Operating instructions

METTLER TOLEDO MultiRange
ID7sx-Sys weighing terminal

METTLER TOLEDO

0.000 kg

www.mt.com/support

Contents

1   Safety precautions

The ID7sx-Sys weighing terminal is approved for operation in zone 1 and 21 hazardous areas. It may only be used in areas in which the causes of static electricity build-up, which lead to propagating brush discharges, have been eliminated.

If the ID7sx-Sys weighing terminal is used in hazardous areas, special care must be taken. The code of practice is oriented to the "Safe Distribution" concept drawn up by METTLER TOLEDO.

Competence   ▲ The weighing system may only be installed, maintained and repaired by authorised METTLER TOLEDO service personnel.

▲ The mains connection may only be connected or disconnected by the owner's electrician.

Ex approval   ▲ For the exact specification please refer to the statement of conformity.

▲ No modifications may be made to the terminal and no repair work may be performed on the modules. Any weighing platform or system modules that are used must comply with the specifications. Non-compliant equipment jeopardises the intrinsic safety of the system, cancels the Ex approval and renders any warranty or product liability claims null and void.

▲ The safety of the weighing system is only guaranteed when the weighing system is operated, installed and maintained in accordance with the respective instructions.

▲ Also comply with the following:
  – the instructions for the system modules
  – the regulations and standards in the respective country
  – the statutory requirement for electrical equipment installed in hazardous areas in the respective country
  – all instructions related to safety issued by the owner

▲ The explosion-protected weighing system must be checked to ensure compliance with the requirements for safety before being put into service for the first time, following any service work and every 3 years, at least.

Operation   ▲ Prevent the build-up of static electricity. Therefore:
  – always wear suitable working clothes when operating or performing service work on the system,
  – do not rub or wipe off the keyboard surface with a dry cloth or glove.

▲ Do not use protective hoods.

▲ Prevent damage to the weighing terminal. Hairline cracks in the keyboard membrane are also considered damage.

2   Introduction and commissioning

2.1   Documentation

These operating instructions describe the operation of the ID7sx-Sys with the basic functions of the Sys-690 application software and all the possible interfaces.

Information on your customer-specific ID7sx-Sys application can be found in the corresponding operating instructions specially authored for you.

2.2   Applications

With the ID7sx-Sys weighing terminals the following applications are possible:

2.2.1   ID7sx-Sys with PSU power supply unit
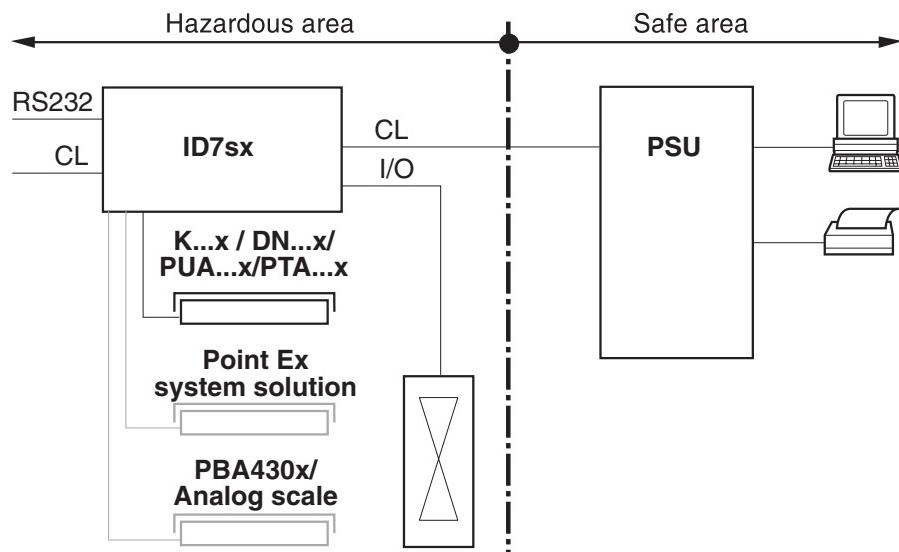
In this configuration the following possibilities are available:

- Multi-scale operation with up to 3 weighing platforms (K...x, DN...x, PUA...x, PTA...x, PBA430x or system solution Point Ex)

- Up to 2 data interfaces and one I/O interface

  – for printing,
  – for data exchange with a computer,
  – for control, e.g. of valves or flaps.

- Alibi memory module for storing the individual configuration data as well as weighing data.

2.2.2   ID7sx-Sys with PSUx power supply unit
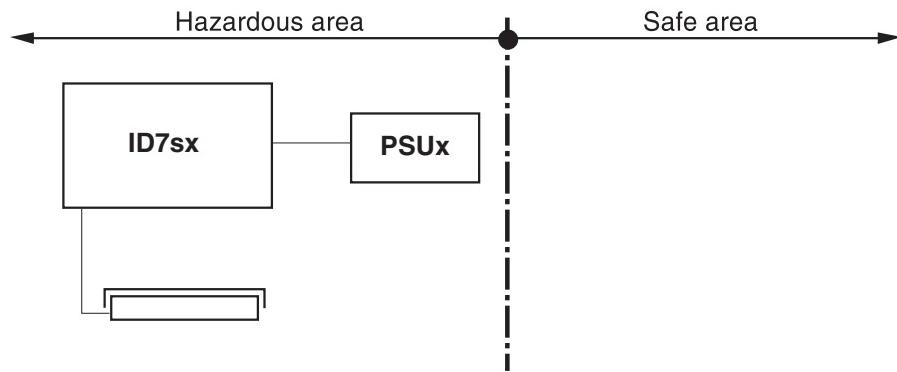
Only one weighing platform (K...x, DN...x, PUA...x, PTA...x, PBA430x or Point Ex system solution) is permissible in this configuration.

2.3   ID7sx-Sys weighing terminal

2.3.1   Display
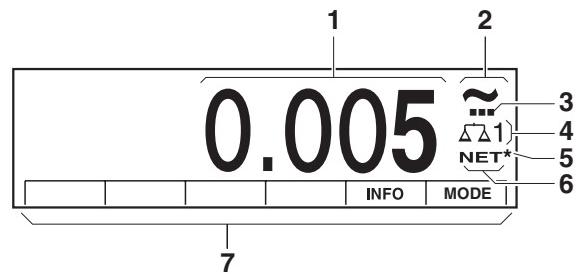
1   Weight display BIG WEIGHT® with sign and decimal point

2   Stability monitor: lights up until the weighing platform has levelled out, then the weight unit appears here

3   Range display for multi-range weighing platforms

4   Number of the weighing platform: shows the weighting platform just selected

5   Symbol * for identifying weight values in the second unit or in a higher resolution

6   NET symbol for marking net weight values

7   Assignment of the function keys

2.3.2 Keypad
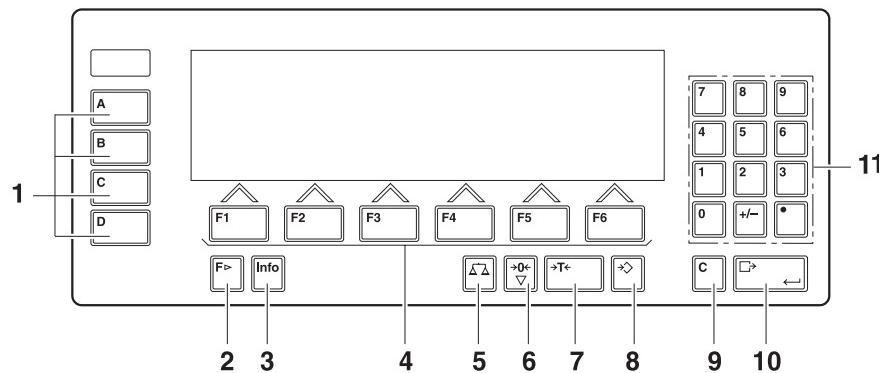
1 CODE A … CODE D keys – enter identification data

2 FUNCTION CHANGE key – display additional functions
when entering weight values: switch over unit

3 INFO key – recall memory contents and system information

4 Function keys F1 … F6 – the current assignment is shown in the display above
the key

5 SCALE key – select scale

6 ZERO-SET key – set scale to zero, test scale

7 TARA key – tare scale

8 TARE SPECIFICATION key – enter known tare values numerically

9 CLEAR key – clear entries and values

10 ENTER key – accept and transfer data

11 Numeric keypad with decimal point and signs

2.4   Commissioning

2.4.1   Control drawings and guides for installers

The explosion-protected weighing system with the ID7sx-Sys weighing terminal may only be installed according to the respective guide for installers and the accompanying control drawing, depending on the power supply unit.

Component	Guide for installers	Control drawing
ID7sx	ME-22008316	PSU-ID7sx ME-22006478
PSU	ME-22006472	
PSUx/230V	ME-22006386	PSUx/230V-ID7sx ME-22006397
PSUx/120V	ME-22006395	PSUx/120V-ID7sx ME-22006399

2.5   Cleaning

DANGER OF SHOCK

➜ Do not open ID7sx-Sys weighing terminal to clean.

CAUTION

➜ Make sure that unused connection sockets are covered with the corresponding protective caps. Ensure the correct position of the seals when doing so.

➜ Do not use high-pressure cleaners.

Cleaning

➜ Wipe off ID7sx-Sys weighing terminal with a commercially available glass or plastic cleaner.

➜ When used in category 2, zone 21 hazardous areas, the weighing terminal must be cleaned regularly. See also standard EN 50281-1-1 / 50281-1-2.

2.6   Disposal
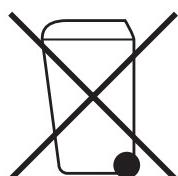
In conformance with the European Directive 2002/96 EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of with domestic waste. This also applies to countries outside the EU, per their specific requirements.

➜ Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.

3   Basic functions

3.1   Setting to zero

Setting to zero corrects the influence of minor dirt on the load plate.
In the case of excessive dirt which cannot be compensated by setting to zero, the display shows OUT OF RANGE.

Manual zero set   1. Relieve weighing platform.

2. Press ZERO-SET key.
   The display shows 0.000 kg.

Automatic zero set   On certified weighing platforms the zero point of the weighing platform is automatically corrected when the weighing platform is relieved.
The automatic zero set can be switched off in the master mode on non-certified weighing platforms.

3.2   Taring

3.2.1   Manual taring

1. Place empty container on scale.

2. Press TARE key.
   The tare weight is saved and the weight display set to zero.
   The display shows the NET symbol.

Notes

- When the weighing platform is relieved, the saved tare weight is displayed with a negative sign.
- The weighing platform only saves **one** tare value.

3.2.2   Specify tare weight
This function is only available when ordered expressly.

Enter numerically   1. Press TARE SPECIFICATION key.

2. Enter tare weight (container weight) and confirm with ENTER.
   When weighing platform is relieved, the entered tare weight is displayed with a negative sign.

Note
With the FUNCTION CHANGE key you can select the weight unit for entering the tare weight.

Correct entry   ➜ Clear the entry character by character with CLEAR key and repeat correctly.

3.2.3 Recall currently saved tare weight

The saved tare weight can be recalled at any time.

→ Enter INFO, TARE SPECIFICATION key sequence.
The saved tare weight is displayed.

3.2.4 Clear tare weight

→ Relieve weighing platform and tare.

– or –

→ Recall tare weight and press CLEAR key.

3.3 Weighing

Weighing without taring

→ Lay weighing sample on weighing platform.
Gross weight (total weight) is displayed.

Weighing with taring

1. Place the empty container on the weighing platform and tare.

2. Pour in weighing sample.
The display shows the net weight and the NET symbol.

Weighing with tare specification

1. Place filled container on weighing platform.
The display shows the gross weight (total weight).

2. Specify tare weight or recall tare memory.
The display shows the net weight (container content) and the NET symbol.

3.4 Working with several weighing platforms

Up to 3 weighing platforms can be connected to the ID7sx-Sys.
Depending on the setting in master mode, only the currently active scale appears in the display (serial Multi-scale mode) or all scales are operated at the same time (parallel multi-scale mode). A constantly updated sum scale is also available in parallel multi-scale mode.

3.4.1 Switch over weighing platform

The weighing platform currently selected is shown on the terminal.

→ Press SCALE key.
The next weighing platform is selected.

– or –

→ Enter number of weighing platform and press SCALE key.
The desired weighing platform is selected.

Note

The sum scale can only be operated non-verifiably. It is therefore identified by the symbol Σ.

3.5   Displaying versions

When connected to a power supply, the versions of the ID7sx-Sys and the installed components are displayed.

Version code for the ID7sx-Sys with customer-specific application program

```
METTLER-TOLEDO ID7sx-Sys

ID7sx 0.13

CC-AA-XXXXXXXX-WV-DD.MM.YYYY
```

CC	Country code, e.g. DE = Germany
AA	Software type, e.g. 00 = Base
XXXXXXXXXX	Order No.
VVV	Software version
DD.MM.YYYY	Date of manufacture, day.month.year

4   Additional functions

The assignment of the 6 function keys of the ID7sx-Sys weighing terminal differs depending on the weighing task. The current assignment is shown above the function keys.

Independent of the customer specific application software, the ID7sx-Sys has the following additional functions:

				INFO	**MODE**
				Display information, see 4.2	Activate master mode, see Chapter 5

4.1   Display ID code and test weighing platform

Each time the weighing platform configuration is changed the ID code counter is increased by 1. On certified weighing platforms the displayed ID code must match the ID code on the ID code sticker, otherwise the calibration is no longer valid.

Display ID code

➜ Press ZERO SET key and hold until IDENTCODE = … appears in the display.

Test weighing platform

➜ Press ZERO SET key again.
   The connected weighing platform is checked. The display shows CHECK SCALE and then SCALE IS OK after completing the test.

Note
If weighing platform is defective, display shows SCALE ERROR.

4.2   Recall information

On the weighing terminal memory contents and system information can be recalled.

1. Press INFO key.
    Then the following function key assignment appears:

DATE	TARE	SCALE	ALIBI	END	VERS
Display date and time	Display tare weight	Call up the data of the current scale: Version, max. load, ID code, etc.	Recall content of alibi memory, see section 4.3. This selection only appears when Alibi Memory-ID7sx is installed.	Exit information mask	Display version numbers of installed software modules

W&M	PERFO	ERROR			
Display checksum of the software relevant to calibration. The correct checksum is documented in the calibration approval.	System utilisation	Fault / Event memory display			

2. Select desired information.
    The information is displayed for about 5 seconds, then the weighing terminal changes to the weighing mode again.

Note

When several values are displayed, the ID7sx-Sys automatically changes to the next value after approx. 5 seconds.

4.3   Recall data from Alibi Memory

With the Alibi-Memory-ID7sx memory module you can fulfill your recording obligations in certified operation without having to archive paper.

Alibi-Memory-ID7sx automatically assigns every weighing operation a consecutive data record number that also appears on the printout, saves the net and tare value and also the date and the time.

The Alibi-Memory-ID7sx operates according to the principle of a ring memory: When the capacity limit of 12 Mbytes is reached, the oldest record block having the size of 64 Kbytes is deleted and overwritten by the data of the subsequent weighings.

By entering suitable search criteria you can quickly access the data of a very specific weighing.

4.3.1   Initiate

➡ Press INFO, ALIBI key sequence.
   The function keys change to the following assignment:

FIND	>>...	<	>	->Num	END
Enter search criteria	Search for next matching data record starting with oldest	Show the data record of the weighing carried out directly beforehand	Show the data record of the weighing carried out directly afterwards	Search for data record with known data record number	Exit Info Alibi and return to normal mode

4.3.2   Fast search with entry of data record number

1. Press ->Num key.

2. Enter number of data record to be searched for and confirm with ENTER.
   Alibi-Memory-ID7sx now searches for the desired data record.

Notes

• The search may take up to 10 seconds.

• If no data record with the entered number is found, the message NO MATCHING DATA RECORD appears.

4.3.3 Search with other search criteria

→ Press FIND key.
The function keys are given the following assignment:

DATE	TIME	NET	TARE	START	END
Enter date as search criterion	Enter time as search criterion	Enter net value as search criterion	Enter tare value as search criterion	Start search with entered search criteria	Terminate search

All offered search criteria can be combined with each other.
The entered search criteria are shown in the display in clear text.
This enables you to search for a find a specific weighing.

Enter date

→ Press DATE key and enter complete date in DD.MM.YY form.

Enter time

→ Press TIME key and enter desired time in one of following formats.

Format HH   all weighings between HH.00.00 and HH.59.59 are found
Format HH.MM   all weighings between HH.MM.00 and HH.MM.59 are found
Format HH.MM.SS only the weighing at the time HH.MM.SS is found

Enter net/tare value

1. Press NET or TARE key.

2. Enter weight value and confirm with ENTER.
The function key assignment changes back again for selection of the search criteria.

Note

With the FUNCTION CHANGE key you can select the weight unit for entering the tare weight.

Start search

→ Press START key.
Alibi-Memory-ID7sx searches for the oldest data record which meets the entered search criteria.

Notes

• The search may take up to 10 seconds.

• If no data record with the entered values is found, the message NO MATCHING DATE RECORD appears.

• If no search criterion has been entered, the oldest data record is displayed.

4.3.4 Displaying data records

Found data records are shown in the display.

DATE:	02.04.06	TIME	09.25.25
NUM:	000987		
NET:	25.000 KG		
TARE:	100.346 KG		

Scroll forward/back   The keys >>…, < and > enable you to scroll within the found data records.

Note

When, during scrolling with the key >>… all entries of the Alibi-Memory-ID7sx have been searched through, the message END OF FILE appears.

5   Settings in the master mode

5.1   Overview of the master mode

In the master mode you adapt the ID7sx-Sys weighing terminal to meet your needs. Depending on the configuration, the master mode is divided into 4 or 5 master mode blocks, which are in turn divided into further blocks.
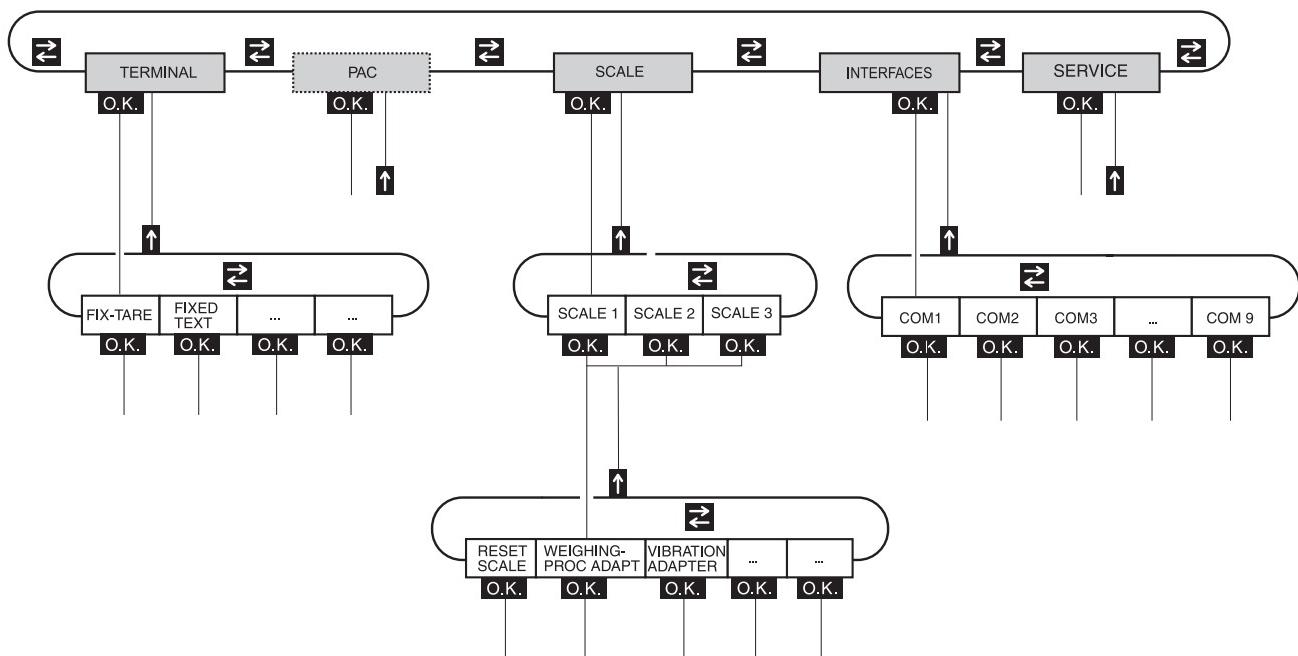
TERMINAL   For system settings, such as entering the date and time or loading permanent texts, see section 5.3.

PAC   To set application-specific parameters.

SCALE   To select one of the connected weighing platforms. For each selected weighing platform the parameters are then set which concern the weight value, e.g. stability detector, unit, etc., see section 5.4.

INTERFACES   To select an interface. The communication parameters are then set for each interface, see section 5.5.

SERVICE   For configuring the weighing platform(s).
On IDNet weighing platforms only for METTLER TOLEDO service technicians.
On weighing platforms with an analog signal output, see service manual A/D converter Point ME-22004256.

5.2 Operating the master mode

5.2.1 Enter the master mode

1. Press MODE key.
   If the current function keys assignment does not contain MODE, press the FUNCTION CHANGE key as often as necessary until the MODE key appears.

2. Enter personal code if configured.
   The display shows the first master mode block TERMINAL.

5.2.2 Assignment of function keys in the master mode

Assignment on the top level
On the top level of the master mode the function keys are assigned as follows:

←	→		↑	**END**	**OK**
Change to previous block within a level	Change to next block within a level		Exit level and return to higher-level block	Exit the master mode and return to normal mode	Recall lower-level block or confirm selection

➜ Select the function by pressing the function key.

When the function keys are otherwise allocated

➜ Press the FUNCTION CHANGE key repeatedly until the function key assignment shown above appears.

Example ➜ Press the END key to exit the master mode and return to the normal mode.

5.2.3 Orientation in the master mode
For improved orientation the display shows the last steps in the path of the current master mode block.

Example The upper 3 lines of the display show the following path for selecting the language:

Path ⎯
Current selection ⎯

TERMINAL
 LANGUAGE
  ENGLISH
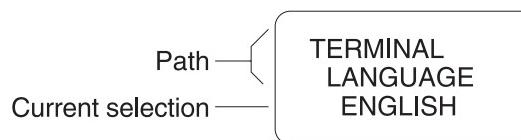
5.2.4 Entries in the master mode

The following basic rules apply to entries made in the master mode:

- Confirm (alpha)numeric entries with ENTER.

- Alphanumeric entries with the ID7sx-Sys: see below.

- To accept the displayed value: Press ENTER key.

Enter alphanumeric identification

1. Press one of the keys CODE A … CODE F.
   The functions keys are given the following assignment:

ABCDE	FGHIJ	KLMNO	PQRST	UVWXY	Z/-()
Selection of letters A to E	Selection of letters F to J	Selection of letters K to O	Selection of letters P to T	Selection of letters U to Y	Selection of letter Z or a special character

2. Select desired group of letters, e.g. press KLMNO key.

3. Select desired letter.
   The display changes again to the above selection.

4. Repeat entry in steps 2 and 3 for additional characters.

Note

Letters and numbers can be combined as desired.

5.2.5 Emergency entrance into the master mode

If a personal code has been assigned for entering the master mode and you have forgotten your code, you can still enter the master mode:

➜ Enter the character sequence C, L, E, A, R as your personal code.

5.3 TERMINAL master mode block

5.3.1 Overview of the TERMINAL master mode block

In the TERMINAL master mode block you enter the following system settings:
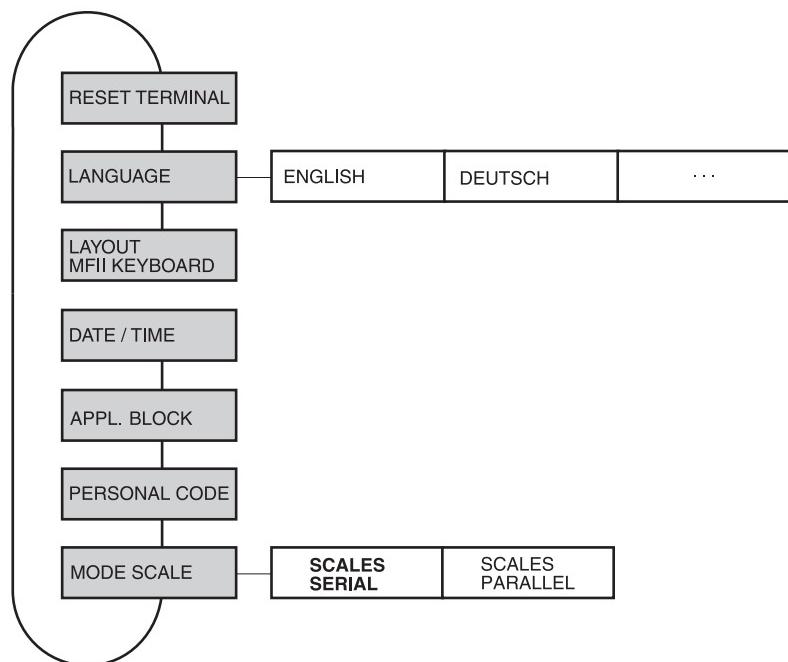
Legend Blocks highlighted in **grey** are described in detail in the following.

5.3.2 Settings in the TERMINAL master mode block

RESET TERMINAL	Reset all terminal functions to the factory setting
	• Resets the password MINIMUM to the factory setting: 2234
	• LANGUAGE German

LANGUAGE	Select dialog language
	Possible setting: English, Deutsch, Français, Nederlands, Italiano, Español, Polski, Russian, Slovakian, Portuguese, Hungarian, Slovenian, Czech, Croatian

LAYOUT MFII KEYBOARD	Select keyboard layout of connected external keyboard
	This setting is not available at ID7sx-Sys. It is available at IND690 only.

DATE / TIME	Enter date and time
	• Enter DATE in European notation: Day.Month.Year.
	• Enter TIME in European notation: (24) Hours.Minutes.Seconds.
Comments	• Enter single-place numbers with a preceding zero.
	• The clock continues to run after the terminal is switched off.

| APPL. BLOCK	Editing application blocks
	Assign application blocks or combinations of application blocks to keys or change key assignments for application blocs.
	This setting is not available at ID7sx-Sys.

PERSONAL CODE	Codes for entering various master mode menus
	Enter codes with a maximum of 8 alphanumeric characters.
MINIMUM	Access to master mode
GENERAL	Access to all personal codes
PAC	Access to the PAC / RESET PAC and PAC / ERROR-INFO menus
PAC-DATAB.	Access to the PAC / DATABASE menu
PAC-APPL.	Access to the PAC / APPLICATION menu
INTERFACE	Access to all parameters in the INTERFACE menus; the test functions are freely accessible
OPTION 1 OPTION 2 OPTION 3	Program dependent
Comment	If only zeros are entered, the password is not used

MODE SCALES	Select between serial and parallel operating mode for the connected scales
SCALES SERIAL	Serial operation of the connected scales: Only the weight value of the current scale is displayed.
SCALES PARALLEL	Parallel operation of the connected scales: All weight values of the connected scales are displayed simultaneously.
SUM SCALE	A sum scale can be defined in parallel scale operation.
	1. SUM SCALE: Select ACTIVATED.
	2. With ↓↑, change to SCALE 1 and select YES with < or > if this scale is to be the sum scale.
	3. Repeat the procedure for SCALE 2 - SCALE 3.
	Factory setting: SUM SCALE DEACTIVATED

5.4 SCALE master mode block

In the first block the weighing platform is selected: SCALE 1 … SCALE 3.
The other setting possibilities are the same for all connected weighing platforms.

5.4.1 Overview of the SCALE master mode block

RESET SCALE				
WEIGHING-PROC ADAPT	**UNIVERSAL WEIGHING**	STATIC WEIGHING	FINE FILLING	
VIBRATION ADAPTER	**AVERAGE CONDITIONS**	EXTREME CONDITIONS	IDEAL CONDITIONS	
STABILITY DETECTOR	ASD = 0	ASD = 1	**ASD = 2**	ASD = 3	ASD = 4
AUTOZERO	**AUTOZERO ON**	AUTOZERO OFF		
RESTART	**RESTART OFF**	RESTART ON		
DISPLAY UPDATE	6 UPS	10 UPS	…	
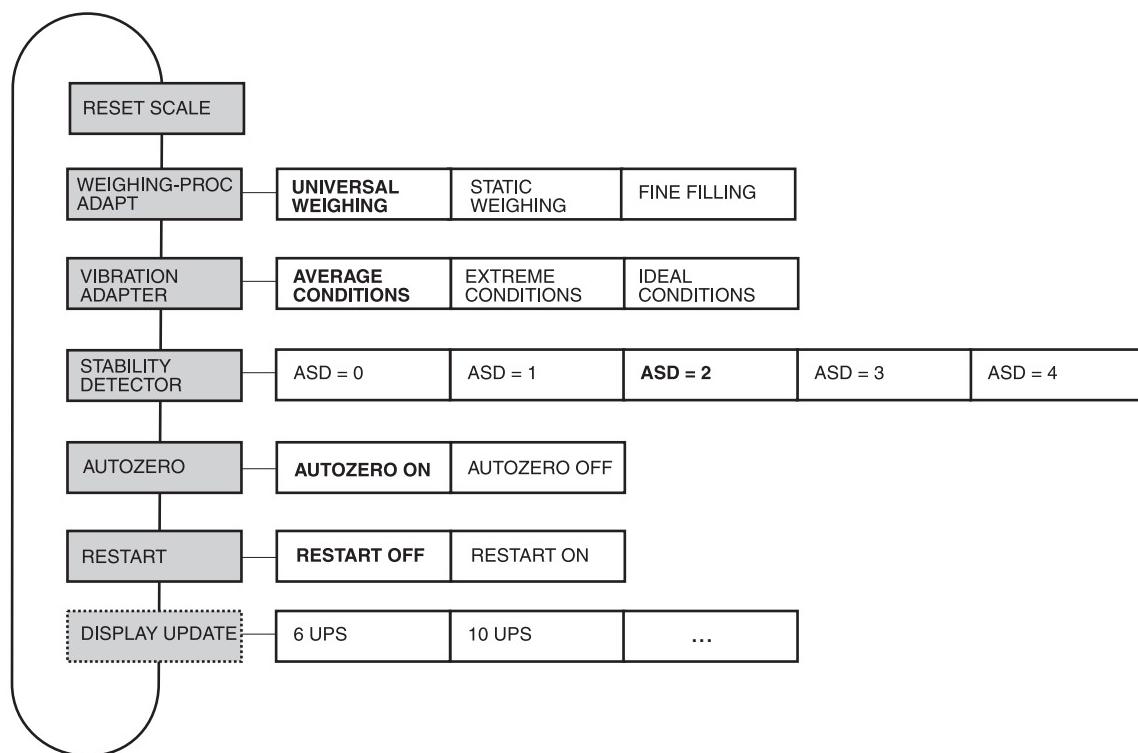
Legend
- Blocks highlighted in **grey** are described in detail in the following.
- Factory settings are printed in **bold print**.
- Blocks which only appear under certain conditions have a **dotted outline**.

5.4.2 Settings in the SCALE master mode block

RESET SCALE	Reset weighing platform to factory setting
	WEIGHING-PROC ADAPT universal weighing VIBRATION ADAPTER average conditions STABILITY DETECTOR ASD = 2 AUTOZERO on RESTART off

WEIGHING-PROC ADAPT	Adapt weighing platform to weighing sample
UNIVERSAL WEIGHING	For solid bodies, coarse filling or checkweighing (factory setting).
STATIC WEIGHING	For solid bodies and weighing under extreme conditions, e. g. strong vibrations or weighing animals.
FINE FILLING	For liquid or powdered weighing samples.

VIBRATION ADAPTER	Adapt weighing platform to the vibration influences of the environment
AVERAGE CONDITIONS	Factory setting.
EXTREME CONDITIONS	The weighing platform operates more slowly, however is less sensitive, e. g. suitable with building vibrations and vibrations at the weighing location.
IDEAL CONDITIONS	The weighing platform operates very quickly, however is very sensitive, e. g. suitable with very calm and stabile weighing location.

STABILITY DETECTOR	Adapt automatic stability detector
	Possible settings: ASD = 0 Stability detector switched off (only possible with non-certified weighing platforms) ASD = 1 fast display good reproducibility ASD = 2 ▲ ▼ (factory setting) ASD = 3 ▲ ▼ ASD = 4 slow display very good reproducibility

AUTOZERO	Switch automatic zero-point correction on or off
	The automatic zero-point correction corrects the weight of minor dirt with the weighing platform unloaded. Factory setting: AUTOZERO ON

RESTART	Switch restart function on or off
	When RESTART ON is set, the zero point and tare value remain stored after the power supply is interrupted. When the weighing platform is switched on again, the terminal shows the current weight. Factory setting: RESTART OFF

DISPLAY UPDATE	Set display speed of the weight display
	Select number of updates per second (UPS). Possible values: 6, 10, 15, 20 UPS
Comments	• This block only appears when the DISPLAY UPDATE function is supported by the connected weighing platform. • The possible settings are dependent on the connected weighing platform.

5.5   INTERFACE master mode block

Select the interface connection

➔ Select the interface connection in the first block:
COM1 through COM7.

Possible interface types

- SERIAL   Only for COM1 (standard) and COM5 (optional). A corresponding slotcard interface has to be installed for each channel in the PSU/..Ex in order to ensure communication in the secure area (RS232 or CL20mA). The wiring is described in the Guide for installers. For additional settings, see Page 25.

- 4 I/O and   Only for COM6. The module designation has been retained for
  RELAY BOX 8   reasons of compatibility. In reality only the optional 8 I/O module on which the functionalities "4 I/O" and "Relay box 8" are mapped exists. For addtitional settings see Page 26.

- 8 I/O   Only for COM6. Alternative dialog for the 8 I/O interface.

- PROFIBUS-DP   Only for COM1 and COM5. An ID7sx Profibus module has to be connected at the PSU/..Ex via RS232. This is a top-hat rail module with an external 24-V supply voltage.

- ALIBI MEMORY   Only for COM7. An Alibi-Memory-ID7sx must be installed in the ID7sx. No further settings are required in the master mode.

SERIAL	Parameters of the standard COM interface driver for serial interfaces. Some parameters are not editable (dependent on the program)
SWITCH ON/OFF	Switches the function of this driver on or off.
MODE	Changes interface parameters.
BAUDRATE	Possible settings: 150, 300, 600, 1200, 2400, 4800, 9600 Baud
PARITY	Possible settings: Parity even, Parity odd, No parity
DATABITS	Possible settings: 7 databits, 8 databits
STOPBITS	Possible settings: 1 stopbit, 2 stopbits
PROTOCOL	Possible settings: Non, XonXoff, CL-Handshake
END-CHARACTERS	Possible settings: End-character 1, end-character 2
TEST	Test function for communication testing. All characters received over the interface are shown in the display. Simple character strings can be sent, if desired.

4 I/O	Parameters of the I/O module. Some parameters are not editable (dependent on the program). At ID7sx this module is mapped to the 8 I/O module.
SWITCH ON/OFF	Switches the function of this driver on or off.
TEST	Test function for testing the 4 I/O module The display shows the signal over inputs 1–4. Outputs 1–4 can be switched on or off using keys 1–4.
Important	**Please ensure that no system functions are activated inadvertently!**

RELAY BOX 8	At ID7sx this module is mapped to the 8 I/O module.
SWITCH ON/OFF	Switches the function of this driver on or off.
I/O TEST	Tests function and state of inputs/outputs of 1 or 2 connected relay boxes 8-690 When an input or output is set (high), its number is shown in the display. When an input or output is not set (low), – is shown in the display. **Setting outputs** Switch outputs using keys 1 to 8 of the numeric keypad; . **Setting inputs** Inputs can be set by connecting a voltage supply (+24 V, current limited to 50 mA), for example.
Comment	The relay box 8-690 corresponds with the BIU Binary Interface Unit. For additional information, see the operating instructions and installation information for the 505918A Binary Interface Unit.

8 I/O	Parameters of the I/O module. Some parameters are not editable (dependent on the program)
SWITCH ON/OFF	Switches the function of this driver on or off.
TEST	Test function for testing the 8 I/O module The display shows the signal over inputs 1–8. Outputs 1–8 can be switched on or off using keys 1–8.
Important	**Please ensure that no system functions are activated inadvertently!**

PROFIBUS-DP	Configuring Profibus-DP-ID7sx
SWITCH ON/OFF	Switches the function of this driver on or off.
NODE ADDRESS	Selects the desired node address from a range of 001 to 126.
OPERATING MODE	Possible settings: 4 words 8 words
TEST	Test function for testing the Profibus I/O values

6   What to do if....?

Error / Message	Possible causes	Rectification
Display dark	• No supply voltage • Incorrect wiring	➜ Check power supply unit ➜ Carry out wiring according to control drawing
Weight display unstable	• Restless installation location • Draft • Interference between load plate and/or materials being weighed and environment • Power supply interference	➜ Adjust vibration adapter ➜ Block draft ➜ Rectify interference ➜ Check power supply
Incorrect weight display	• Incorrect zeroing of weighing platform • Incorrect tare value • Interference between load plate and/or materials being weighed and environment • Weighing platform tilted • Incorrect weighing platform selected	➜ Unload weighing platform, repeat zeroing and weighing ➜ Delete tare or enter correct tarevalue ➜ Rectify interference ➜ Level out weighing platform ➜ Select correct weighing platform
IDENTCODE =	• Test cycle started	➜ Complete test by pressing the ZERO-SET key
-----------	• Load plate not in place • Pre-load not in place • Weighing range dropped below • Weighing range exceeded • Weighing platform locked	➜ Put load plate in place ➜ Load pre-load ➜ Set to zero ➜ Unload weighing platform ➜ Release lock
SCALE ERROR	• Error in weighing platform	➜ Test weighing platforms ➜ If message appears again: Inform METTLER TOLEDO Customer Service
SCALE OVERLOAD	• Weighing range exceeded	➜ Unload weighing platform ➜ Release lock
TOTAL IS NEGATIVE	• Total weight is negative	➜ Unload weighing platform and set to zero
ERROR TARE SET	• Taring not possible, as total weight is negative	➜ Unload weighing platform and set to zero, repeat taring

Error / Message	Possible causes	Rectification
ERROR ZERO SETTING	• Zero-set range exceeded	➜ Unload weighing platform and set to zero
SCALE IN MOTION	• Weight value does not remain constant	➜ Wait until weighing platform shows weight value which remains constant
	• Restless environment	➜ Ensure low-vibration environment
		➜ Check setting of vibration adapter
		➜ If message appears again: Inform METTLER TOLEDO Customer Service
SCALE NOT ZERO	• Zero point has shifted	➜ Set to zero
PRINTER OFFLINE	• Printer (GA46) switched off	➜ Switch on printer
PRINTER NO PAPER	• No paper in printer (GA46)	➜ Insert paper
PRINTER ERROR	• General printer error	➜ Inform METTLER TOLEDO Customer Service
RAM CLEARED	• New software in ID7sx-Sys, all data reset to factory setting	–
NO ALIBI MEMORY !!	• No alibi memory found	➜ Inform METTLER TOLEDO Customer Service
ALIBI ERROR	• Error in alibi memory	➜ Inform METTLER TOLEDO Customer Service
NO SCALE FOUND	• Weighing platform cable not connected properly	➜ Connect the weighing platform cable according to the control drawing
	• Load-cell cable not connected properly	➜ Inform METTLER TOLEDO Customer Service
	• Not all scales connected	➜ Connect all weighing platforms
ERROR SCALE NUMBER	• Error in weighing cell	➜ Repeat test
		➜ If message appears again: Inform METTLER TOLEDO Customer Service
	• Two or more connected weighing platforms have identical scale number	➜ Inform METTLER TOLEDO Customer Service
PERMISSION DENIED	• Incorrect personal code	➜ Enter correct personal code
	• Incorrect information in FTP SECURITY or FTP FILE	➜ Enter permissible values for username, password, drive, directory and file name
DATABASE INIT ERROR	• Database could not be initialised	➜ Inform METTLER TOLEDO Customer Service

7   Technical data and accessories

7.1   Technical data

Terminal	
Display	• Backlit LC display, with graphics capabilities, 64 240 pixels, display field 39 x 132 mm • Cover of scratch-resistant, hardened, antireflection glass
Keypad	• Tactile-touch membrane keypad with acoustic acknowledgement • Scratch-resistant marking, 3-color • 4 keys A to D for identification data, 6 function keys with function change and info key, 4 scale function keys, numerical keypad • Alphanumeric input possible with function keys
Housing	• All nickel chromium steel DIN X5 CrNi 1810 • Weight: net 3.2 kg, without cables
Type of protection	• II 2G EEx ib IIC T4 −10 °C … +40 °C • II 2D IP65 T55 °C
Protection type (IEC 529)	• Dust and water-tight as per IP65/68
Pollution degree	2
Installation category	II
Power supply connectioni	• via PSU/ID..-Ex power supply unit (in the safe area) • via PSUx/.. (in the hazardous area)
Ambient temperature	• operation: −10 °C – +40 °C for weighing platforms of certification class III 0 – +40 °C for weighing platforms of certification class II • storage −25 °C – +60 °C
Relative humididy	20 – 80 %, non condensing
Weighing platform connection	• 1 IDNet connection standard for METTLER TOLEDO weighing platforms of the DN…x, PUA..x, PTA…x, PBA430x series, Point Ex system solution and analog weighing platforms with Point Ex • In the configuration with the PSU power supply unit 2 additional IDNet connections (IDNet-ID7sx) are possible
Serial interface connection	• 1 CL20mA connection standard • In the configuration with the PSU power supply unit max. 2 additional serial interface connections (CL20mA-ID7sx or RS232-ID7sx) possible, see guide for installers and control drawing ME-22006478

Terminal	
Digital inputs/outputs	8 I/O-ID7sx module as an option • 8 digital inputs / 8 digital outputs, galvanically separated, passive • Signal level input logically 0 = not supplied with current < 0.3 mA logically 1 = supplied with current > 4 mA • Intrinsically safe connection values see PSU guide for installers and control drawing ME-22006478
Storage of certification-relevant weighing data	Alibi-Memory-ID7sx module as an option • Paperless archiving of certification-relevant weighing data • Capacity: approx. 700000 data records with net weight, tare weight, date and time • Convenient search function • Ring data buffer which overwrites the oldest data record when the memory capacity is exceeded

Profibus-DP-ID7sx	
Housing	Aluminium, DIN locking foot
Dimensions	42 mm x 106 mm x 115 mm (W x H x D)
Weight	2,400 g
Protection type	IP20
Supply	24 V DC +/− 20 %
Current consumption	100 mA (at 24 V DC)
CPU core	80C52, 32 K RAM, 128 K flash
Displays	2 status LEDs
UART interface	RS232
UART buffer	max. 15 KB
Temperature range	0 – 50 °C
Max. humidity	90 %, non-condensing
Profibus	DP connection, 9-pin Sub-D
Electrical isolation	DP interface and 24 V DC
Baud rate	up to 12 Mbit/s
Node address	adjustable to between 0 and 126 in the master mode Factory setting: 126
Data width	2/4 IN and 2/4 OUT words, consistent for 2 words at operating mode 16-bit integer or for 4 words at operating mode 32-bit floating point
Status indication	2 LEDs

7.2   Accessories

Weighing platform connections		Order No.
IDNet-ID7sx	• Connection for a weighing platform • Max. of 2 additional connections possible	22 008 443
Point Ex-ID7sx	• Connection for an analog weighing platform • Max. of 2 additional connections possible	22 008 443
Active CL/IDNet-ID7sx	• Connection for a weighing platform • Connection of a second ID7sx for use as a second display	22 008 443

Serial data interfaces		Order No.
CL20mA-ID7sx	CL 20 mA interface, for installation in ID7sx	22 008 444
RS232-ID7sx	RS232 interface, for installation in ID7sx	22 008 445

Digital inputs/outputs		Order No.
8 I/O-ID7sx	8 digital inputs, 8 digital outputs	22 008 446

Network connection		Order No.
Profibus-DP-ID7sx	Field bus module: Connection via PSU/ID..Ex	22 008 649

Alibi Memory module		Order No.
Alibi-Memory-ID7sx	• Paperless archiving of certification-relevant weighing data • Fail-safe storage of configuration data	22 008 447

Barcode reader		Order No.
Barcode kit ID7sx	barcode scanner (II2G EEx ib IIC T4; II2D T 70°C) complete with RS232-ID7sx and Viper-Ex (SW) slotcard	22 008 640

Other accessories		Order No.
ID7sx installation set	for cabinet installation	22 008 439
Wall bracket	Completely rust-proof	00 504 130
Floor stand	Completely rust-proof	00 504 132
Stand socket	Completely rust-proof	00 503 701
Bracket stand	Completely rust-proof	00 504 128

8 Index

ServiceXXL
Tailored Services

Congratulations on choosing the quality and precision of METTLER TOLEDO. Proper use according to these instructions and regular calibration and maintenance by our factory-trained service team ensure dependable and accurate operation, protecting your investment. Contact us about a ServiceXXL agreement tailored to your needs and budget.

We invite you to register your product at www.mt.com/productregistration so we can contact you about enhancements, updates and important notifications concerning your product.

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