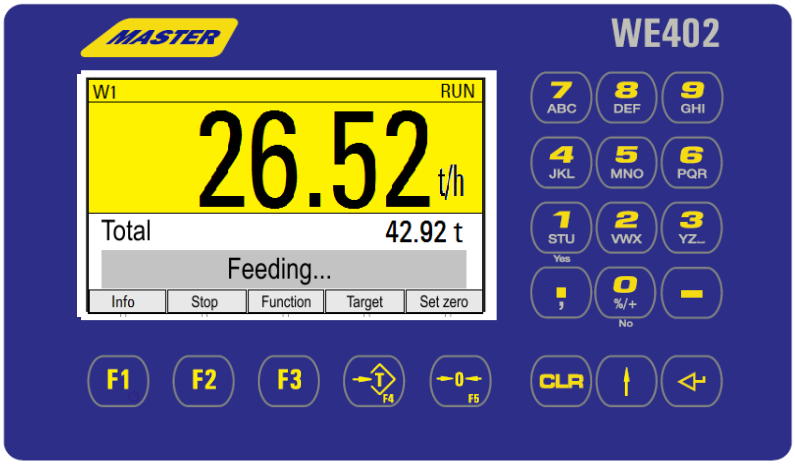
OPERATOR MANUAL

WE402D



INDUSTRIAL WEIGHING TERMINAL FOR BELT WEIGHERS BULK SLIDE FLOWMETERS IMPACT FLOW METERS SCREW WEIGHERS

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Operator Manual WE402D

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Contents

1 About This Manual

This manual describes in short form the essential functions of the WE402D controller based on the WE402 weighing terminal. For technical details on calibration and configuration please refer to Technical Manual WE402D.

1.1 Safety Symbols Used In This Manual

Safety relevant information is shown with corresponding symbols as follows:

W A R N I N G
Failure to observe this precaution could result in serious injuries or fatal accidents. Please make absolutely sure that these precautions are observed in order to ensure safe operation of the equipment.

CAUTION
Failure to observe this precaution could result in damage to or destruction of the equipment or bodily harm! Please make absolutely sure that these precautions are observed in order to ensure safe operation of the equipment.

Note: This indicates an advice for the appropriate operation of the equipment and additional information to avoid incorrect handling.

1.2 General Safety Advice

W A R N I N G
Disconnect all power to this instrument before opening the housing! Risk of electrical shock!

W A R N I N G
Exercise utmost care when making checks, tests and adjustments that can actuate movable parts such as feeding devices, gates, flaps, conveyors, etc. Make absolutely sure that nobody is within reach of movable parts.

W A R N I N G
This unit must not be operated in a potentially explosive atmosphere!
It is the sole responsibility of the user to classify the area of installation and make sure that absolutely no potentially explosive atmosphere can be present at any time!

W A R N I N G
This unit must be installed, serviced and operated in strict compliance with all locally applicable safety regulations and the rules for the prevention of accidents!

CAUTION
Input voltage of the instrument must comply with local mains supply!

CAUTION
This module and its associated equipment must be installed, adjusted and maintained by qualified personnel only!

Note:

- The unit does not have a mains switch and is operational immediately after connection to the mains supply!
- Only permit qualified personnel to operate this instrument!
  Disconnect all power to this instrument before cleaning and servicing!
- Keep this manual for future reference!

1.3 Declaration Of Conformity

See Technical manual.

1.4 Technical Features

Beltweigher:

- Connection to one understructure or force transducer with 1 or several analog load cells.
- Interface for pulse wheel to transmit belt speed. Applications not subject to W&M approval may be operated without transmitter.

Operating modes:

- Totalizing mode (beltweigher) with up to three counters, of which two can be reset.
- Batching mode (weighfeeder) with preset target and adjustable preact (inflight compensation).

Display:

- Main display with current feed rate (kg/h or t/h or lb/h or t/h, respectively) and indication of operational status.
- Auxiliary display switchable from batch quantity (resettable) to feed rate (kg/h or t/h or lb/h or t/h, respectively), total quantity (resettable), current belt load and belt speed; in batching mode also display of target and remaining quantity.
- Operator display with colored background for operational status and settings.

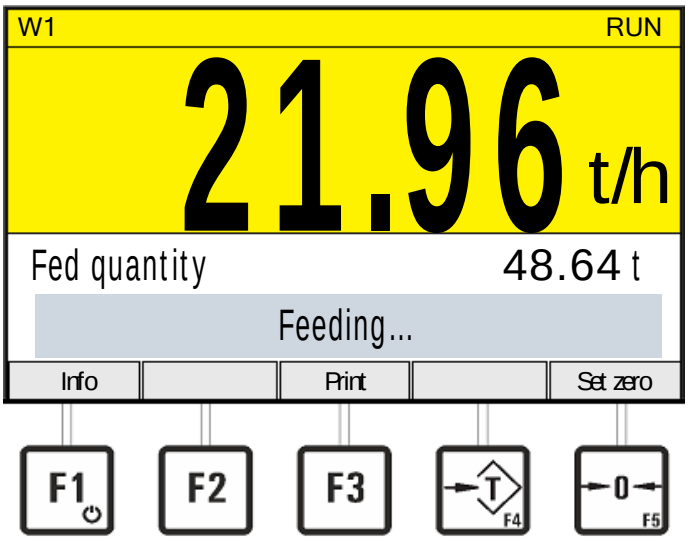
Options:

- Pulse output for quantity, quantity per pulse selectable.
- Continuous data output for batch quantity, total quantity, feed rate or a combination of those. Alternatively data transmission on request and data logging on printer.
- 15-bit analog output for current feed rate.
- W&M approved weight storage for conveyed quantity and/or total quantity.

Construction:

- Stainless steel desk-top / wall-mount housing.
- Panel-mount housing.

1.5 Display And Keyboard



Status display

Main display

Auxiliary display

Operational status

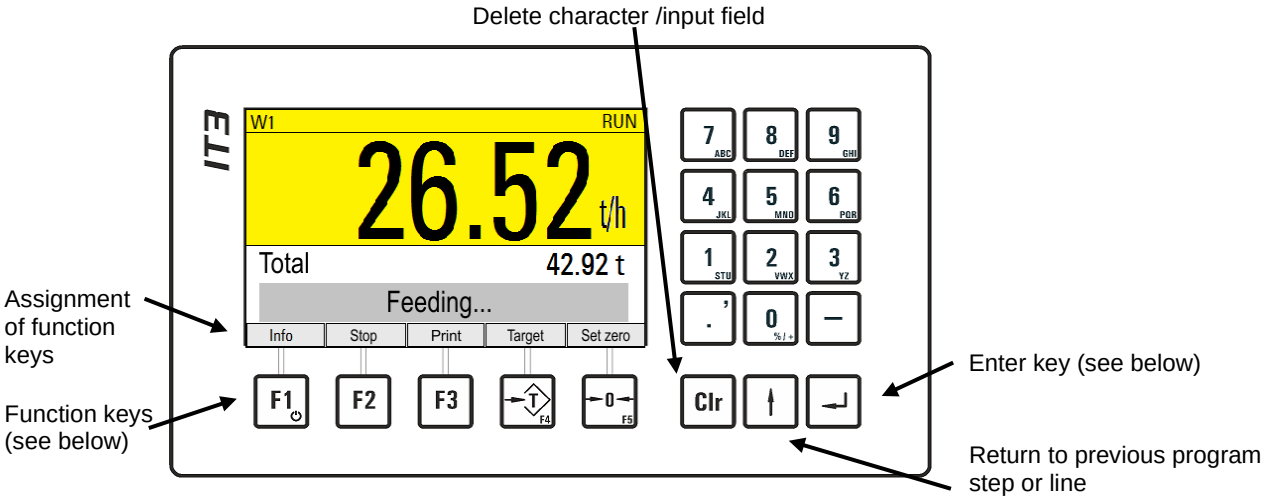
Assignment of function keys

Status display		
Scale No.	W1	Scale No. (always W1 for WE402D)
Status	e.g. RUN	Current status of beltweigher:
		RUN Running
		NUL Zero setting in progress
		AZT Automatic zero tracking in progress
		OVC Beltweigher in overload (static)
		UDC Beltweigher in underload (static)
		QMN Feed rate below min.
		QMX Max. feed rate exceeded
		ERR Error
		HLT Beltweigher out of operation

Main display		
Material flow	e.g. 21.96	Current feed rate
Unit	e.g. t/h	Unit, selectable in Calibration Mode

Auxiliary display (selectable with F1 key)		
Fed quantity	e.g. 48.64 t	Currently conveyed quantity in t or kg (counter 1)
Target	e.g. 100.00 t	Currently set target quantity in t or kg (batching mode only)
Remaining quantity	e.g. 51.36 t	Quantity still to be conveyed (batching mode only)
Total quant.	e.g. 45.77 t	Total of conveyed quantity in t or kg (counter 2)
Belt load	e.g. 16.41 kg/m	Current belt load in kg/m
Belt speed	e.g. 2.03 m/s	Current belt speed in m/s

1.6 Function And Input Keys



Confirmation Of Entry / Chosen Function

Each entry or selected function / parameter must be confirmed by pressing an Enter-key (even if not explicitly stated in the text). Subsequently, the program is continued in the next step.

Soft Keys

The assignment of soft keys depends on the respective program step. The currently active assignment is shown in the lower display line above the function keys.

Key	Function	Comment
	**Info**	Switch auxiliary display
	Select	Scrolling forward in functions or parameters
	Settings	Call up settings (alternative functions)
	Master Mode	Call up Master Mode while version message is displayed
	F1-key	Switch on / off (if configured, see Technical Manual section 'Enable on / off key')
	**Start / Stop / Resume**	Start / interrupt / continue feeding (only in batching mode and only if start via F2 key is enabled)
	**Print**	Start printout / data transmission, depending on configuration
	DW Info	Call up data word monitor (alternative functions / only for fieldbus)
	Wgt. Storage	Call up W&M approved weight storage (while version message is displayed and only in W&M approved operating mode)
	**Target**	Enter / edit target quantity (only in batching mode)
	**Set zero**	Release zero setting (only if feed rate is within zero setting range)
	Verification	Check / correct gain factor (alternative functions, see section 'Calibration Check')
	Setup	Call up Service Mode while version message is displayed
	Abort	Abort entry
	**↑ -key**	Return to previous entry step
		Call up alternative function key assignment. From there call up display of version (not during feeding)
	**↵ -key**	Confirm entry of parameter and/or continue in next entry step (Enter)
	**Clr -key**	If fed quantity is shown on auxiliary display: Delete quantity (after confirmation)
		If total quantity is shown on auxiliary display: Delete quantity (after confirmation)

1.7 Operator Prompting

The following sections describe the operating sequence of the controller with operator prompts and the requested entries.

The contents of the display is shown in a frame on the left hand side, e.g.:

Password 1234	Entry of 4-character password for access to settings.

Prompts or entries that apply only under certain conditions are shown in an extra frame. The condition is shown in bold face in the upper left hand corner of the frame, e.g.:

Batching mode only:

Preset 0.25 t	Entry of preact for cutoff of feeding device.

Entry is only requested when batching mode is active.

↵ -key (Enter) and ↑-key

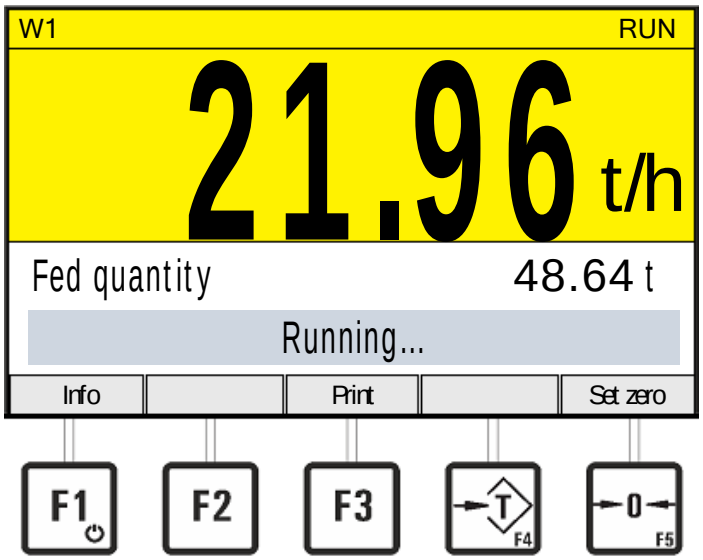
In all program steps, unless otherwise specified, the ↵ -key (Enter) leads to the next step. Pressing the ↑ -key leads to the previous step.

2 Operation

After power-up and the display of the program version the program automatically branches to the weighing mode. Depending on configuration WE402D either works as beltweigher for the simple capturing of fed quantities or as weighfeeder with preset target and adjustable preact.

2.1 Operation As Totalizer Without Preset Target

After power up the unit is immediately operational and automatically starts capturing the fed quantity.

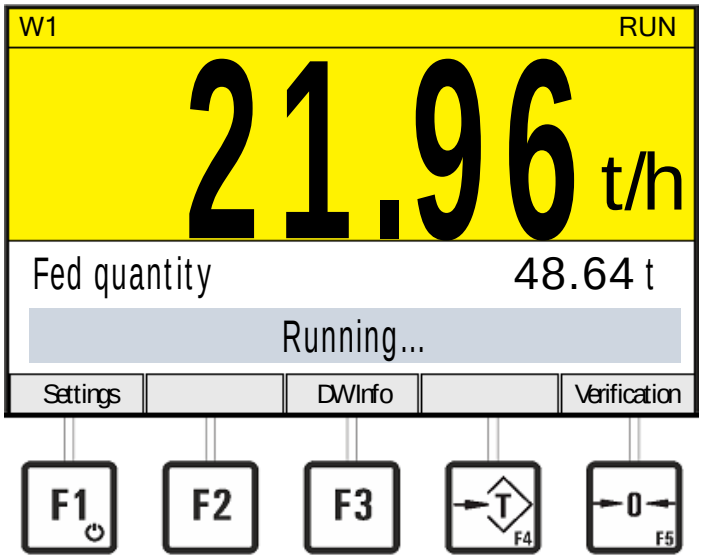


Key	Function	Comment
F1	**Info**	Switch auxiliary display: Fed quantity — Captured quantity in kg, lb or t Total quantity — Captured quantity in total in kg, lb or t Belt load — Current belt load in kg/m, t/m, lb/ft or t/ft Belt speed — Current belt speed in m/s or ft/min
F3	**Print**	Release printing (only if printer installed).
0 F5	**Set zero**	Start zero setting procedure (see section 'Set beltweigher to zero').
↑	**↑-key**	Call up alternative function key assignment (see below)
Clr	**Clr-key**	If fed quantity (counter 1) / total quantity (counter 2) is shown on auxiliary display: Set fed quantity or total quantity to zero (see notes).

Notes:

- Resetting the conveyed and the total quantity must be confirmed by the operator.
- Conveyed quantity or total quantity can be reset via external input or over fieldbus.
- In W&M approved operating mode conveyed quantity and total quantity cannot be reset while feeding is running (feed rate greater Zero).

With the ↑ -key the second level of the softkey assignment can be called up from where further functions can be accessed. If no key is pressed for five seconds after calling up the second level, the program falls back to the main level.



In the second (alternative) level of the function key assignment the following functions are available:

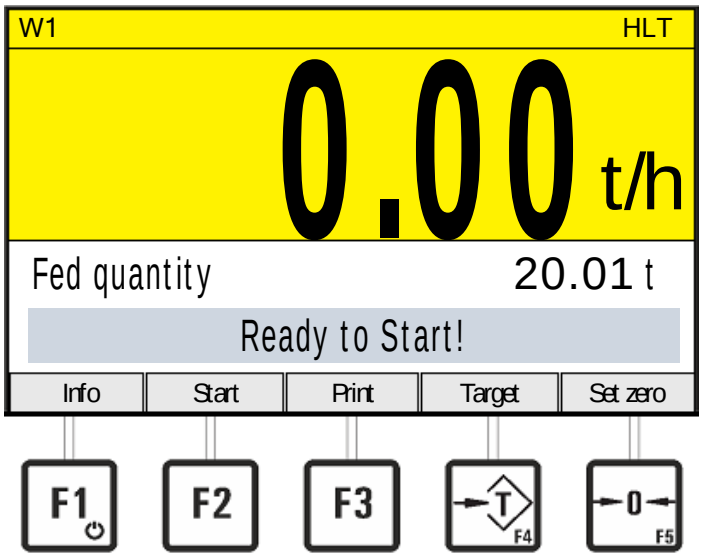
Key	Function	Comment
F1	**Settings**	Call up settings.
F3	**DW Info**	Call up data word monitor (only if fieldbus communication installed).
0 F5	**Verification**	Check / correct gain factor (see section 'Calibration Check').
↑	**↑ -key**	Call up display of version (see note)

Note:

- While version is shown, the capturing of the conveyed quantity is continued in the background.

2.2 Operation As Weighfeeder With Preset Target

After power-up the unit is immediately operational and – if batching release is on – proceeds to the step 'Ready to start'.



Key	Function	Comment
F1	**Info**	Switch auxiliary display: Fed quantity — Captured quantity in kg, lb or t Target — Target weight of quantity to be fed Remaining Qty. — Quantity that still needs to be fed to reach target (if target > 0) Total quantity — Captured quantity in total in kg, lb or t Belt load — Current belt load in kg/m, t/m, lb/ft or t/ft Belt speed — Current belt speed in m/s or ft/min
F2	**Start**	Start of feeding (only if keyboard start enabled).
F3	**Print**	Start printout (only when printer is configured).
T F4	**Target**	Enter / edit target weight.
0 F5	**Set zero**	Start zero setting procedure (see section 'Zero setting').
↑	**↑-key**	Call up alternative function key assignment (see below).
Clr	**Clr-key**	If fed quantity (counter 1) / total quantity (counter 2) is shown on auxiliary display: Set fed quantity or total quantity to zero (see notes).

Notes:

- Resetting the conveyed and the total quantity with the Clr-key must be confirmed by the operator.
- When feeding is started or when a new target weight is entered, the fed quantity is automatically reset to zero.
- Fed quantity or total quantity can be reset via external input or over fieldbus.
- In W&M approved operating mode conveyed quantity and total quantity cannot be reset while feeding is running (feed rate greater Zero).

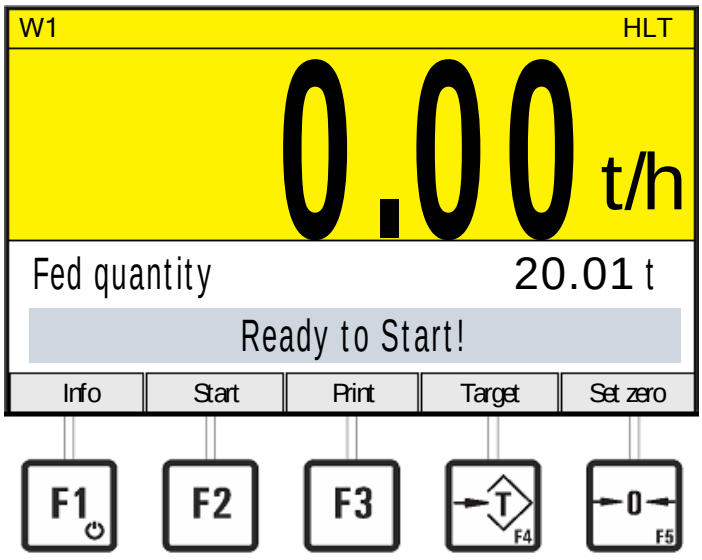
With the ↑ -key the second level of the softkey assignment can be called up from where further functions can be accessed. If no key is pressed for five seconds after calling up the second level, the program falls back to the main level.

In the second (alternative) level of the function key assignment the following functions are available:

Key	Function	Comment
F1	**Settings**	Call up settings.
F3	**DW Info**	Call up data word monitor (only if fieldbus communication installed).
→0← F5	**Verification**	Check / correct gain factor (not during running feeding; see section 'Calibration Check').
↑	**↑ -key**	Call up display of version (not during running feeding)

2.2.1 Start Feeding

Feeding is started with the rising edge of the start input or the start bit of the fieldbus data word. If keyboard start is enabled in the configuration, feeding can also be started with the F2 function key.



F2	**Start**	Start feeding (only if keyboard start is enabled).

With the start of feeding the fed quantity is reset to zero.

When the target quantity is reached (if applicable, minus the preact as entered in the settings) feeding is automatically stopped.

If no target is entered, feeding runs continuously.

Note: The number of the input used for start depends on the configuration.

2.2.2 Operating Sequence

With the start of feeding the actually conveyed quantity is reset to zero and the external outputs 'Batching' and 'Pre-signal' and the corresponding bits in the fieldbus data words are set to activate the feeding device. When the target weight minus the value for the preact is reached, the output signal 'Pre-signal' and/or the fieldbus bit are reset to stop the feeding of material.

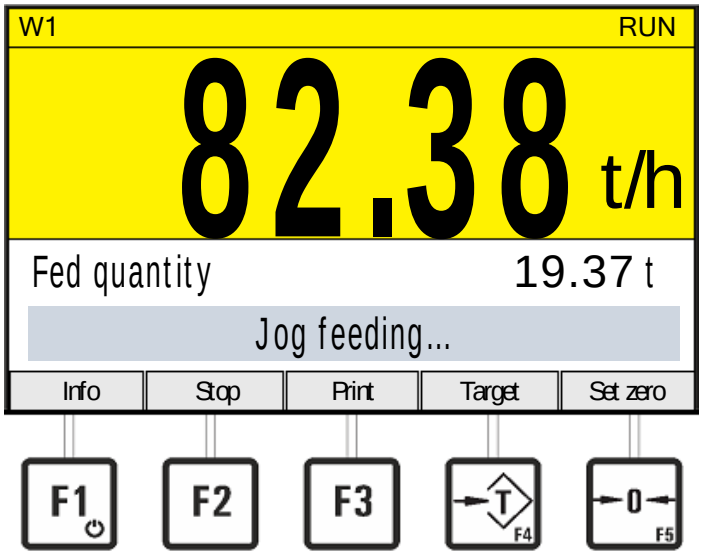
The following stop delay time (specified in the settings) serves to empty the belt, after it has expired the fed quantity is compared with the target and – if required – jog feeding started to correct minus tolerance. If jog feeding is not necessary or not activated (Jog time = 0) the external output 'Done' and the corresponding bit on the fieldbus is set to indicate the end of a feeding cycle. Subsequently the output 'Batching' and/or the fieldbus bit are reset and the program returns to the step 'Ready to start'.

After the stop delay time has expired the belt should be empty (feed rate = zero). If this is not the case, an error message is shown. Alternatively, WE402D can be configured to let the signal 'Batching' stay on until the belt is empty (Empty belt = Y) and only then to start the optional stop delay time.

Note: The number of the external outputs used for feeding depends on the configuration.

2.2.3 Jog Feeding

After the stop delay time has expired, the actual quantity is compared with the target. If it is smaller, the external output 'Pre-signal and/or the fieldbus bit are set again for the specified jog time to bring the quantity to target.

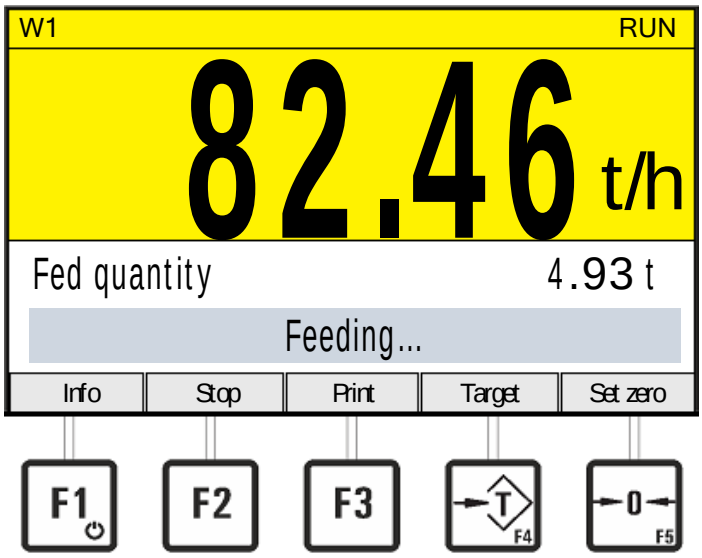


After expiry of the jog time the external output 'Pre-signal' and/or the corresponding bit on the fieldbus are reset and the stop delay time is started anew.

After the stop delay time has expired the actually fed quantity is again compared with the target and the sequence is continued as described above.

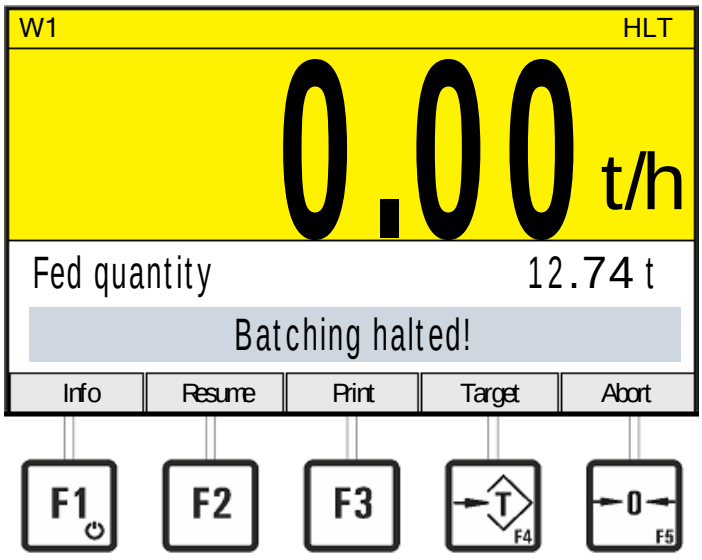
2.2.4 Interrupt / Abort Feeding

The running feeding cycle can be stopped with the falling edge of the external start/stop signal or the 'Run' bit of the fieldbus data word. Then the external outputs 'Batching' and 'Pre-signal' and/or the corresponding fieldbus bits are reset. If keyboard start is enabled in the configuration, feeding can also be interrupted with the F2-key 'Stop'.



F2	**Stop**	Interrupt / abort feeding (only if keyboard start is enabled).

Feeding can be continued with the rising edge of the external start/stop signal or the 'Run' bit of the fieldbus data word. If keyboard start is enabled in the configuration, feeding can also be continued with the F2-key 'Resume'. An interrupted feeding cycle can be aborted with the F5-key 'Abort' or the corresponding bit of the fieldbus communication.



F2	**Resume**	Continue feeding (only if keyboard start is enabled).
F5	**Abort**	Abort feeding (if preset quantity has not yet been reached).
	Finish	Terminate feeding (if no target quantity has been entered).

2.2.5 Terminate Feeding

If a target quantity has been set, feeding stops automatically when target quantity is reached (see section 'Operating Sequence'). If batching is running without a set target quantity, it can be stopped and finished by pressing the F5-key 'Finish.'

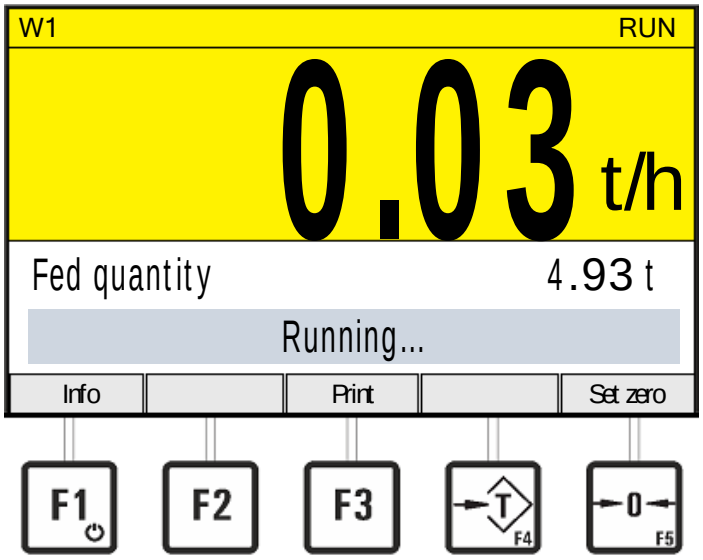
In approved mode, the fed quantity is automatically written into the weight storage.

If a printer is enabled, a protocol is released automatically at the end of the batch.

2.3 Zero Setting

The belt scale controller can be set to zero via the F5 zero-key or via the external input 'zero setting' or the corresponding bit of the fieldbus communication (feed rate = 0kg/h or 0t/h). This is only possible when the current feed rate is within the zero setting range.

Also, the controller can be configured for automatic zero tracking within a specified range.



	**Set zero**	Start zero setting procedure.

During the zero setting procedure the external output 'Setting zero' and/or the corresponding bit on the fieldbus is set. If the permissible zero setting range is left during zero setting the procedure is automatically aborted. Zero setting must then be triggered anew.

2.4 Reset Counters

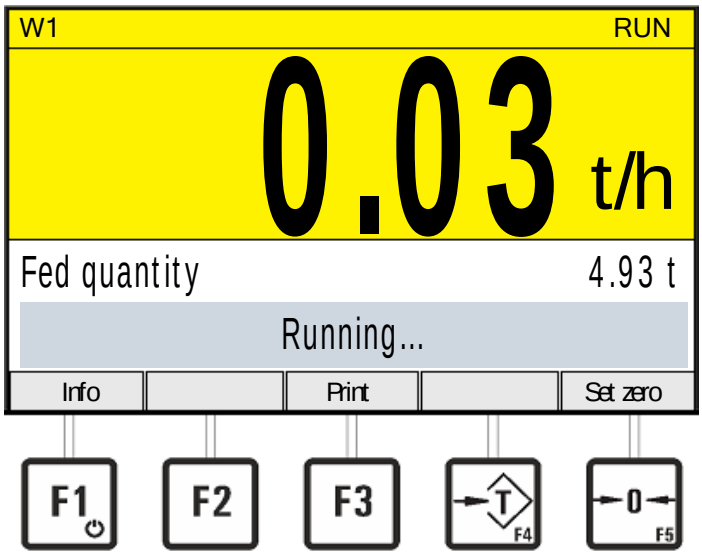
Conveyed quantity and total quantity can be reset to zero with a rising edge of the external inputs 'Clear quantity' and 'Clear total' and/or the corresponding bits on the fieldbus.

Alternatively, the operator can call up the display of conveyed quantity or total quantity with the F1-key 'Info' and reset the counter – after confirmation – with the Clr-key.

Resetting the counters is only possible when feed rate is zero, i.e. not during running feeding.

With the start of batching with preset target weight, the conveyed quantity is automatically set to zero.

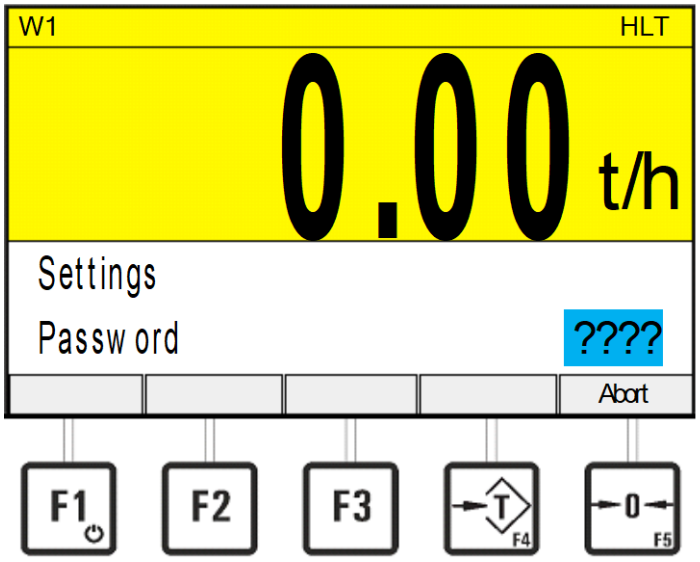
When a counter is reset, its previous count, together with a time stamp, is entered in the weight storage.



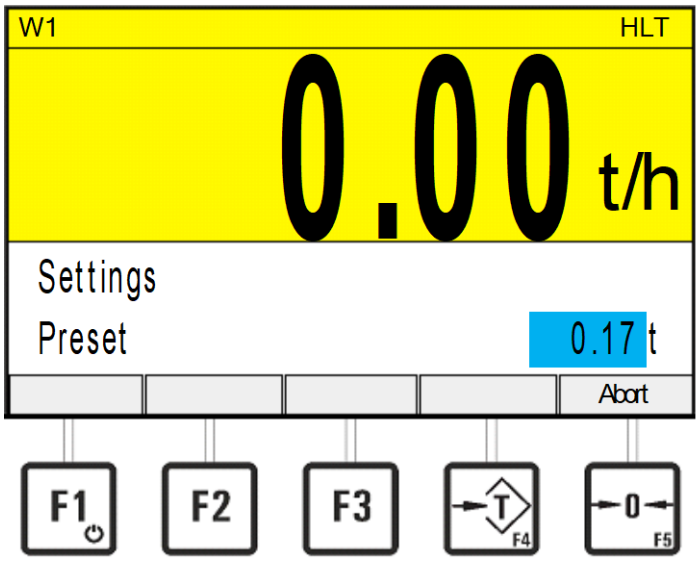
F1	**Info**	Switch auxiliary display to select conveyed quantity or total quantity.
Clr	**Clr-Taste**	Reset conveyed quantity or total quantity to zero.

3 Settings (Entry Of Operating Parameters)

The 'Settings' menu allows the entry of parameters during running operation. After calling up the alternative function key assignment via the ↑ -key, press key F1 'Settings' to enter this menu.



If access to settings is password protected (see further down below) first the password must be entered.



Operation with preset quantity (feeding to target):

Preset 999.99 t	Entry of preact value in kg, t or lb to cut off batching signal before target is reached.
Empty belt Y	Y(es) The belt continues to run after end of batch until it is empty (feed rate = 0). N(o) After resetting the feeding output a specified afterrun time is started before the belt is stopped.
Stop delay 999 s	Entry of discharge delay (stop delay time) in sec; this is the time between cutting off the batching signal and starting the check to determine whether jog feeding is required.
Jog Time 99 s	Entry of jog time (in sec) for jog feeding. The output signal for feeding is set during this interval to add missing material. Enter 0 to disable jog feeding.

Date 31.12.99	Entry of date.
Time 23:59	Entry of time.

If freely configurable output on printer is activated:

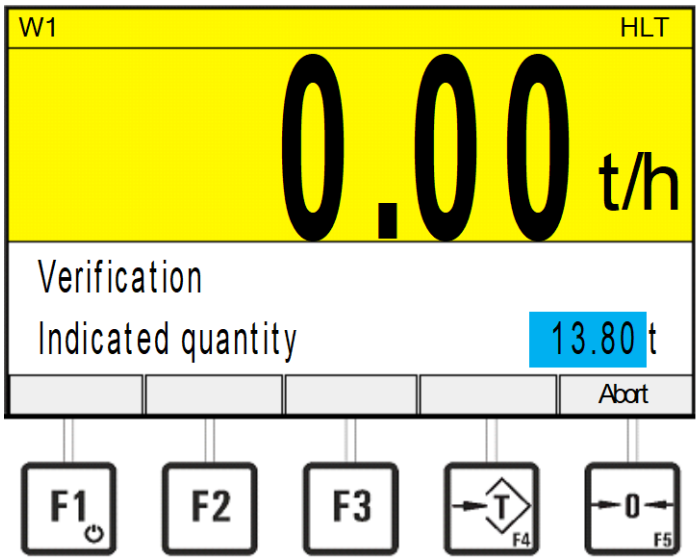
With printer Y	Enable / disable printer.
Consecutive No. 9999	Reset consecutive No. or set to defined start value for printout.

Password 9999	Entry of password for access to settings; if no password is specified, settings can be called up without password check.

4 Calibration Check

To check the accuracy of the installation, a certain amount of material can be conveyed over the scale and subsequently weighed on a static scale. To determine the deviation the test routine can be called up with the F5-key 'Verification' of the second key assignment level.

Note: The test is only available if the current feed rate is zero.



Indicated quantity 9999.999	Entry of the quantity captured and displayed by WE402D.
Measured quantity 9999.999	Entry of weight checked on the reference scale.

If calibration of scale is locked:

Deviation 9.99 %	Display of deviation in percent.

If calibration of scale is not locked:

Gain Factor 9.9999	Display of corrected gain factor (correction factor) with the option to overwrite or edit.
Apply Factor? N	Y(es) The new factor is applied. N(o) The new factor is discarded.

5 Printing

WE402D can be configured for the output of data onto a printer. Printing can be released with the F3-key or the rising edge of the digital input 'Print release' (intermediary protocol). In batching mode also at the end of a batch automatically a batch protocol is printed.

For further details contact your supplier.

5.1 Intermediate Printout

During batching or during operation without target weight it is possible at any time to obtain an intermediary printout.

The printout contains date and time of print, the consecutive No. (as specified under 'Settings') and the actually conveyed quantity in the chosen unit.

Printing can be released with the F3-key or the rising edge of the external input 'Release printing'. With each printout the consecutive No. is incremented by one, i.e. print of the intermediate printout cannot be repeated.

Default format intermediate report (factory setting)

```
0000000001111111111222222222233333333334444444444555555555 6
1234567890123456789012345678901234567890123456789012345678 90
```

```
  Date      Time    Consec.No.   Fed quantity Total quant.
31.12.18   23:59       1234       123456.890  123456.890 kg
```

5.2 Batch Protocol

In batch mode a protocol is printed automatically at the end of the batch. The protocol contains date and time of batch and the conveyed quantity in the chosen unit.

If required printing can be repeated with the F3-key before starting a new batch.

Default format batch protocol (factory setting)

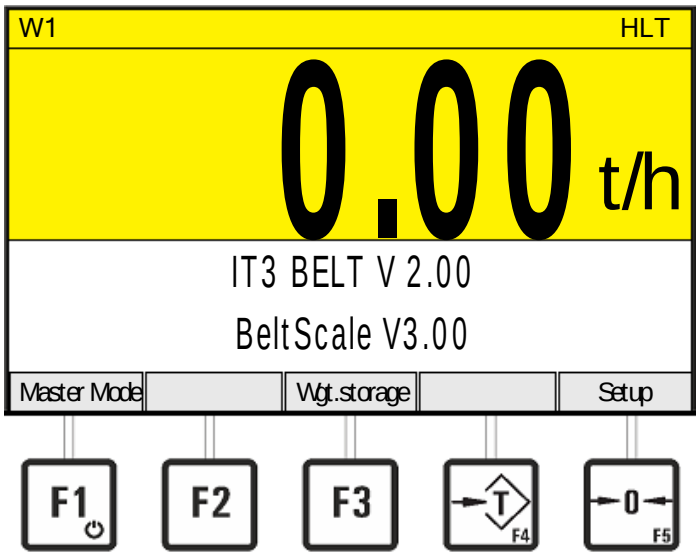
```
0000000001111111111222222222233333333334444444444555555555 6
1234567890123456789012345678901234567890123456789012345678 90
```

```
  Date      Time    ID No.     Fed quantity
31.12.18   23:59     1234       123456.890 kg
```

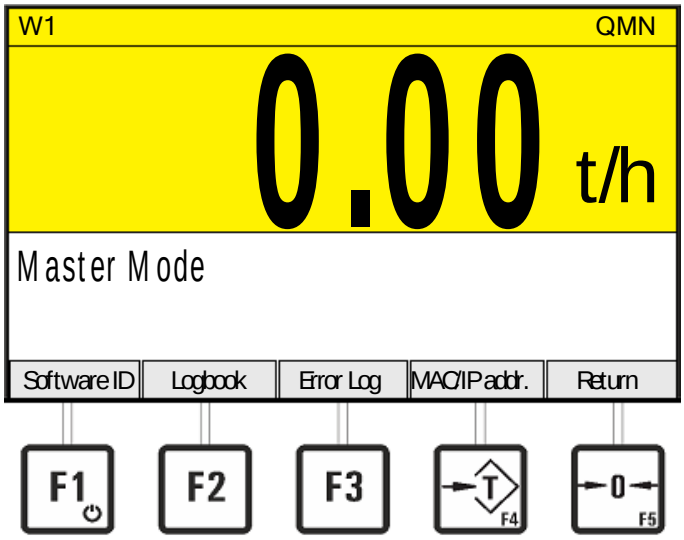
6 Master Mode

In the Master Mode the software ID, the logbook with the firmware updates, the error log and the MAC and/or IP address of the unit can be viewed.

Call up the display of version with the ↑- key and press F1.



F1 **Master Mode** Call up Master Mode



F1 **Software ID** Show version No. of approved scale software and its identification No.

F2 **Logbook** Show list of firmware updates.

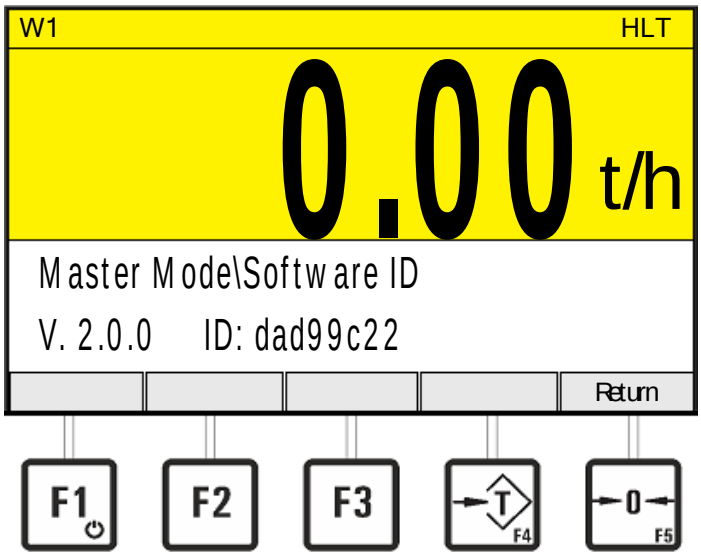
F3 **Error Log** Show error log.

F4 **MAC/IP addr.** Show MAC address and IP address of weighing terminal.

F5 **Return**

6.1 Software ID

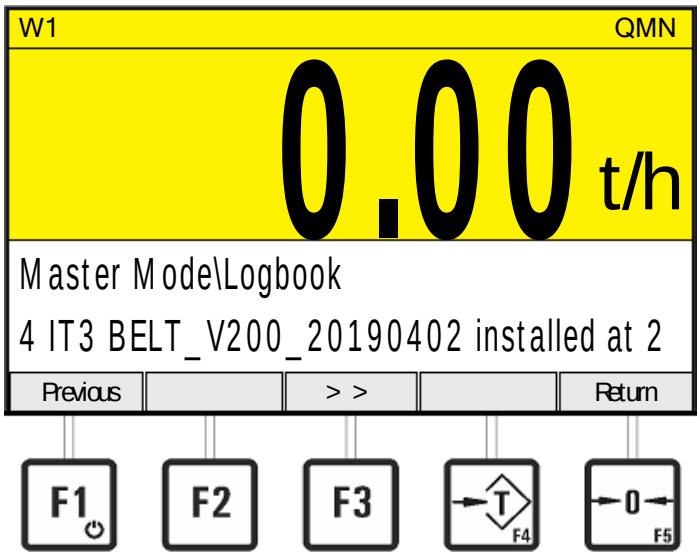
Under the menu item 'Software ID' the identification No. of the operating system and the version No. of the W&M approved beltweigher software and its identification No. can be viewed.



Return Return to Master Mode menu.

6.2 Logbook

All firmware updates can be traced and viewed in the logbook.
The stored records are read-only and cannot be deleted or changed.
The record contains a consecutive number, the file name, and date and time of installation.
The topmost record is the most recent one.



F1	**Previous**	Show next record.
F2	**<<**	Scroll record back by 5 characters.
F3	**>>**	Scroll record forward by 5 characters.
0 F5	**Return**	Return to Master Mode menu.

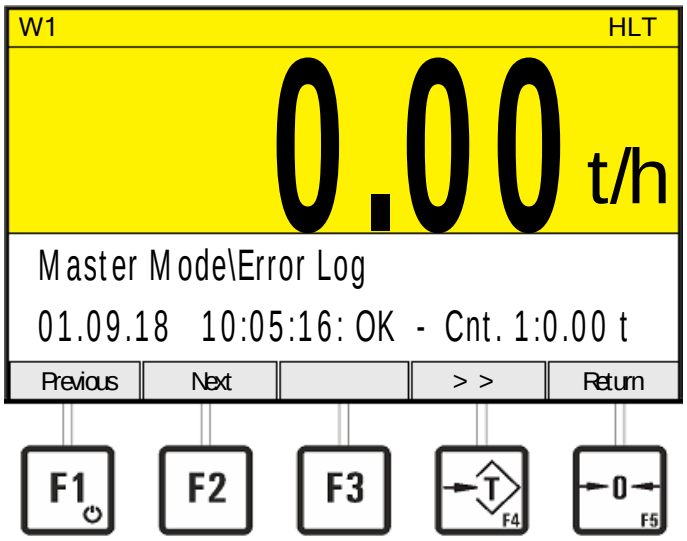
6.3 Error Log

The error log contains all error messages and the time stamp when the error was rectified.

The stored records are read-only and cannot be deleted or changed.

The record consists of date and time, the respective error code, and all counter readings when the event occurred.

The topmost record is the most recent one.



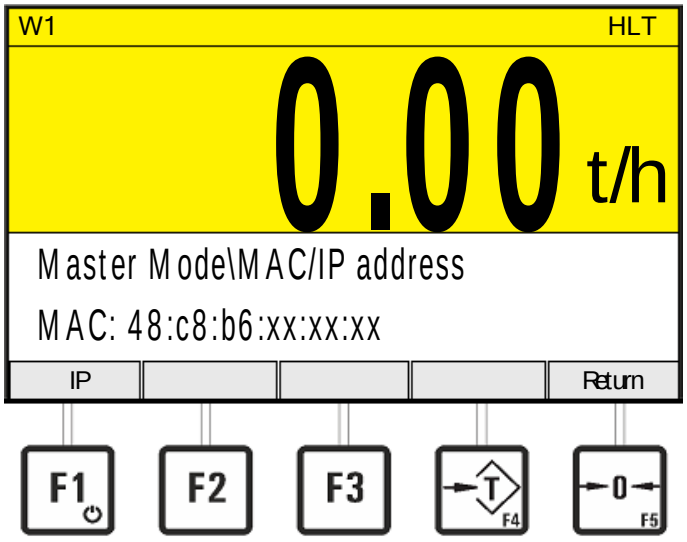
F1	**Previous**	Show next (older) record.
F2	**Next**	Show previous (newer) record.
F3	**<<**	Scroll data string to the right to show characters at start of record.
F4	**>>**	Scroll data string to the left to show characters at end of record.
F5	**Return**	Return to Master Mode menu.

Possible errors

Code	Error	Comment
01	ADM failed	ADM defective
07	ADM out of range	ADM out of range, input signal too big
08	ADM timeout	ADM timeout
09	ADM not ok	ADM defective or not installed
11	ADM no factory cal.	ADM not factory calibrated or calibration not ok
13	ISM impulse missed	No pulses from ISM, pulse sequence not ok
18	ISM communication	Communication error ISM
20	Feed rate below min.	Feed rate below min. value
21	Feed rate above max.	Feed rate exceeds max. value
22	Load above max.	Belt load exceeds max. value
23	Load below min.	Belt load below min. value

6.4 MAC/IP Address

In the menu 'MAC/IP address' the MAC and IP address of the device can be viewed.

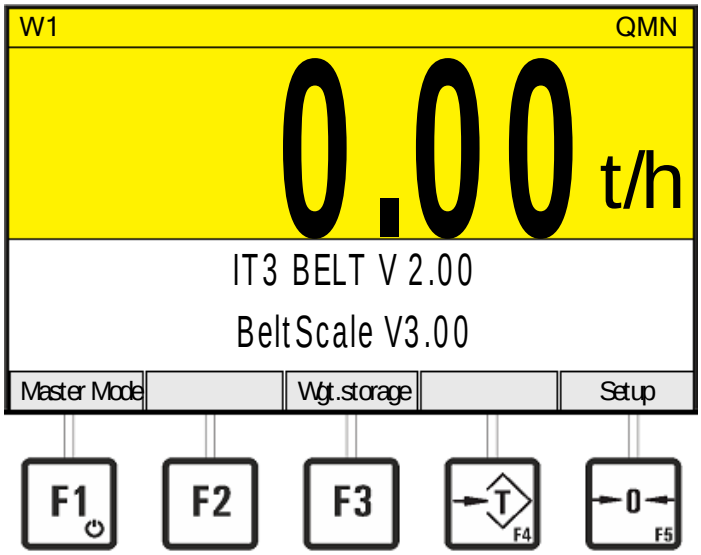


F1	**IP/ MAC**	Change display to IP or MAC, respectively.
0 F5	**Return**	Return to Master Mode menu.

7 Weight Storage

In the weight storage the counter readings are stored. When a counter is reset its latest reading is stored together with a time stamp in the weight storage. The entries are read-only and cannot be changed or deleted.

Call up the the version display with the ↑- key and press F3.



F3 **Wgt. Storage** Call up weight storage.

Note:

- The weight storage requires the installation of an ASM module.
- The weight storage is only available for beltweighers in approved operating mode.

The W&M approved long-term weight storage (data archive) has a capacity of approx. 32,000 records. A record is stored every time a counter is set to zero. The sequence of a weighing transaction is: operating / data entry, entry in data archive, printing and data transmission.

In the storage, each record is stored with date of zero setting, consecutive ID No. and counter value.

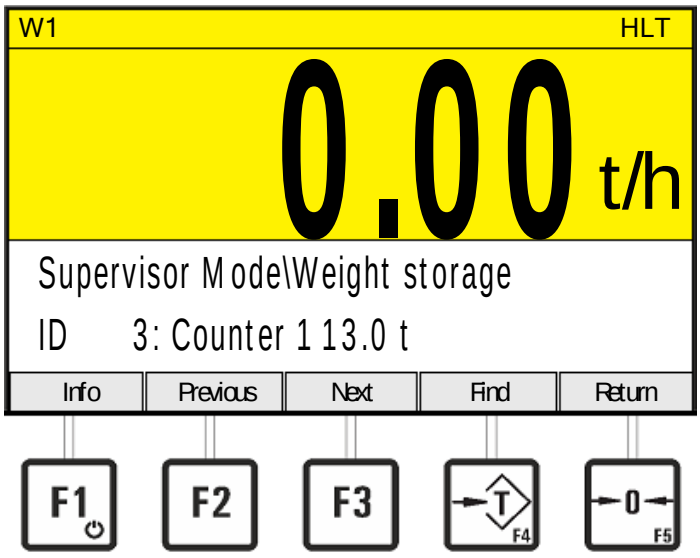
The beltweigher controller provides three counters for the capturing of quantities:

Counter 1: Conveyed quantity – can be reset via keyboard or external input. In feeding mode the counter is reset with each new start of a feeding cycle.

Counter 2: Batch total – can be reset via keyboard (after password check) and external input.

Counter 3: Total quantity – can only be reset in Service Mode.

Note: When operated in W&M approved mode, counters can only be reset when feed rate is zero.



F1	**Info**	Switch to date and time of displayed record.
F2	**Previous**	Show previous record.
F3	**Next**	Show next record.
F4	**Find**	Find record by means of ident No.
F5	**Return**	Return to display of version, after 5 sec. return to normal operation.

8 Transport, Maintenance, Cleaning

8.1 Transport

Note:

- Transport and storage of the WE402D terminal shall only be made in the original packing with foam cushion. The device must not be exposed to shock or vibration.
- Transport and storage of electronic components such as boards, etc. must only be made in suitable anti-static ESD bags or cases.
- Storage temperature –25 to +70 °C at 95 % relative humidity without condensation.

8.2 Maintenance

CAUTION

- This unit and its associated equipment must be maintained by qualified personnel only, who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. Failure to observe these precautions may result in bodily injury.

  Disconnect all power to this unit before servicing!

The WE402D terminal is designed to require a minimum of maintenance and service, however, depending on the environmental conditions a visual inspection at regular intervals is recommended. The frequency at which normal maintenance (cleaning and inspection) should be performed, when installed in a clean office, should be twice a year. However, if the unit is subject to a dusty or dirty environment the frequency should be increased as required. At these inspections it should be made sure that all connected cables are undamaged and that all connectors are tightly fastened.

Maintenance of the scale is required at regular intervals depending on use and environment. The accuracy of scales can be affected by dirt, foreign objects, etc. and appropriate maintenance is strongly recommended. Also recommended is the calibration with certified test weights at regular intervals.

8.3 Cleaning

CAUTION

- **Disconnect all power to this unit before cleaning!**

Clean the keyboard and covers with a soft clean cloth that has been dampened with a mild window type cleaner. Do **NOT** use any type of industrial solvent or the finish of the unit may be damaged. Do not spray cleaner directly on the unit.

9 Service

CAUTION
Only permit qualified personnel to service this equipment. Exercise care when making checks, tests, and adjustments!

If any problem arises that has not been explained above, please follow this check list:

- Power supply on and line cord undamaged (visual inspection)?
- All cables connecting to scale and peripheral devices undamaged (visual inspection)?
- Connectors fitted correctly and tightly secured at peripheral devices (visual inspection)?
- Connected sensors in correct position and operational?

If operational difficulties are encountered that cannot be rectified by means of this manual, obtain as much information as possible regarding the particular trouble.

If possible, try first to determine the conditions under which the problem occurs. Try to find out whether the appearance of the difficulties can be reproduced under the same conditions.

For the systematic analysis of an unknown problem the information as listed below is required:

- Serial-No. of the unit
- Program version as displayed on power-up
- Exact wording of any error message displayed
- Type and model of peripheral components related to the problem (e.g. load cell, remote display, etc.)

To obtain professional assistance contact your service station stating the information listed above.

9.1 Error Messages

If an error occurs during calibration or normal operation, error messages are displayed as follows:

Error Message	Possible Cause	Corrective Measure
Scale error	□ No data from ADM	□ Replace ADM
	□ Short circuit in load cell cable	□ Check wiring
	• Wiring error load cell	□ Check wiring
	□ Defective load cell	□ Check load cell
	□ Extreme overload	□ Unload scale
Scale in overload	□ Defective load cell	□ Check load cell
	□ Load receiver overloaded	□ Unload scale
Invalid gain factor	□ Invalid gain factor (e.g. 0)	□ Enter correct gain factor
	□ Scale not calibrated	□ Calibrate scale
Error gain factor	• Wrong gain factor	• (Re)-calibrate scale
Belt not empty	• Feed rate after end of feeding not zero	• Check material flow • Set scale to zero
No release	• Input signal 'Run enable' not on	• Check input signal • Check release over fieldbus
Error counter reset	• Belt not stopped or belt load too big (feed rate > 0)	• Check configuration parameters
	• Record could not be entered in weight storage	• Check ASM module