ARPEGE MASTERK

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USER ADJUSTMENT MANUAL IDe100 / IDe200 / IDe300 / IDe400 / IDe500

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USER ADJUSTMENT MANUAL IDe100 / IDe200 / IDe300 / IDe400 / IDe500

Date	Edition No.	Subject of the modification
23/04/2001	00	Original
7/11/2001	01	Update
18/01/2002	02	Addition of the IDe300 indicators, and Update
17/04/2002	03	Update of the IDe300's indicators lamp
27/05/2002	04	Update (orthography + diagram + Word 2000)
17/10/2002	05	Addition of the change of sign in menus and summary.
27/11/2002	06	Update 3.10. , 3.5. and 5.
03/03/2003	07	Modification of the following parameters: Indicator type, m/s, and addition of explanations on the error messages.
12/04/2005	08	Update of the second generation of the IDE board.
29/04/2005	09	Addition of the positioning of the jumpers and warnings according to the operating software.
13/02/2008	10	Update.
02/08/2012	11	Update.
19/02/2019	12	Update and correction of label's parameters "**NET WEIGHING**" and "**ZERO TRACKING**".

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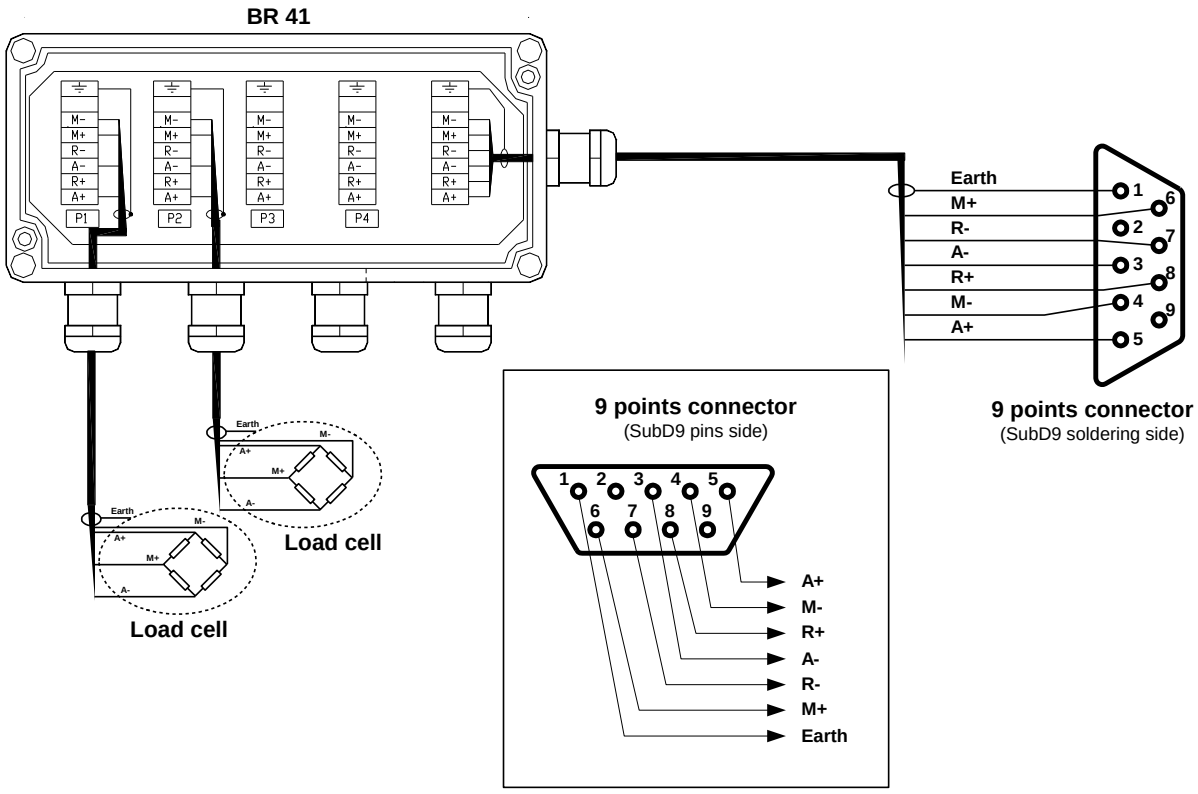
**: The management of the memory board is not available for all software types, it depends of the software edition.*

1. ⚠ WARNINGS ⚠

PRINCIPLE OF THE ANALOG LOAD CELLS' CONNECTION ON THE IDE INDICATOR.

1°/ Verify that the ***9 points connector is disconnected from the connector M1 of the IDe indicator***.

2°/ Make the connection of the load cells and the connection cable inside the junction box, ***as showed below***. (Example with a BR41 and two load cells)



3°/ ***Before connecting the load cell's cable on the connector M1 of the IDE, you must verify the following impedances on the 9 points connector:***

- Between the pins ***3 and 5 (A- and A+)*** : The impedance must be ***greater than 42Ω.***
- Between the pins ***7 and 8 (R- and R+)*** : The impedance must be ***greater than 42Ω.***
- Between the pins ***3 and 7 (A- and R-)*** : The impedance must be ***equal to 0Ω.***
- Between the pins ***5 and 8 (A+ and R+)*** : The impedance must be ***equal to 0Ω.***

Remark:

If the load cells' power supply is on short circuit, this will cause the damage of the IC13 MIC4424.

2. HARDWARE DESCRIPTION

2.1. Technical characteristics

Maximum number of scale divisions (in legal for trade mode) : 6000.
Sensitivity : 0.75 µV
Power supply voltage of the weighing cell : 7.5V alternative square wave.
Number of measurements / second, (fast) : 60, (180)
Load impedance (analog load cells) : ≥ 45 ohms

Zero displayed at 1/4 verification scale interval
Interactive digital setting on front panel.
Mains voltage 115 V, 50/60 Hz.
DC power supply 12 V (Or 24 V optional).
Power consumption: max 15 to 25 VA, depending on the configuration.
Internal clock and memory backed up by battery.

On the IDe 100:
5½ -digit weight display of 14 mm.
Operator guide through 8 alphanumeric characters of 5 mm.
Keypad: - 4 metrological keys,
- and 5 application keys.

On the IDe 200:
5½ -digit weight display of 14 mm.
Operator guide through 8 alphanumeric characters of 5 mm.
Keypad: - 4 metrological keys,
- numeric keypad with 16 application keys.

On the IDe 300:
6-digit weight display of 18 mm.
Operator guide through 2 lines of 16 alphanumeric characters of 16 mm.
Keypad: - 4 metrological keys,
- alphanumeric keypad with 52 application keys.

On the IDe 400:
LCD screen of 240 pixels by 64 pixels composed of the weight on 6 digits of 15 mm and of an operator guide.
Keypad: - 4 metrological keys,
- alphanumeric keypad with 52 application keys.

On the IDe 500:
LCD screen of 240 pixels by 128 pixels composed of the weight on 6 digits of 15 mm and of a complete operator guide.
Keypad: - 4 metrological keys,
- 5 application keys,
- and a 102 keys PC keyboard.

2.2. Peripherals

In standard version the IDe indicator offers:

* 2 Serial links:

COM1 **:** RS232 and/or RS485 2 wires. (Short distance link: 10 meters max.)

COM2 **:** Passive current loop, or in option: RS232, RS485, 0/10V, 4/20mA, active or passive current loop, Ethernet. (Long distance link: the maximal length depends of the type of the link)

* A USB slave interface:

USB **:** For the communication with a PC. (Short distance link: 3 meters max.)

* A parallel interface:

LPT **:** For printing through a parallel printer. (Short distance link: 3 meters max.)

* An input for the analog load cells: (For the indicators in analog version)

M1 **:** 6 wires load cells(s). (Long distance link: 150 meters max.)

Reminder: Only one cable must be connected on M1. Load cells are wired up in parallel separately in a connection box.

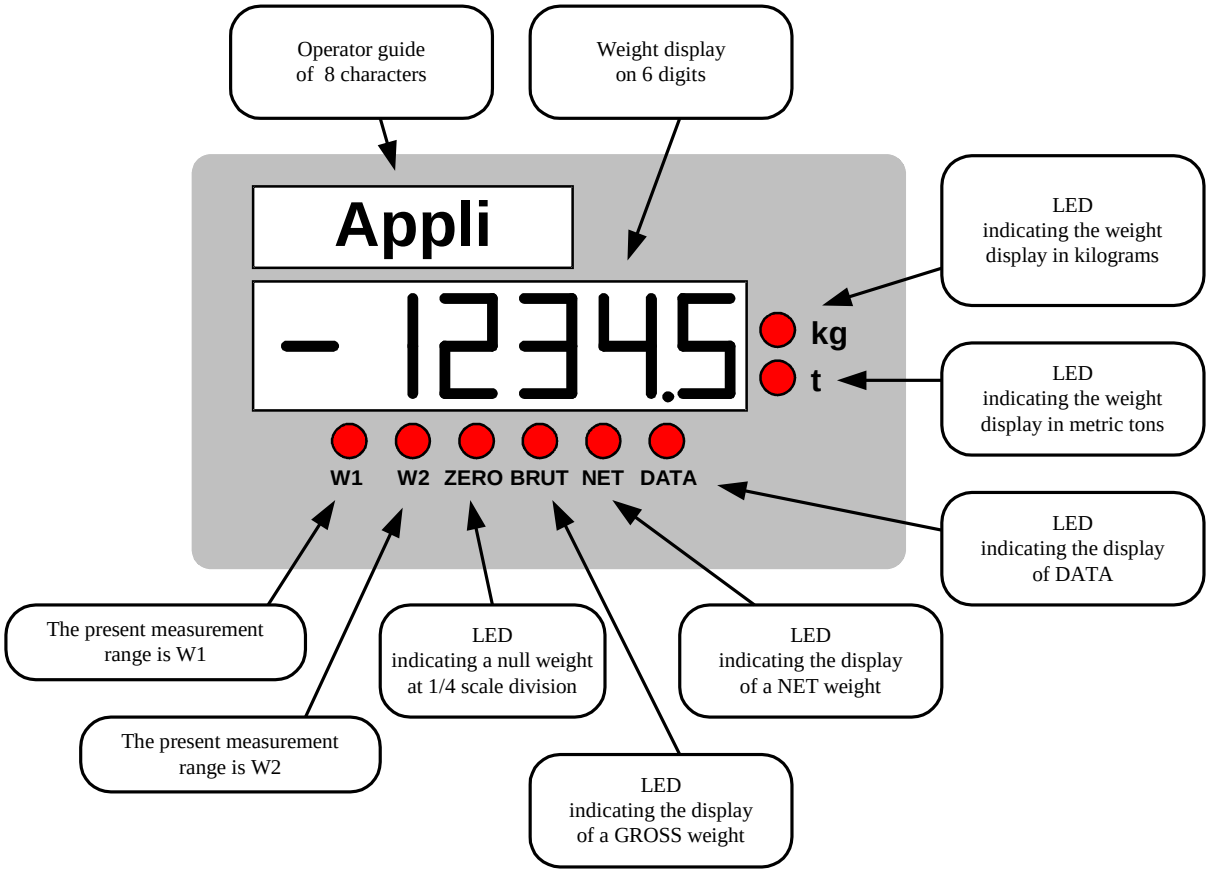
* A CAN bus interface: (For indicators in numeric versions or in option for the analog versions)

MASTER CAN **:** Digital load cell(s), BIP terminal, Repeater. (Long distance link: 1 000 meters max.)

3. THE FRONT PANEL

3.1. Displays and LEDs

3.1.1. IDe 100/200.



Remarks:

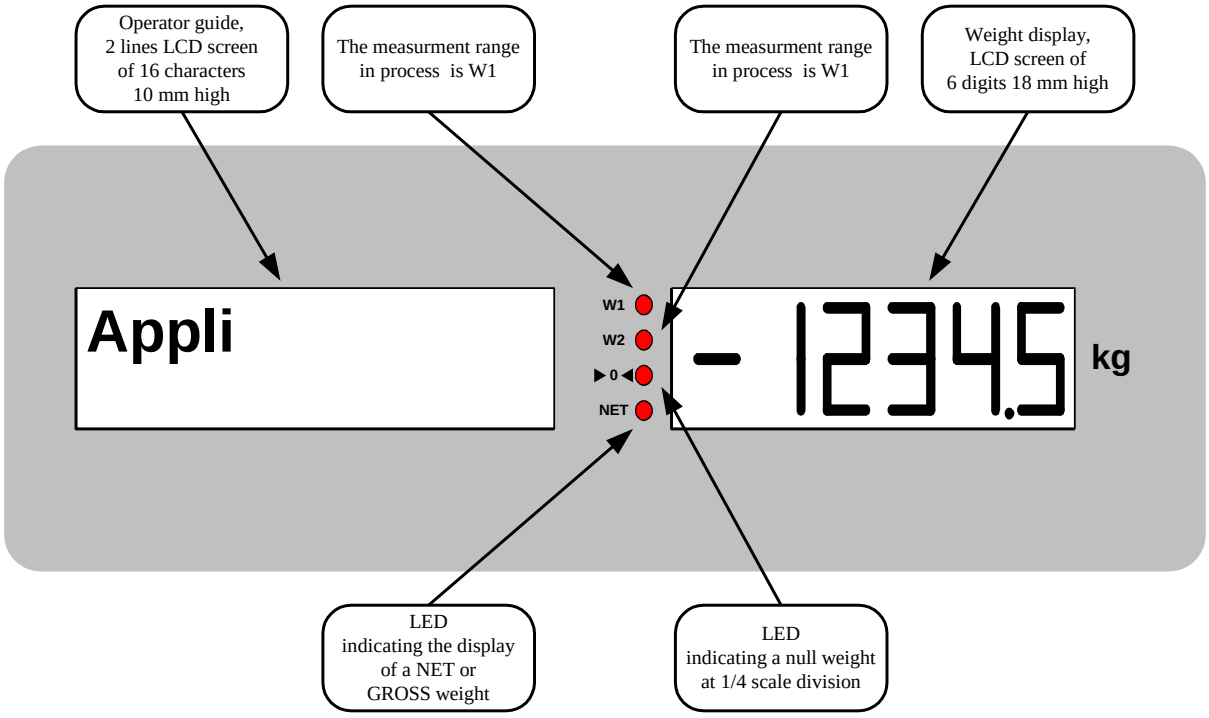
- The kg or t indicator lamps also indicate if the weight is immobile: LED flashing ⇒ weight unstable.
  LED steady ⇒ weight stable.

- In user adjustment mode the display indicates the number of verification scale intervals measured at a precision of 1/10:

Example: For 50000 kg / 20 kg weighbridge, the verification scale interval is 20 kg, hence 1/10th verification scale interval = 2kg.

The standard masses placed on the weighbridge weigh 10000 kg.
The display indicates 0500.2 verification scale intervals.
The result of the measurement is 5002 times 2kg = 10004 kg (Error of +4 kg).

3.1.2. IDe 300

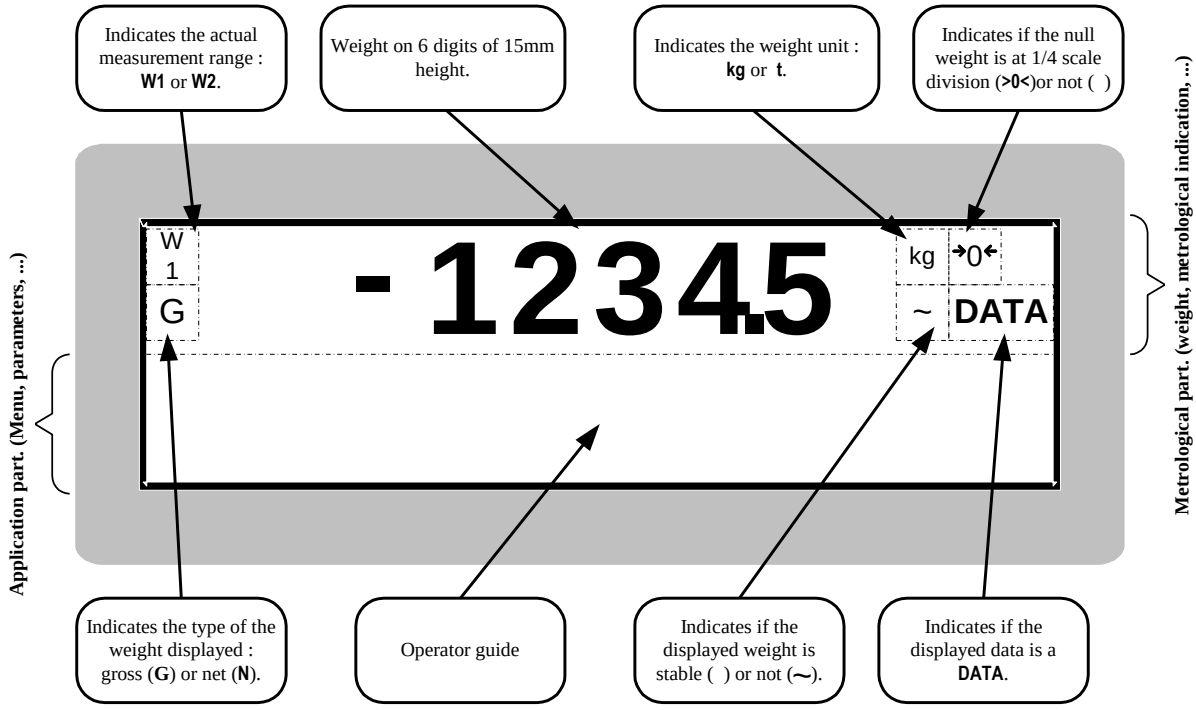


*__Remarks:__

- The **W1** or **W2** LEDs also indicate if the weight is immobile: LED flashing ⇒ weight unstable.
  LED steady ⇒ weight stable.
- The **NET** LED indicates: LED off ⇒ the weight displayed is a Gross weight.
  LED on ⇒ the weight displayed is a Net weight.

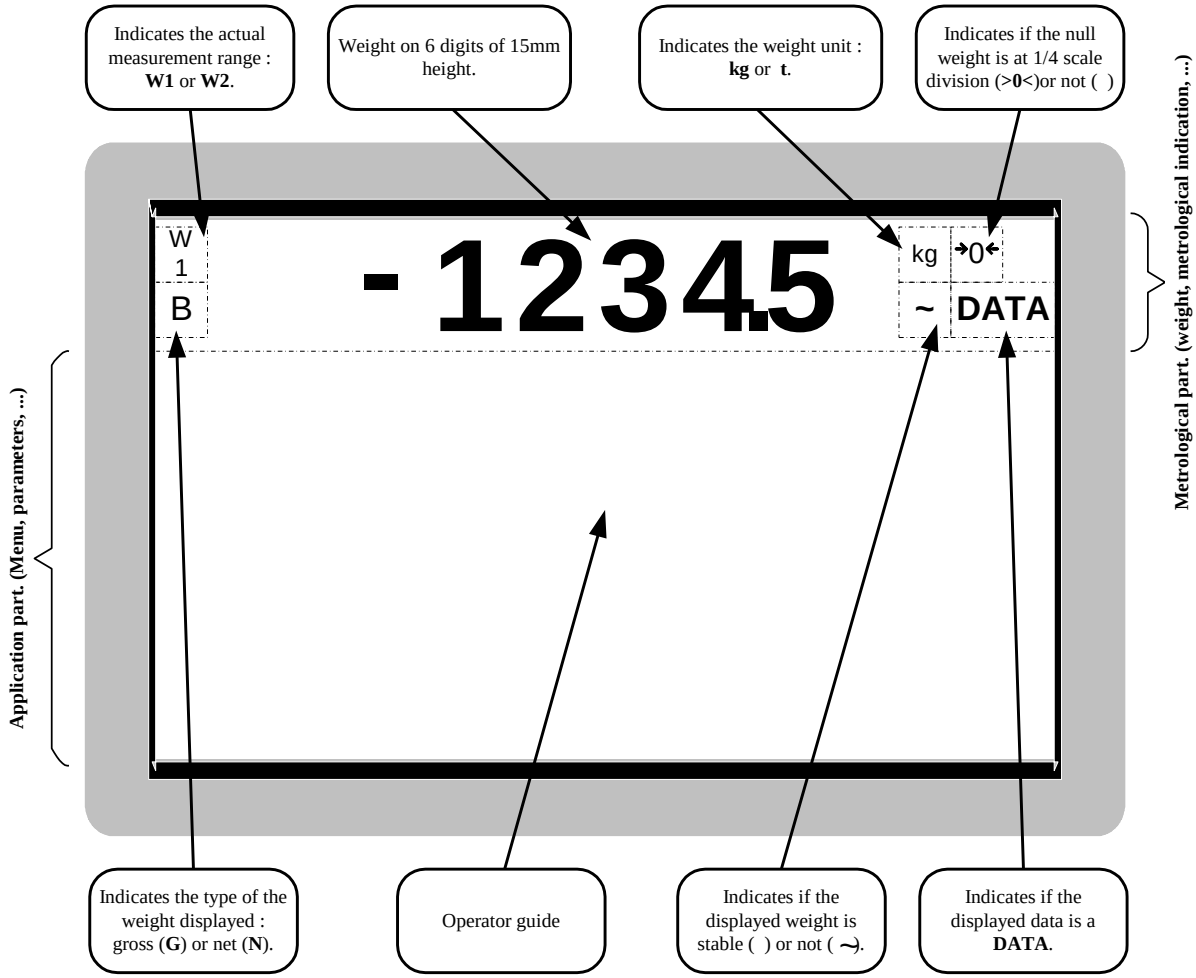
In user adjustment mode, the operator guide only uses 8 characters. (Identical to IDe100/200)

3.1.3. IDe 400



__Remark__ In user adjustment mode, the operator guide uses only 8 characters. (Same as IDe100/200/300)

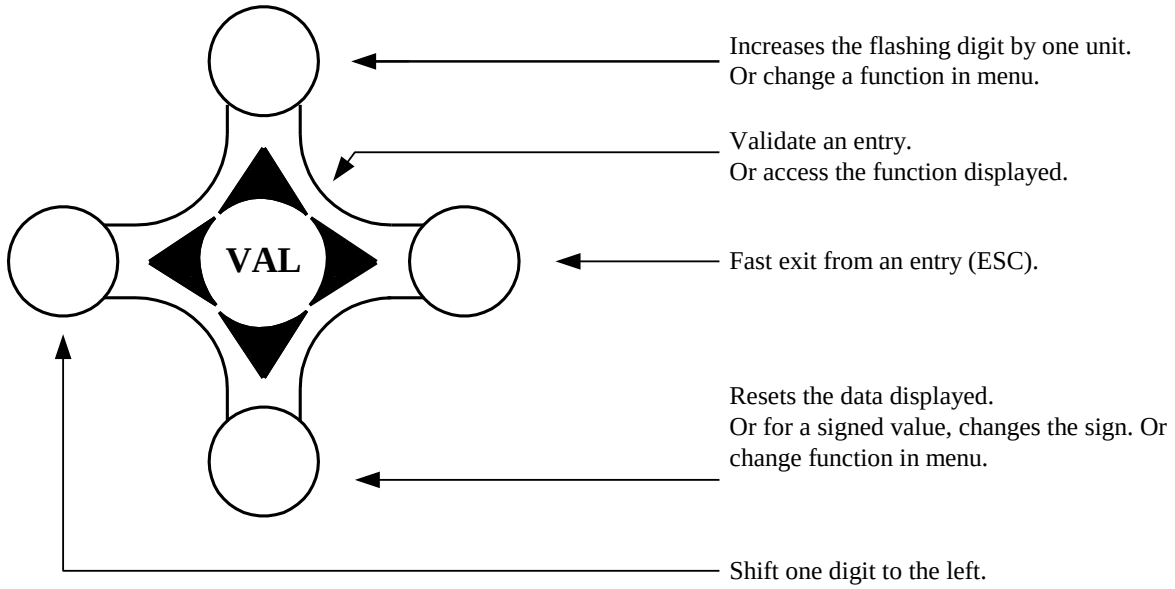
3.1.4. IDe 500



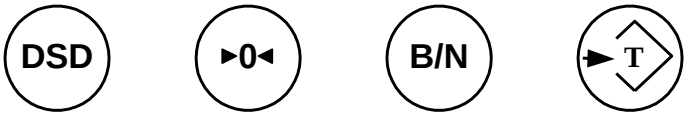
Remark: In user adjustment mode, the operator guide uses only 8 characters. (Same as IDe100/200/300/400)

3.2. Keypad of the IDe 100 / IDe 500

Application keys:



Metrological keys:

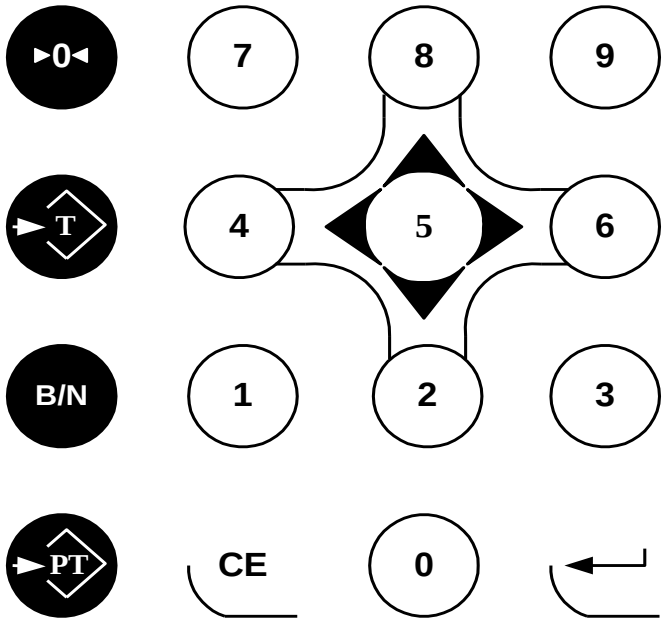


Remarks:

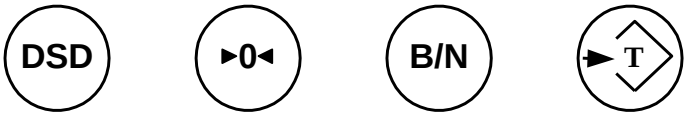
- The other keys are not used in the adjustment mode.
- The IDe 500 disposes of a PC keyboard which is not used in the adjustment mode.

3.3. Keypad of the IDe 200

Application and metrological keys



Metrological keys:



Keys 0 to 9: Numeric keys used to enter numeric data.

Keys 2 to 8: These numeric keys form a pseudo-mouse to move through the various menus: 2 = ↓ 8 = ↑

CE key: "Correction" key used to reset the data or change the sign for the signed data entries.

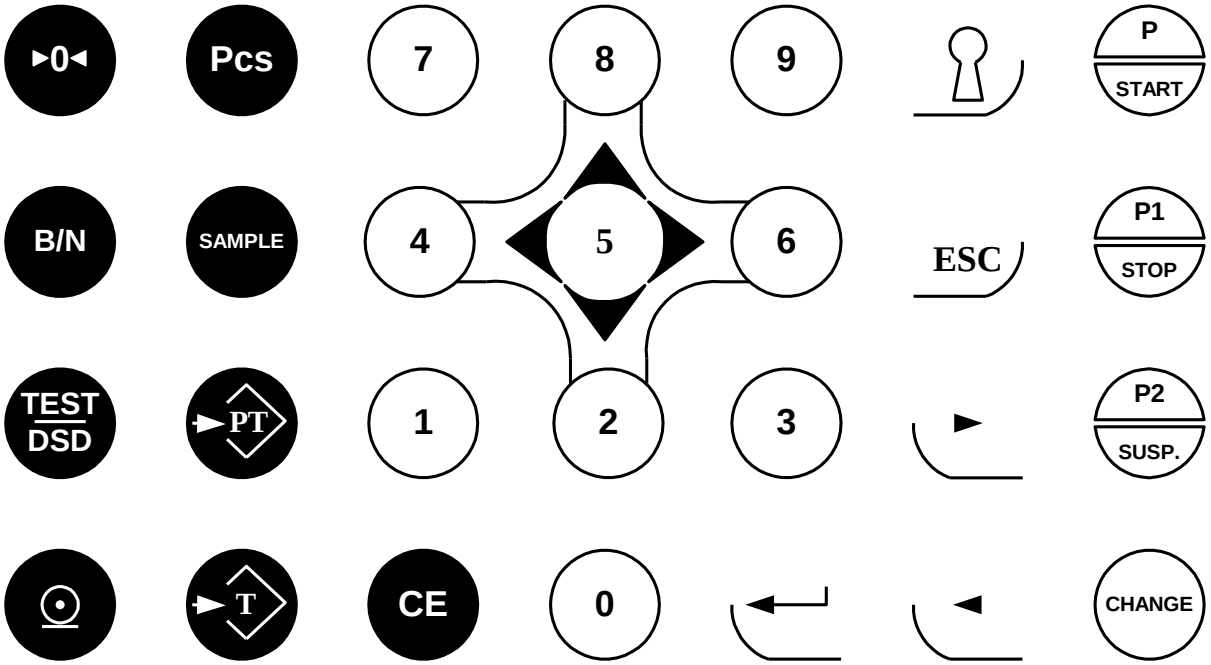
I key: "Information" key, used to move through the menus.

key: "VALIDATION" key used to enter a function or validate a data item.

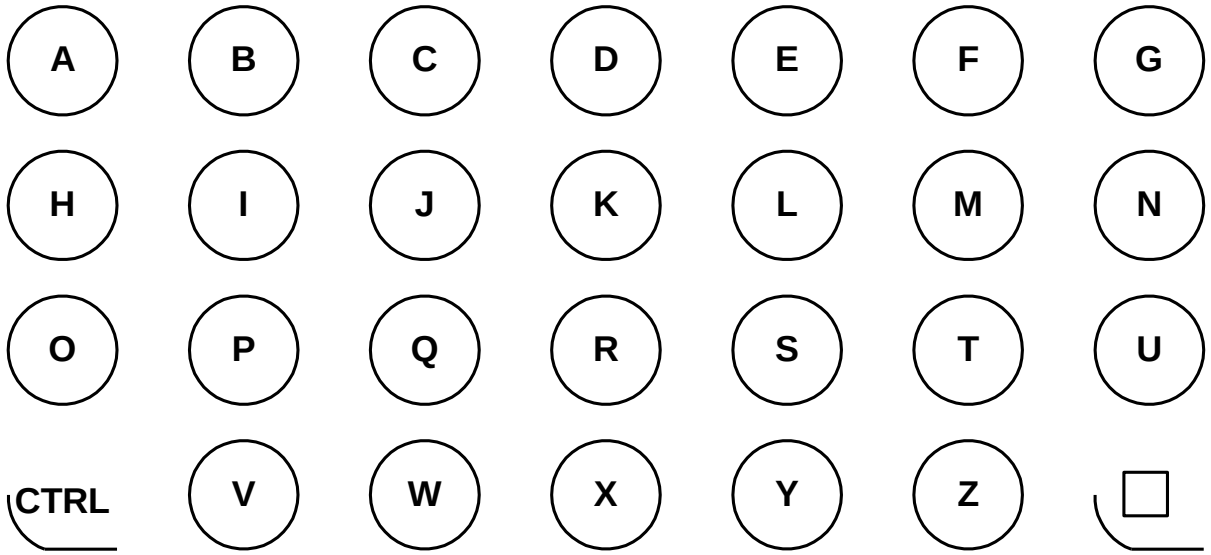
Remark: The other keys are not used in user adjustment mode.

3.4. Keypad of the IDe 300

Application and metrological keys:



Alphanumerical keys:



Keys 0 to 9: Numeric keys used to enter numeric data.

Keys 2 to 8: These numeric keys form a pseudo-mouse to move through the various menus: 2 = ↓ 8 = ↑

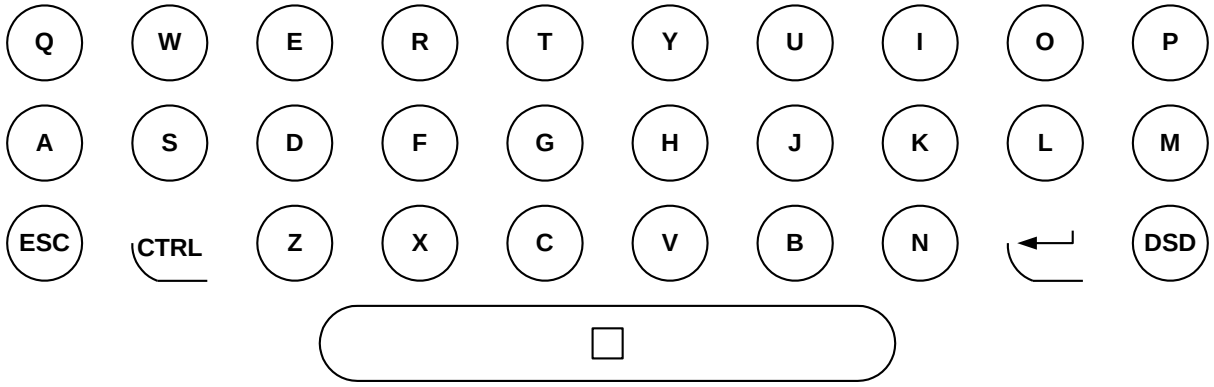
CE key: "Correction" key used to reset the data or change the sign for the signed data entries.

key: "VALIDATION" key used to enter a function or validate a data item.

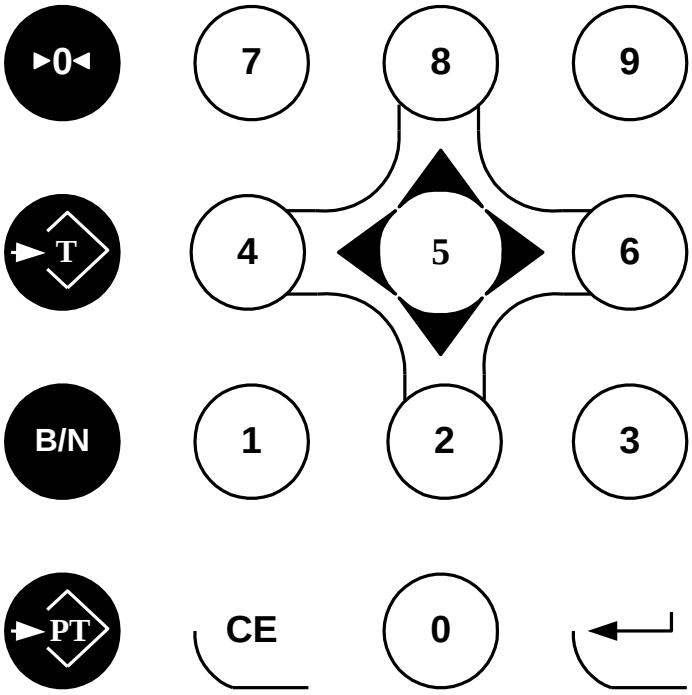
Remark: The other keys are not used in user adjustment mode.

3.5. Keypad of the IDe 400

Alphanumeical and application keys :



Application and metrological keys



Keys 0 to 9: Numeric keys used to enter numeric data.

Keys 2 to 8: These numeric keys form a pseudo-mouse to move through the various menus: 2 = ↓ 8 = ↑

CE key: "Correction" key used to reset the data or change the sign for the signed data entries.

key: "VALIDATION" key used to enter a function or validate a data item.

Remark: The other keys are not used in user adjustment mode.

4. USER ADJUSTMENT MODE

This manipulation must be executed by an accredited agent.

The two red leds which are located inside the indicator, near the buzzer, indicate the current mode:

- On → normal mode.
- Off → adjustment mode.

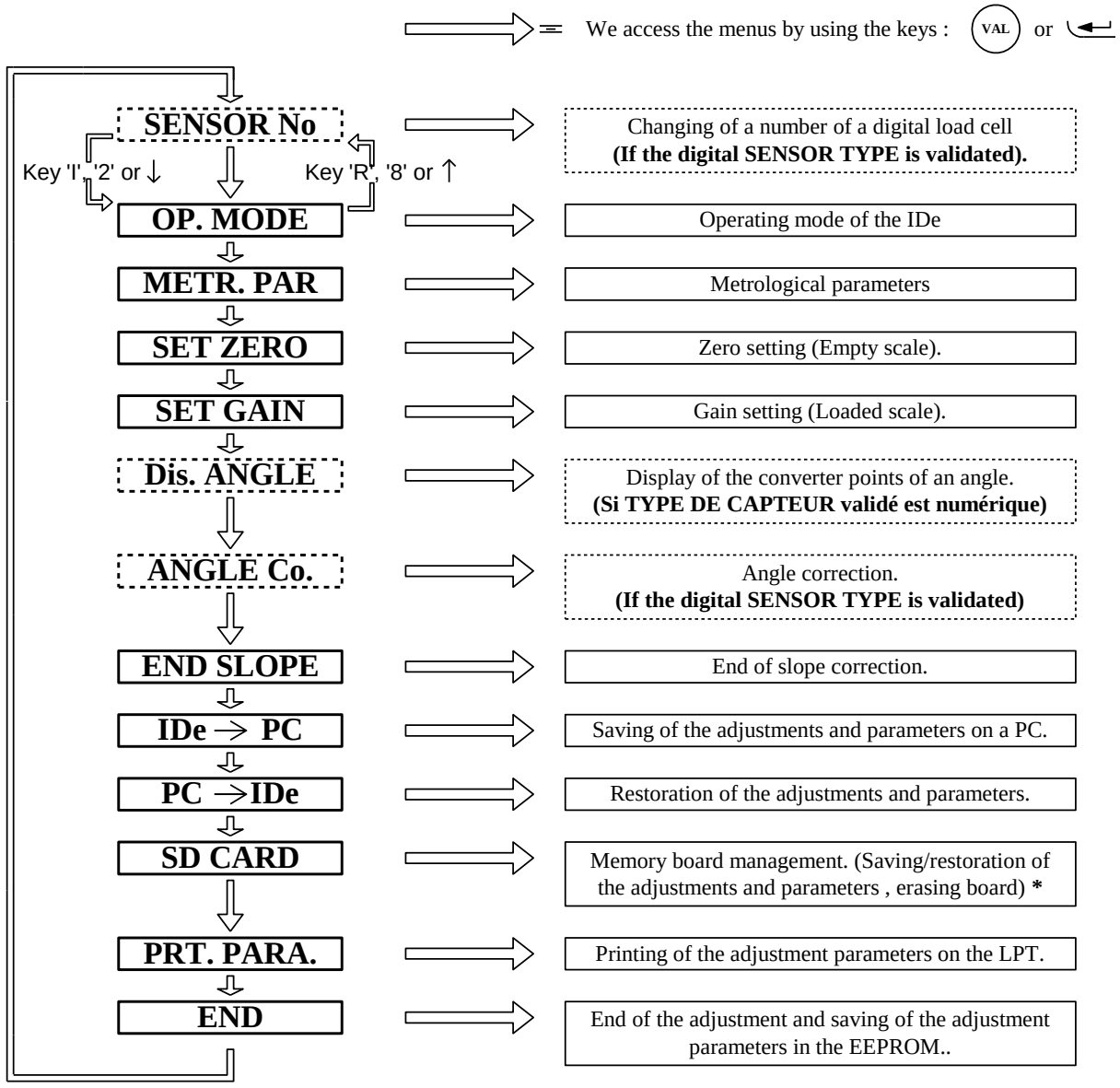
Passage from the normal mode to the adjustment mode:

The commutation from one mode to the other is done thanks to the adjustment switch which is located inside the indicator near the battery. (See technical folder)

For this you must proceed as follows:

- Turn off the indicator, then commute the adjustment switch, turn on the indicator.
- The starting phases are displayed "**4**", "**3**", "**2**" then "**1 REGL**".
- The operator guide proposes you the choice of the language of the adjustment mode, with the help of the keys ↓ or ↑ select your language.
- In the case of the indicators IDe 400 and IDe 500, it is on this stage that you must adjust the contrast of the LCD display. It is this adjustment that is used at the starting of the indicator.
  - For the IDe 400, the key (4) allows the decreasing of the contrast while the key (6) allows its increasing.
  - For the IDe 500, the key (←) allows the decreasing of the contrast while the key (→) allows its increasing.
- Once the language is chosen (and according to the indicator type, the contrast's adjustment is done) validate with the key (VAL) (IDe 100/500) or the key (↵) (IDe 200/300/400) according to the indicator.
- The operator guide displays the message **CALIBRAT,** validate with the key (VAL) (IDe100/500) or the key (↵) (IDe 200/300/400) according to the indicator.
- The adjustment menu is displayed on the operator guide.

Adjustment menu:



**: The management of the memory board is not available for all software types, it depends of the software edition.*

IMPORTANT: If there is a power cut during user adjustment mode before the saving is done, all the user adjustment parameters or values will be lost.

4.1. Changing the number of a digital load cell

This menu is only proposed if **LOAD CELL TYPE = digital (see paragraph 4.2)**.

When changing a load cell, give the CAN station number of the old load cell to the new load cell.
To do this, validate the "Changing the number of a digital load cell" function.
Give the CAN station number of the new load cell (63), validate.
Then give the CAN number of the load cell to be replaced (number from 1 to 12), validate.

If the load cell number is not 63 (load cell already used), isolate the load cell, by disconnecting the wires CAN_H and CAN_L, from the other load cells.
Give the CAN station number of the load cell (00), validate.
Then give the CAN number of the defective load cell (number from 1 to 12), validate.
Reconnect all the load cells for test.

Remark: On leaving the factory the digital load cells are configured with the value **53**.

4.2. IDe operating mode

INDICATOR TYPE (1/2/3/4/5) : *XY*

Enter the indicator type on 2 digits (X and Y), X for the type of Intrinsic Safety Terminal and Y for the type of front panel.

X = 0 = no TSI.	Y = 0 = reserved.
X = 1 = TSI 1 on COM2.	Y = 1 = IDe 100 front panel.
X = 2 = TSI 2 on COM2.	Y = 2 = IDe 200 front panel.
X = 3 = TSI 3 on COM2.	Y = 3 = IDe 300 front panel.
	Y = 4 = IDe 400 front panel.
	Y = 5 = IDe 500 front panel.

SENSOR TYPE (0=A 1=DMK) : *X*

0 = Analog load cell(s).
1 = Digital load cell(s) MASTER-K.

NUMBER OF SENSORS (1 to 12) : *XX*

This data is only important if the load cell type is digital, in this case the number of load cells declared must be exact.

INPUT RANGE (mV) 1=10 2=20 3=40 : *X*

Input range of the analog to digital converter.

0 = Range by default. (20mV)
1 = Range 10 mV.
2 = Range 20 mV.
3 = Range 40 mV.

MESUREMENT/S Xx20 (1 to 9) : *X*

Number of measurements/seconds = X x 20.

1 = 20 measurements per second.
2 = 40 measurements per second.
3 = 60 measurements per second.
Etc …
7 = 140 measurements per second.
8 = 160 measurements per second.
9 = 180 measurements per second.

MULTI. RANGE (0=no 1=yes) : *X*

If the instrument has a plate with 2 ranges and 2 scale divisions this parameter must be 1.

AUTO SWITCH W2/W1 (0=n 1=y) : *X*

Automatic switching from W2 to W1 on return to zero. This parameter is only taken into account if MULTIPLE RANGE has been validated.

I2 1=STEEL YARD 2=INCLINO 0=NOTH : *X*

0 = nothing connected on input I2.
1 = steel yard switch connected on input I2.
2 = inclinometer connected on input I2.

REGULATED MODE(0=no 1=yes) : *X*

If the indicator is intended for legal for trade use (commercial transactions, etc., the device has in this case a CE compliance marking) this parameter must be set to 1.
Otherwise, the safety mechanisms of 6000 verification scale divisions and semi-automatic zero-setting zone are disabled.

4.3. Metrological parameters

In this menu you must enter all the following parameters:

RANGE W1 (1kg to 500000kg) : *XXXXXX*

Range W1.

DIVISION W1 (max 500,000kg) : *XXX,XXX*

Measurement verification scale division (multiple of 1, 2, 5) of range W1.

RANGE W2 (1kg to 500000kg) : *XXXXXX*

Range W2, if multiple range parameter =1

DIVISION W2 (max 500,000kg) : *XXX,XXX*

Measurement verification scale division (multiple of 1, 2, 5) of range W2, if multiple range parameter =1.

IMMOBILITY (0,5e to 3,0e) : X,X

Depending on the scale installation conditions, the immobility area may have to be adjusted.

NB OF IMMOBILE MEASM (0..9) : *Y*

Determines the speed of obtaining immobility according to the calculation: (Y x 8) + 8 (8 to 80 : number of measurements required to obtain immobility)

NUMERIC FILTRE (XX moy) : *XX*

Zero filter means that the measurement is not filtered, a value of 99 indicates maximum filter.

NET WEIGHING (0=N 1=Y 2=PT) : *X*

0 = The NET weighing is not authorized. (Always in GROSS)
1 = The NET weighing is authorized.
2 = The NET weighing is authorized only with a tabulated tare. (Semi-automatic tare key disabled)

ZERO TRACKING (0=no 1=yes) : *X*

Validation or not of zero-tracking.

ZERO POWER ON (0=no 1=yes) : *X*

Scale's reset when the IDe is started up within +/- 10% of the range.

4.4. Setting the zero

Before validating this menu check the load cells connections, the state of the platform (scale, weighbridge, hopper, etc.).
With the platform empty and clean, you can validate the zero-setting.
The time for this operation depends on the time required to obtain a stable measurement. Consequently, there must be no vibration ....and calm weather for outdoor scales.

4.5. Setting the gain

Before validating this menu, you must have set the zero.
Place the standard masses on the platform then validate the gain-setting. The operator guide displays "calibration weight value", type in the sum of the standard masses on the IDe keypad, then validate.
The duration of this operation depends on the time required to obtain a stable measurement. Consequently, there must be no vibration ....and calm weather for outdoor weighbridges.

Remarks:

- Good quality settings implies standard masses of a value near to the max range of the scale.
- This operation can be repeated several times without unloading the masses.

4.6. Displaying the value of an angle

This menu is only enabled if the parameter LOAD CELL TYPE = 1 (Digital load cell, see paragraph 3.2).
After validating this menu, enter the CAN station number of the load cell to display its converter points. This menu is only used to check that a load cell is on line, or to know the distribution of loads on the platform.

4.7. Angle correction

This menu is only enabled if the parameter LOAD CELL TYPE = 1 (Digital load cell, see paragraph 3.2).
It is used to make a correction on an angle which is "too large" or "too small". Enter the CAN station number of the load cell to be corrected then the value of the correction in converter points.

Remark: MASTER-K digital load cells give 100 000 points for the maximum range of the load cell.

4.8. End of slope correction

This menu is used to make a small correction on the slope (System gain).
In particular, it is used to compensate the variation of the "g" factor according to the place of use of the complete instrument.
When checking the scale, if you notice a slight delay or advance at full load you can correct the error with this function.
Validate the menu, then enter the value of the correction, validate again.
Check the result of the correction by displaying the weight display.

Remark: If the minus sign is displayed in front of the data, the correction will be negative. There is no sign for a positive correction. (Change of sign by the "CE" key of the IDe 200/300/400 and by the low arrow for the IDe100/200).

4.9. Saving the user adjustments and parameters on a PC

This menu is used to save all the user adjustments and the parameters on a PC in a text file (.TXT).

Proceed as follows:

-connect the PC (on Com1) with the IDe (on Com1), with a PC/IDe connection cable.
- start the program Hyperterminal (path of Hyperterm.exe:
"C:\Program Files\Accessories\HyperTerminal\HYPERTRM.EXE")
- name the connection and validate (TERMINAL.IDE).
- then in the header "Connect using" choose "Send to Com1".
- configure the connection as follows: 9600 Bauds, no parity, one stop bit, no flow control.
- after returning to the main screen, go to "Transfer" then "Capture text", enter the name of the backup file and validate "Start", the PC now waits for information.
- On the IDe validate the menu "**IDe → PC** ". Another menu is displayed "**Tr. Num ZONE (1/2/3/4/5)** ", validate the zone to be stored.
- during the transmission, the save is displayed on the PC screen and the IDe displays "Tr" with an animated cursor on the secondary display.
- to end the save go to "Transfer" then "Capture text" and "Stop".

Details of the various memory zones which can be transferred:

ZONE 1: Metrology EEPROM. (A few seconds for the transfer)
ZONE 2: application EEPROM. (A few seconds for the transfer)
ZONE 3: application RAM. (A few seconds for the transfer)
ZONE 4: application file. (10 min. for the transfer)
ZONE 5: includes all the previous zones. (10 min. for the transfer)

4.10. Restoring user adjustments and parameters

This menu is used to restore all the user adjustments and the parameters saved earlier on PC in a text file (.TXT).

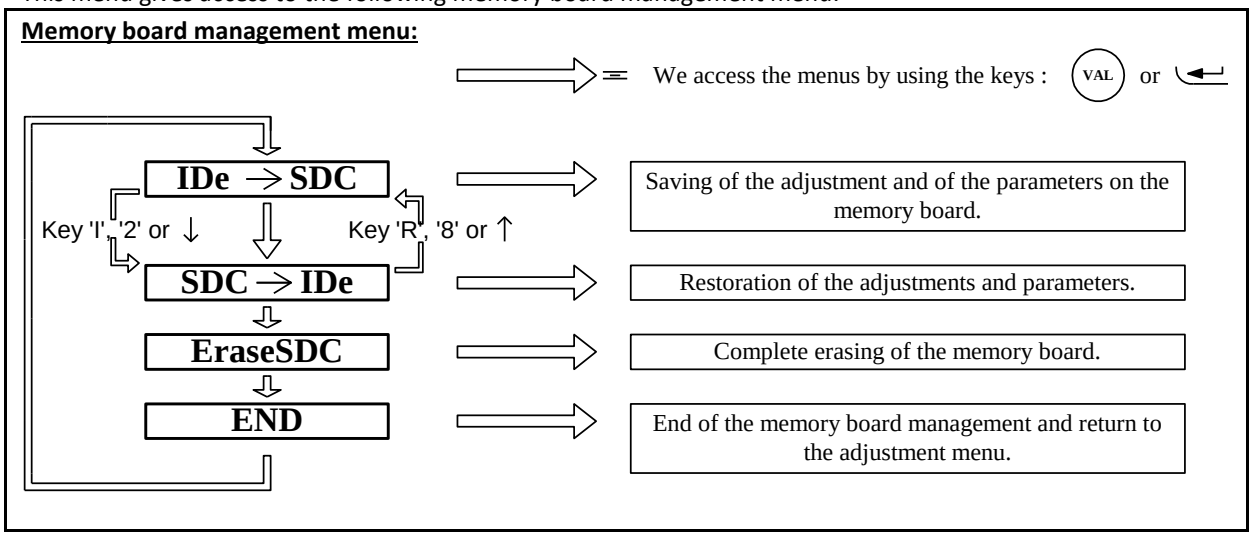
Proceed as follows:

- connect the PC (on Com1) with the IDe (on Com1).
- run the program Hyperterminal. (Path of Hyperterm.exe:
"C:\Program Files\Accessories\HyperTerminal\HYPERTRM.EXE")
- name the connection and validate (TERMINAL.IDE).
- then in the header "Connect using" choose "Send to Com1".
- configure the connection as follows: 9600 Bauds, no parity, one stop bit, no flow control.
- on the IDe validate the menu "**PC → IDe** ". Another menu is displayed "**Re. Num ZONE (1/2/3/4/5)** ", validate the zone to be restored. The IDe waits for information.
- on the PC choose "Transfer", then in "Send text file" select the backup file to be transferred and validate "Open", the PC sends the information.
- during the transmission the IDe displays "Re" with an animated cursor on the secondary display.

4.11. Management of the memory board*

**: The management of the memory board is not available for all software types, its depends of the software's version.*

This menu gives access to the following memory board management menu:



4.11.1. Saving the adjustments and the parameters on the memory board

This function allows the saving of all the adjustments and all the parameters on the memory board.

4.11.2. Restoration of the adjustments and parameters

This function allows the restoration of all the adjustments and parameters already saved on the memory board.

4.11.3. Complete erasing of the memory board

This function allows the resetting of the memory board. (Formatting of the memory board)

ATTENTION: THIS FUNCTION MAKES THE MEMORY BOARD COMPLETELY BLANK.

4.11.4. End of the memory board management

This function allows the complete erasing of the memory board, this function corresponds to a formatting of the memory board.

4.12. Printing of the parameters and of the adjustment values

If a printer is connected on LPT port you can keep a hard copy of the parameters and user adjustment values by validating this menu.

4.13. End of the adjustment and saving of the data

Validate this menu to exit user adjustment mode and save the parameters and the adjustment values. During the saving, the operator guide indicates "SAVE"; this operation takes a few seconds. The message "STRAP OFF" is then displayed indicating that the user adjustment switch must be returned to its initial position. (Normal mode position)

5. ERROR MESSAGES

5.1. Messages of the weight display in normal mode

	Error: power supply too low.
	Error: steelyard switch.
	Error: inclinometer.
	Error: converter off range overflow. (converter capacity exceeded)
	Error: converter off range underflow. (converter capacity exceeded)
	Error: EEPROM CRC. (It's necessary to check the metrological parameters and to remake a complete setting of zero and gain)
	Error: M1 input. (Check that the Load cell is well connected).
	Off-scale error, range exceeded.
	Off-scale error, weight below zero.
	Error: calculation capacity overflow.
	Error: one or more digital Load cell(s) no longer respond. (Check the power supply and the connection of the load cell)
	Error: serial number of a digital Load cell, settings of digital Load cells not valid. (Remake a setting of the zero)

5.2. Error messages during configuration or user adjustment (on the operator guide)

Error 1: Verification scale interval incorrect.
Error 2: Verification scale interval different from 1/2/5.
Error 3: Range above 500 metric tons.
Error 4: Display capacity exceeded
Error 5: More than 6000 verification scale divisions.
Error 6: Range W1 incompatible with W2. (W1 must be < W2)
Error 7: Verification scale interval W1 incompatible with W2. (sd2 must follow sd1)

Error Z: Error during the weighbridge zero setting phase.
Error G: Error during the gain setting phase.
Error R: Error during the gain setting phase, the input range is not sufficiently important.

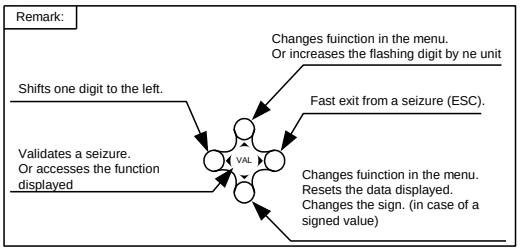
Error a: Indicator type different from IDe 100/200/300.
Error b: Load cell type different from 0/1.
Error c: Number of load cells not within 1 to 12.
Error d: Number of measurements per second different from 3 or 9.
Error e: Multi range parameters different from 0/1.
Error f: Automatic switching W2 W1 parameter different from 0/1.
Error h: Steel yard or inclinometer parameter different from 0/1/2.
Error I: Legal metrology parameter different from 0/1.
Error j: Immobility parameter not within 0.5sd to 3.0sd.
Error k: Zero-tracking parameter different from 0/1.
Error l: Weighing in net weight authorized parameter different from 0/1.
Error m: Zero parameter, on power up, different from 0/1

Error01: The memory board is locked. (Lock button on the side)
Error02: The memory board is not detected.
Error03: There have been a communication problem with the memory board.
Error04: There have been a communication problem with the memory board.
Error05: There have been a communication problem with the memory board.
Error06: The memory board is not formatted, erase it.
Error07: There have been a communication problem with the memory board.
Error08: There have been a communication problem with the memory board.
Error08: There have been a communication problem with the memory board.
Error09: There have been a communication problem with the memory board.
Error10: There have been a communication problem with the memory board.
Error11: There have been a communication problem with the memory board.
Error12: There is no saving of the metrological parameters on the memory board.
Error13: There is no saving of the application parameters on the memory board.
Error14: There is no saving of the file on the memory board.
Error15: The data of the memory board is not compatible with the software.
Error16: This data is protected.

6. USER ADJUSTMENT MENU SUMMARY

The display		
	XXXXXX	represents the weight value in 10% of the scale division.
	OS -	Underflow off scale error (zone -9 scale divisions)
	OS +	Overderflow off scale error (zone max +9 scale divisions)
	OF	Off range
	SENS	No digital load cell's response

Example	Weight display	Operator guide		Comments
	I.Regl	I.Regl		If digital load cells (see operating mode)
	I.Regl	C : X		The load cell N° X does not respond
	I.Regl	ENGLISH		The messages of the menu are in english
		DEUTSCH		The messages of the menu are in german
		FRANCAIS		The messages of the menu are in french
	I.Regl	Adjust.		
	XXXXXX	SENSOR N°		If digital load cells (see operating mode)
	53		Load cell number (01 to 12)	
	00		New load cell number (01 to 12)	
	XXXXXX	OP. MODE		
IDe 100	01		Indicator type on two digits : XY	X: 1 = TSI 1 com2, 2 = TSI 2 com2, 3 = TSI 3 com2. Y: 1 = IDe 100, 2 = IDe 200, 3 = IDe 300, 4 = IDe 400, 5 = IDe 500.
Ana.	0		Load cell's type 0 = ana. 1 = dig. 2 = HBM	
1 sensor	01		Number of load cells (1 to 12)	
20 mV	2		Input range (1 = 10mV 2 = 20 mV 3=40mV)	
60 ms	3		Mesurements / s (X x 20ms with X between 1 and 9)	
No	0		Multi. range (0 = no 1 = yes)	
No	0		auto.switch W1/W2 (0 = no 1 = yes)	
No	0		I2 (1 = steel yard 2 = inclinometer)	
Yes	0		legal for trade mode (0 = no 1 = yes)	
	XXXXXX	Metro. Par		
50 t	050000		Range W1 (1kg to 500000kg)	
by 20 kg	020.000		Scale division W1 (Max 500,000kg)	
	000000		Range W2 (1kg à 500000kg)	If multi range = 1 (operating mode)
	000000		Scale division W2 (Max 500,000kg)	If multi range = 1 (operating mode)
Cal. immo.	1,0		Immobility (0,5e to 3,0e)	
	3		Number of immobile measurements (0 to 9)	
Cal. fil.	30		Numeric filter (XX)	
Yes	1		Net weighing (0 = no 1 = yes)	
No	0		Zero trackning (0 = no 1 = yes)	
No	0		Power up reset (0 = no 1 = yes)	
	XXXXXX	Set Zero		
	- - - - - -		Setting	
	XXXXXX	Set Gain		
Val. Std. weight 24 t	000000		Standard mass value (kg)	
	024000		Enter the standard mass value (kg) ex : 24000kg	
	XXXXXX		Number of scale divisions	
	000000	ANGLE dis.		
	00		Load cell's number (01 to 12)	
	YYYYYY		serial N° and in alternation value of the serial N°.	
	000000	Co. ANGLE		
	"00"		Load cell's number (01 to 12)	passage from + to - by the key "CE" for the IDe200/300/400 and by the lower arrow for the IDe100/500
	"00"		Correction in number of points (+ / - XX)	
	- - - - - -		wait 15s	
	XXXXXX	END SLOP		passage from + to - by the key "CE" for the IDe200/300/400 and by the lower arrow for the IDe100/500
	00		Correction in 1/10th of the scale division (+ / - XX)	
	XXXXXX	IDe --> PC		
	0		Tr. Num zone (0 / 1 / 2 / 3 / 4 / 5)	
	- - - - - -		Tr /	
			Remark: The slash rotates during the transfer.	
	XXXXXX	PC --> IDe		
	0		Re. Num zone (0 / 1 / 2 / 3 / 4 / 5)	
	- - - - - -		Re -	
			Remark: The slash rotates during the transfer.	
	CARD	SD CARD	IDe --> SDC	WRITE..
			SDC --> IDe	READ ...
			EraseSDC	ERASE.
			END	
	XXXXXX	PRT.ADJ.		
	- - - - - -		IMPRIME	
	XXXXXX	END		
	- - - - - -		SAVE	
			Rem: if no parameter has been changed, the "SAVE" message does not appear.	
			Strapp Off	



7. APPENDIX

7.1. Cabling of the various connectors

Connector Marker / Pin N°	M1	MASTER CAN	COM1		COM2				Connect. AUX.
					BDC passive	Options			
			RS232	RS485		BDC passive/active	RS232	RS485	
1	⏚	⏚	⏚	⏚	⏚	⏚	⏚	⏚	**0V**
2	*N.U.*	*N.U.*	**Rx**	*N.U.*	*N.U.*	*N.U.*	**Rx**	*N.U.*	**V Battery**
3	**A-**	**CAN_H**	**Tx**	*N.U.*	*N.U.*	*N.U.*	**Tx**	*N.U.*	**+12Vout**
4	**M-**	**CAN_L**	*N.U.*	**RxTx+**	**R+**	**R+**	*N.U.*	**Rx+**	**Common I**
5	**A+**	**V+**	*N.U.*	**RxTx -**	**R-**	**R-**	*N.U.*	**Rx-**	**I1+**
6	**M+**	**0V**	**DTR**	*N.U.*	*N.U.*	*N.U.*	**DTR**	*N.U.*	**I2+**
7	**R-**		**0V**	**0V**	*N.U.*	**0V_Iso**	**0V_Iso**	**0V_Iso**	
8	**R+**		*N.U.*	*N.U.*	**T+**	**T+**	*N.U.*	**Tx+**	
9	*N.U.*		*N.U.*	*N.U.*	**T-**	**T-**	*N.U.*	**Tx-**	

7.2. Positions and functions of the different jumpers of the board