4.11 – *Drilling template. Measurements and dimensions in mm*
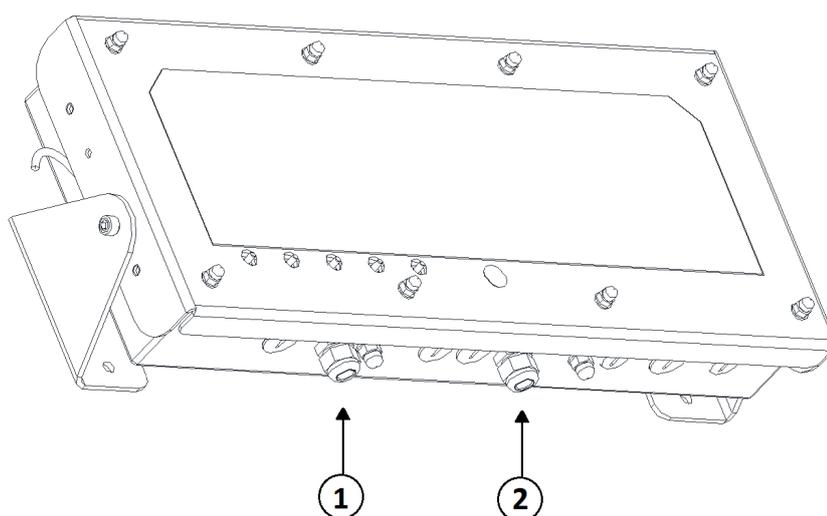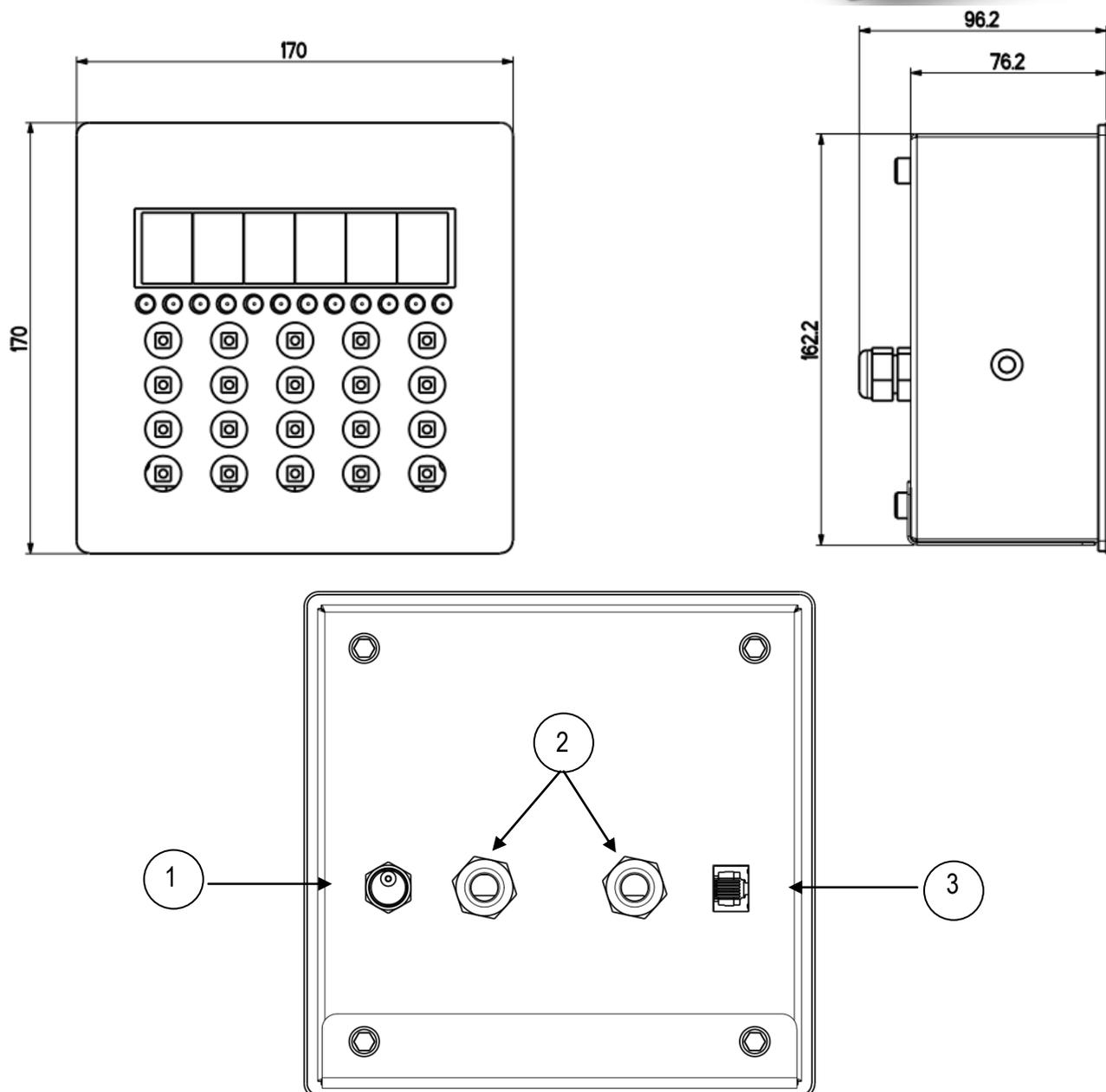
The instrument may be installed on the wall.
NOTE: When the identification plate is supplied separately (therefore not attached to the front panel) it is advisable to attach it in the appropriate space on the indicator, so that it can be identified.

4. POWER SUPPLY & START UP

INSTRUMENT POWER SUPPLY:

DGT1, DGT1S,DGT4 , DGTQ, DGTP, DGTPK, and DGT20 models
The instrument must be powered with stabilized voltage at 12 Vdc or 24 Vdc supplied from an AC/DC external charger (not supplied) which should be connected to the 220 Vac mains voltage.
TO POWER the instrument, connect the two power supply cables (+ and -) in the appropriate terminal board (section "INSTALLATION", Fig. 4.1, 4.4, 4.5) on the side or on the rear of the instrument.

DGT60 and DGT100 models
The instrument is powered with stabilized voltage at 12 Vdc or 24 Vdc supplied from an AC/DC internal charger (supplied) which should be connected to the 220 Vac mains voltage.

DGT603GD model
See ATEX ATTACHMENT in this manual.

Safety norms must be respected for the connection to the mains voltage <u>including the use of a line which has to be free from noise generated by other electronic equipment.</u>

Do not connect other equipment to the same socket as the one that the adapter is in.
Do not step on or crush the power supply cable

<u>**TO TURN ON THE INSTRUMENT**</u>, keep the **C – ON/OFF** key pressed until the indicator turns on, and then release the key.
The display executes a start-up procedure, and will indicate:
XX.YY   is the installed software version.
The indicator has an "auto zero at start-up" function: in other words it means that if at start-up a weight within +/- 10% of the capacity is detected, it will be zeroed; if the weight is not within this tolerance, with a non approved instrument the display shows the present weight after a few instants, while with an approved instrument "ZEro" is shown continuously on the display, until the weight is made to re-enter within this tolerance; the auto zero function at start-up may be disabled in the set-up environment (only with non approved instrument); see **SEtuP >> ConFiG >> PArAM. >> Auto-0 (TECH.MAN.REF.)**.

By pressing the **ZERO** key for an instant while the version is shown in the LED display, the indicator will show the following in this order:
XX.YY   in which XX is the software release and YY is the sub release.
CLoCK   if there is the optional board.
XX.YY   in which XX indicates the type of the instrument, YY indicates the metrological software version.
XX.YY.ZZ   is the installed software version.
XXXXXX   is the name of the installed software.
**n.Ch X**   number of the configured channels (if equal to 2, 3,or 4)
XXX.XXX   capacity and division of channel 1

After this, the instrument "hi rES" is displayed (in case of non approved instrument), or "LEGAL" (in case of approved instrument), together with the gravitational acceleration value of the area of use.
Then, the instrument executes a countdown (self-check).

<u>**NOTE:**</u> the display of the other information is described in section "DISPLAY OF METRIC DATA (inFO)".

<u>**TO PUT THE INSTRUMENT IN STANDBY:**</u> keep the **C – ON/OFF** key pressed until the message "- OFF –" appears on the display and then release the key; just the point at the extreme left of the display remains on.

<u>**TO TURN OFF THE INSTRUMENT:**</u> take away the power supply.

5. FRONT PANEL KEYS AND INDICATORS

The front panel of the indicator is designed for quick but simple weighing applications for the user.

5.1 DGT1

The front panel of the DGT1 consists of a display with 6 digits, 13 mm high, 6 LED function indicators and a 5-key keyboard.
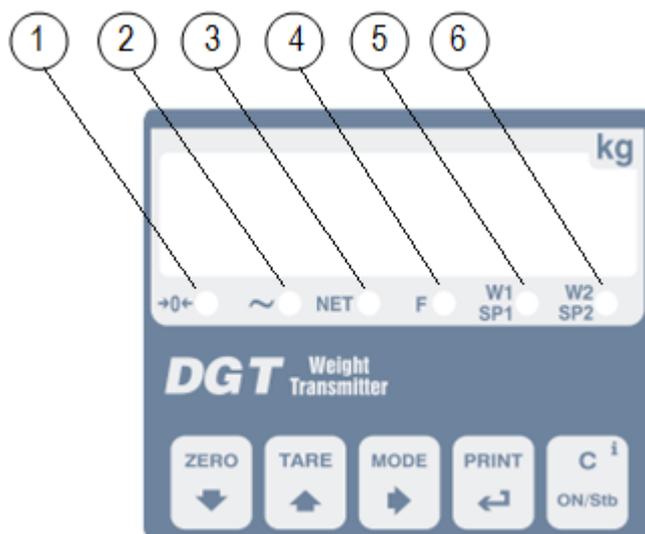
Figure 6.1 – *Keys and indicators of the DGT1 front panel*

5.2 DGT1S

The front panel of the DGT1S consists of a display with 6 digits, 13 mm high, 6 LED function indicators and a 5-key keyboard.
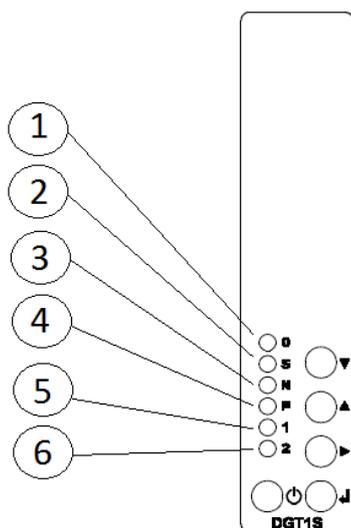
Figure 6.2 – *Keys and indicators of the DGT1S front panel*

5.3 DGT4

The front panel of the DGT4 consists of a display with 6 digits, 13 mm high, 6 LED function indicators and a 5-key keyboard.
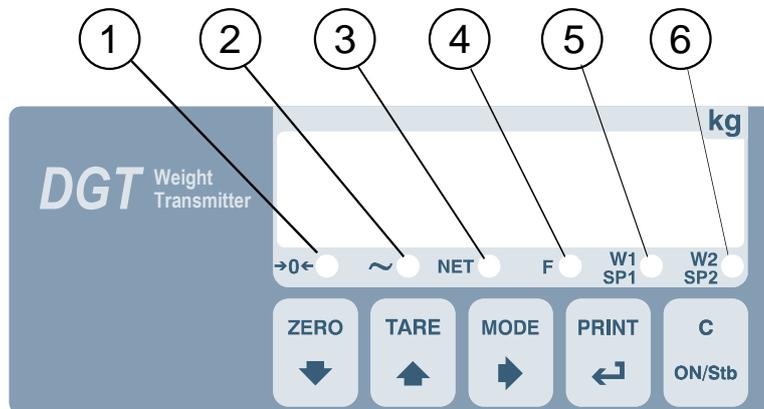
Figure 6.3 – *Keys and indicators of the DGT4 front panel*

5.4 DGT60

The front panel of the DGT60 consists of a display with 6 digits, 60 mm high, 6 LED function indicators and a 5-key keyboard.
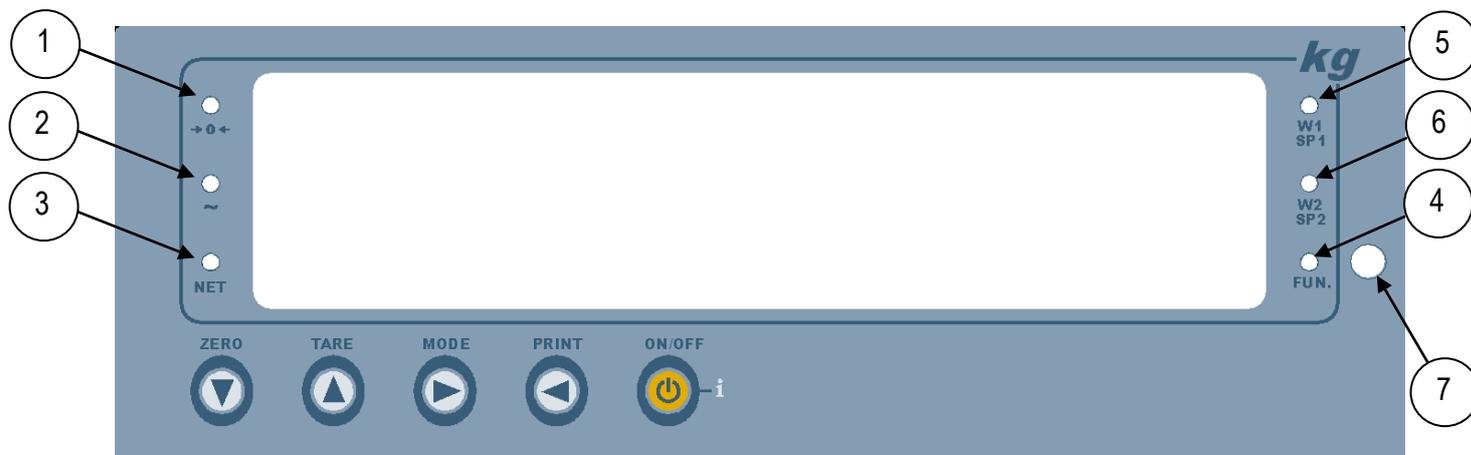
Figure 6.4 – *Keys and indicators of the DGT60 front panel*

5.5 DGT100

The front panel of the DGT100 consists of a display with 6 digits, 92 mm high, 6 LED function indicators and a 5-key keyboard.

Figure 6.5 – *Keys and indicators of the DGT100 front panel*

5.6 DGTQ

The front panel of the indicator is designed for quick but simple weighing applications for the user. It consists of a display with 6 digits, 13 mm high, 6 LED function indicators and a 5-key keyboard.
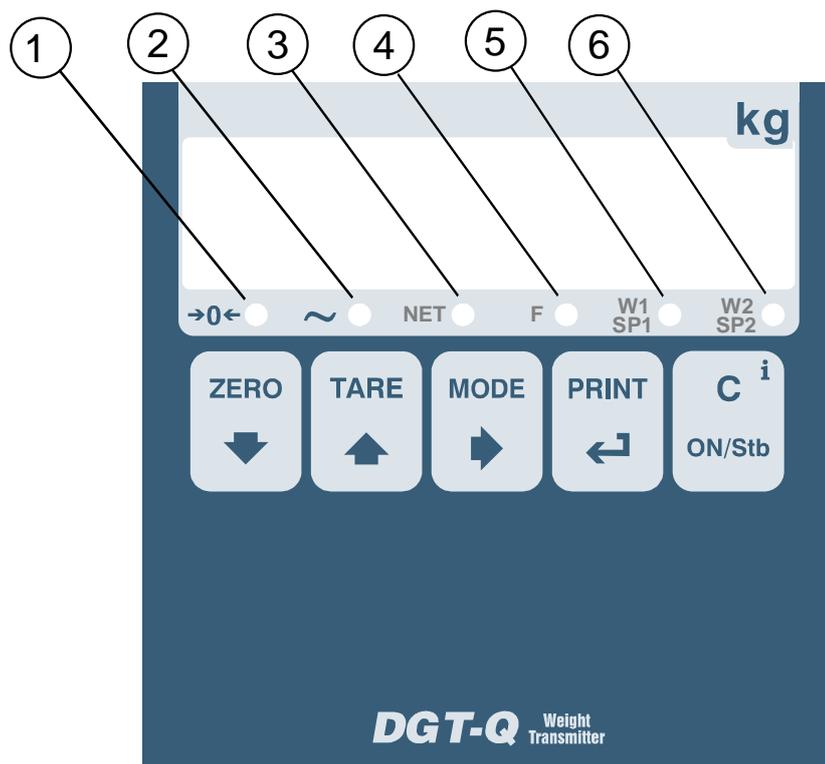
Figure 6.6 – *Keys and indicators of the DGTQ front panel*

5.7 DGTP

The front panel of the DGTP consists of a display with 6 digits, 20 mm high, 6 LED function indicators and a 5-key keyboard.
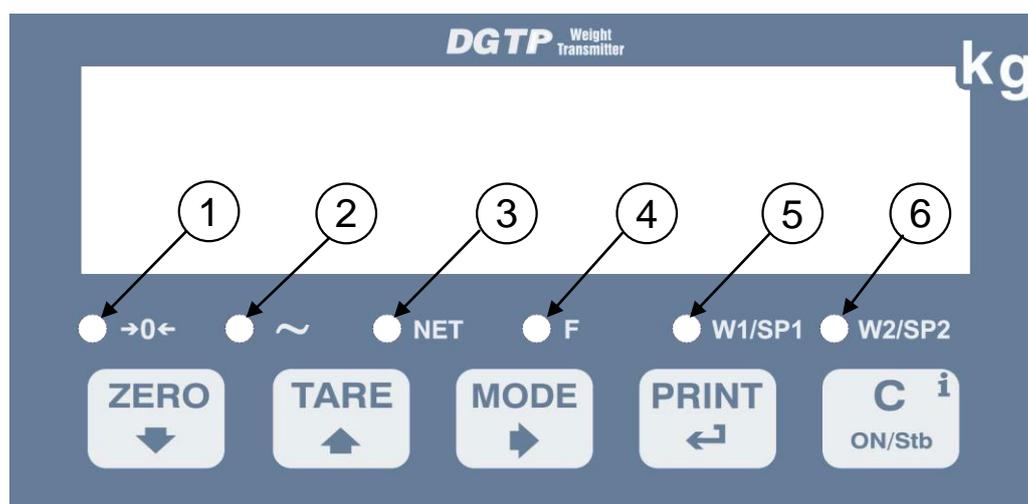
Figure 6.7 – *Keys and indicators of the DGTP front panel*

5.8 DGTPK

The front panel of the DGTPK consists of a display with 6 digits, 20 mm high, 12 LED function indicators and a 20-key keyboard.
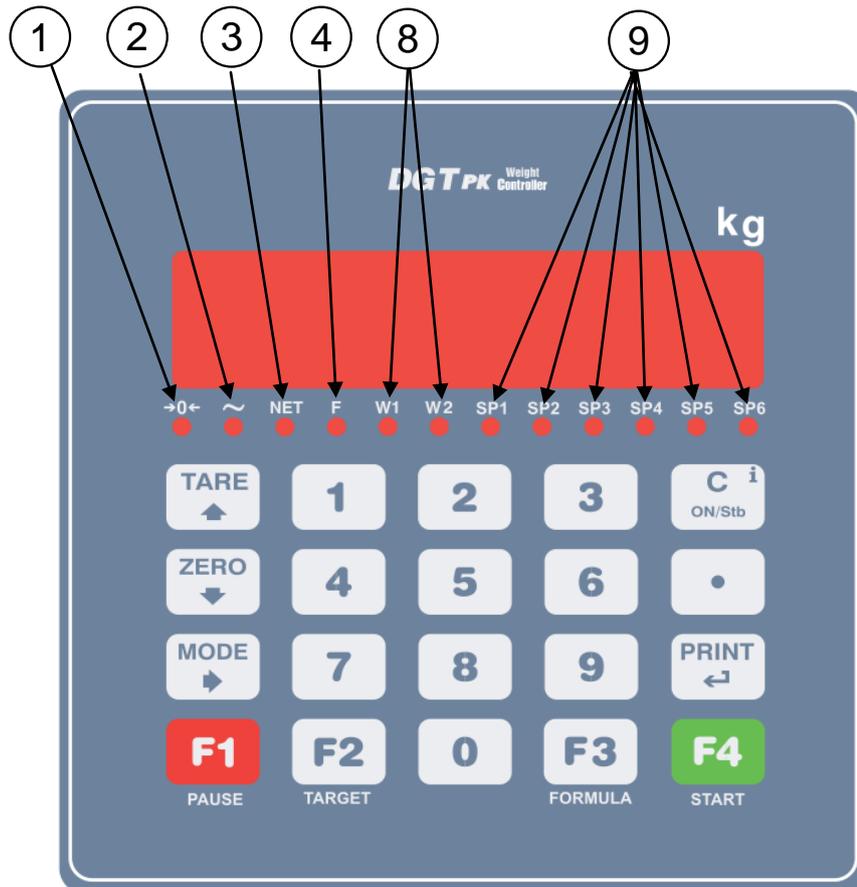
Figure 6.8 – *Keys and indicators of the DGTPK front panel*

5.9 DGT20

The front panel of the DGT20 consists of a display with 6 digits, 20 mm high, 6 LED function indicators and a 5-key keyboard.
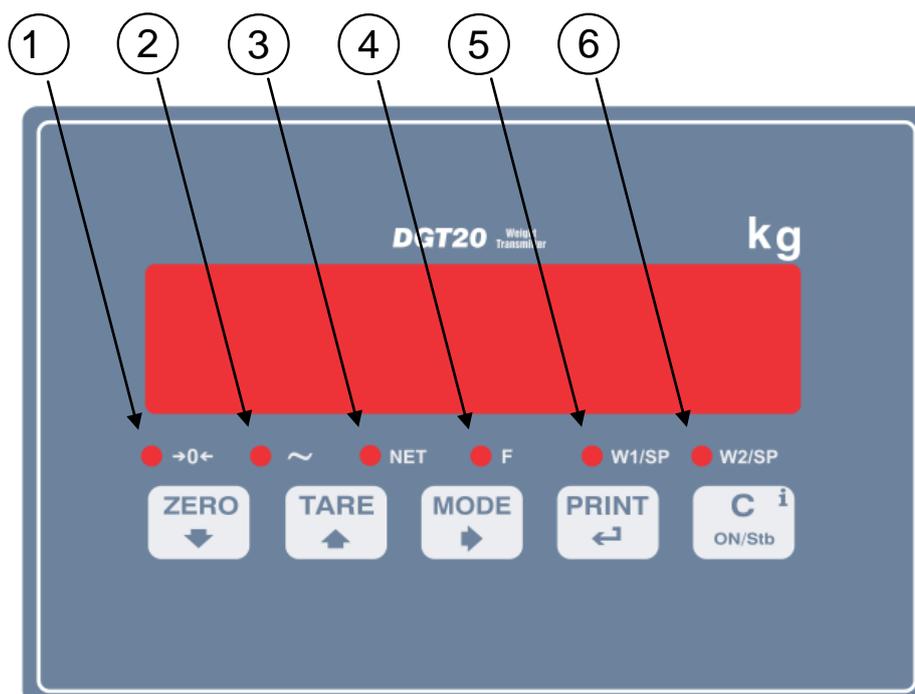
Figure 6.9 – *Keys and indicators of the DGT20 front panel*

5.10 FUNCTION OF THE INDICATORS

NUMBER	FUNCTION
(1)	Indicates that the weight detected by the weighing system is near zero, specifically within - ¼ ÷ ¼ of the division.
(2)	Indication of UNSTABLE WEIGHT.
(3)	Indicates that the displayed value is a NET WEIGHT.
(4)	It turns on when: - the SPECIFIC FUNCTION of the instrument is ACTIVE, which is set in the **F.ModE >> FunCt** parameter - a key is pressed. It turns off: - when the SPECIFIC FUNCTION of the instrument IS DISABLED. - with an active function, a key is pressed. When blinking it means that the instrument function is active for 5 seconds.
(5)	*If instrument in dual range and approved:* one's within the 1st weighing range (*w1*). *In the other cases:* It shows the activation of the 1st OUTPUT (*Sp1*).
(6)	*If instrument in dual range and approved:* one's within the 2nd weighing range (*w2*) *In the other cases:* It shows the activation of the 2nd OUTPUT (*Sp2*).
(7)	Sensor for the reception of the infrared signal (standard fitting, only for the DGT60 and DGT100 models).
(8)	*If instrument in dual range and approved:* one's within the 1st weighing range (*w1*) *If instrument in dual range and approved:* one's within the 2nd weighing range (*w2*)
(9)	The relays nr. 1,2,3,4,5,6 has been enabled.

5.11 FUNCTIONS OF THE KEYS:

DGT4, DGT60, DGT100, DGTP, DGT20 KEY	DGTPK KEY	FUNCTION
ZERO ▼	ZERO ▼	- <u>Clears the displayed gross weight</u>, if included within +/- 2% of the total capacity. - <u>Cancels the negative tare value</u>. - In <u>NUMERIC INPUT</u>: decreases the digit to be modified.
TARE ▲	TARE ▲	- With <u>Brief pressing</u>: executes the semiautomatic tare. - With <u>Long pressing</u>: allows to enter a manual tare from the keyboard. - <u>Cancels the negative tare value</u>. - In <u>NUMERIC INPUT</u>: increases the digit to be modified.
MODE ►	MODE ►	- <u>Executes a SPECIFIC FUNCTION</u> of the functioning mode which has been previously set in the set-up environment. - By <u>Pressing at length</u>: this allows to switch the displayed channel of the instrument (if configured in the "Independent Channels" mode, or "IND.CH"). - In <u>NUMERIC INPUT</u>: selects the digit to be modified, from left to right.
PRINT ↵	PRINT ↵	- <u>Executes a SPECIFIC FUNCTION</u> of the functioning mode which has been previously set in the set-up environment. - In <u>NUMERIC INPUT</u>: confirms the entry made. - In <u>SETUP</u>: allows to enter a step or to confirm a parameter inside a step. - <u>Executes a PRINTOUT</u> or transmission of the data from the serial port dedicated to the printer.
C ON/OFF	C ON/Stb	- <u>ON</u> / <u>STANDBY</u> of the instrument. - In <u>NUMERIC INPUT</u>: quickly clears the present value. - In <u>SETUP</u>: allows to exit a step without confirming the modification made. - Visualisation of <u>*Metric information*</u> of the scale: Capacity, Division, Minimum weigh for each configured range, Gravitational Acceleration Value, Number of configured Channels.
	F1, F2, F3, F4	- Not used in this application.
	NUMERIC KEYBOARD	- In the numeric input phase it allows to enter the desired value.

6. BASIC FUNCTIONS

6.1 SCALE ZERO

By pressing the ZERO key it is possible to zero a gross weight value which is within +/- 2% of the capacity; after the zeroing, the display shows 0 weight and the relative pilot lights turn on.

6.2 TARE OPERATIONS

SEMIAUTOMATIC TARE

By pressing the **TARE** key any weight value present on the display is tared: the display shows **"tArE"** for an instant and then 0 (net weight); the relative keys turn on.
NOTE: The semiautomatic tare will be acquired only if the weight is AT LEAST A DIVISION, STABLE (instability **~** led off) and VALID (in other words, the OVERLOAD condition should not be created).

MANUAL TARE FROM KEYBOARD

Press TARE for a few seconds: the display shows "– tM –" and then *"000000"*. Enter the desired value using the following keys:

ZERO   decreases the blinking digit.
TARE   increases the blinking digit.
MODE   selects the digit to be modified (blinking); the scrolling of the digits takes place from left to right.
C– ON/OFF   if pressed for an instant it quickly zeros the present value; if pressed at length it allows to return to weighing without saving the changes made.

Confirm with the PRINT key; the value will be subtracted from the weight present on the plate and the relative pilot lights will turn on.
If the entered value is not a multiple of the scale's minimum division, it will be rounded off.

CANCELLING A TARE

One can manually cancel the tare value in different ways:
- unload the scale and press the **TARE** or **ZERO** key.
- carry out the tares in deduction, partially unloading the scale and pressing **TARE** to zero the display.
- press **C – ON/OFF** without unloading the scale.
- enter a manual tare equal to 0.
NOTE: it is possible to automatically cancel the tare value by doing the following:

SELECTION OF LOCKED/UNLOCKED/DISABLED TARE

Normally, when a tare value is entered (automatic, manual, or from storage) by unloading the scale plate, the display shows the tare value with a negative sign (LOCKED TARE). For one's convenience it is also possible to choose that the tare value cancels itself automatically each time that the scale is unloaded (UNLOCKED TARE); or disable the tare functions.
With the UNLOCKED tare:
- **In case of SEMIAUTOMATIC TARE the net weight, before unloading the scale, may also be 0.**
- **In case of MANUAL TARE the net weight before unloading the scale must be greater than 2 divisions and stable.**

To set the type of tare:
-   Turn on the indicator, press the **TARE** key while the firmware version is displayed (the display shows the "tYPE" menu).
-   Select "F.ModE" (by pressing once the **ZERO** key) and press **PRINT** to enter in the menu.
  -   Scroll until one finds the "tArE t" parameter and select it.
  -   With the **ZERO** or **TARE** keys select the possible options: "LoCK" (locked tare), "unLoCK" (unlocked tare), diSAb (disabled tare).
  -   Confirm with **PRINT**.
  -   Press the **C – ON/OFF** key many times until the display shows the message "SAVE?".
  -   Press **PRINT** to confirm the changes made or another key for not saving.
The indicator stores the last selection made, also after it is turned off.

6.3 LIMITATION OF THE TARE FUNCTIONS

With <u>approved instrument</u>, it is possible to limit the tare functions, by setting "yES" in the step **SEtuP >> d.SALE (TECH.MAN.REF.)**. The tare operations will have the following specifications:

SCALE CAPACITY	FUNCTIONING	
	SEtuP >> d.SALE >> rEM.dSP >> no (no remote display for the visualization of the tare)	**SEtuP >> d.SALE >> rEM.dSP >> yES** (remote display for the visualization of the tare)
< 100kg	All the tare functions are disabled.	- The SEMIAUTOMATIC TARE value can not be modified with a manual tare. - The manual tare can be entered or modified only with an UNLOADED scale and tare equal to zero. - It's possible to cancel the tare value only with an UNLOADED scale, by pressing the ZERO key or by entering a manual tare equal to zero.
≥ 100kg	- The SEMIAUTOMATIC TARE value can not be modified with a manual tare. - The manual tare can be entered or modified only with an UNLOADED scale and tare equal to zero. - It's possible to cancel the tare value only with an UNLOADED scale, by pressing the ZERO key key or by entering a manual tare equal to zero.	- The SEMIAUTOMATIC TARE value can not be modified with a manual tare. - The manual tare can be entered or modified only with an UNLOADED scale and tare equal to zero. - It's possible to cancel the tare value only with an UNLOADED scale, by pressing the ZERO key or by entering a manual tare equal to zero.

With approved instrument, the **d.SALE** and **rEM.dSP** steps are read-only.

6.4 AUTO POWER OFF FUNCTION

It is possible to automatically turn off the indicator (from 1 to 255 minutes), or disable it; the auto power off takes place when, **with unloaded scale,** the weight has not been moved or a key has not been pressed for the time set: the display shows the "- oFF – " blinking message, after this the indicator turns off.

For the setting, follow the procedures below:

- Turn on the scale, press the TARE key while the firmware version is displayed (the display shows the "tYPE" menu).
- Select "F.ModE" (by pressing once the ZERO key) and press PRINT to enter in the menu.
- Scroll until one finds the "AutoFF" parameter and select it.
- With the ZERO or TARE keys select the possible options: "diSAb" (auto switch-off disabled), "EnAb" (auto switch-off enabled).
- Confirm with PRINT; if "EnAb" has been selected, one will be asked to enter the number of minutes after which the indicator should turn off: enter a number between 1 and 255 (using the MODE key to select the digit to be modified and ZERO/TARE to decrease/increase it) and confirm with PRINT.
- Press many times the **C – ON/OFF** key until the display shows "SAVE?".
- Press PRINT to confirm the changes made or another key for not saving.

6.5 MULTI RANGE FUNCTIONING (for legal for trade approved instruments)

The multirange functioning allows to subdivide the scale capacity in two or three ranges, each which is up to 3000 divisions, improving in this way the first range division in the dual range.

For example, with a 10 kg cell platform it is possible to approve the weighing system with:

- A single range: 6 kg capacity and 2 g division (3000 div.).
- Dual range: 6 / 3 kg capacity and 2/1 g division (3000 + 3000 div.).

NOTES:

- For the approval of the weighing system in dual range the cell must have better technical features in comparison to the

cell used for the approval in a single range.

The multirange functioning is shown by the turning on of the relative LED which identifies the range in which one is operating; by passing to the second range, the second range division is enabled. At this point the first range division is restored **only by passing by the gross zero of the scale**.

- The selection of the range number with multirange functioning is made during the indicator's calibration (**TECH.MAN.REF.)**.

6.6 DATE/TIME ADJUSTMENT (OPTIONAL)

The indicator can be fitted with the date/time option; in this case, the "CLoCK" message is shown when the instrument is turned on. To set the date/time follow the procedure below:

- Turn on the scale, press the **TARE** key while the firmware version is displayed (the display shows the "tYPE" menu).
- Select "F.ModE" (by pressing once the **ZERO** key) and press **PRINT** to enter in the menu.
- Scroll until one find the "CLoCK" parameter.
- Confirm with **PRINT**: in this order one will be asked to enter the day, month, year, hour, and minutes. The entry of each parameter must be confirmed with **PRINT**.
- Press the **C – ON/OFF** key many times until the message "SAVE?" appears on the display.
- Press **PRINT** to confirm the changes made or another key to not save.

NOTE:
- **the "CLoCK" parameter is not displayed if there is no date/time option.**
- **the clock/calendar function is standard fitted on the DGTP/DGTPK version.**

6.7 "SCREEN SAVER" FUNCTION (OPTIONAL)

If the indicator is fitted with the date/time function, it is possible to enable the "Screen Saver": after a programmable time (from 1 to 255 minutes) **with the scale unloaded**, the time is shown on the display, in the "HH-MM.SS" format. As soon as a weight variation is detected, or a key is pressed, the indicator returns to viewing the current weight.

To set the function:

- Turn on the scale, press the **TARE** key while the firmware version is displayed (the display shows the "tYPE" menu).
- Select "F.ModE" (by pressing once the **ZERO** key) and press **PRINT** to enter in the menu.
- Scroll until one find the "SCr.SAV" parameter and select it.
- With the **ZERO** or **TARE** key select the possible options: "no" (disabled), "YES" (enabled).
- Confirm with **PRINT**; if one has selected "YES", one is asked to enter the number of minutes after which the indicator should show the time: enter a number between 1 and 255 (using the **MODE** key to select the digit to be modified and the **ZERO/TARE** keys to decrease/increase it) and confirm with **PRINT**.
- Press the **C – ON/OFF** key many times until the display shows the message "SAVE?".
- Press **PRINT** to confirm the changes made or another key to not save.

NOTE:
- **the "SCr.SAV" parameter is not shown if there is no date/time option.**
- **the screen saver function is standard fitted on the DGTP/DGTPK version.**

6.8 PRINTING
If a printer is connected, it is possible to print the programmed weight data, for example:
- 4 heading lines of 24 characters
- GROSS weight
- TARE weight
- NET weight
- ticket number
- date and time (optional)
- a CODE 39 bar code (both with the LP542S labeller as well as the TPR thermal printer).

Besides the generic printing described above, each single functioning mode will have some specific printouts, which are described in the operating mode.

It is also possible to send weight data to the PC, with standard or extended string, via the printer port (ALL.Std/ALL.EXt or PrPC.Std/PrPC.Ext/PrPC.HK in Pr.ModE parameter).

Executing printouts with NON approved scales.
In order to print with non approved scales the following conditions must exist:
- the weight must be stable;
- the gross weight must be >= 0;
- the printout is always active;

NOTE: In the totaliser modes in order to print the totalised weight the following must take place:
- the weight must be stable;
- the net weight must be >= of a division with normal or fast totalisation;
- the net weight must be >= of 10 divisions with automatic totalisation.
The printing is reactivated depending on how the "rEACt" parameter has been set in the set-up environment: passage by zero of the NET weight, weight instability, or always (see "REENABLING OF THE PRINTOUTS AND OF THE INDICATOR FUNCTIONS" section).

Legal for Trade scale printing.
In order to be able to print with a legal for trade scale the following conditions must exist:
- the weight must be stable;
- the net weight must be >= the minimum weight (minimum of 20 divisions).
- the printing is reactivated depending on how the "rEACt" parameter has been set in the set-up environment: passage by zero of the NET weight, weight instability, or always (see "REENABLING OF THE PRINTOUTS AND OF THE INDICATOR FUNCTIONS" section).
To configure the printouts, go to the "PROGRAMMING THE PRINTOUTS" section in the technical manual **(TECH.MAN.REF.)**.

Notes:
- The printing is confirmed by the indication on the display of the "Print" message.
- If the printout is not reenabled the display shows the "no.0.unS" message
- With the weight unstable the display shows the "unStAb" message.

6.9 REENABLING THE PRINTOUTS AND THE INDICATOR FUNCTIONS

While using the indicator, it is possible to incur into the "**no.0.unS**" error shown on the display; this means that the printing or the function which one wants to carry out must be reenabled (in order to avoid unwanted executions).

It is possible to set the reenabling in different ways: "passage by zero of the net weight", "weigh instability" or "always". Follow the procedure below:

- Turn on the scale, press the **TARE** key while the firmware version is displayed (the display shows the "tYPE" menu).
- Select "F.ModE" (by pressing once the **ZERO** key) and press **PRINT** to enter in the menu.
- Scroll until one finds the "rEACt" parameter and select it.
- With the **ZERO** or **TARE** keys select the possible options: "ZEro" (passage by zero of the net weight), "inSt" (instability), ALWAyS.
- Confirm with **PRINT**.
- Press the **C – ON/OFF** key many times until the message "SAVE?" is shown on the display.
- Press **PRINT** to confirm the changes made or another key to not save.

6.10 DISPLAY OF METRIC DATA (inFO)

The indicator is fitted with a function named "INFO", thanks to which it is possible to view the metric data and other configuration data:

- First range capacity, first range minimum weigh, first range division.
- Second range capacity, second range minimum weigh, second range division (if set).
- Gravitational Acceleration Value.
- Number of configured Channels.

NOTES:
- The minimum weigh corresponds to 20 net weight divisions.
- The data of the second and third range appear only if actually configured.

To view the metric data:
- Keep the **C – ON/OFF** key pressed until the display shows "inFO", and release.
- The capacity value of the first range will appear.
- Press the **ZERO** key to scroll the following data, in the order (for *example* for channel 1):
  1st range capacity ("Ch1.MAX") ⇨ *1st range minimum weigh ("Ch1.Min")* ⇨ *1st range division ("Ch1.E")* ⇨ *2nd range division ("Ch1.MAX")* ⇨ *2nd range minimum weigh ("Ch1.Min")* ⇨ *2nd range division ("Ch1.E")* ⇨ *Gravitational Acceleration Value ("GrAVit")* ⇨ *Nr. of Configured Channels ("ConF.Ch")* ⇨ …….. and so on these repeate cyclically.
- Press the **TARE** key to scroll backwards through the metric data.
- Press the **PRINT** or **C – ON/OFF** key to return to weighing.

By pressing the MODE key during the display of the info for the currently active channel, it is possible to view the metric data of the other channels (if configured); for example, if also channels 2 and 3 are configured, for the maximum capacity of the 1st range:

1st range capacity channel 1 ("Ch1.MAX") ⇨ *Press **MODE*** ⇨ *1st range capacity channel 2 ("Ch2.MAX")*
⇨ *Press **MODE*** ⇨ *1st range capacity channel 3 ("Ch1.MAX")*
(Function is not available with DGT1 and DGT1S models)

6.11 SELECTION OF THE CHANNEL TO BE DISPLAYED

In all the functioning modes, excluding the "MASTER" mode (section "MULTISCALE REPEATER (MASTR)"), it is possible to select the channel to be displayed (when the instrument is configured in the "Independent Channels" Mode - see the section "CALIBRATION", **TECH.MAN.REF.**) using the **MODE** key:

*By pressing the **MODE** key at length:* The "Chan" message appears for a few instants.
- The nr. of channel used until that moment is displayed:
  - *For **example**, if channel 1 → "Ch 1" appears*
- Select the number of channel to be displayed, using the **ZERO** or **TARE** keys
  - *For **example**, if the channels 1, 2, and 3 are configured → the items "Ch 1", "Ch 2", "Ch 3" will appear.*
- Confirm the choice by pressing the **PRINT** key.
(Function is not available with DGT1 and DGT1S models)

6.12 REMOTE CONTROL (OPTIONAL, JUST WITH DGT60 AND DGT100 MODELS)

Just with the DGT60 and DGT100 models, with the remote control it is possible to remotely control the instrument by two different remote controls: 4 keys infrared (ir) remote control, or 6 keys radio (rd) remote control.

6.12.1 FOUR KEYS IR REMOTE CONTROL

NOTE: indoor use only.

If the model is provided for the 4 keys remote control, it is possible to remotely use the functionality of the ZERO, TARE, MODE, ENTER/PRINT keys or just the TARE key. To choose which type of functioning follow the below procedure:

- Turn on the scale; press the **TARE** key while the firmware version is displayed (the display shows the "typE" menu).
- Press **ZERO** many times (to scroll forwards through the parameters) or **TARE** (to scroll backwards) until one finds the "F.ModE" parameter.
- Press **PRINT** to enter the menu.
- Scroll until one finds the "ir.ConF" parameter and select it.
- With the **ZERO** or **TARE** keys select the possible options: "none" (disabled remote control), "ir 1" (all the remote control keys function as the **TARE** key) or "ir 4" (the remote control keys functions as **ZERO**, **TARE**, **MODE** and **PRINT**). All other options refer to other types of remote controls
- Confirm with **PRINT**.
- Press the **C – ON/OFF** key many times until the message "SAVE?" appears on the display.

Press **PRINT** to confirm the changes made or another key to not save.

In the "multifunction" configuration, the remote control keys repeat the keys' functions (both the ones obtained with a SHORT pressing as well as those with a LONG pressing) and they correspond to the following indicator keys:

KEY	"none" MODE FUNCTION	"ir 1" MODE FUNCTION	"ir 4" MODE FUNCTION
ZERO	DISABLED	TARE	ZERO
TARE	DISABLED	TARE	TARE
F1 MODE	DISABLED	TARE	MODE
F2 PRINT	DISABLED	TARE	ENTER/PRINT

In the "multifunction" configuration, by pressing at length the ZERO key, it's possible to put the instrument in stand-by; by pressing the C key on the keyboard or by pressing at length any key on the remote control one returns to the weighing mode.

6.12.2 SIX KEYS RD REMOTE CONTROL

If the model is provided for the 6 keys remote control, it is possible to remotely use the functionality of the ZERO, TARE, MODE, ENTER/PRINT, C/DEL and Fn keys or just the TARE key.

To choose this type of remote control follow the below procedure:

-    Turn on the scale; press the TARE key while the firmware version is displayed (the display shows the "typE" menu).
-    Press ZERO many times (to scroll ahead through the parameters) or TARE (to scroll backwards) until one finds the "F.ModE" parameter.
-    Press ENTER/PRINT to enter the menu.
-    Scroll until one finds the "ir.ConF" parameter and select it.
-    With the ZERO or TARE keys select the possible options: "none" (disabled remote control), "rd 1" and "br 1" (all the remote control keys function as the TARE key) or "rd 4" and "br 4"(the remote control keys functions as ZERO, TARE, MODE, ENTER/PRINT, C/DEL and Fn).
     All other options refer to other types of remote controls
-    Confirm with ENTER/PRINT.
-    Press the C key many times until the message "SAVE?" appears on the display.
-    Press ENTER/PRINT to confirm the changes made or another key to not save.

The remote control keys repeat the keys' functions (both the ones obtained with a SHORT pressing as well as those with a LONG pressing) and they correspond to the following indicator keys:

KEY	"none" MODE FUNCTION	"rd 1" or "rd.br 1" MODE FUNCTION	"rd 4" or "rd.br 4" MODE FUNCTION
TARE	DISABLED	TARE	TARE
ZERO	DISABLED	TARE	ZERO
MODE	DISABLED	TARE	MODE
PRINT	DISABLED	TARE	ENTER/PRINT
C	DISABLED	TARE	C
Fn	DISABLED	TARE	Fn

Radio remote control configuration:
- "rd x":   In this configurations it's necessary to combine the remote control to the instrument.
- "rd.br x":   All radio remote controls we provide work with the instrument.
In the "rd 1" and "rd 6" configurations it's possible to combine 3 remote controls.

It's possible to combine a new remote control with TARE key and ZERO key pressed at length (3 seconds).
When the instrument display "aut.rd?" by pressing ENTER key of the keyboard the new remote control is combined.
With C key of the keyboard, if the serial number exits, the remote control is removed.

In the "multifunction" configuration, by pressing at length the C key, it's possible to put the instrument in stand-by; by pressing C on the keyboard or any key on the remote control the instrument returns to the weighing mode.

7. SELECTABLE OPERATING MODES

In addition to the STANDARD weighing mode - with TARE deduction and transmission of data, the indicator can carry out one of the following functions:
UNIT OF MEASURE CONVERSION, NET/GROSS SWITCH, IN/OUT WEIGHING, MULTISCALE REPEATER, ALIBI MEMORY, SINGLE SCALE REPEATER, DISPLAY WITH SENSITIVITY X 10, FREEZING OF THE WEIGHT ON THE DISPLAY, PEAK DETECTOR, HORIZONTAL TOTALIZER, VERTICAL TOTALIZER, PIECE COUNTING, SIMULTANEOUS TRANSMITTER OF THE CHANNEL VALUE.
Each functioning mode foresees the turning on of various function pilot LEDs, described in detail in the sections "KEYS AND INDICATORS OF THE FRONT PANEL".
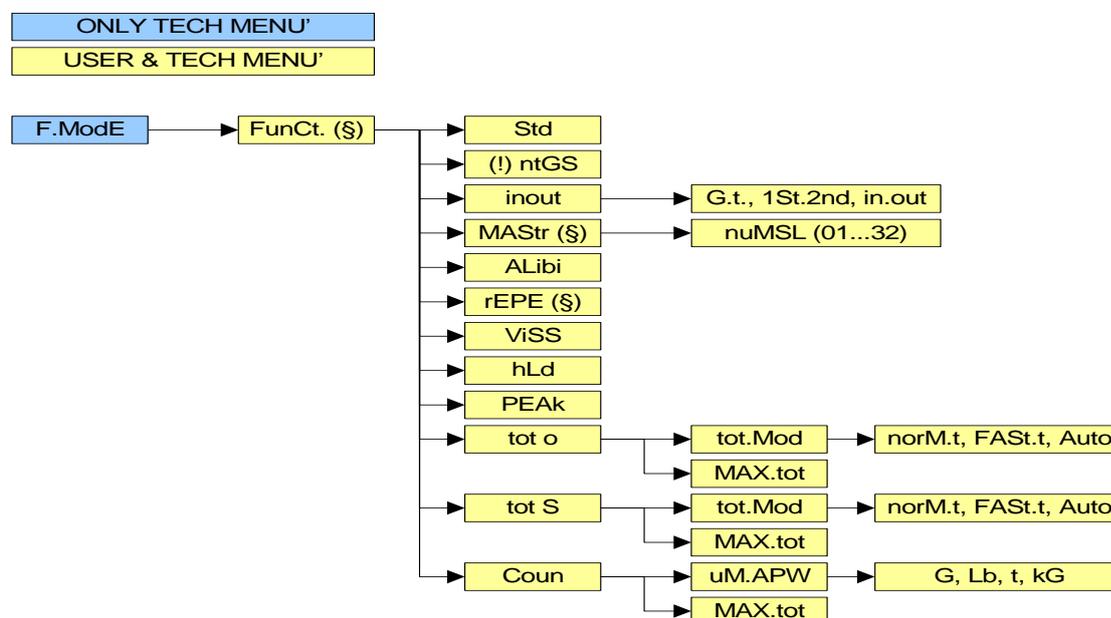
To set the operating mode, carry out the following procedures:

- Turn on the scale, press the TARE key while the firmware version is displayed (the display shows the "tYPE" menu).
- Select "F.ModE" (by pressing once the ZERO key) and press PRINT to enter in the menu (the display shows the "FunCt" menu).
- Press PRINT to enter the parameter.
- With the ZERO or TARE keys select the possible options:

Std	Unit of measure conversion
ntGS	net weight / gross weight conversion
inout	input / output weighing
MAStr	Multiscale repeater (**)
ALibi	Alibi memory
rEPE	Single scale repeater(**)
ViSS	Sensitivity times ten
hLd	Freezing of the weight on the display
PEAk	Peak detector
tot o	Horizontal totalizer
tot S	Vertical totalizer
Coun	Counting

- Confirm with PRINT; if one has selected the inout, MAStr, tot or, tot S or Coun mode, one will be asked to select another operating parameter; refer to the specific functioning mode section for the relative description.
- The instrument automatically goes to the following step.
- Press many times the **C – ON/OFF** key until the display shows the message "SAVE?".
- Press PRINT to confirm the changes made or another key to not save.

(**) MAStr and rEPE are the only parameters displayed in the MASTER type firmware.

NOTE: Once the functioning mode is selected, and there is a printer, the standard printouts relative to the type of printer selected in the **SEtuP** >> **SEriAL** >> **CoM.Prn** >> **Pr.ModE** (see **TECH.MAN.REF.**) parameter. It is possible to activate the default parameters by carrying out the selected print default (see section "PROGRAMMING THE PRINTOUTS", **TECH.MAN.REF.**).

7.1 UNIT OF MEASURE CONVERSION (Std)

Simple display functioning mode with the function of conversion between the scale unit of measure and lb and viceversa.

FUNCTIONING:
-   By pressing the **MODE** key the weight conversion between the scale unit of measure and lb is made and vice versa.
-   By pressing the **PRINT** key at length: one directly enters the SETPOINT INPUT Menu (see section "OUTPUTS FUNCTIONS").

NOTES:
-   If one connects various platforms to the indicator, in order to pass from one platform to the other, the weight must be expressed in the scale unit of measure.
-   The conversion takes place for any unit of measure set during the calibration.
Furthermore with APPROVED instrument
-   The weight in pounds is displayed for 5 seconds, after which the display goes to the scale unit of measure.
-   During the viewing in pounds it is not possible to print the weight (when pressing **PRINT** the message "ConV" is shown)

7.2 NET/GROSS SWITCH (ntGS)

Simple functioning mode with Net / Gross conversion function.

FUNCTIONING:
-   If a tare is set, by pressing **MODE** the display switches between the net and the gross weight and vice versa.
-   By pressing **PRINT** at length: one enters directly into the INPUT menu of the SET POINTS (see section "OUTPUTS FUNCTIONS").

NOTES:
With an APPROVED instrument
- The display time of the gross weight is 5 seconds, and then the display of the net weight returns.
- While the gross weight is displayed it's not possible to print the weight.

7.3 INPUT/OUTPUT (in / out)

Simple display functioning mode with in / out weighing function: the indicator acquires two weight values through the confirmation of the operator and calculates the difference, automatically printing the data (if the presence of a printer has been configured).

SETTING:
Once the in/out mode has been selected, the message "tyPE" is shown and one is asked to select with PRINT the printing mode of the acquired data:

-   **G.t. gross/tare:**
    PRINTED DATA
    GROSS   Greater weight with unit of measure
    TARE   Lesser weight with unit of measure.
    NET   Difference between GROSS and TARE with unit of measure

-   **1st.2nd first weigh/second weigh:**
    PRINTED DATA
    WEIGH 1   First weight with unit of measure
    WEIGH 2   Second weight with unit of measure.
    NET   Difference without sign between WEIGH 1 and WEIGH 2 with unit of measure.

- **in.out input/output:**
  PRINTED DATA
  INPUT   First weight with unit of measure.
  OUTPUT   Second weight with unit of measure.
  NET   Zero weight with unit of measure   >> if WEIGH 1 = WEIGH 2

  INPUT NET   >> if WEIGH 1 > WEIGH 2
                    Difference without sign between INPUT and OUTPUT with unit of measure.

  OUTPUT NET   >> if WEIGH 1 < WEIGH 2
  Difference without sign between INPUT and OUTPUT with unit of measure.

FUNCTIONING:
- Through the **MODE** key of the indicator one acquires the first weight, on the display is shown " - - 1 - - -".
- By pressing again the MODE key of the indicator one acquires the second weight, and on the display is shown "- - 2 - - -".
- When the acquisition of the second weight is made, the printing of the data is commanded.
- It is possible to interrupt the weighing cycle by pressing the **C – ON/OFF** key after the acquisition of the first weight: On the display the message " CLEAr ". Press **PRINT** to confirm the cancelling of the first acquired weight or another key to not confirm.
- By pressing **PRINT** at length: one enters directly into the INPUT menu of the SET POINTS (see section "OUTPUTS FUNCTIONS").

NOTES:
- The weight is acquired if:
  With a NON APPROVED scale one has a STABLE weight and GREATER than 0.
  With an APPROVED scale one has a STABLE weight and GREATER than 20 divisions.
  If the setting of the rEACt parameter in the set-up environment has been respected (passage by zero of the weight, instability, or always); see the "REENABLING OF THE PRINTOUTS AND THE INDICATOR FUNCTIONS" section.

7.4 MULTISCALE REPEATER (MAStr)
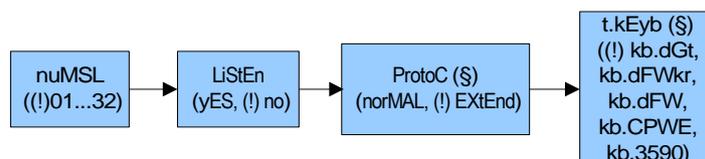
The system is made up of one or more indicators (up to 32, called **SLAVES**), connected to one or more weighing systems, which communicate with another indicator (called **MASTER**) which acts as weight repeater, on which it is possible to view (or printed if the printer is provided) the weight of each single scale or the sum of the weight detected by the single scales. Slaves also repeat some of the keys pressed on the master, such as tare or zero.
NOTE: It is possible to achieve a network with a MASTER, which remotely performs the functions of the scales connected, and one or more LISTEN ONLY MASTER having the sole function of repeating the weight.

7.4.1 LISTEN ONLY MASTER

One can also add other masters (see next paragraph) which must be set as weigh repeater. The keys pressed on these masters are not repeated on the slaves.

When the listen only master is turned on, it displays the weight of the slave, or automatically selects the sum of the weights if there are more slaves connected to the master.

If there are more slaves, the listen only master can display:

- the sum of weights, if it is selected on the listen only master and also on the master the sum is displayed; the "SuM" message is displayed every 10 seconds;
- the weight of the selected slave, if the master displays the weight of the same slave or the sum of weights; the "SCA n" message is displayed (n is the number of the selected slave).

If it is not possible to set the communication, the listen only master displays the central segments alternated to the messages "SCA n" or "SuM".

NOTE: this type of master works if there is at least one master in no listen mode.

7.4.2 MASTER CONFIGURATION

In the MASTER, by selecting with ENTER/PRINT in this operating mode:

- one is asked to enter the number of the SLAVES which one wants to use: for an instant "nuMSL" is displayed; then, one enters the number (between 01 and 32).
- one is asked to select if listen only mode or not.
- (If listen mode = "no") one is asked to enter the protocol type.
- (If listen mode = "no") one is asked to enter the SLAVE keyboard type: "kb.dGt" (for DGT type instruments), "kb.dFW" (for DFW type instruments), "kb.dFkr" (for DFWKR type instruments), "kb.CPWE" (for CPWE type instruments), "kb.3590" (for 3590 type instruments).

In the SLAVES, instead, one needs enter a code (between 01 and 32, to identify each single SLAVE) in **SEtuP** >> **SEriAL** >> **CoM.PC** >> **PCModE** >> **485 (see set-up environment, TECH.MAN.REF.)**.

NOTES:

DGT as Master key map:

Pressed key	3590 key	CPWE key	DFW key
ZERO	ZERO	F6	ZERO
TARE	TARE	TARE	TARE
MODE	RIGHT ARROW	F9	MODE
ENTER	ENTER	ENTER	ENTER

7.4.3 FUNCTIONING

- When turned on, the MASTER predisposes itself for the connection to the SLAVES present ("ECo n" message appears, in which n is the SLAVE number which is to be detected): when at least one SLAVE is detected, it positions itself on the one with the lowest 485 address.
- By pressing the **MODE** key many times one switches from SLAVE to SLAVE, in order by 485 addresses: the display shows "SCA n" (in which n is the SLAVE number); after this, the weight transmitted by the selected SLAVE is displayed. In this mode, about every 10 seconds, the message "SCA n" appears, indicating the meaning of the shown data and in which n is the number of the active scale in that moment..
- By pressing at length the **MODE** key the sum of the weight on all the scales is shown: the display shows "SUM", and then the sum of the net weight on all the scales.
  In the display of the sum:
    - the "SuM" message appears about every 10 seconds and it indicates that the sum of the weights present on the scales is being displayed
    - The reference unit of measure is that of the connected SLAVE with the lowest address; if the other weights have different units of measure, these are automatically converted.
    - If the sum of the weights is greater than 999999, the segments in the upper part of the display are turned on.
    - If the sum of the weights is less than -99999, the segments in the lower part of the display are turned on.
    - If the sum of weights is not valid (because one or more slaves is in under load or overload), the segments in the central part of the display are turned on.

- By pressing the **MODE** key two times in master mode a menu appears:
  - SLAVE: allows to select fastly a slave (available only with more than 1 slave)
  - SET.PNT: input setpoint (available only if there are functions linked to relays)

  If there are no functions linked to relays the fast slave selection is displayed, the user is asked to insert the salve to select.
- By pressing the **ZERO, TARE, PRINT and C – ON/OFF** keys the functionality of the key pressed in the selected slave is transmitted.

WARNING:
- To carry out the weight repeater function it is sufficient that just one SLAVE instrument in the system be turned on. When turned on, the MASTER places itself automatically on the first turned on SLAVE (lowest 485 address); if all the instruments are off or if the radio signal does not reach the MASTER, on the same display the "ECo n" message is displayed in which n is the address of the SLAVE with which one is trying to communicate.
- If there are various slaves, it isn't possible to transmit the functionality of the **MODE** key to the active slave.
- To carry out the sum function, it is necessary to have a connection with at least two SLAVES.
- In the sum mode, it isn't possible to transmit the functionality of the **ZERO**, **TARE** and **PRINT** keys to the SLAVES.
- If the connection is lost with the SLAVE which is acting as a repeater, the MASTER will try to reconnect it; if after about a second this does not happen, it connects with the following SLAVE.
- If the connection is lost with a SLAVE in the sum mode, the MASTER tries to reconnect it: if this happens, it remains in the sum mode, otherwise it passes to the repeater mode of the following SLAVE.

7.4.4 EXECUTION OF THE PRINTOUTS

If there is a printer on the master:
- the printer has to be selected both in the SLAVE and in the MASTER (**SEtuP** >> **SEriAL** >> **CoM.Prn** >> **Pr.ModE** parameter, **TECH.MAN.REF.**).
- it's possible to direct on it the printouts and the heading configured in the active slave, by pressing on the MASTER or on the SLAVE the dedicated key (depending on the selected function on the SLAVE). In order to configure this format refer to section "PROGRAMMING THE PRINTOUTS", **TECH.MAN.REF.**.
- by pressing the ENTER/PRINT key when the sum is displayed, it is possible to execute a printout with the weights of all the detected scales and their sum. In order to configure this format refer to the section "PROGRAMMING THE PRINTOUTS", **TECH.MAN.REF.**; the heading is the one programmed in the MASTER.

If there is a printer on a slave:
- the printer has to be selected in the SLAVE (**SEtuP** >> **SEriAL** >> **CoM.Prn** >> **Pr.ModE** parameter, **TECH.MAN.REF.**) but not in the MASTER.
- it is possible to execute the printout configured in the SLAVE.

Examples of printout:
2 slaves connected to the master (TPR printer)

Slave 1   Slave 2   Master

```
 SCALES   1

 MASTER LINE 1
 MASTER LINE 2
 MASTER LINE 3
 MASTER LINE 4

 SLAVE 1 LINE 1
 SLAVE 1 LINE 2
 SLAVE 1 LINE 3
 SLAVE 1 LINE 4
  GROSS        1.091 kg
  TARE         0.091 kg
  NET          1.000 kg
```

```
 SCALES   2

 MASTER LINE 1
 MASTER LINE 2
 MASTER LINE 3
 MASTER LINE 4

 SLAVE 2 LINE 1
 SLAVE 2 LINE 2
 SLAVE 2 LINE 3
 SLAVE 2 LINE 4
  GROSS        1.091 kg
  TARE         0.091 kg
  NET          1.000 kg
```

```
 MASTER LINE 1
 MASTER LINE 2
 MASTER LINE 3
 MASTER LINE 4
  SCALES   1     1.000 kg
  SCALES   2     1.413 kg
  SUM            2.413 kg
```

NOTES:

If the printer has been selected in the MASTER but not in the SLAVE, it is not possible to print.
If more than one SLAVE is present, the number of the SLAVE from which the weight comes from will be added on each printout on the MASTER.
If enabled the master inserts the header
If enabled the master adds at the end of the format the ticket number and date & time.

On the MASTER it is also possible to display and print the sum of the weights of a number of SLAVES lower than the value programmed in the **FunCt** >> **MAStr** >> **nuMSL** step, by turning off the SLAVES that are not used.

7.4.5 TURN OFF THE MASTER AND THE SLAVES

If the MASTER displays the sum of the weights:

- by pressing at length the **C** key on the MASTER it is possible to turn off only this indicator.
- by pressing at length the **C** key on a SLAVE it is possible to turn off only that indicator: after a few instants the MASTER displays the "ECo n" message in which n is the number of the SLAVE that has been turned off and then the weight transmitted by the next detected SLAVE.

If the MASTER displays the weight transmitted by a SLAVE:

- by pressing briefly the **C** key on the MASTER this is repeated on the active SLAVE.
- by pressing the **C** key on the MASTER until the "-0FF-" message is displayed, it is possible to turn off the active SLAVE; the "-0FF-" message is displayed on the MASTER for a few seconds, then it displays the "ECo n" message in which n is the number of the SLAVE that has been turned off and then the weight transmitted by the possible next detected SLAVE. Note: while the "-0FF-" message is displayed it is possible to turn off the MASTER by pressing again at length the **C** key.
- by pressing the **C** key on the MASTER until the "-0FF-" message is displayed for the second time it is possible to turn off only the MASTER indicator.
- by pressing at length the **C** key on the active SLAVE it is possible to turn off only that indicator: the MASTER displays the "-0FF-" message and then the "ECo n" message in which n is the number of the SLAVE that has been turned off; then the MASTER displays the weight transmitted by the possible next detected SLAVE.
- by pressing at length the **C** key on a SLAVE that is not active it is possible to turn off only that indicator.

It is also possible to turn off only the MASTER indicator while it displays the "ECo n" message, by pressing at length the **C** key. If the auto-off is set on MASTER indicator, it works only while the MASTER indicator displays the "ECo n" message.

7.5 ALIBI MEMORY (ALibi) (OPTIONAL)

The alibi memory allows to file the transmitted weight values in the computer for data processing and/or integration. The filed values may then be recalled from the PC serial line or directly on the indicator's display for a following check.

The storage of a weigh takes place either following the reception of the serial command or following the pressure of the **PRINT** key: the indicator transmits on the PC serial line the gross and tare weights and an ID which clearly identifies the weigh.

The ID has the following format:

<Rewriting number> — <Weigh number>

- Rewriting number: number of 5 digits which may go from 00000 to 00255; it indicates the number of complete rewritings of the alibi memory.
- Weigh number: number of 6 digits which may go from 00000 to 131072; it indicates the weigh number in the current rewriting of the alibi memory.

With each storage the weigh number is increased of 000001; when this reaches the 131072 value, it restarts from 000000 and the rewriting number increases of 00001.

Therefore the weigh relative to an ID may be verified just if:

- it has a rewriting number equal to the current one of the alibi memory and a weighing number equal or less than the last value received with the "PID" command;
- it has a rewriting number equal or greater than zero, but less than 1, in comparison to the current value of the alibi memory, and a weigh number greater than the last value received with the "PID" command.

example:

If the stored weigh is the following:
"PIDST,1,   1.000kg, 1.000kg,00126-131072"

and the following will be:
"PIDST,1,   1.000kg, 1.000kg,00127-000000"

The storage of a weigh is possible only if the weight is stable and valid (in other words not in under load nor in overload), if the gross weight is equal or greater than zero.

the storage of the weigh by pressing a key is possible only if the function is active (or passage from 0 or weight instability, or always depending on how the **F.ModE >> rEACt** step has been configured in the technical set-up, **TECH.MAN.REF.**, and minimum weight of 20 divisions with approved instrument,).

 If these conditions are not respected:

- in the response to the PID serial command one has "NO" in the place of the ID.
- there is no transmission if **PRINT** has been pressed.

When the weight is transmitted with the ID following the pressing of the **PRINT** key, the display shows for about 2 seconds the message " tr.id ", and the transmitted string is the following:

<ESC>[II]PIDSS,B,LLLLLLLLLLUU,YYTTTTTTTTTTUU,(ID | NO)<STX>.

See the following section "Serial commands" for the string description.

NOTES:

- With approved or not approved instrument, the storage of the weigh through the PID serial command is always possible for all the weighs from 0 to full range value.
- The PRINT key works if the serial protocol is set on **ondE, rEPE.4/6, Prin.St/EX, 485, ALL.Std/EXt, StAb.St/EX (TECH.MAN.REF.)**.

READING OF THE WEIGHS CARRIED OUT

In order to read the information relative to the weighs carried out:

- Press the **MODE** key.
- The message "rew.id" appears; now one should enter the rewriting number (from 00000 to 00255) and press **PRINT**.
- The message " id " appears; now one should enter the weigh number (from 000000 to 131072) and press **PRINT**.
- Now it is possible to view on the display the weigh information in sequence, and scroll through it with the **ZERO** key (ahead) or the **TARE** key (backwards):
    - "ch. x", in which x is the scale number (from 1 to 4).
    - " um yy" in which yy is the unit of measure (kg, g, t o lb).
    - gross weight (for about a second the message "GroSS" appears and then the gross weight value).
    - Tare weight (for about a second the message "tArE" appears or "tArEPt" if it is a manual tare; then the tare value appears).
- Press **C – ON/OFF** to return to weighing.

NOTE:

- If the alibi memory is empty, when the **MODE** key is pressed the message "EMPTY" appears for about a second, one returns to weighing.
- If the entered ID is not valid, in other words, if there is no stored weigh relative to the entered ID, the message " no id" appears and one returns to weighing.

INITIALISATION OF THE ALIBI MEMORY

It is possible to cancel all the weighs made, initialising the alibi memory; this operation can be made directly on the indicator (see the parameter "SETUP" >> "ini.AL" of the set-up environment, **TECH.MAN.REF.**) or through the serial command (see "SERIAL COMMANDS" below).

NOTES:

- It is not possible to just cancel a single weigh.
- The initialisation is possible only with a non approved instrument.

SERIAL COMMANDS:

Besides the commands described in the section "FORMAT OF THE SERIAL COMMANDS", **TECH.MAN.REF.**, in this functioning mode also the commands below are available:

WEIGH STORAGE

Command:
[II]PID<CRLF> or **<ESC>[II]PID<STX>**
and
[II]PIDD<CRLF> or **<ESC>[II]PIDD<STX>**
in which: [II] : 485 address
                   <ESC>: 27 ascii decimal character
                   <STX> : 2 ascii decimal character

Instrument response to the **[II]PID<CRLF>** command:
[II]PIDSS,B,LLLLLLLLLLUU,YYTTTTTTTTTTUU,(ID | NO) <CRLF>

Instrument response to the **<ESC>[II]PID<STX>** command:
<ESC>[II]PIDSS,B,LLLLLLLLLLUU,YYTTTTTTTTTTUU,(ID | NO)<STX>

Response of the instrument to the **[II]PIDD<CRLF>** command:
[II]PIDDSS,B,LLLLLLLLLLUU,YYTTTTTTTTTTUU,(ID | NO),(dd/mm/yybbhh:mm:ss|"NO DATE TIME")<CRLF>

Response of the instrument to the **<ESC>[II]PIDD<STX>** command:
<ESC>[II]PIDDSS,B,LLLLLLLLLLUU,YYTTTTTTTTTTUU,(ID | NO),(dd/mm/yybbhh:mm:ss|"NO DATE TIME")<STX>

In which:[II]   485 address (only when transmitting in 485 mode)
     SS   OL" (weight in overload) or "UL" (weight in under load) or "ST" (stable weight) or "US" (unstable weight) or "TL" (TILT input closed).
     ,   comma character (ASCII decimal 44)
     B   scale number (from 1 to 4)
     LLLLLLLLLL: gross weight on 10 digits
     UU: unit of measure
     YY: 2 spaces in the case of null tare or semiautomatic tare, "PT" in case of manual tare
     TTTTTTTTTT   tare on 10 digits
     ID   XXXX-YYYYYY   in which:
                                           XXXXX is the rewriting number (5 digits, from 00000 to 00255) and
                                           YYYYYY is the weigh number (6 digits, from 000000 t0 131072).

     dd/mm/yy   Date in the "dd/mm/yy" format (only with PIDD command)
     bb   2 space characters, ascii decimal 32 character (only with PIDD command)
     hh:mm:ss   Now in the "hh:mm:ss" format (only with PIDD command)

In the case in which the gross weight is negative or unstable, the weight is transmitted but not the ID; "NO" is in its place. In these cases there is no storage in the alibi memory.
If the ALIBI MEMORY board is not detected, only the weight and not the date and time is sent in response to the REXD command; and in its place there is "NO DATE TIME".

WEIGH READING
Command:
[II]ALRDXXXXX-YYYYYY <CR o CRLF>
In which: [II]   485 address (only when transmitting in 485 mode)
           XXXXX   rewriting number (from 00000 to 00255)
           -             - character (ASCII decimal 45)
           YYYYYY   weigh number (from 000000 to 131072)

Instrument response:
[II]B,LLLLLLLLLLUU,YYTTTTTTTTTTUU<CR o CRLF>
In which: [II]   485 address (only when transmitting in 485 mode)
                   B   scale number (from 1 to 4)
                   ,   comma character (ASCII decimal 44)
                   LLLLLLLLLL   gross weight on 10 digits
                   UU   unit of measure
                   YY   spaces in the case of null or semiautomatic tare, PT in the case of manual tare
                   TTTTTTTTTT   tare weight on 10 digits

ALIBI MEMORY CANCELLATION (only with non approved instrument)

Command:
[II]ALDL <CR o CRLF>
In which   [II]   485 address (only when transmitting in the 485 mode)

Instrument response:
[II]ALDLOK <CR o CRLF>   if the cancellation has been effective
[II]ALDLNO <CR o CRLF>   if the cancellation has not worked

The commands are ignored if one is not in the alibi memory functioning mode.

7.6 SINGLE SCALE REPEATER (rEPE)
The system is made up of one or more indicators (named **REPEATERS**) which receive the data of the display or of the weight from another indicator or from a PC/PLC (named **TRANSMITTER**) and which therefore act as repeaters.

In the **REPEATERS** once this functioning mode has been set, one should configure the "rEPE.6" or "W.rEPE" parameter in the communication mode of the PC port, **SEtuP** >> **SEriAL** >> **CoM.PC** step **(TECH.MAN.REF.)**.
For further configuration and functioning details refer to the technical manual (**SEtuP** >> **SEriAL** >> **CoM.PC** step and section "TRANSMISSION MODES OF THE SERIAL PORTS", **TECH.MAN.REF.**).

If "rEPE.6" communication protocol has been set in the **REPEATER**, one will need to set the "rEPE.6" communication protocol in the **TRANSMITTER** on the desired port.
If "W.rEPE" communication protocol has been set in the **REPEATER**, one will need to set the protocol of the continuous weight transmission on the desired port of the **TRANSMITTER**.
For further configuration details refer to the technical manual of the connected indicator.

FUNCTIONING
When the indicator is turned on it waits for the data; if it does not receive a correct communication string, the communication parameters are wrong, or it does not receive any character, it remains in the test condition, in other words, with all the central segments of the display turned on.
When the serial string of the connected instrument is identified, the indicator repeats the data of the display or the weight string of the instrument to which it is connected.

CAREFUL:
- The keys pressed in the **REPEATER** are not repeated on the **TRANSMITTER** and vice versa.
- The indicator acts as a simple weight repeater: only the **C – ON/OFF** key is enabled for turning on/off.
- In this functioning mode for the printer port only the "rEPE6" transmission mode is enabled; see section
  "TRANSMISSION MODES OF THE SERIAL PORTS", **TECH.MAN.REF.**.

Example of Dini Argeo REPEATER/TRASMITTER configuration:

	FunCt	PCModE	bAud	bit
REPEATER (DGT4)	rEPE	rEPE.6	9600	n – 8 - 1
TRANSMITTER	(*)	rEPE.6	9600	n – 8 - 1

(*) all function (excepted "MAStr")

7.7 DISPLAY WITH SENSITIVITY X 10 (VISS) (TO BE USED IN TESTING DURING THE CALIBRATION)

Simple display functioning mode with the function of switching the weight for display with sensitivity increased 10 times.

FUNCTIONING:
-   By pressing the **MODE** key one switches from the weight display with normal sensitivity to a sensitivity ten times greater; in fact, one will note that the last digit on the right of the display will have a sensitivity equal to the scale's division divided by 10.
-   The printout and the change of channel can only be done when the indicator has the standard sensitivity.
-   By pressing the **PRINT** key at length: one directly enters the SETPOINT INPUT menu (see section "OUTPUTS FUNCTIONS").

NOTE: In case the instrument is LEGAL FOR TRADE, when **MODE** is pressed, the sensitivity times 10 is displayed for five seconds after which the instrument returns to standard weight displaying. Furthermore, with the **SEtuP** >> **d.SALE** parameter set at **YES (TECH.MAN.REF.)** this displaying is possible only with capacities over or equal 100 kg (220 lb).

7.8 HOLD: FREEZING THE WEIGHT ON THE DISPLAY (hLd)

Simple display functioning mode with the function of freezing the weight shown on the display.

FUNCTIONING:
-   By pressing **MODE**, the value of the weight is held on the display, and the display shows HoLd alternately with the weight held value (every 5 sec).
-   To release the weight value on the display, press **MODE** key again.
-   By pressing the **PRINT** key at length: one directly enters the SETPOINT INPUT Menu (see section "OUTPUTS FUNCTIONS").

NOTE: if one connects various scales to the indicator, in order to pass from one scale to the other one should exit the HOLD mode, unblocking the frozen weight.

7.9 PEAK: WEIGHT PEAKS DETECTION (PEAk)

It is possible to use the instrument to store the maximum weight value measured during the weigh (PEAK), useful to measure, for example, the breaking load of the materials.

FUNCTIONING:
- By pressing the **MODE** key: the peak mode is enabled, and the display shows –PEAk–, every 5 seconds, alternated with the maximum weight reached up until that moment.
- The test terminates by pressing the **MODE** key again or when the weight peak surpasses the maximum capacity of the instrument (for an instant PEAk.oF is displayed and then the display shows the weight on the scale once again). The detected weight value will be:
  - The maximum before a rapid decrease of the weight (measurement of the ultimate load).
  - The maximum and persistent weight detected on the scale.

- To set a SET POINT one should press at length (for about 3 seconds) the **PRINT** key:
  If the functioning of a output upon reaching a set point has been configured, one enters a submenu in which it's possible to choose which parameter to modify; select "InP.StP" (see section "OUTPUTS FUNCTIONS").

NOTE: if one connects various scales to the indicator, in order to pass from one scale to the other one should exit the PEAK mode, unlocking the weight peaks detection.

SETTING SAMPLING TIME

It is possible to set the minimum time period of the peak impulse beyond which the measuring is accepted:
- Press **PRINT** at length
- If the functioning of a output upon reaching a set point has been configured, one enters a submenu in which it's possible to choose which parameter to modify; select "PIC.tIM".

The message **-tP-** appears on the display followed by a number which corresponds to the minimum time length of the impulse expressed in hundredths of seconds.

By pressing **ZERO** or **TARE** the following settable values are proposed: 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 75, 100, and 127; press **PRINT** to confirm the desired value, (the indicator will return to weighing).

TABLE OF THE OPERATING PARAMETERS IN PEAK MODE

LENGTH	SAMPLINGS PER SECOND (SENSITIVITY)	ACQUIRED VALUES	MEDIATED VALUES
1	400	1	1
2	200	1	1
3	100	1	1
4	100	4	2
5	50	4	2
10	25	4	2
20	12	4	2
50	6	4	2
100	6	8	2
127	6	12	2

The peak detection function is more or less sensitive depending on the parameter that should be set. Higher the number of samplings, and greater is the sensitivity.

If an unexpected peak is detected immediately, the sensitivity decreases.

EXAMPLE:

If 0.000Kg is on the cell of 20Kg (350 ohm), and the sampling time is equal to 1, when the PEAK mode is enabled, 0.005Kg could be displayed.

7.10 HORIZONTAL TOTALIZER (Sum of lots) (tot o)

Tot.Mod: TYPE OF TOTALISATION (NORMAL, FAST, AUTOMATIC)

Once the totalizer operating mode is selected, both horizontal and vertical, one is asked to set the type of totalization: normal (t.norM), fast (t.FASt) or automatic (Auto); with ZERO or TARE one changes the parameter; with PRINT one confirms.

- In the normal totalisation, for each accumulation operation there is the display of the weigh number and the net weight total, before the printing of the data.
- In the fast one, just the display of the "-tot-" message appears on the display, before the printing of the data.
- In the automatic one, there is the automatic acquisition of the stable weight; therefore the display of the "-tot-" message on the display and then the printing of the data.

MAX.tot: number of consecutive totalisations after which the total is automatically printed and reset

After having carried out the set weighs, the accumulated general total is printed and reset; set a value between 0 and 63.

NOTE: the value 0 disables the function

FUNCTIONING

TOTALISATION OPERATIONS

In order to carry out the totalisation it is necessary to load the weight on the scale and press the MODE key (if the automatic totalisation has not been set): the weight is accumulated in two total levels (a partial total and a general total).

To totalize, the net weight must be

- at least 1 division with non approved instrument and with normal or fast totalisation;
- at least 10 division with non approved instrument and with automatic totalisation;
- at least 20 divisions with approved instrument.

To avoid undesired accumulations, the "MODE" key is active just once; it reactivates depending on the setting of the "rEACt" parameter in the SET-UP environment, in other words, either after passing by the net zero of the scale, by instability or always (see section "REENABLING OF THE PRINTOUTS AND THE INDICATOR FUNCTIONS").

If the presence of a printer has been configured, the "MODE" key causes also the printing of the weight values.

By pressing the MODE key again, **without having reenabled the totalisation**:

- with the normal totalizer, one can temporarily view on the display the number of weighs carried out and the PARTIAL NET TOTAL accumulated until that moment (Subtotal): if the accumulated digit is more than 5 digits the visualisation takes place in two stages.

- with the fast totalizer the "no.0.unS" error message is displayed.

NOTE:

- If the gross weight is equal to zero, the indicator displays the "GroS.Er" error message is displayed.
- If the or net weight is equal to zero, the indicator displays the "NEt.Err" error message is displayed.

TOTALISATION WITH PRINTING

If the presence of a printer has been configured, upon each pressing of MODE, one prints the data programmed in step SEtuP >> SErIAL >> CoM.Prn >> Pr.ConF of the set-up environment **(TECH.MAN.REF.)**, for example:

- Weigh number
- GROSS weight
- TARE weight
- NET weight

PRINTING AND ZEROING OF THE TOTALS
The instrument has two different total levels, a partial total and a general total, which increase upon each totalisation; these may be printed and zeroed independently from each other.

To print and zero the PARTIAL TOTAL one should press for an instant the PRINT key (brief pressing); depending on the type of totalisation, various messages will be displayed:
- With **normal totalisation** the number of weighs and the accumulated total will be displayed.
- With **fast or automatic totalisation** the message "totAL" will be displayed.
The number of weighs made and the NET WEIGHT TOTAL is printed.

To print and zero the GENERAL TOTAL one should press at length the PRINT key;
If the functioning of a output upon reaching a set point one enters a submenu in which it's possible to choose which parameter to be modified; select "Pr.G.tot".
Depending on the type of totalisation; various messages will be displayed:
- With **normal totalisation** the number of weighs and the accumulated total will be displayed.
- With **fast or automatic totalisation** the message "G.totAL" will be displayed.
The number of weighs made and the NET WEIGHT TOTAL is printed.

NOTE: All the accumulated values are automatically reset each time the instrument is turned off.

SETTING OF SET POINT
To set a SET POINT one should (like for the General Total printout) press the PRINT key for about 3 seconds.
If the functioning of a output upon reaching a set point one enters a submenu in which it's possible to choose which parameter to be modified; select "InP.StP." (see section "OUTPUTS FUNCTIONS").

7.11 VERTICAL TOTALIZER (Sum by recipe) (tot S)
Like the horizontal totaliser but with each pressing of **MODE** the indicated weight is totalised and automatically tared; in this way it is possible for example to fill a container with various products.
Note: At the end of the totalisation operations, if one wants to view the gross weight on the scale one should press the **C – ON/OFF** key.

7.12 PIECE COUNTING (Coun)

This functioning mode allows to use the instrument as a counting scale, after making a "reference operation" (described in the "Counting Procedure") which consists in linking a sample weight to a specific quantity of pieces (REFERENCE value), calculating in this way the "Average Piece Weight" (APW).

Upon the selection of the functioning mode in the SET-UP ENVIRONMENT ("F.ModE" >> "FunCt" >> "Coun") the setting of some parameters is requested:

- **"uM.APW" : Unit of Measure of the average piece weight (APW).**
  - Press PRINT to enter in the step.
  - With the ZERO or TARE keys select the unit of measure (*g / kg / t / Lb*).
  - Confirm with PRINT.
  - Press many times the **C – ON/OFF** key until the display shows the message "SAVE?".
  - Press PRINT to confirm the changes made or another key to not save.

Independently from the unit of measure selected, the APW has always three fixed decimals.

- **"WAit.t" : sampling interval.**
  Setting of the sampling time (in seconds, with a decimal); greater is the time set and more precise will the calculated APW be.
  - Press PRINT to enter the step.
  - Set the desired time.
  - Confirm with /PRINT.
  - Press many times the **C – ON/OFF** key until the display shows the message "SAVE?".
  - Press ENTER/PRINT to confirm the changes made or another key to not save.

FUNCTIONING:

By pressing **PRINT** at length it's possible:
- to enter the known APW value (see "DISPLAY AND MODIFICATION OF AVERAGE PIECE WEIGHT" described later on)
- set a SET POINT:
  If one has configured the functioning of a output upon reaching a set point one accesses a submenu in which it's possible to choose which parameter to modify; select "InP.StP." (see section "OUTPUTS FUNCTIONS").

By pressing the **MODE** key:
- If there is NOT a reference one sets the REFERENCE VALUE (see "COUNTING PROCEDURE" described in the following paragraph)
- If there is a reference one alternates the display of NR. OF PIECES / WEIGHT ON THE SCALE.

By pressing the **C – ON/OFF** key
- One CANCELS the REFERENCE previously set (the display shows for an instant "CLEAR"; if there is no valid reference to be cancelled the message does not appear).
- With the following pressing of the **MODE** key (equivalent to a first pressing of the key) it's possible to set a NEW REFERENCE.

COUNTING PROCEDURE

The operations to be carried out are the following:

1) Place the empty container on the scale and press **TARE** to tare it.

2) Check that the zero is on the display and press the MODE button: the counting function activates

3) The display suggests a REFERENCE QUANTITY. The possible options are: 5, 10, 20, 30, 40, 50, 60, 75, 100, 200.

4) Press "ZERO" or "**TARE**" the number of times needed to reach the desired sample size.

5) Put the quantity of pieces chosen for the SAMPLE on the scale and press **ENTER/PRINT** to confirm or **C – ON/OFF** to cancel the operation and return to weighing..

   APW calculation:

6) Press **PRINT**; the display will show SAMPL and the indicator will calculate the **A**verage **P**iece **W**eight (**APW**). After a few instants the display will indicate the quantity selected put on the platform.

7) Add the rest of the items to count in the container and whose value will appear on the display.

8) Unload the scale (with the unloaded plate the message "PCS-0" will appear on the display).
   The APW will remain stored until the indicator is turned off, allowing for the counting of similar pieces, without having to repeat the REFERENCE operation.

9) By pressing the **MODE** key one switches from the display of the number of pieces to the display of the net weight and vice versa.

10) To carry out a new reference operation. Press the **C – ON/OFF** key when the instrument displays the number of pieces, the message "CLEAR" will appear to show the cancellation of the REFERENCE value. With the following pressing of the **MODE** key it is possible to set a new REFERENCE value, repeating the operations as described from point **3)** onwards)

NOTES:

- If the number of calculated pieces is greater than 999999, the display shows just the first 6 digits on the right.

- By changing the visualisation from 1 channel to the other, the reference is not cancelled and the chosen type of visualisation, weight or pieces, remains with the possibility of switching it by pressing **MODE**.

PIECE COUNTING IN EXTRACTION

1) Load a FULL container on the scale and press "**TARE**" to tare it.

2) Press "**MODE**": The display suggests various REFERENCE QUANTITIES: 5,10,20,30,40,50,60,75,100,200

3) Press "**ZERO**" or "**TARE**" various times until the chosen quantity is displayed.

4) From the container take off the same number of pieces and press "**PRIN**T" to confirm. The display shows "SAMPL" while the indicator calculates the Average Piece Weight. The display shows in negative the quantity extracted.

6) Continue the counting in extraction.

"Er.Mot" ERROR DUE TO WEIGHT INSTABILITY DURING THE SAMPLING

It may happen that during the sampling phase the weight is unstable and therefore it is not possible to correctly calculate the APW. The "Er.Mot" is shown remaining for about three seconds. One should therefore repeat the sampling operation.

MINIMUM WEIGHT OF THE SAMPLE

It is advisable to use a reference quantity equal or greater than 0,1% of the scale capacity.

In any case, the weight of the reference quantity should not create an APW lower than the two internal points of the converter (intrinsic limit of the instrument); if this condition takes place, during the sampling, the display will indicate for an instant: "Error " and the quantity put on the plate will not be accepted. One should therefore use a higher reference quantity.

DISPLAY AND MODIFICATION OF AVERAGE PIECE WEIGHT (APW)

It is possible to view or enter with the keyboard a known APW to speed up the reference operations.

- Press the **PRINT** key at length.

- If one has configured the functioning of a output upon reaching a set point, one accesses a submenu in which it's possible to choose which parameter to set; select "InP.PMU".

- The display shows *" APW "* and then the stored value expressed with 9 digits with five decimal digits, in the programmed unit of measure.

- Enter the APW value using the keys in the following way:
  - **MODE** key to choose the digit (blinking)
  - **ZERO** key to decrease, **TARE** key to increase
  - **C – ON/OFF** key to quickly clear the present value

- confirm with **PRINT** or press twice **C – ON/OFF** to exit without confirming

Example
Unit of measure of the APW in g
"0000.00000" means 0,0 g, therefore by entering "0001,05000" one will have 1,05 g.

PRINTING UNDER COUNTING MODE
If the presence of a printer has been configured, each time PRINT is pressed, while either weight or pieces are displayed, one prints the data programmed in the SEtuP >> SEriAL >> CoM.Prn >> Pr.ConF of the set-up environment **(TECH.MAN.REF.)**; for example:
- GROSS weight
- TARE weight
- NET weight
- Quantity of PIECES (PCS) on the scale in that moment.
- calculated APW, expressed in the set unit of measure, with three decimal digits

7.13 SIMULTANEOUS TRANSMITTER OF THE CHANNEL VALUE (tYPE: trAnSM)
Independent channel mode which makes it possible to have the simultaneous transmission (through the serial line) of the values read by each single channel and, through the optional alibi memory board, it's possible to store the transmitted weight values in the computer for data processing and/or integration. The filed values may then be recalled from the PC serial line or directly on the indicator's display for a following check.
NOTE: in this mode the zero tracking and the scale **ZERO**, **TARE** and **PRINT** key are disabled; it's not possible to set the functioning modes and the ALIBI mode is set automatically.

ONLY TECH MENU'

USER & TECH MENU'

tYPE	→	ind.Ch
	→	dEP.Ch
	→	trAnSM
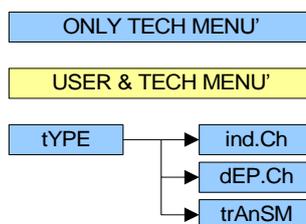
To set this mode, carry out the following procedure:
- Turn on the scale, press **TARE** while the firmware version is displayed (the display shows the "tYPE" menu).
- Press **PRINT** to enter in the "tYPE" menu (the display shows the configured mode of use of the channels)
- Select "trAnSM" and press **PRINT**.
- The instrument automatically passes to the following step.
- Press many times the **C – ON/OFF** key until the display shows the message "SAVE?".
- Press **PRINT** to confirm the changes made or another key to not save.

FUNCTIONING
By pressing the **MODE** key it is possible to read on the indicator the information relative to the weighs carried out, see paragraph "ALIBI MEMORY", "Reading of the weighs carried out" section.
- By pressing at length the **MODE** key one can SWITCH THE CHANNEL (if the scale has been configured as multichannel) see section "SELECTION OF THE CHANNEL TO BE DISPLAYED".
- It's not possible to carry out other operations.
  It's possible to only manage the functions which can be enabled through the serial commands described in the **ALIBI** mode, paragraph "ALIBI MEMORY", section "SERIAL COMMANDS", and only some serial commands described in section "SERIAL COMMANDS FORMAT" **(TECH.MAN.REF.)**.
  List of usable commands:
  PID, ALRD, ALDL, VER, REXT, REXTA, READ, MVOL, RAZF, CGCHN, ECHO, DISP, DINT, PCOK, STAT, KEYP, KEYR
  Note: the simulation of the pressing of the scale keys through the **KEYP** and **KEYR** commands, allows to only manage the functions linked to the **MODE** key.

8. OUTPUTS FUNCTIONS

The indicator is fitted with **2** inputs (optoisolator photocouplers, and 4 in the DGTP/DGTPK version) and **2 outputs photomosfet** (expandable to 6 as an option in the DGTQ model, while it is standard fitted in the DGTP/DGTPK version), whose electric specifications are shown in the section "MAIN TECHNICAL SPECIFICATIONS" of this manual, as well as in the section "CONNECTION SCHEMES" at the end of the Technical Manual.

In the **outPut** menu of the SET-UP (**SEtuP** >> **outPut**; **TECH.MAN.REF.**) it is possible to set the functioning mode of each of the outputs: the functioning mode (**FunC**), the normal status (open or closed, **no / nC**), the switching condition (direct or upon weight stability (**drCt / StbL**), active hysteresis (enabling and disabling set points) or not (single set point) (**iSt.FF / iSt.on**), the sign of the configured set point (**PoSit / nEGAt**, only for the "set point on net weight" and "set point on pieces" functioning modes), the output enabling time (**EnAb.tM**) and the delay time for enabling the output (**dELAY**).

Specifically, for the "**FunC**" step, the following functioning modes are possible: none, set point on the gross weight, set point on the net weight, set point on pieces, gross weight at zero, net weight at zero, weight instability, totalisation, set point on the pieces' total, pressing of the KEYS (PRINT, MODE, C, ZERO, TARA), error indication.

NOTE: some of functioning modes of the outputs are relative to the specific functioning modes of the instrument; see the following descriptions for the details.
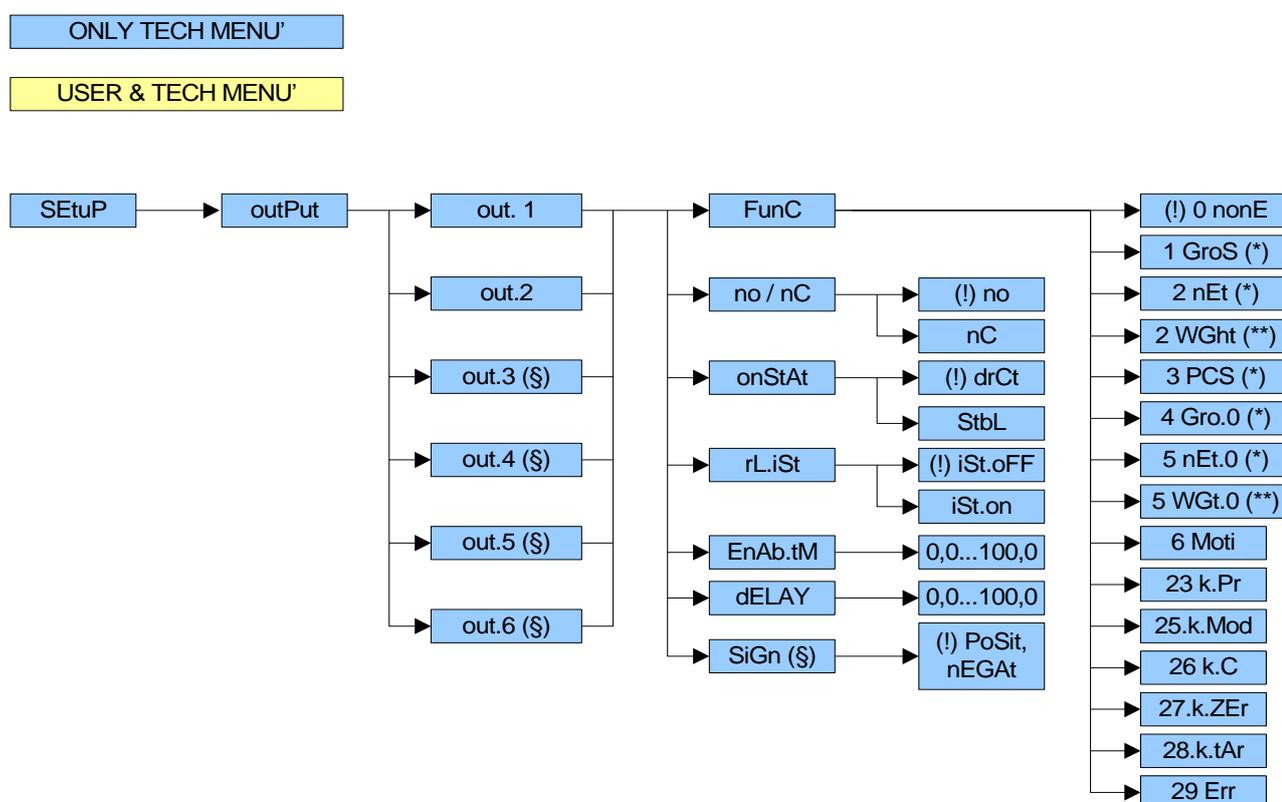
Figure 9.1 – *Steps in the SET-UP ENVIRONMENT for the OUTPUT SETTINGS*

(§) The step is displayed in the DGTQ model with the expansion board, the step is standard fitted in the DGTP/DGTPK version, while it is not displayed in the DGTQ model.
(*) The parameter is displayed only if the firmware is STANDARD type.
(**) The parameter is displayed only if the firmware is MASTER type.

If the instrument is in a single range, or in non approved dual range:
The **w1/sp1** and **w2/sp2** leds turn on to indicate respectively the enabling of OUTPUT 1 (*sp1*) and OUTPUT 2 (*sp2*)**.**

Description of the configurable functionalities for the outputs ("FunC"):

0 nonE – "No Function"

No functionality is linked to the outputs, which therefore are completely inactive.

1 GroS – "Set point on the GROSS WEIGHT" (*)

Functioning with hysteresis (**rL.iSt** "HYSTERESIS" parameter set at **iSt.on**)

By selecting this functioning mode one enables the output function on the GROSS weight; one enters two SET POINTS for each output; a DISABLING one, which, when the gross weight is below it, disables the output; and an ENABLING one, which when the gross weight is equal or greater than it, enables the output. By pressing **PRINT** at length it's possible to enter the SET POINT value (DISABLING and ENABLING) for each configured output:

-   If the functioning mode provides for the modification of a parameter one enters a submenu in which it's possible to choose which parameter to modify; select InP.StP.
-   The display shows " S.1 on " (output 1 ENABLING SET POINT): press **PRINT,** enter the weight value using the keys in the following way:
      - **MODE** key to choose the digit (blinking)
      - **ZERO** key to decrease, **TARE** key to increase
      - **C – ON/OFF** key to quickly clear the present value
-   confirm with **PRINT** or press twice **C – ON/OFF** to exit without confirming
-   The display shows " S.1 oFF " (output 1 DISABLING SET POINT): press **PRINT,** enter the weight value with the keyboard and confirm with **PRINT** (use the **C – ON/OFF** key to quickly clear the present value).
-   Do the same for the following outputs (if present).
-   When the programming of the set points is done, exit with the **C – ON/OFF** key.

Functioning without hysteresis (**rL.iSt** "HYSTERESIS" parameter set at **iSt.oFF**)

The functioning mode is the same as the previous, except that one enters just one SET POINT for each output (" S.1 on "); due to this **it's not possible to enter the " S.1 oFF " parameter.**

NOTES

- If all the outputs have the "NONE" functioning mode, or if the selected functioning mode does not require the entry of a SET POINT value, the pressing of the **PRINT key at length does not allow to access the configuration of the set points.**

With the indicator off or in standby the outputs are normally open (**no**).

- The DISABLING SET POINT must be equal or less than the ENABLING one; if in the DISABLING SET POINT a value is entered and confirmed which is greater than the ENABLING one, the indicator will set the set point at 0, until a valid value is entered.

  If in the ENABLING SET POINT one enters a confirms a value lower than the DISABLING one, the value will be accepted, but the DISABLING SET POINT will be put at 0.

- The 0 value is valid on both the set point values.
- The check on the weight remains active on this value also while modifying the SET POIINT until the new value is confirmed.
- If the weight is not valid the outputs will not be disabled.
- At start-up, the outputs are managed from when the weight is displayed and these take on the configuration set in the set-up environment. These are not managed inside the set-up.
- The tare operations are active.
- The length of the enabling impulse of the outputs for the keys linked to these is about 2 seconds (PRINT, MODE, C, ZERO, TARE keys). The outputs are enabled by pressing the key; if the key pressing time is greater than 2 seconds the output is disabled after 2 seconds and remains disabled until the following pressing of the key.
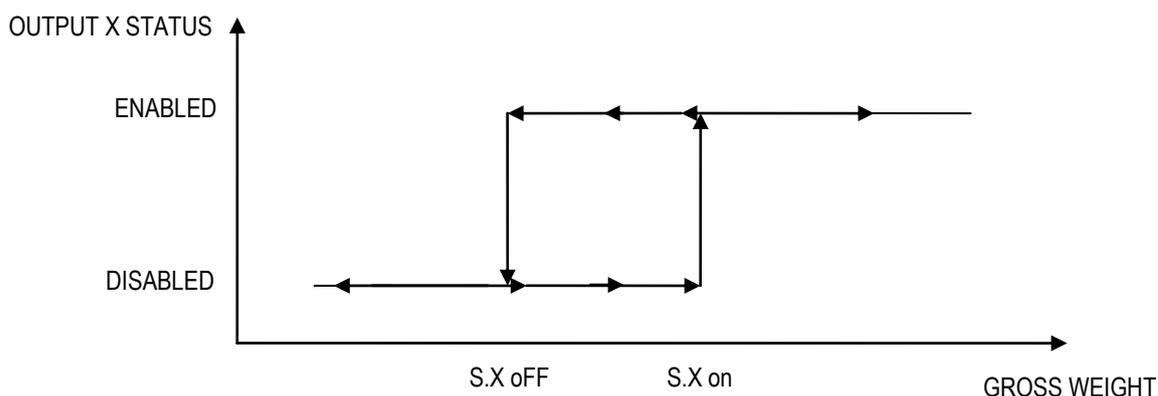
Figure 9.2 – *Diagram showing the output functioning with active hysteresis, in which X indicates the output number.*

IMPORTANT: the weight thresholds set with the **PRINT** key are common to all the connected scales; therefore it is not possible to have different thresholds for different scales. The value takes on the unit of measure and the decimals of the selected channel; for example, if one sets 1000 one will have the following set point values:

Channel	Unit of Measure	Decimals	Set Point Value
1	kg	3	1,000 kg
2	g	0	1000 g
3	kg	2	10,00 kg
4	g	1	100,0 g

2 nEt – "Set point on NET WEIGHT" (*)

By selecting this functioning mode, one enables, in the normal scale status, the function of the output on the NET weight; the SET POINTS and the specifications are entered the same way as for the functioning on the gross weight but it's possible to set the functioning of the set points on the negative weight:

FUNCTIONING WITH HYSTERESIS (**rL.iSt** "HYSTERESIS" parameter set at **iSt.on**)

Functioning on negative weight (**SiGn** parameter set at **PoSit**)
The specifications are the same for the functioning mode on the gross weight.
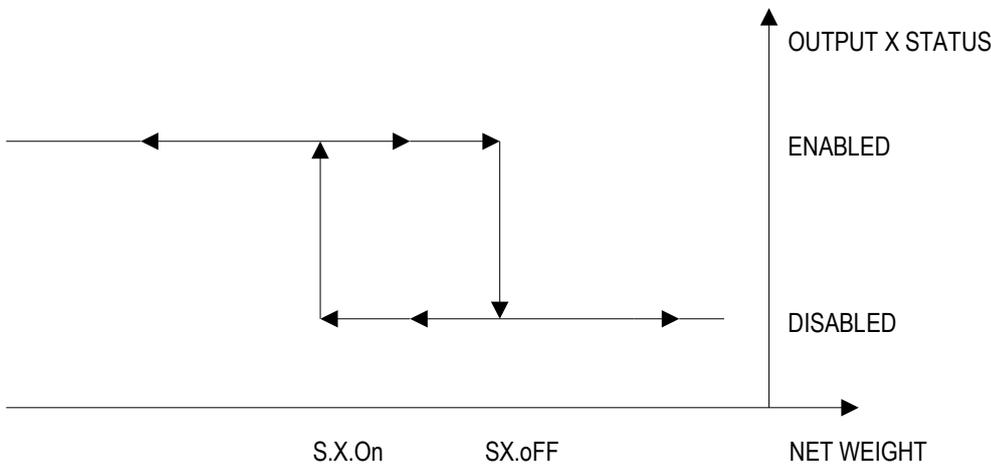
Functioning on negative weight (**SiGn** parameter set at **nEGAt**)
By selecting the functioning mode on the negative weight, one enables the output function on the NEGATIVE WEIGHT; one enters two NEGATIVE SET POINTS for each output; a DISABLING one, which, when the net weight is greater than it, the output is disabled, an ENABLING one, which when the net weight is equal or less than it, the output is enabled. By pressing **PRINT** at length it's possible to enter the NEGATIVE SET POINT values (DISABLING and ENABLING) for each configured output:
-    If the functioning mode provides for the modification of a parameter one enters a submenun in which it's possible to choose which parameter to modify; select InP.StP.
-    The display shows " S.1 on " (output 1 ENABLING SET POINT): press **PRINT,** enter the weight value using the keys in the following way:
     - **MODE** key to choose the digit (blinking)
     - **ZERO** key to decrease, **TARE** key to increase
     - **C – ON/OFF** key to quickly clear the present value
-    confirm with **PRINT** or press twice **C – ON/OFF** to exit without confirming
-    The display shows " S.1 oFF " (output 1 DISABLING SET POINT): press **PRINT,** enter the weight value with the keyboard and confirm with **PRINT** (use the **C – ON/OFF** key to quickly clear the present value).
-    Do the same for the following outputs (if present).
-    When the programming of the set points is done, exit with the **C – ON/OFF** key.

FUNCTIONING WITHOUT HYSTERESIS (**rL.iSt** "HYSTERESIS" parameter set at **iSt.oFF**)
The functioning mode is the same as the previous, except that one enters just one SET POINT for each output (" S.1 on "); due to this **it's not possible to enter the " S.1 oFF " parameter.**

Figure 9.3 – *Diagram showing the negative functioning of the outputs with active hysteresis, in which X indicates the output number.*

IMPORTANT: the weight thresholds set with the **PRINT** key are common to all the connected scales; therefore it is not possible to have different thresholds for different scales. The value takes on the unit of measure and the decimals of the selected channel; for example, if one sets 1000 one will have the following set point values:

Channel	Unit of Measure	Decimals	Set Point Value
1	kg	3	1,000 kg
2	g	0	1000 g
3	kg	2	10,00 kg
4	g	1	100,0 g

2 WGht – "Set point on the WEIGHT" (**)

By selecting this functioning mode one enables the output function on the weight (net and gross). The specifications are the same of the functioning on the net weight, but it is also possible to set the functioning of the set-points on the negative gross weight.

The modes in which one access to the submenu for entering the values of the set –points are different depending on the functioning mode selected in the **F.ModE** >> **FunCt** step **(TECH.MAN.REF.)**:

- in the MAStr functioning mode, one has to press two times in rapid succession the **MODE** key;
- in the rEPE functioning mode, one has to press at length the **PRINT** key.

NOTE: The functioning of this type of output is possible in the "MAStr" mode with "EXtEnd" protocol (see the section "MULTISCALE REPEATER (MAStr)"), or in the "rEPE" mode with the PCModE step set on "W.rEPE" **(TECH.MAN.REF.)**.

3 PCS – "Set point on the PIECES" (only for Counting mode) (*)

By selecting this functioning mode, one enables, in the normal scale status, the function of the outputs on the number of pieces shown on the display; the SET POINTS and the specifications are entered the same way as for the functioning on the **NET** weight, in other words, it's possible to set the functioning of the set points on the negative number of pieces.

4 Gro.0 – "GROSS WEIGHT AT ZERO" (*)

By selecting this functioning mode, one enables, in the normal scale status, the function of the outputs on the GROSS weight at 0.

5 nEt.0 – "NET WEIGHT AT ZERO" (*)

By selecting this functioning mode, one enables, in the normal scale status, the function of the outputs on the NET weight at 0.

5 WGt.0 – "WEIGHT AT ZERO" (**)

By selecting this functioning mode, one enables the function of the outputs on the weight (net and gross) at 0.

NOTE: The functioning of this type of output is possible in the "MAStr" mode with "EXtEnd" protocol (see the section "MULTISCALE REPEATER (MAStr)"), or in the "rEPE" mode with the PCModE step set on "W.rEPE" **(TECH.MAN.REF.)**.

6 Moti – "INSTABILITY"

By selecting this functioning mode, one enables, in the normal scale status, the function of the outputs on the unstable weight.

NOTE: The functioning of this type of output is possible in the "MAStr" mode with "EXtEnd" protocol (see the section "MULTISCALE REPEATER (MAStr)"), or in the "rEPE" mode with the PCModE step set on "W.rEPE" or "rEPE.6" **(TECH.MAN.REF.)**.

23 K.Pr - "PRINT KEY"

By selecting this functioning mode, in the normal scale status, the output is enabled (for about 2 seconds) when the PRINT key is pressed.

25.K.Mod – "MODE KEY"

By selecting this functioning mode, in the normal scale status, the output is enabled (for about 2 seconds) when the MODE key is pressed.

26 K.C – "C KEY"

By selecting this functioning mode, in the normal scale status, the output is enabled (for about 2 seconds) when the **C – ON/OFF** key is pressed.

27.K.ZEr – "ZERO KEY"

By selecting this functioning mode, in the normal scale status, the output is enabled (for about 2 seconds) when the ZERO key is pressed.

28.K.tAr – "TARE KEY"

By selecting this functioning mode, in the normal scale status, the output is enabled (for about 2 seconds) when the TARE key is pressed.

29 Err – "ERROR INDICATION"

By selecting this functioning mode in the STANDARD type firmware, in the normal scale status, the output is enabled on the invalid weight (OVERLOAD / UNDERLOAD) is enabled or without the signal coming from the cell (DISCONNECTED CELL).

NOTES:
- In the **ind.Ch** and **trAnSM** mode the output is enabled only when the condition takes place on the selected channel.
- In the **dEP.Ch** modes the output is enabled when the condition takes place on any of the set channels.

By selecting this functioning mode in the MASTER type firmware, the output is enabled when the repeater is not communicating with the weighing system; depending on the functioning mode selected in the **F.ModE** >> **FunCt** step **(TECH.MAN.REF.)**; this occurs when:
- one enters in the setup environment of the master indicator or it displays "ECo n" (in the "MAStr" mode);
- the repeater displays all the central segments (in the "rEPE" mode).

9. INSTRUMENT MESSAGES WHILE IN USE

MESSAGE	DESCRIPTION
AL.Err	It is displayed when one selects the alibi memory functioning mode, and upon start-up, the alibi memory is not connected or there are communication problems between the indicator and the board. The "Unit of measure conversion" functioning is automatically set, but not saved in the set-up environment.
buSy	Print under way (PRN serial port is occupied) or indicator waiting to transmit a printing to a PC.
unStAb	One is trying to print with an unstable weight.
un.oVEr	One is trying to print with the weight in under load or in overload, in other words, with a weight of 9 divisions greater than the capacity or of 100 divisions below the gross zero.
▬ ▬ ▬ ▬ ▬	The weight is 9 divisions above the **Maximum Capacity.**
▬ ▬ ▬ ▬ ▬	Approved instrument: the weight is under the gross zero (-100 divisions). Non approved instrument: the weight is under the gross zero (- capacity – 9 divisions).
GroS.Er	One is trying to print with a not positive gross weight (equal or less than zero).
NEt.Err	One is trying to print with a not positive net weight (equal or less than zero).
LoW	Net weight less than the minimum weight provided for the printing or the totalisation.
no.0.unS	Weight not passed by net 0 or by instability.
ConV.	In standard mode, with approved instrument, one is trying to print while the instrument is converting the unit of measure.
no in	In the input/output mode (set as "in.out"), one is trying to acquire a second time the input weight.
no out	In the input/output mode (set as "in.out"), one is trying to acquire a second time the output weight.
no 1	In the input/output mode (set as "G.t." or "1st.2nd"), one is trying to acquire a second time the input weight.
no 2	In the input/output mode (set as "G.t." or "1st.2nd"), one is trying to acquire a second time the output weight.
Er.Mot	In the counting mode, the sampling has not been made because the weight is unstable.
Error	In the counting mode, the sampling has not been made because one should use a higher reference quantity.
Err.CLK	Communication problems with the date/time of the indicator: check the F.ModE >> CLoCK step of the setup **(TECH.MAN.REF.)**.
PrEC.	It is displayed if one tries to calibrate a point without first having confirmed the number of calibration points
ErMot	Weight unstable during the acquisition of a point during calibration.
ErPnt	During the acquisition of a calibration point a null value has been read by the converter.
Er – 11	Calibration error: a too small sample weight has been used; it is advisable to use a weight equal to at least half of the scale capacity.
Er – 12	Calibration error: the acquired calibration point (tP1 o tP2 o tP3) is equal to the zero point (tP0).
Er – 37	Scale to be calibrated, **TECH.MAN.REF.** (it is advisable to carry out a technical default, "dEFAu" parameter, before proceeding). NOTE: press the **TARE** key to access the setup.
Er – 39	Scale to be calibrated, **TECH.MAN.REF.** (it is advisable to carry out a technical default, "dEFAu" parameter, before proceeding). NOTE: press the **TARE** key to access the setup.
ECo X	It is displayed for an instant if the master can connect to the slave X; if the connection is not possible, the message remains fixed and the master emits an acoustic signal.

10. PRINT EXAMPLES

```
WEIGHING NR.          00000001
GROSS                 2,000 kg
TARE                  0,500 kg
NET                   1,500 kg


WEIGHING NR.          00000002
GROSS                 3,000 kg
TARE                  1,000 kg
NET                   2,000 kg



WEIGHING NR.          00000002
TOTAL NET             2,862 kg
TICKET NR.                   2
24/08/06  16:54:10

Totalizer Mode
```

```
GROSS (HOLD)     3,326 kg
TARE    (HOLD)   1,364 kg
NET     (HOLD)   1,926 kg
TICKET NR.              1
24/08/06  16:54:10

Hold Mode
```

```
SCALE 1        0.000 kg
SCALE 2        4.000 kg
SCALE 3        5.000 kg
SCALE 4       10.000 kg
SUM           19.000 kg
TICKET NR.           1
16/08/06  11:56:10


Master Mode (Sum mode)
```

```
HEADING 1
HEADING 2
HEADING 3
HEADING 4
 GROSS              8,000 kg
 TARE               3,000 kg
 NET        5,000 kg
 TICKET NR.    1
 24/08/06  16:54:10


Standard Weight Indicator Mode
(VISS, Std, ntGS)
```

```
GROSS                  1,000 kg
TARE                   0,500 kg
NET                    0,500 kg
PCS                       100
APW                    0,005 kg
TICKET NR.                   2
24/08/06  16:54:10

Piece Counting Mode
```

```
GROSS (PEAK)   1,500 kg
TARE    (PEAK)   0,000 kg
NET     (PEAK)   1,500 kg
TICKET NR.             1
24/08/06  16:54:10

Peak Mode
```

DECLARATION OF CONFORMITY

This device conforms to the essential standards and norms relative to the applicable European regulations. The Declaration of Conformity is available in the web site www.diniargeo.com

WARRANTY

The ONE YEAR warranty period begins on the day the instrument is delivered. It includes spare parts and labour repair at no charge if the INSTRUMENT IS RETURNED prepaid to the DEALER'S PLACE OF BUSINESS. Warranty covers all defects NOT attributable to the Customer (such as improper use) and NOT caused during transport.

If on site service is requested (or necessary), for any reason, where the instrument is used, the Customer will pay for all of the service technician's costs: travel time and expenses plus room and board (if any).

the Customer pays for the transport costs (both ways), if the instrument is shipped to DEALER or manufacturer for repair.

The WARRANTY is VOIDED if any of the following occurs: repairs or attempted repairs are made by unauthorised personnel, connected to equipment installed by others, or is incorrectly connected to the power supply, or instrument has defects or damage due to carelessness or failure to follow the guidelines in this instruction manual.

This warranty DOES NOT provide for any compensation for losses or damages incurred by the Customer due to complete or partial failure of instruments, even during the warranty period.

AUTHORIZED SERVICE CENTRE STAMP

WEIGHT INDICATOR SERIES

DGT60

ATEX 3GD VERSION

(FOR USE IN A HAZARDOUS AREAS)

ATTACHMENT

INDEX

1. ⚠️ WARNINGS ⚠️

- **The use of the instrument in hazardous areas requires a special attention and special precautions during the use, installation and maintenance**

- Avoid accumulations of dust

- WARNING! electrostatic hazard, clean only with wet cloths or antistatic product

- The instrument has been approved for using in zones having precise features: do not install and use the instrument in environments different than those provided for.

- **The installation, maintenance and repair of the instrument, must be made by qualified and authorized personnel.**

- The maintenance must be made after removing the voltage/power supply of the instrument.

- Only spare parts approved by Dini Argeo must be used.

- Do not paint.

- The ATEX safety of the weighing system is guaranteed **only** if the system is installed, used and taken care of following the instructions given in this manual.

- Avoid accumulations of electrostatic charges; therefore, when using the instrument in a hazardous zone, the appropriate work clothing must be used by the operator or the maintenance person.

- Do not cover the instrument with coverings made by materials which could have electrostatic charges

- **The safety of the instrument depends on the IP65 protection degree and on the limited breathing case (nR type of protection, see EN60079-15).**
  Do not tamper with or alter with the instrument's seals (cable passings, i, locking screws tightening).
  In the case of installation or maintenance must be respect the IP65 protection degree and the "limited breathing" protection mode by closing all the holes with caps and/or cable glands for inserting cables in the weight indicator case: close well the cap of all the cable glands with the relative appropriate cable section, the cap of all the wires, the locking screws tightening of the indicator and the various instrument connectors (cell, etc.), using the wrenches having the relative measurement (see the "Instructions for installation in hazardous area" section).

- It is forbidden to modify or repair the instrument with components not conforming to the declaration CE; this action compromises the intrinsic safety of the instrument (**with a subsequent loss of the Ex approval**) and the nullification of the product warranty.

- It is forbidden to connect the instrument to modules not provided for by the declaration CE; this action compromises the intrinsic safety of the instrument (**with a subsequent loss of the Ex approval**). Contact Dini Argeo srl for further information.

- **All the cables must be installed and protected in accordance with the standard norms for electrical equipment**

- **All the peripheral units (for instance printers, converters, etc.), which are not marked ATEX, should be installed**

- Be very careful when using the instrument; any sparks could cause an explosion.

- The DFTL remote control in not ATEX certified, so it cannot be used with this indicator

- Every 5 years the indicator must be returned from the manufacturer DIni Argeo for the verification and the eventual recovery of the Atex characteristics.

- The instrument is equipped with a test port for testing the properties of restricted breathing to be made after the installation and during maintenance(see Figure 1).
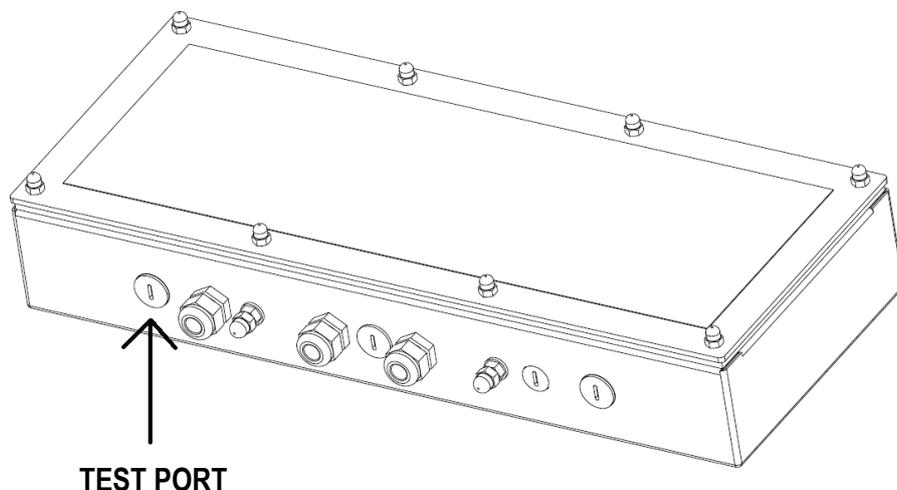

TEST PORT

Figure 1

- Avoid direct sunlight

Warning:
- Read carefully this document and apply the his technical specifications.
- This manual has been made as carefully and exactly as possible; in any case, your suggestions are always welcome.
- To make it simpler, in this document, the name DGT60 has been used for the DGT60 device as well as for the DGT60AN and DGT60PB devices; therefore, where "DGT60" is mentioned, it is intended to be "DGT60", "DGT60AN" and "DGT60PB".

⟨Ɛx⟩   2. DESCRIPTION of the SYSTEM   ⟨Ɛx⟩

The DGT60 series' electronic weighing terminals "ATEX3GD" version are devices for hazardous areas having presence of gas, designed and made according to the ATEX 94/9/CE directive, group II category 3GD according to the EN60079-0, EN60079-15 and EN60079-31 norms with the Eex "limited breathing" protection mode for the gas and with the limitation for the maximum superficial temperature of the case (tc e IP) for the dust.

⟨Ɛx⟩   3. MARKING   ⟨Ɛx⟩

⟨Ɛx⟩ II 3G Ex nR IIC T6 Gc X   Specific marking against the explosions in the presence of gas:
           II   Group II (surface);
           3   Category 3 equipment;
           G   Explosive atmospheres caused by gas, fog or vapours
           Ex nR IIC T6 Gc X   Protection mode, gas group, class of temperature

⟨Ɛx⟩ II 3D Ex tc IIIC T130°C Dc IP68 X   Specific marking against the explosions in the presence of dust:
           II   Group II (surface);
           3   Category 3 equipment
           D   Explosive atmospheres caused by dust
           Ex tc IIIC T130°C Dc IP68 X Protection mode, IP Protection degree of the metallic case (according to
EN60529) and maximum superficial temperature of the case.

NOTE: **The equipment have also the IP65 protection degree.**

Hazardous zones		Category according to the 94/9/CE directive
Gases, hazes or vapours	Zone 0	1G
Gases, hazes or vapours	Zone 1	1G or 2G
Gases, hazes or vapours	Zone 2	1G, 2G or 3G
Powders	Zone 20	1D
Powders	Zone 21	1D or 2D
Powders	Zone 22	1D, 2D or 3D

⟨Ex⟩ 4. INSTRUCTIONS FOR INSTALLATION IN HAZARDOUS AREA ⟨Ex⟩

The equipment must be installed and maintained according to the applicable norms relative to installations in hazardous area (different from the mines) classified for the presence of gas as ZONE 2 or for the presence of dusts as ZONE 22; for example: (EN 60079-14:2008 / IEC 60079-14:2007, EN 60079-17:2007 / IEC 60079-17:2007, EN 1127-1:2007) and the norms applicable in the zone and in the installation environment.

For the power supply it is necessary use a cable with minimum section is 0,5mm².

Connect the terminal to the ground using the appropriate anti-rotation plug.

Minimum and maximum diameter of cable which can be used with relatives cable gland:

Cable gland	min-max cable diameters in mm	Wrench measurement in mm
PG7	3-6,5	14
PG9	4-8	17

In order to connect the 230 Vac power supply:

- Unscrew the indicator's locking screws, and the one of the fixing bracket belonging to the internal power adapter (9);
- Unscrew the locking cap of the PG9 cable gland;
- Put the power supply cable (7) through the PG cable gland and connect it to the internal power adapter as shown in the figure. The wires must be installed on the lower side of the connectors. The yellow-green wire is to be connected to the pin of the container.
- Connect with the yellow-green wire (8), the pin and the central connector of the internal power adapter.
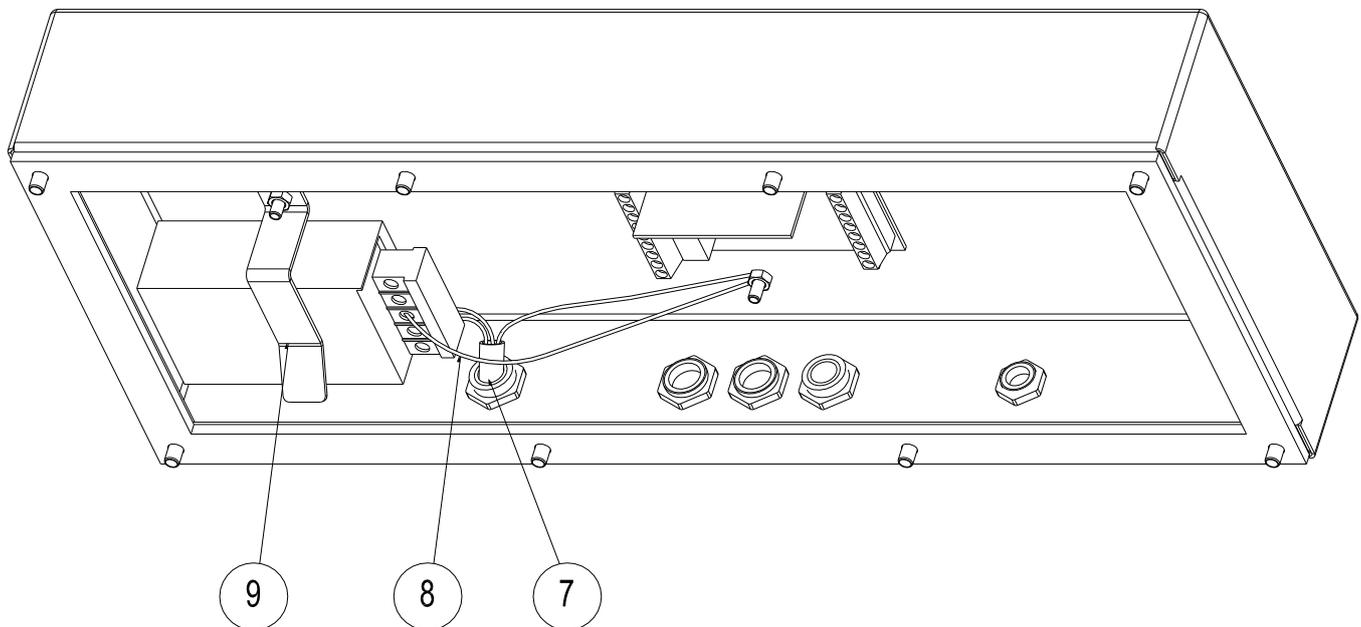
-   Lock the internal power adapter with the appropriate bracket;
-   Lock the fairlead cap of the cable gland;
-   Close the indicator making sure that the wires do not get stuck with the front panel's seal and the case.
-   Tighten the locking screws.

NOTE: Make sure that the metallic box is closed well before using the indicator

To connect the cable coming from the platform or from the load cell/s:
-   Unscrew the indicator's locking screws;
-   Unscrew the locking cap of the PG9 cable gland
-   Pass the load cell cable in the cable gland and connect it to the indicator following the instructions shown in the section "CONNECTION TO THE LOAD RECEIVER" of the technical manual **(TECH.MAN.REF.)**.
-   Closing well the cap of cable gland;
-   Close the indicator making sure that the wires do not get stuck with the front panel's seal and the case.
-   Tighten the locking screws.

NOTE: Make sure that the metallic box is closed well before using the indicator

DECLARATION OF CE CONFORMITY

We   **DINI ARGEO Srl,**
            Via della Fisica, 20
            41042 Spezzano di Fiorano - MODENA - ITALY

Declare under our responsibility that the following product:

        - "DGT60XX3GD" series' electronic weighing terminal

Described in this declaration conform to the following directives:

-   **EMC 2004/108/CE Directive**
-   **2006/95/EU Directive**
-   **ATEX 94/9/CE Directive**
-   **2009/23/CE Directive**

The conformity is confirmed by the observance of the following norms:

IEC 60079-0:2007 / EN 60079-0:2009   EN 61000-6-2:2005, EN 61000-6-4:2007,
IEC 60079-15:2010 / EN 60079-15:2010   EN 61326-1:2006, EN 55011:2007
IEC 60079-31:2008 / EN 60079-31:2009   EN 61010-1:2001,
EN 1127-1:2007   EN 45501:1992 (°)
EN 13463-1:2009

(°) the EN 45501 norm is cited when the instrument is submitted to a metric verification ("stamping")

Markings:

-   ⟨Ex⟩ **II 3G Ex nR IIC T6 Gc X**
-   ⟨Ex⟩ **II 3D Ex tc IIIC T130° Dc IP68 C X**

Spezzano di Fiorano, 01/10/2012

                                        Signature
                                        Marco Bertoni
                                        President