



Original instructions

FleetManager™ 4.x
with FMID access control



first in intralogistics

50988011723 EN - 06/2019

List of abbreviations

Abbreviation	Meaning
ABE	Display and operating unit
BGG	General Employers' Liability Insurance Association Act
BGV	General Employers' Liability Insurance Association Regulations
DFÜ	Remote data transmission
GPRS	General packet radio service (packet-based wireless communication technology)
LED	Light emitting diode
PIN	Personal identification number
WLAN	Wireless local area network

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Foreword

Information regarding these operating instructions

Information regarding these operating instructions

Scope and target group

These operating instructions describe access control for industrial trucks using the following variants of FleetManager™ 4.x:

- FleetManager™ 4.x with reading device and transponder chip
- FleetManager™ 4.x with keypad

Possible responses of FleetManager™ 4.x and of the industrial truck are also described.

The target group of these operating instructions are the operators of the industrial trucks

(drivers, fleet managers, workshop personnel).

These people can activate the industrial truck for operation via a valid access authorisation.

These operating instructions do not describe:

- The setup, function and operation of the FleetManager™ 4.x PC software (see description of the FleetManager™ 4.x PC software)
- Details of possible parameterisations
- Technical details of the access control

Description

The device described in these operating instructions is called **FleetManager™ 4.x**.

Issue date and topicality

These operating instructions correspond to the state of the technology at the time of printing. Subject to changes in technology and equipment.

These operating instructions will be updated as soon as there are any changes. This applies in particular to changes in function where they affect the behaviour of the industrial truck, but also to changes to the software versions used.

Thank you for reading and complying with these operating instructions.

If you still have any questions, require technical support for your product, would like to suggest improvements or have discovered any errors, please contact the relevant STILL service centre.

We hope you enjoy your driving

STILL GmbH
Berzeliusstrasse 10
22113 Hamburg Germany

Storage location

These operating instructions must be supplied with the industrial truck.

If these operating instructions are lost, the operator must immediately request a replacement from STILL.

Copyrights and trademark rights

These operating instructions—either in part or in full—may only be reproduced, translated

or made available to third parties with the express **written** permission of STILL GmbH.

Definitions and explanations

These operating instructions contain important warning signs relating to operation, to which particular attention must be paid. They are marked with DANGER, WARNING or CAUTION.

DANGER

Indicates procedures that must be strictly adhered to in order to prevent the risk of fatalities.

WARNING

Indicates procedures that must be strictly adhered to in order to prevent the risk of injuries.

CAUTION

Indicates procedures that must be strictly adhered to in order to prevent material damage and/or destruction.

Each operation-related warning sign is structured in the following sequence:

- Description: Nature and source of the danger, as well as potential consequences if disregarded
- Avoidance: Measures for avoiding the danger/prohibitive rules

In some cases, there are also other signs which must be observed in addition to the operation-related warning signs. They are labelled NOTE or ENVIRONMENTAL NOTE.

NOTE

For technical requirements that require special attention.

ENVIRONMENT NOTE

To prevent environmental damage.

Information regarding these operating instructions

Other applicable documents

These operating instructions are supplementary.

Basic safety and operation-related warning signs for operation of the industrial truck can be found in the operating instructions of the corresponding industrial truck.

Other guidelines listed in these operating instructions only apply in Germany:

- BGG (German Trade Association Guidelines) 925 "Training and instruction of

drivers of industrial trucks with driver's seat and driver's platform"

- BGV D27 (Regulations of the Employer's Liability Insurance Association) "Accident prevention regulations for industrial trucks"

NOTE

Observe the national regulations for your country!

Declaration of conformity in accordance with the Radio Equipment Directive 2014/53/EU

The manufacturers of the radio equipment installed in the industrial truck declare that the radio equipment corresponds to the Radio Equipment Directive 2014/53/EU. The declarations of conformity can be viewed at the following Internet address:

<https://www.still.de/eu-declarations.html>

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Safety

Definition of terms used for responsible persons

Definition of terms used for responsible persons

Operating company

The operating company is the individual or legal entity that uses the industrial truck—and associated equipment—or on whose instruction the industrial truck is used.

The instruction must be given to the operator **in writing**.

As the operating company, you must instruct the operator in their duties and rules of behaviour when using FleetManager™ 4.x.

Ensure that

- FleetManager™ 4.x is used only for its intended purpose and in accordance with the safety regulations in these operating instructions
- The operator of the industrial truck has received, read and understood these operating instructions

Operator

The operator of a power-driven industrial truck—and the associated equipment—must comply with the following requirements in order to operate and/or to drive an industrial truck in Germany:

- He or she must suitable for and trained for this activity and
- must have proven to the operating company or a representative of the operating company of their ability to drive and handle loads.

The required minimum age of the operator and/or driver depends on the model of the industrial truck.

The contract for driving an industrial truck must be provided to the operator **in writing**.

NOTE

Observe the national regulations for your country!

In Germany, these requirements are regulated by BGV D27 (Regulations of the Employer's Liability Insurance Association), §7 "Accident prevention regulations for industrial trucks".

Operators are accordingly trained and qualified if they have been trained in accordance with BGG 925 (German Trade Association Guidelines) "Training and instruction of drivers of industrial trucks with driver's seat and driver's platform".

Basic principles for safe operation

Damage and defects

The operator must report any damage or other defects in FleetManager™ 4.x to the supervisory personnel immediately.

Equipment that is not functional or safe for use on the road must not be used until it has been properly repaired.

Use of non-original parts

Original parts and accessories are designed specifically for FleetManager™ 4.x. We draw your attention specifically to the fact that parts and accessories supplied by other companies have not been tested and approved by STILL.

DANGER

Risk of accident through the use of non-original parts.

Non-original parts can have a negative effect on the design features of the industrial truck and thus impair active and/or passive driving safety.

Before installation, obtain approval from the manufacturer and, if necessary, from the relevant regulatory authorities.

The manufacturer accepts no liability for any damage caused by the use of non-original parts and accessories without **written** approval.

Residual risk

On account of the various possibilities for parameterising industrial trucks and FleetManager™ 4.x, the responses of FleetManager™ 4.x and of the industrial truck may also vary.

Defined responses are ultimately also dependent on the truck control unit and the setup of the respective industrial trucks.

FleetManager™ 4.x remains a device for access control and can never be a substitute for proper decommissioning of the industrial truck.

The driver must **not rely solely** on the responses of FleetManager™ 4.x during operation. The driver **always** takes responsibility for safe operation.

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Description

Using FleetManager™ 4.x

Using FleetManager™ 4.x

Permissible use

FleetManager™ 4.x is used to control access to industrial trucks.

A driver is granted access to an industrial truck via a transponder chip (reading device variant) or by entering a PIN code (keypad variant). The PIN code can contain either 5 or 8 digits.

The fleet manager uses the FleetManager™ 4.x PC software to assign the transponder chips or PIN codes to the industrial trucks (configuration). The validity of the access authorisation can be adjusted as required.

After configuration, only drivers with an appropriate transponder chip or PIN code can unlock the assigned industrial truck and

lock it again to prevent use by unauthorised persons.

In addition to controlling access, the FleetManager™ 4.x performs the following functions:

- Recording of operating data
- Detection of shock events (if equipped with a shock sensor)
- Temporarily change in the properties of the industrial truck

The data is analysed by the fleet manager or the workshop personnel on a separate computer using remote data transfer and the FleetManager™ 4.x PC software.

Impermissible use

The operating company or operator, and not the manufacturer, is liable for any hazards caused by improper use.

Use for purposes other than those described in these operating instructions is prohibited.

**NOTE**

Please note the definition of the following responsible persons: "operating company" and "operator".

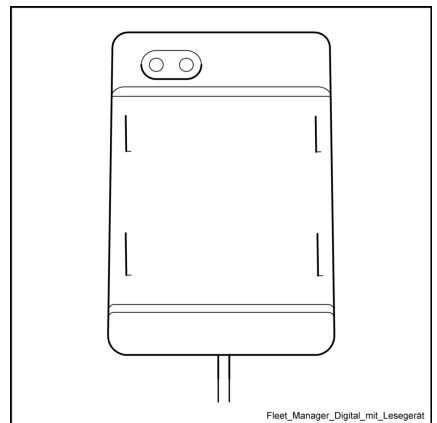
Equipment and accessories

Item	Name	Comment
2	In reading device variant only: Transponder chip	The transponder chip is supplied with a fixed code that can be assigned to an operator by adjusting the configuration. The code itself cannot be changed.
1	Optional: Acceleration sensor	For measuring shock accelerations of the industrial truck.
1	Optional: DFÜ components	For remote transfer of data.

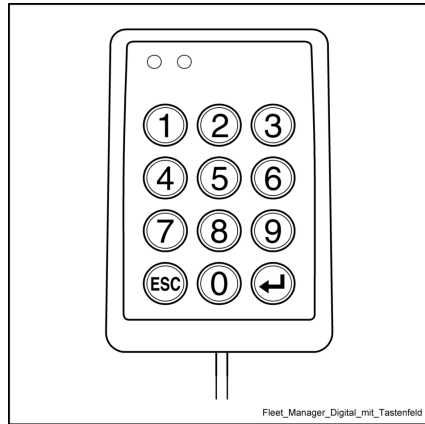
Image of **transponder chip**



Image of **reading device variant**



Equipment and accessories

Image of **keypad** variant

Overviews and description

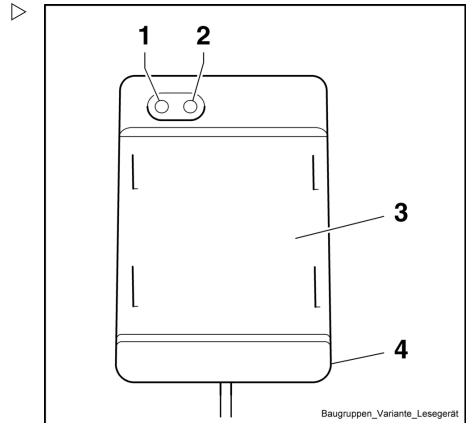
General view and basic function

Reading device variant

The FleetManager™ 4.x (reading device variant) consists of a housing (4) with an integrated reading device (3).

A green LED (1) and a red LED (2) are used as display elements.

Responses indicated by the two LEDs also appear in text form on the screen of the industrial truck's display and operating unit (ABE). A signal transmitter can also emit corresponding signal tones.



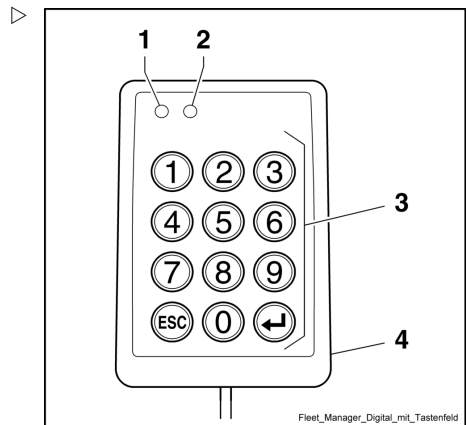
- 1 Green LED
- 2 Red LED
- 3 Reading device
- 4 Housing

Keypad variant

FleetManager™ 4.x (keypad variant) consists of a housing (4) with a keypad (3).

A green LED (1) and a red LED (2) are used as display elements.

Responses indicated by the two LEDs also appear in text form on the display screen of the industrial truck's ABE. A signal transmitter can also emit corresponding signal tones.



- 1 Green LED
- 2 Red LED
- 3 Keypad
- 4 Housing

Overviews and description

Display elements

LED indicators

Display element	Possible statuses
Green LED	Permanently lit
	Flashing slowly at two-second intervals
	Rapid flashing
	Single flash
Red LED	Permanently lit
	Rapid flashing

Signal tone indicators

Display element	Possible statuses
Signal transmitter	One short signal tone
	Two short signal tones
	One long signal tone

ABE message text

Display	Meaning
LOG IN PLEASE	Reading device variant Request to the operator to log in with a valid transponder chip.
	Keypad variant Request to the operator to log in by entering a valid PIN code.
PLEASE WAIT	In the keypad variant , this display element appears for 30 seconds after the operator has entered a PIN code three consecutive times without valid authorisation for the relevant industrial truck.
CONFIGURATION PLEASE WAIT	The truck starts the configuration (integration of the industrial truck into the fleet).
SHOCK ACCIDENT (depending upon the version)	Registering a shock event.
NOT VALID < 1 MONTH	Optional indication of the remaining period of validity of the access authorisation. Period of validity: < 1 month
NOT VALID < 1 WEEK	Optional indication of the remaining period of validity of the access authorisation. Period of validity: < 1 week
NOT VALID < 3 DAYS	Optional indication of the remaining period of validity of the access authorisation. Period of validity: < 3 days

Display	Meaning
NOT VALID < 2 DAYS	Optional indication of the remaining period of validity of the access authorisation. Period of validity: < 2 days
NOT VALID < 1 DAY	Optional indication of the remaining period of validity of the access authorisation. Period of validity: < 1 day
ACCESS DENIED	No access authorisation for the industrial truck.
ACCESS NOT VALID	Access authorisation has essentially been granted to the operator, but the specified period of validity has expired.

Activating access control after delivery

⚠ CAUTION

Danger associated with use of the truck by unauthorised persons

The FleetManager™ 4.x must be put into operation after the truck is delivered to the operating company so that only persons authorised by the operating company have access to the truck.


- Put FleetManager™ 4.x into operation immediately after delivery.
- Make the truck available only to persons authorised by the operating company.
- If the FleetManager™ 4.x is not put into operation immediately after delivery, convert the truck to a different access control. Contact the authorised service centre regarding this matter.

The fleet management system installed in your truck provides effective protection against unauthorised access. The system can only be activated at the customer's premises, as it uses essential customer data. This means that the truck is not protected against unauthorised access at the time of delivery.

The fleet management system in the truck must therefore be put into operation immediately after delivery in order to guarantee protection. If this is not possible, **the operating company** must ensure that the truck is made available only to authorised persons. If it is decided not to use the fleet management system, **the operating company is also responsible for ensuring** that the truck is equipped with some other form of access control.

Overviews and description


In its delivered state, the display elements respond according to the table below after the industrial truck is switched on:

FleetManager™ 4.x LEDs	Signal transmitter	Display on the ABE
 The green LED stays lit continuously. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.

Initial configuration and activation

The fleet manager uses the FleetManager™ 4.x PC software to assign the transponder chips or PIN codes to the industrial trucks (configuration). The validity of the access authorisation can be adjusted as required.

If this transponder chip or PIN code is issued to a driver, the driver is provided with access authorisation for the industrial truck.

The fleet manager can also specify in the configuration whether the operator has to press the  confirmation button after entering a PIN code in the keypad variant. ▶

After the configuration has been created, the fleet manager must send the configuration file to the truck so that the access authorisations are activated on the truck. This is done via wireless transfer either via mobile radio network or Bluetooth, depending on the vehicle equipment.

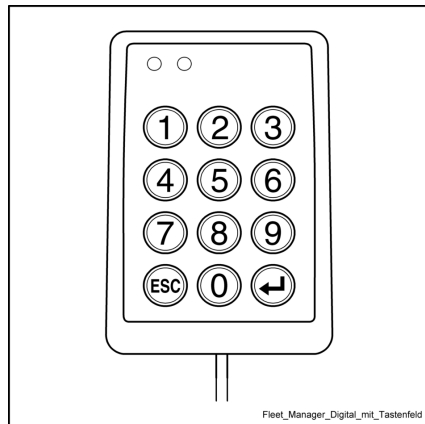
Pre-shift codes (optional)

The fleet manager can also specify in the configuration whether the operator has to enter a pre-shift code when logging in.

Entering this pre-shift code enables the operator to assess the status of the industrial truck.

The following statuses are defined:

- Industrial truck OK.
- Industrial truck ready for operation, but faults present.
- Industrial truck not ready for operation.



The pre-shift code is entered after the actual login. The pre-shift code is entered in different ways depending on the FleetManager™ 4.x variant:

- Reading device variant: Remove transponder briefly after logging in and hold in front of reading device again at the required LED flash sequence (see table below).
- Keypad variant: Enter PIN code (and then press the confirmation button if required) and press additional button as described in the table below.

Status	Reading device variant	Keypad variant
Industrial truck OK.	Hold up transponder chip when green LED flashes (cycle 1).	Press 0 button.
Industrial truck ready for operation, but faults present.	Hold up transponder chip when LED flashes green/red (cycle 2).	Press 1 button.
Industrial truck not ready for operation.	Hold up transponder chip when red LED flashes (cycle 3).	Press 2 button.

NOTE

*The keypad variant ignores all buttons except the **0**, **1** and **2** buttons during entry of the pre-shift code.*

Activation (master enable)

The industrial truck is initially activated by the master enable. This is used to provide feedback confirming that the configured industrial truck actually belongs to the customer's fleet.

NOTE

*Unlike the initial configuration, the master enable does **not** have to be repeated if subsequent changes are made to a configuration.*

When using the reading device variant, the fleet manager must hold a special master transponder chip in front of the reading device.

When using the keypad variant, the fleet manager must input a special master PIN code.

Overviews and description

Changing the configuration

The configuration data can be sent to FleetManager™ 4.x over the mobile radio network at any time (even during operation of the industrial truck) and stored there. However, the new configuration data is not applied (activated) until the operator has logged off.

Deactivating FleetManager™ 4.x

FleetManager™ 4.x can be deactivated by changing the parameters in the service diagnostics. This is required to enable the industrial truck to be operated for servicing work without valid access authorisation.

Shock sensor (variant)

Detecting shock events

Defining a shock event

An acceleration sensor must be installed in order to record shock event data (such as in a collision).

Using this data, the identity of the operator logged in to the industrial truck at the time of the shock event can be reconstructed.

The acceleration sensor measures shock accelerations (vibrations) of the industrial truck; these are then compared with the pre-defined limit values and saved.

A shock event is recorded if the shock acceleration measured at any one moment exceeds a **pre-defined activation threshold**.

Reading out and transferring the shock event data

The shock event data can be read out either during the regular cyclic data transfer process or via an immediate transfer. The fleet manager can then evaluate the shock acceleration data using the FleetManager™ 4.x PC software.

Emergency operation after a shock event

The functional restrictions of the industrial truck after a shock event are dependent on the industrial truck and its parameterisation.

After a shock event (e.g. after a collision) the operator responsible at the time of the shock event must park the industrial truck securely.

- Bring the industrial truck into the designated parking area and actuate the parking brake.
- Switch off industrial truck using key switch.

Shock sensor (variant)

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Operation

Commissioning and functional testing



Commissioning and functional testing







Initial configuration by the fleet manager

 **NOTE**

The configuration can be adjusted at any time over the mobile radio network — i.e. via wireless transmission using the FleetManager™ 4.x PC software — while the industrial truck is switched on. The configuration is first activated on the industrial truck when the instructions in the following table have been completed in full.

The following table describes the initial configuration for both variants of FleetManager™ 4.x (reading device and keypad).

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Create configuration table using the FleetManager™ 4.x PC software.	—	—	—
2	Switch on industrial truck using key switch.	 The green LED stays permanently lit. The red LED does not light up. ► Industrial truck is initially ready for operation without valid access authorisation.	Two short signal tones sound.	The normal operating display appears.
3	Transfer the configuration data via the mobile radio network.	 The green LED flashes at one-second intervals. The red LED flashes at one-second intervals. ► This status is retained until the fleet manager switches off the industrial truck with the key switch.	A long signal tone sounds at one-second intervals.	CONFIGURATION PLEASE WAIT ► As soon as configuration is complete, this message disappears so that the driver is also aware that the configuration process has finished and that they can continue to operating step no. 4.

Se- quen- tial No.	Operating step	LED status	Signal transmitter	Display on the ABE
4	Switch off the industrial truck via the key switch and switch it on again.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE (displayed once)
5	For reading device variant only: Hold the master transponder chip in front of the reading device.	 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.
		▶The industrial truck is integrated into the fleet.		
6	For keypad variant only: Enter master PIN code and press  button to confirm if required.	 The green LED flashes every time a button is pressed. The red LED stays permanently lit.	A short signal tone sounds every time a button is pressed.	LOG IN PLEASE
		▶If any of the buttons (including the ) are not pressed within five seconds, the login procedure must be restarted from the beginning.		
		 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.
		▶The industrial truck is integrated into the fleet.		


Changes to the configuration by the fleet manager

 **NOTE**

The fleet manager can send the configuration data at any time (even during operation of the industrial truck) over the mobile radio network to the industrial truck, where it can be stored. However, the new configuration data is not applied (activated) until the operator has logged off.

If an operator is still logged in during configuration, the following display elements appear:

Commissioning and functional testing

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Create configuration table using the FleetManager™ 4.x PC software.	●○ The green LED stays permanently lit. The red LED does not light up.	No signal tone sounds.	The normal operating display remains visible.
2	Transmit configuration data via remote data transfer command.	●○ The green LED stays permanently lit. The red LED does not light up.	No signal tone sounds.	The normal operating display remains visible.
3	Depending on the variant: Log off using the transponder chip or by pressing the  button on the keypad.	○● The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	LOG IN PLEASE (when operator has logged off)
		●○ The green LED flashes quickly. The red LED does not light up.	No signal tone sounds.	CONFIGURATION PLEASE WAIT
		●○ The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE

 NOTE

If the fleet manager performs the configuration whilst the industrial truck is in operation but no operator is logged in, the message CONFIGURATION PLEASE WAIT is shown on the display and operating unit. The operator can log in as normal once the configuration process is complete.

Functional tests

When an industrial truck is configured for the first time after delivery and is activated by the master enable, it can then still only be operated with valid access authorisation.



In the event of faults, the red and green LEDs respond accordingly and a signal tone sounds (see chapter entitled "Malfunctions,

Causes and Remedies"). In addition, the corresponding indicators appear on the ABE. The industrial truck remains locked and cannot be operated.

A further manual functional test by the operator is not necessary.


Operator login without pre-shift code


Operator login without pre-shift code**Operator login on the reading device (without pre-shift code)**




Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE
2	Hold the transponder chip in front of the reading device.	 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.
►The industrial truck is ready for operation.				


Operator login on the keypad (without pre-shift code)

 **NOTE**






The fleet manager can also specify in the initial configuration, or in subsequent changes to a configuration, whether the operator has to press the  button to confirm entry of a PIN code.

Operator login **without** entry confirmation via the  button:

Se- quen- tial No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE
2	Enter the PIN code.	 The green LED flashes every time a button is pressed. The red LED stays permanently lit.	A short signal tone sounds every time a button is pressed.	LOG IN PLEASE
		►If any of the buttons are not pressed within five seconds, the login procedure must be restarted from the beginning.		
		 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.
►The industrial truck is ready for operation.				

Operator login **with** entry confirmation via the  button:

Operator login without pre-shift code

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE
2	Enter the PIN code.	 The green LED flashes every time a button is pressed. The red LED stays permanently lit.	A short signal tone sounds every time a button is pressed.	LOG IN PLEASE
▶If any of the buttons are not pressed within five seconds, the login procedure must be restarted from the beginning.				
3	Press the  button.	 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.
▶If the  button is also not pressed within five seconds, the login procedure must be restarted from the beginning.				
▶The industrial truck is ready for operation.				

Operator login with pre-shift code

Evaluating the operational reliability of the industrial truck

By entering the pre-shift code, the operator is able to evaluate the status of the industrial truck.

The following statuses are defined:

- Industrial truck OK
- Industrial truck ready for operation, but faults present
- Industrial truck not ready for operation

The operator enters the pre-shift code after logging into the industrial truck. After logging in, but before the pre-shift code has been entered, the hydraulic functions are fully enabled but the drive functions are limited. In this way, the operator can evaluate the operational reliability.

Functional restrictions if the pre-shift code is negative

If the result of a pre-shift procedure is that the "industrial truck is not ready for operation", there is the option to limit the drive functions and hydraulic functions. The fleet manager determines the restrictions when carrying out the configuration using the PC software TM4.x.


The restrictions remain in force even if the industrial truck is switched on and off. They can be reset only using an access means or PIN code with corresponding authorisation. As long as the restrictions are active, no further pre-shift procedures can be performed.

Result of the pre-shift procedure	Enabled functions
Industrial truck OK	Drive functions and hydraulic functions enabled
Industrial truck ready for operation, but faults present	Drive functions and hydraulic functions enabled
Industrial truck not ready for operation	Drive functions and hydraulic functions are enabled or restricted (depending on the pre-shift configuration)

If drive functions and hydraulic functions are restricted after the pre-shift procedure, the

Operator login with pre-shift code

reading device in the industrial truck shows the following LED signal:

	<p>The green LED stays lit continuously. The red LED flashes 4 times a second.</p>
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Logging in again with the operator's pre-shift code

When carrying out the configuration using the PC software TM 4.x, the fleet manager determines whether an operator must enter another pre-shift code when logging in again.

There are two available options:

- 1 Pre-shift procedure upon change of driver
- 2 Pre-shift procedure 1x daily



NOTE

If there has been no change of operator within that time, a pre-shift code must be entered again 12 hours after the last pre-shift procedure.

Option: "Pre-shift procedure upon change of driver"

When an operator logs off after the pre-shift procedure, the same operator can log back on without a new pre-shift procedure. This applies even if the industrial truck has been switched off and on again in the meantime.

A new pre-shift procedure is necessary only when there is a change of operator.

Option "Pre-shift procedure 1x daily"

When an operator logs off after the pre-shift procedure, the same operator must perform a new pre-shift procedure if there has been a change of day between the last login and the new login. Any authorised driver can then log in without a pre-shift procedure at any time up to the end of the current day. A new pre-shift procedure is necessary only when there is a change of operator.

Operator login on the reading device (with pre-shift code)

To log into the industrial truck, the operator must hold a valid transponder chip in front of the reading device. Once the login procedure has been completed successfully, the pre-shift procedure starts. By means of different LED signals, the reading device successively offers the available statuses of the industrial truck for selection. The operator selects the pre-shift code for the status of the industrial truck by holding the transponder chip in front of the reading device again. The pre-shift procedure is now complete.

An operator can log off only using the same transponder chip as was used to log in. As soon as another transponder chip is held in front of the reading device the pre-shift procedure is interrupted. The PIN code must be entered a second time.

Timeout during the pre-shift procedure

If the operator holds the transponder chip in front of the reading device for longer than 30 seconds after login, the login process is cancelled. The PIN code must be entered a second time.




If the operator does not perform the pre-shift procedure within five minutes of logging in, the process is cancelled. The PIN code must be entered a second time.

Performing the pre-shift procedure





The device runs through the cycles described in the following tables one after the other until the operator holds the transponder chip in front of the reading device during the required LED flash sequence. To select cycle 2, for example, the operator must first allow cycle 1 to run through without any user action.

Operator login with pre-shift code

Status "Truck OK (cycle 1)"






Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE
2	Hold the transponder chip briefly in front of the reading device (login).	 The green LED flashes quickly. The red LED does not light up. ► Cycle 1 is now started and runs for three seconds. The operator must hold the transponder chip in front of the reading device again (operating step no. 3) during this three-second period, i.e. while the green LED is flashing quickly.	A short signal tone sounds.	LOG IN PLEASE
3	Hold the transponder chip in front of the reading device during the three-second period indicating cycle 1 .	 The green LED stays permanently lit. The red LED does not light up. ► The industrial truck is now ready for operation.	Two short signal tones sound.	The normal operating display appears.

Status "Industrial truck ready for operation but faults present (cycle 2)"

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE	
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE	
2	Hold the transponder chip briefly in front of the reading device (login).	 The green LED flashes quickly. The red LED does not light up.	A short signal tone sounds.	LOG IN PLEASE	
		▶ Cycle 1 is now started and runs for three seconds without any further action by the operator.			
		 The green LED flashes quickly. The red LED flashes quickly.	No signal tone sounds.	LOG IN PLEASE	
▶ Cycle 2 is started at the end of cycle 1 and runs for a further three seconds. The operator must hold the transponder chip in front of the reading device again (operating step no. 3) during this three-second period, i.e. while the two LEDs are flashing quickly.					
3	Hold the transponder chip in front of the reading device during the three-second period indicating cycle 2 .	 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.	
▶ The industrial truck is now ready for operation.					

Operator login with pre-shift code

Status "Industrial truck not ready for operation (cycle 3)"

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE	
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE	
2	Hold the transponder chip briefly in front of the reading device (login).	 The green LED flashes quickly. The red LED does not light up.	A short signal tone sounds.	LOG IN PLEASE	
		▶ Cycle 1 is now started and runs for three seconds without any further action by the operator.			
		 The green LED flashes quickly. The red LED flashes quickly.	No signal tone sounds.	LOG IN PLEASE	
		▶ Cycle 2 is started at the end of cycle 1 and runs for a further three seconds if there is no action by the operator.			
		 The green LED does not light up. The red LED flashes quickly.	No signal tone sounds.	LOG IN PLEASE	
▶ Cycle 3 is started at the end of cycle 2 and runs for a further three seconds. The operator must hold the transponder chip in front of the reading device again (operating step no. 3) during this three-second period, i.e. while the red LED is flashing quickly.					
3	Hold the transponder chip in front of the reading device during the three-second period indicating cycle 3 .	 The green LED stays permanently lit. The red LED does not light up.	Two short signal tones sound.	The normal operating display appears.	
▶ The industrial truck is now ready for operation.					

Operator login on the keypad (with pre-shift code)

To log in to the industrial truck, the operator must enter a valid PIN code using the keypad. Once the login procedure has been completed successfully, the pre-shift procedure starts. When the operator has pressed the respective button (0, 1, 2) for the status of the industrial truck, this completes the pre-shift procedure.




The current pre-shift procedure can be terminated at any time by pressing the **[ESC]** key.

Timeout during the pre-shift procedure


If the operator does not perform the pre-shift procedure within five minutes of logging in, the process is cancelled. The PIN code must be entered a second time.


Performing the pre-shift procedure






Operator login **without** entry confirmation via the **[↵]** button:


Se- quen- tial No.	Operating step	LED status	Signal transmitter	Display on the ABE	
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE	
2	Enter the PIN code.	 The green LED flashes every time a button is pressed. The red LED stays permanently lit.	A short signal tone sounds every time a button is pressed.	LOG IN PLEASE	
		►If any of the buttons are not pressed within five seconds, the login procedure must be restarted from the beginning.			
		 The green LED flashes quickly. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE	
►PIN code entered correctly.					

Operator login with pre-shift code

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
3	Press the button corresponding to the status of the industrial truck: [0]: Industrial truck OK [1]: Industrial truck ready for operation, but faults present [2]: Industrial truck not ready for operation	 The green LED stays permanently lit. The red LED does not light up. ▶The industrial truck is ready for operation.	Two short signal tones sound.	The normal operating display appears.

Operator login **with** entry confirmation via the  button:

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Switch on industrial truck using key switch.	 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE
2	Enter the PIN code.	 The green LED flashes every time a button is pressed. The red LED stays permanently lit. ▶If any of the buttons are not pressed within five seconds, the login procedure must be restarted from the beginning.	A short signal tone sounds every time a button is pressed.	LOG IN PLEASE
3	Press the  button.	 The green LED flashes quickly. The red LED does not light up. ▶If the  button is also not pressed within five seconds, the login procedure must be restarted from the beginning.	No signal tone sounds.	LOG IN PLEASE

Se- quen- tial No.	Operating step	LED status	Signal transmitter	Display on the ABE
4	Press the button corresponding to the status of the industrial truck: <input type="checkbox"/> : Industrial truck OK <input type="checkbox"/> : Industrial truck ready for operation, but faults present <input type="checkbox"/> : Industrial truck not ready for operation	 <p>The green LED stays permanently lit. The red LED does not light up.</p> <p>► The industrial truck is ready for operation.</p>	Two short signal tones sound.	The normal operating display appears.

Operator logoff

Operator logoff



 NOTE

An operator can only log off using the same transponder chip that was used to log in. If an operator is still logged in when another operator with access authorisation holds their transponder chip in front of the reading device, this results in an immediate change of operator.






 NOTE

If the operator does not log off before leaving the industrial truck, the device can be set to log off automatically after a certain time has elapsed. The fleet manager can specify the length of this period as required in the configuration.

Reading device variant

Se- quen- tial No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Hold the transponder chip briefly in front of the reading device.	 The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	The normal operating display remains visible.
		 The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE

Keypad variant

Se-quential No.	Operating step	LED status	Signal transmitter	Display on the ABE
1	Press the  button and hold down .	Neither LED lights up. ►Acknowledgement is issued.	A long signal tone sounds.	The normal operating display remains visible.
		  The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	The normal operating display remains visible.
		  The green LED flashes slowly at two-second intervals. The red LED does not light up.	No signal tone sounds.	LOG IN PLEASE




Malfunctions, causes and remedies

Malfunctions, causes and remedies

Faults in the reading device variant

 NOTE





The fault displays only appear when FleetManager™ 4.x is activated.

LED status	Signal transmitter	Message (display and operating unit)	Cause	Remedy
 The green LED does not light up. The red LED flashes quickly.	A long signal tone sounds upon activation.	—	The reading device is faulty.	Notify the STILL service centre.
 The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	ACCESS DENIED ►After two seconds, the login prompt is displayed again.	No valid access authorisation.	Create valid access authorisation using the FleetManager™ 4.x PC software.
 The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	ACCESS NOT VALID ►After two seconds, the login prompt is displayed again.	Access authorisation has essentially been granted to the operator, but the specified period of validity has expired.	Adjust the period of validity using the FleetManager™ 4.x PC software.
			The truck date has changed.	

Faults in the keypad variant

 **NOTE**

The fault displays only appear when FleetManager™ 4.x is activated.

LED status	Signal transmitter	Message (display and operating unit)	Cause	Remedy
 The green LED does not light up. The red LED flashes quickly.	A long signal tone sounds upon activation.	—	The keypad is faulty.	Notify the STILL service centre.
 The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	ACCESS DENIED ▶After two seconds, the login prompt is displayed again. ▶If the PIN code is entered incorrectly three times, the waiting period then extends to 30 seconds.	Incorrect PIN code entered or not confirmed via  button.	Enter the PIN code again.
			No valid access authorisation for the PIN code entered.	Create valid access authorisation using the FleetManager™ 4.x PC software.
 The green LED does not light up. The red LED lights up for approx. one second.	A long signal tone sounds.	ACCESS NOT VALID ▶After two seconds, the login prompt is displayed again.	Access authorisation has essentially been granted to the operator, but the specified period of validity has expired.	Adjust the period of validity using the FleetManager™ 4.x PC software.
			The truck date has changed.	Update truck date.

Decommissioning

Decommissioning

- Bring industrial truck into the designated storage area and actuate parking brake.
- Log off the operator properly.



NOTE

If the operator does not log off before switching off the industrial truck, the truck will be locked when it is switched on again, to prevent unauthorised access.

- Switch off industrial truck using key switch.

5

Technical data

Radio equipment

Radio equipment

Technical data in accordance with RED 2014/53/EU

GSM / GPRS	
Frequency bands	Quad band GSM 850 / 900 / 1800 / 1900 MHz
Maximum transmission power	Class 4 (2 W) for GSM850
	Class 4 (2 W) for GSM900
	Class 1 (1 W) for GSM1800
	Class 1 (1 W) for GSM1900
Bluetooth	
Frequency bands	2400 MHz ... 2483.5 MHz (2.4 GHz ISM band)
Maximum transmission power	+3 dBm
Maximum range	30 m
Version	Bluetooth 2.1 + EDR
RFID	
Frequency bands	125 kHz, 13.56 MHz
Maximum transmission power (EIRP)	18.92 dBuA/m, 2.66 dBuA/m

STILL GmbH

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