









ENGLISH



KEY TO SYMBOLS

Please see below all the symbols that will be used in the manual to draw the reader's attention:



Pay special attention to the following instructions.



Further information.

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INTRODUCTION

The Instrument Manager software allows you to set, update and monitor parameters, to be managed from a PC for an instrument connected via a PC serial port. Software features:

- Creation of instrument configurations.
- Configuration uploading and downloading to/ from instruments.
- Profiles and personal configuration database.
- Configuration comparison and printout.
- Real-time instrument management via serial port.
- Firmware update.
- Instrument real calibration.
- Equalisation and channel selection (multichannel instruments only).
- Restoring non-operating instruments.
- Qualified access for legally relevant operations.

INSTALLATION AND START-UP



The software can be used on Windows 7 or higher.

Double-click on the installation file and follow the on-screen instructions.



You may need to perform the operation as an administrator. In this case, right-click on the installation file and select "Run as administrator".

Once installed, start Instrument Manager from the Windows Start menu or double-click the icon on your desktop.

At startup, the software will show the welcome window.



From the welcome window, you may perform various quick operations by clicking on the displayed icons and fields:

- New: click to create a new configuration (see section CREATING A NEW CONFIGURATION).
- Browse: click to open an existing configuration (see section OPENING AN EXISTING CONFIGURATION).
- Connect: click to open the connection window in real time (see section CONNECT).
- Help: click to open this user manual.
- *Recent configurations*: double-click on an item on the list or select and click *Open* to open the configuration.
- Show this window at startup: select to display the welcome window at software start-up.

SOFTWARE CONFIGURATION

Select the menu *File* \rightarrow *Settings* to access the Instrument Manager software settings window.

Settings	×
System	
Language	
English	•
Theme	
Dark	•
Search for updates when software starts	
Use verbose logging	
Show Welcome Screen at startup	
E s	ave

Click on Save to confirm settings.

Language: select the software language (to apply changes, you need to save and restart the software). *Theme*: select the software graphic theme (to apply the changes, you need to save and restart the software).

Search for updates when software starts: if activated, software updates and possible new firmware are automatically searched for at start-up. *Use verbose logging*: activate to get more information on running the application (only if requested by technical assistance; see section **LOG EXPORT**).

Show welcome window screen at startup: if enabled, it displays the screen with quick operations at start-up (see section **INSTALLATION AND START-UP**).

CONFIGURATIONS

Configurations are sets of parameters that define the identity and behaviour of an instrument. Configuration data consist of various types of parameters:

- identity parameters;
- operating parameters;
- saving parameters.

You can create new configurations or open previously created and saved configurations.

CONFIGURATION DATA

IDENTITY PARAMETERS

The identity parameters describe the instrument with its software:

- Instrument: type of instrument.
- Firmware: instrument firmware version.
- Model: model specific to the type of instrument.
- Program: type of program loaded on the instrument.
- Legal for Trade: legal status of the instrument.
- Options: any active options on the instrument.

Instrument	Firmware	Model	Program	Legal for Trade	Options
CLM8	1.14.0 ÷ 10.0.0	TLB	Base	Not Legal	No items found
TLB		TLB485		Legal	
TLB4				Legal Multi Interval	

OPERATING PARAMETERS

The operating parameters are the set of parameters that the instrument uses while performing its tasks. They can be set directly from the instrument menu.

For example: sensitivity, theoretical full scale, setpoint and weight filter, etc.

10000 kg 10000 kg Sensitivity Divisions 2 mV 1	Residual Full Scale		Theoretical Full Sca	le
Sensitivity Divisions	10000 kg		10000	kg
2 mV 1 -	Sensitivity		Divisions	
	2	mV	1 •	
Maximum Weight Unit of Measurement	Maximum Weight		Unit of Measureme	ent
0 kg Kilograms 🔻	0	kg	Kilograms 👻	

SAVING PARAMETERS

The saving parameters are the software data configurations being stored and identified within the software:

Profile	
D Default	-
Name	
TLB Default	
Details	
Default data configuration	
	Save

Profile: Profiles are those attributes that may be used to distinguish configurations of instruments belonging to different customers or to subdivide configurations as desired (see section **PROFILES**).

Name: name assigned to the configuration.

Details: any configuration details (optional).

CREATING A NEW CONFIGURATION

You can create a new configuration by manually defining all the identity parameters or by using the identity parameters of a connected instrument.

To create a new configuration by manually defining all the identity parameters, proceed as follows:

- select the menu File \rightarrow New
- the software will show the new configuration window;
- select the identity parameters for the configuration you want to create and click on Create to confirm the selection;
- the software will generate a new configuration with the default operating parameters.

New Configuration	New Configuration							
Instrument	Firmware	Model	Program	Legal for Trade	Options			
CLM8 TLB TLB4 TLBBus TLM8 TLS	1.14.0 ÷ 10.0.0	TLB TLB485	Base	Not Legal Legal Legal Multi Interval	No items found			
₽ Search Instru	ment	Search Model		X Cancel	Create			



The configuration created may only be loaded onto an instrument with the same identity parameters.

Create a new configuration using the identity parameters of a connected instrument as follows:

- connect the instrument to the PC;
- select the menu Connection \rightarrow Connect
- the software will show the connection window with the list of instruments detected;
 - if the window fails to show the connected instruments, check the serial settings (see section SERIAL SETTINGS) and click on *Refresh*;
- select the instrument from which you want to load the identity parameters;
- click on New to confirm your selection;
- the software will generate a new configuration with the default operating parameters.

OPENING AN EXISTING CONFIGURATION

To edit or use a previously saved configuration, proceed as follows:

- select the menu File \rightarrow Open or, in the menu Configurations \rightarrow Saved Configurations:
- the software will show the *Configurations* window containing all saved configurations, indicating the saving and the identity parameters;
- icons 🖛 🐿 🟛 are associated with each configuration in the list;
- click on **to** open the configuration;
- click on ¹ to edit the parameters and save the configuration (see section SAVING PARAMETERS);
- click on 🟛 to delete the configuration.

Configurations									- • •
	Profile		Instrument	Model	Version	Name	Details	Date	Last Edit
								From	From
Clear Filters								То	То
⇔ \ ti	D	Default	TLB	TLB	1.14.0	Second Scale	Full Scale = 20kg	6/17/2019 2:22:16 PM	6/17/2019 2:22:16 PM
⇔ 13 ti	D	Default	TLB	TLB	1.14.0	TLB Default		6/17/2019 2:22:28 PM	6/17/2019 2:22:28 PM
🛥 🖸 🗇	5	Second Profile	TLB4	TLB4 Powerlink	1.5.0	For PLC		6/17/2019 2:22:45 PM	6/17/2019 2:22:45 PM
🛥 🖸 🗇	5	Second Profile	TLM8			EtherCAT Online		6/17/2019 2:23:01 PM	6/17/2019 2:39:01 PM

To help the research of configurations, use the fields on top of the window to filter the items listed in the table.

Filters *Date* and *Last Edit* allow you to search for configurations created and/or edited within a given time frame.

Click on *Clear Filters* to reset the active filters and come back to display the active configurations.

EDITING A CONFIGURATION

After creating a new configuration or loading an existing configuration, the software will show a series of sheets with a breakdown of the operating parameters. You may change the operating parameters via the related fields.

Instrument Mana	ger 1.1.0						00	X
File Connection C	onfigurations	?						
🗈 🛥 凹 🧕	\$\$ ♠ #	ān						
		TLB 1.14.0	0 • Program: Base •	Legal fo	or Trade: Not Lega	il.		
Calibration								Ê
Real Calibration		Residual Full Scale			Theoretical Full Sci	ale		
Analog		10000 kg			0	kg		
Serial		Sensitivity			Divisions			
Input / Output		2	mV		1 -			
		Maximum Weight			Unit of Measurem	ent T		
		0	kg		Kilograms 🔻			
		Coefficient			Manual Zero Value	2		
		1			0	kg		
	Filter							
		Filter			Anti-Peak			
		4 -						
	Zero Par	ameters						
		Auto Zero			Zero Tracking			

After each edit, the software will check the new value entered. If incorrect, the parameter will be highlighted in red and the name of the tab it belongs to will be marked by a warning icon.

Instrument Manage	er 1.1.0					(202)	×
File Connection Cor	nfigurations ?						
🔓 🛥 🖻 🛛 🛑 🗉	1 ゆ 田 臣						
	TLB 1.14.00) • Program: Base •	Legal for	r Trade: Not Lega	al		
Calibration							Ê
Real Calibration	Residual Full Scale			Theoretical Full Sci	ale		
Analog	10000 kg			0	kg		
Serial	Sensitivity			Divisions			
Input / Output	8	mV		1 -			
	Maximum Weight			Unit of Measurem	ent		
	0	kg		Kilograms 🔻			
	Coefficient			Manual Zero Value	•		
	1			0	kg		
	Filter						
	Filter			Anti-Peak			
	4 -						
	Zero Parameters						
	Auto Zero			Zero Tracking			
							-

To display the type of error, place the mouse pointer onto the name of the parameter concerned.



Example: The maximum permitted value for sensitivity is 7. If set to 8 - a higher value - the parameter will be highlighted in red. If the mouse pointer is positioned over the message *Sensitivity*, the display will show the range of permitted values for this parameter.



If one or more operating parameters are in error, you cannot save the configuration nor load it onto the instrument.



If the configuration has been set in a Legal for Trade state - e.g. Legal, Legal Multi Range, or Legal Multi Interval type - you can only edit certain parameters via a qualified access (see section **QUALIFIED ACCESS**). These parameters are identified by the icon **a** next to the name.

SAVING A NEW CONFIGURATION

After creating and editing a new configuration, you can save it by defining its backup parameters. To save a new configuration, proceed as follows:

New Configuration	X
Profile	
D Default	-
Name	
TLB Default	
Details	
Default data configuration	
	L Save

- select the menu File →Save
- the software will show the save window;
- define the saving parameters (see section **SAVING PARAMETERS**);
- click on Save to save the configuration.

SAVING AN EXISTING CONFIGURATION

After editing an existing configuration, you may:

- overwrite the original configuration and save it;
- save it with a different name;

To save an existing configuration by overwriting the original one, proceed as follows:

- select the menu $File \rightarrow Save$

To save an existing configuration with a new name, proceed as follows:

- select the menu File \rightarrow Save new
- the software will show the save window;
- define the saving parameters (see section SAVING PARAMETERS);
- click on Save to save the configuration.

EXPORTING A CONFIGURATION

You may export a configuration for sending it or using it on another PC.

To export a configuration, proceed as follows:

- select menu File \rightarrow Export
- select the saving path;
- save the .lac file containing the configuration.

IMPORTING A CONFIGURATION

You may import a previously exported configuration. Imported configurations may be used and edited even if they are not in the database.

To import a configuration, proceed as follows:

- select the menu File \rightarrow Import
- select the path of the file you want to import
- upload the .lac file containing the configuration.

COMPARING CONFIGURATIONS

You may compare two configurations to highlight any differences between parameters.

Ocompare	
Configuration 1	Configuration 2
🚔 🍇	🚔 🍇
Show All Only Differences	Print 📀 Compare
Tab Group Parameter Configuration 1 C	
No items found	

To compare two configurations, proceed as follows:

- select the menu Configurations \rightarrow Compare
- the software will show the comparison window where the configurations to be compared may be selected. You may select a configuration from the previously saved ones or read the configuration from a connected instrument.
 - - the software will show the Configurations window containing all saved configurations;
 - select the desired configuration and click on Select to confirm.
 - \circ to read a configuration from a connected instrument, click on the icon ${}^{\mathbf{X}}$:
 - select the desired instrument form the list and click on Select;
 - if the list fails to show the instrument, check the serial settings (see section SERIAL SETTINGS) and click on *Refresh*;
- after selecting the configurations to be compared, click on Compare.

The parameters and their values are shown in the table below.

Parameters with different values are highlighted in red.

To show only parameters with different values, select *Only Differences* in the *Show* drop-down menu. To print out the comparison, click on *Print*.

Compare					- • •
Configuration 1			Configuration 2		
TLB - Second Sca	ale - Full Scale = 20kg	🚖 🍇	Connected to TLB4 - Seri	al Number 625123256	🖆 🍇
Show All C	Only Differences		•	Print 📀	Compare
Tab	Group	Parameter	Configuration 1	Configuration 2	
Serial	RS 485	Address	1	1	^
Calibration	Filter	Anti-Peak	v	✓	
Calibration	Zero Parameters	Auto Zero	0	0	_
Serial	RS 485	Baud Rate	9600 bps	9600 bps	
Serial	RS 485	Stop Bit	1	1	
Calibration	Calibration	Coefficient	1	1	
Serial	RS 485	Delay	0	0	
Calibration	Calibration	Divisions	0.002	1	
Calibration	Filter	Filter	4	4	
Calibration	Calibration	Theoretical Full Scale	20	0	
Serial	RS 485	Hertz	10	10	•

You may compare instrument configurations with different identity parameters. In this case, the table will only show the operating parameters of both configurations.

PRINTOUTS

After creating or editing a configuration, you may print out all its parameters.

Proceed as follows to print out a configuration:

- select the menu File \rightarrow Print
- select the printer or PDF printing mode;
- click on *Print*.

PROFILES

Profiles are attributes that may be used to distinguish configurations of instruments belonging to different customers or to subdivide configurations as desired. You may create and edit profiles to which configurations may be assigned.

The profile data are:

💿 New Profile		— X—
Name		
1		
Logo	Delete	Open
Detelle		
Details		
		Save

Name: name of the profile identifier.

Logo: image associated with the profile (optional). You may upload an image by clicking *Open* or delete it by clicking *Delete*.

Details: any profile details (optional).

CREATING A NEW PROFILE

To create a new profile, proceed as follows:

- select the menu Configurations \rightarrow Profiles
- the software will show the *Profiles* window containing all the previously created profiles (only one default profile available at the beginning);
- click on New Profile;
- the software will show the New Profile window containing profile data (see section PROFILE DATA);
- define the parameters and click on Save to generate a new profile.

EDITING AN EXISTING PROFILE

To edit an existing profile, proceed as follows:

- select the menu Configurations \rightarrow Profiles
- the software will show the *Profiles* window containing all the previously created profiles (only one default profile available at the beginning);
- icons \mathbf{N} $\mathbf{\bar{m}}$ are associated with each profile in the list;
- click on 1 to edit the profile data (see section **PROFILE DATA**);
- click on to delete the profile.

Profile	s					×
Client Pro	ofiles:			.	New P	rofile
Logo	Name	Details				
D	Default				1	Ŵ
5	Second Profile	Test profile			ß	莭

CONNECTION

It is possible to connect to an instrument via serial port and MODBUS protocol.

SERIAL SETTINGS

Set the serial communication parameters as follows:

- select the menu Connection \rightarrow Serial Settings
- the software will show the window Serial Settings containing all the communication parameters;
- set the communication parameters;
- click on Save to save the settings.

Serial Settings ×					
Baud Rate	9600 bps -				
Address	1 🚔				
Delay	0 🖨				
Parity	None Odd Even				
Stop Bit	1 2				
	Set to Defau	<u>ilt</u>			
💾 Sav	e				

Click on *Set to Default* to automatically set the default communication parameters (Baud Rate = 9600, Address = 1, Delay = 0, Parity = None, Stop Bit = 1).

To establish communication with the software, the instrument needs to be connected via a serial port set with the Modbus protocol and with the same communication parameters (see section **SERIAL COMMUNICATION SETTING** in the instrument manual).

If the Baud Rate parameter is set to *Auto*, the software automatically searches for the value that allows establishing a connection and uses it for subsequent operations on the instrument.

To connect with an instrument, proceed as follows:

- connect the instrument to the PC;
- select the menu Connection \rightarrow Connect;
- the software will show the *Connection* window with the list of detected instruments:
 - if the window fails to show the connected instruments, check the serial settings (see section SERIAL SETTINGS) and click on *Refresh*;
- select the desired instrument;
- click on one of the icons in the window to execute one of the possible operations:

Conr	nection							2 <u>983</u> 3	D X	
Port	Baud Rate	Instrument	Version	Model	Program	Legal for Trade	Serial Number			
COM4	9600	TLB	1,15.02	TLB485	Base	Not Legal	105178151			
G	New	Upload	-	Download	,	Connect	្ទ	Search In	istrument	
		M								

- New: will generate a new configuration where identity parameters will be identical to those of the connected instrument, and operating parameters will be set by default (see section CREATING A NEW CONFIGURATION).
- Upload Configuration: will upload the currently open configuration to the software on the connected instrument. Each operating parameter on the instrument will be overwritten. The configuration upload procedure ends with the restart of the instrument.
- Download Configuration: will generate and open a new configuration with all parameters identical to those of the connected instrument. The parameters on the instrument are not synchronised with those of the open configuration. To update them you need to upload the configuration again.
- Connect: will activate a real time connection with the instrument (see section OPERATIONS IN REAL TIME).
- Search Instrument: will search again for connected instruments.

REAL-TIME OPERATIONS

All the operations described in this section are possible only if a real time connection with the instrument is in progress (see the section **CONNECT**).

The instrument keypad will be locked during real-time connection. If the real-time connection is unexpectedly interrupted, the instrument will need to be restarted to resume use.



- 1. Weight graph: shows the weight trend displayed on the connected instrument display
- 2. Weight value read by the connected instrument.
- 3. Information on the status of the read weight: Stable, Net/Gross, Negative, Error.
- 4. Buttons for interacting with the connected instrument:
 - PAUSE/RESUME: will stop the weight reading by the instrument. The graph and all read values will remain unchanged at the last value read.
 - Net: will perform a net operation. This operation may be repeated several times.
 - Gross: will cancel all net operations performed.

- 5. Information on the status of the connected instrument inputs and outputs:
 - Indicator off: Input or Output open;
 - Indicator on: Input or Output closed;
- 6. Load graph: shows the percentage of current load, expressed in relation to the capacity of the load cells connected to the instrument.
- 7. Information on the connected instrument.
- 8. Display settings:
 - Show setpoints: adds horizontal highlighted lines to the graph, corresponding to the setpoint values set on the connected instrument;
 - Show stability: adds weight stability information to the graph;
 - the red lines correspond to the points when the weight lost stability;
 - the green lines correspond to the points when weight gained stability;
 - e/10: the weight value is indicated in tenths of the current division.

CHANNELS

Only available for multichannel instruments.

To access the *Channels* window, proceed as follows:

- establish a real time connection with the instrument (see section CONNECT);
- select the menu Operations \rightarrow Channels or

click on the toolbar icon

Via the Channels window you may:

- display the weight distribution;
- select active channels; _
- equalise the weighing system.



- Î 3
- 1. Commands for equalisation (see section EQUALISATION).
- 2. Commands for selecting the active channels (see section CHANNEL SELECTION).
- 3. Weight value read by the connected instrument and weight information: Stability, Error.
- 4. Weight distribution as a percentage on the active channels.
- 5. Cell signals in mV detected by the active channels.

CHANNEL SELECTION

The channel selection commands may be used to display and confirm the channels automatically detected by the instrument. It is possible to establish active channels automatically or manually. For further information on how to select channels, please refer to the instrument manual.

To set the automatic selection of active channels, proceed as follows:

- from the drop-down menu *Selection mode*, select *Automatic*;
- the active channels are automatically detected by the instrument when the *Automatic* mode is selected;
- in this mode, each time the instrument is switched on, it scans to automatically activate the connected channels.

To manually set the active channels, proceed as follows:

- from the drop-down menu Selection mode, select Manual;
- the channels active at the time of selecting Manual mode will be saved in the instrument's memory;
- to manually select which channels to be activated, click on *Edit*;
- the Actions pane will appear, allowing you to perform the following operations:
 - Scan channels: will scan the channels detected by the instrument and highlight them in green;
 - Deselect all: deactivates all channels;
 - Select All: activates all channels;
- select the channels to be activated and click on Save.

Channel Selection	Channel Selection	Channel Selection
Selection Mode Manual 🔹	Selection Mode Manual	Selection Mode Manual
Channel 1	Channel 1 Actions	Channel 1 Actions
Channel 2	Channel 2	Is Channel 2 🞜 Scan channels
Channel 3	Channel 3 Deselect all	Channel 3 Deselect all
Channel 4	Channel 4 Select all	Channel 4 Select all
		Select detected
		Legend
		Active channels
		Disabled channels
🞦 Edit	Save X Cancel	Save 🗙 Cancel

EQUALISATION

If an instrument has been set in a Legal for Trade state - e.g. Legal, Legal Multi Range, or Legal Multi Interval type - to access this feature, qualified access is required (see section QUALIFIED ACCESS).

The equalisation procedure allows the weight differences detected on a platform to be corrected, weighed by more than one load cell.

For more information on how equalising works, please refer to the instrument manual.

To perform the equalisation procedure, proceed as follows:

- click on Equalise;
- the software will show the wizard window with preliminary instructions;
- click on Start;
- unload the scales, wait for stability and confirm by pressing Next;
- position the sample weight at a load cell:
 - o if the tallest column of the graph is red, wait for stability and confirm by clicking on *Next*;
 - if the tallest column is green, this means that the sample weight corresponds to a cell that has already been equalised. Move the sample weight before continuing;
- repeat the positioning of the sample weight for each active channel;
- click on Finish to save the equalisation.

F	n		•	
L	٠y	•	•	

Ch 1				
	c	h 2	OFF	OFF
🔴 Stab	le			258 kg
🔴 Stab	le			258 kg

OK Click on *Next* to confirm the weight with the scales unloaded.



OK Click *Next* to equalise channel 3.

Ch 1			
	Ch 2	OFF	OFF
Stable		1	616 kg
	> Next	×	Cancel

NO

Channel 1 has already been equalised and by proceeding, you would get an error. Move the sample weight to channel 2 or 3 before continuing.

To delete the equalisation and return to a non-equalised system, click on Delete active equalization.

REAL CALIBRATION

If an instrument has been set in a Legal for Trade state - e.g. Legal, Legal Multi Range, or Legal Multi Interval type - to access this feature, qualified access is required (see section QUALIFIED ACCESS).

It is possible to perform instrument real calibration using sample weights of a known value and, if necessary, to correct indicated value deviations from the correct value.



The graph in the *Real Calibration* window shows the calibration curve currently active on the instrument. The blue dot on the graph indicates the weight currently being read by the instrument.

To perform the real calibration procedure, proceed as follows:

- establish a real time connection with the instrument (see section CONNECT)
- select the menu Connect \rightarrow Operations \rightarrow Real Calibration
 - or

click on the toolbar icon

- the software will show the real calibration window;
- unload the weighing system and wait for stability;
- clear the weight value by clicking on Set as Zero (the weight detected by the instrument will be reset);
- load a sample weight to the weighing system and wait for stability;
- if need be, adjust the weight displayed by writing the correct value in the Manual Weight field;
- click on Insert to confirm the calibration point;
- you may repeat this operation for inserting up to 8 calibration points.

To delete a calibration point, click on the corresponding icon $\overline{\mathbf{m}}$ in the *Points* pane. To delete all calibration points, click *Delete All* in the *Points* pane.



Performing a reset will cancel all calibration points: so, this is the first operation you need to perform in the real calibration procedure.



If you intend to calibrate a multichannel instrument, it is recommended you first equalise the system (see section **EQUALISATION**).

COMMANDS

You can send commands to the connected instrument: to access the command list, proceed as follows:

- establish a real time connection with the instrument (see section CONNECT);
- select the menu Operations \rightarrow Commands.

Command options:

- *Restart instrument*: the instrument is restarted;
- *Factory Reset*: all instrument's operating parameters will be set to the instrument's default values (see instrument manual to acquaint the default values).

FIRMWARE UPDATE

To start an update of the connected instrument proceed as follows:

- connect the instrument to the PC;
- select the menu Connection \rightarrow Instrument \rightarrow Firmware Update;
- the software will show the window with the list of instruments detected;
 - if the list fails to show the instrument, check the serial settings (see section SERIAL SETTINGS) and click on *Refresh*;
- when the icon 🖸 appears on the line of the connected instrument, a new firmware version is available;
- click on *Update* or 🕑 to start the automatic update procedure;
 - After clicking *Update*, you can specify a firmware update file manually by browsing the local folders on your computer.



After launching the update, follow the instructions on the monitor and proceed as follows:

1. The software will show the *Confirm Boot Mode* window.

Confirm Boot Mode	—					
<u>.</u>						
Before proceeding, the instrument must be in Boot mode. Restart the instrument while holding down the ENTER key in the instrument's keyboard until the instrument displays the letter "b".						
888888						
The instrument must be switched off and on again even up, even if it is already in Boot m	ry time this window shows ode!					
Select the correct COM Port connected to the RS232 port	of the instrument.					
СОМЗ	- C Refresh					
✓ Proceed						

- If the window requires the RS232 port to be specified, connect the instrument RS232 serial port to the PC and select the corresponding COM port from the drop-down menu (for further information on connecting the serial port, consult the instrument manual);
- If the window does not require you to specify the RS232 port, the COM port will be selected automatically;
- If you are prompted to perform preliminary operations before proceeding, follow the directions of the wizard shown;
- 2. Activate the Boot mode on the instrument:
 - Restart the instrument by holding down the ENTER key on the instrument keyboard until "ь" or "ь. " appears;
- 3. Click on *Proceed* to confirm the update;
- 4. Upon completion, the software will display a message showing the outcome of the update procedure. In case of failure, see section **ERRORS DURING UPDATE**.

ERRORS DURING UPDATE

If the firmware update is unsuccessful the software automatically saves to file the identification data of the instrument and the information needed for recovery.

To restore the instrument see section **INSTRUMENT RESTORE**.

To troubleshoot errors during the firmware update, follow these tips:

- 1. Always try the update procedure at least twice;
- 2. Check the connection with the instrument and check that the earth of the serial cable is connected to the earth of the instrument (for further information on the connection, consult the instrument manual);
- 3. If the instrument is connected to the serial port of the PC, replace the cable with a Serial USB converter and connect the instrument to the USB port of the PC;
- 4. Open the update console by clicking on the arrow in the figure to check the possible causes of the failure (see section LOG EXPORT).

•			X
Firmware Update			Step 2/4 ● ● ● ●
Updating Please do not close I	Instrument Mana	ger or disconnect the instrument.	
		28%	
Data Rate 9.15 kB/s	Elapsed 0:21 s	Remaining 0:39 s	

INSTRUMENT RESTORE

If the firmware update is unsuccessful, proceed as follows to restore the instrument:

- connect the instrument to the PC;
- select the menu Connection \rightarrow Restore Instrument;
- the software will show a window with the list of instruments for which data have been saved and whose update failed;
- select the desired instrument;
- click on Restore.





The software will not check that the connected instrument corresponds with the selected one. Pay special attention when selecting the instrument

QUALIFIED ACCESS

If an instrument has been set in a Legal for Trade state - e.g. Legal, Legal Multi Range, or Legal Multi Interval type - you can edit certain parameters and perform certain features only via a qualified access.

Qualified Access							
Access to le	Access to legally relevant parameters						
Insert authentication credentials.							
Seed	User		Password				
124	1						
		0 -7	Authenticate				

A customer password table is required to execute a Qualified Access Procedure, which is supplied by the manufacturer to authorised service centres only. If you have the password table, proceed as follows:

- select the menu File \rightarrow Qualified Access;
- the software will show the Qualified Access window;
- enter your identification code (user password) in the User field, shown in the table;
- refer to the table and record the password (4-digit number) corresponding to the value shown in the *Seed* field;
- type the password in the *Password* field and click on *Authenticate*.

Qualified access mode will be quitted when the software is closed.

To cancel qualified access, proceed as follows:

- select the menu File \rightarrow Qualified Access;
- click on Cancel Authentication.

LOG EXPORT

In the event of a malfunction or a failed firmware update, you can export log files, containing diagnostic information, to facilitate technical assistance in identifying the problem.

This information must be provided in case of a request for technical assistance.

To export the log files proceed as follows:

- Select menu: ? → Export Logs;
- The software shows the window for saving the log file.

