

Software V3.73 - Quick Reference

System-Software for Controllers of the Nice UST1-Family



With the new program UST1-V3.73 **two significant changes** were made compared to previous versions:

1. Selection of one of two alternate default-parameter tables for reset (EEPROM-erasure)
 2. New teach-in procedure for end-positions
- (For further information see chapter 2 (p.3) of this document)



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1. INTENTION OF THIS DOCUMENT

This document describes the features of the System-Software V3.73 for Controllers of the UST1-Family. It is intended to be an add-on to existing manuals for Controllers of the UST1-Family referring to previous software-versions to update that information to the advanced features of the Software-Version V3.73 and as quick-reference manual.

2. SIGNIFICANT CHANGES IN V3.73

With the new program UST1-V3.73 **two significant changes** were made compared to the previous versions:

1. Selection of One of Two Alternate Default-Parameter Tables for Reset (EEPROM-Erasure)

When Reset is initiated using a K5-Module now one of two default-value tables can be chosen to be loaded after the reset.

This makes it possible to start either with default-values for standard doors or as a new feature also with alternate default-values for speed-doors (using FU). This makes the setup of speed-doors more convenient.

2. New Teach-In Procedure for End-Positions

During the teach-in procedure to determine the end-positions of the door has to be run between 2 and 7 times (average 4 times). The number of runs is determined by the software according to the individual conditions.

When the display indicates "teach-in procedure"

- with K5-Module: **E nr** (from the German word "Einrichten" (engl. setup))

- without K5-Module: Middle horizontal bar is blinking)

the door has to be run up and down between the top and bottom end-positions

several times until the "teach-in procedure" indication (with K5: **E nr** / without K5: middle bar blinking) disappears.

3. PREPARATION FOR PROGRAMMING / CHECKING OF VERSION

For utmost functionality and ease for programming and we recommend to have K5 module installed on the UST1-family controller. In case that You do not have a K5 module permanently installed on the system You can also install it temporarily for the set-up procedure or during service only.

In case that an installation of a K5 module is needed please refer to the installation manual for K5 modules on how to do so. **DO NOT CONNECT OR DISCONNECT any module WHILE THE SYSTEM IS POWERED ON!**

When a UST1 controller is powered on and a K5 module is installed the K5 module shows the version of the installed software directly after power on the 4 digit 7-segment LED display of the K5 module (e.g. 373).

Without a K5 module the software-version is displayed directly after the power is switched on the 7-segment LED display of the main controller board digit by digit one after another (e.g. 3. - 7 - 3)

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4. PARAMETERS

For accessing the parameters and for reading, setting or altering their values please check the main manual for Your product of the UST1 family and K5 module (if installed).

For a short summary concerning the usage of the K5 module for programming please see chapter 5 of this document.

4.1. PARAMETER LIST

The following table is sorted by the number of the program-parameters.

- "ro" in the column "Min. Value" indicates that the value is read-only and cannot be changed.
- "X" in one of the columns MES (Mechanical Limit Switch), EES (Electronic Limit Switch), K2, K1E or K1D indicates that the parameter is available for the related feature. An "-" indicates that it is not applicable for the related feature.

Special Note for modules K2 and K4: These modules are needed separately for UST1 only. The models UST1K, UST1KL and UST1FU have the features of K2 and K4 already implemented on their main-board - no additional K2 or K4 module cards is needed.

Parameter	Description	Unit	Min. Value	Max. Value	Default Std. Doors (EE 0)	Default Speed-Doors (EE 1)	MES	EES	K2	K1E	K1D
P 0	Output of current position and values of limit-switches <i>no button pressed: display of current position value</i> <i>UP button pressed: value of top limit-switch</i> <i>DOWN button pressed: value of bottom limit-switch</i> <i>both buttons pressed: value of pre-limit switch</i>	num	ro				-	X	X	X	X
P 1	Number of Door-Cycles	num	0	9999	0	0	X	X	X	X	X
P 2	Door Maintenance	num	0	9999	2000	3500	X	X	X	X	X
P 3	Limit-Switch Top	incr.	0	8191	off	off	-	X	X	X	X
P 4	Limit-Switch Bottom	incr.	0	8191	off	off	-	X	X	X	X
P 5	Limit-Switch Half Open	incr.	0	8191	off	off	-	X	X	X	X
P 6	Distance Pre-Limit Switch	incr.	1	200	50	50	-	X	X	X	X
P 7	Distance Safety Limit-Switch	incr.	0	5000	200	250	-	X	X	X	X
P 8	Distance Break-Point Top	incr.	0	5000	0	700	-	X	X	-	-
P 9	Distance Break-Point Bottom	incr.	0	5000	0	700	-	X	X	-	-
P 10	Lag Top <i>no button pressed: display of current Lag Top</i> <i>UP or DOWN button pressed: Initial Lag Top, same as in P 41 (see chapter 4.2.3)</i>	incr.	0	200	50	50	-	X	X	X	X
P 11	Lag Bottom <i>no button pressed: display of current Lag Bottom</i> <i>UP or DOWN button pressed: Initial Lag Bottom, same as P 42 (see chapter 4.2.3)</i>	incr.	0	200	50	50	-	X	X	X	X
P 12	Average Run-Time	1/10 sec.	ro	-	-	-	X	X	X	X	X

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Parameter	Description	Unit	Min. Value	Max. Value	Default Std. Doors (EE 0)	Default Speed-Doors (EE 1)	MES	EES	K2	K1E	K1D
P 13	Run-Time Monitoring Mode 0 = Off 1 = Automatic (Electronic Limit Switch only) 2 = Manual for Standard-Doors 3 = Manual for Speed-Doors		0	3	2	3	X	X	X	X	X
P 14	Maximum Run-Time Full Height	sec	0	240	200	5	X	X	X	X	X
P 15	If P 13 = 0, 1, 2 Maximum Run-Time Half Height If P 13 = 3 (Speed-Doors): Minimum Run-Time Half Height	sec	0	240	60	3	-	X	X	X	X
P 16	Last Door Run-Time	sec	ro	-	-	-	X	X	X	X	X
P 17	Run-Control / Safety-Bar Options (if K2 installed): with 0 = default K2 1 = ramp or 2 = no safety-bar connected, with down in dead-man mode only K/ 3 = no safety-bar connected, KL/ down also possible with down as impulse FU 4 = repeating door cycles (Test-Mode). Pause between 2 cycles is equivalent to pause for automatic closure (<i>see chapter 4.2.1</i>) 5 = up and down in dead-man mode only 6 = disable function light barrier below half open position 7 = automatic closure cannot be interrupted by STOP button 8 = options 6 + 7 combined 9 = radio safety bar (test using K3)		0	9	0	0	X	X	X	-	-
P 17	Run-Control Options (if K1E installed): with 0 = default K1E 5 = up and down in dead-man mode only 7 = automatic closure cannot be interrupted by STOP button		0	7	0	0	-	X	-	X	-
P 17	Run-Control / Safety Bar Options (if K1D installed): with 0 = default K1D 3 = no safety-bar connected, down also possible with down as impulse 5 = up and down in dead-man mode only 7 = automatic closure cannot be interrupted by STOP button		0	7	0	0	X	X	-	-	X
P 18	Discontinuation of Automatic Closure after Safety Bar activation 0 = disable immediately 1-5 = disable after n retries		0	5	3	3	X	X	X	-	X
P 19	Maximum Ground-Level adjustment	incr	0	240	5	5	-	X	X	-	X
P 20	Waiting Time Opposing Traffic	sec	0	240	0	0	X	X	X	-	-

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Parameter	Description	Unit	Min. Value	Max. Value	Default Std. Doors (EE 0)	Default Speed-Doors (EE 1)	MES	EES	K2	K1E	K1D
P 21	Options Radio Signal 0 = Normal Operation as impulse-buttons 1 = same as inside UP button 2 = same as outside UP button 3 = (not in use) 4 = Old Nice Radio impulse 5 = Old Nice Radio inside UP button 6 = Old Nice Radio outside UP button 7 = (not in use) 8 = Nice Radio impulse 9 = Nice Radio inside UP button 10 = Nice Radio outside UP button		0	10	0	0					
P 22	Options for K4-Relay (Red-Light) 0 = Red-Light 1 = Release of Safety Limit Switch The red-light relay is closed as long as the door did not run cross the safety limit switched 2 = Alarm when door is open Relay closes if the door is kept open for more than 30 sec. or the emergency-off button is pressed 3 = Break-Relay for Speed-Doors (associated time-values must be set P 37 to P 40) 4 = Red-Light as in 0 but static not blinking		0	3	0	3	-	X	X	-	-
P 23	Options for K3's potential-free output "bottom end position" 0 = Display of bottom end position 1 = fault-signalization static 2 = fault-signalization blinking 3 = impulse output door starts movement 4 = door latch		0	4	0	0	X	X	X	-	-
P 24	Options for K3's potential-free output "top end position" 0 = Display of bottom end position 1 = fault-signalization static 2 = fault-signalization blinking 3 = impulse output door starts movement 4 = door latch		0	4	0	0	X	X	X	-	-
P 25	Option automatic ground level adjustment 0 = limit to bottom end position 1 = adjustment also below bottom end position		0	1	1	1	-	X	X	-	X
P 26	Downward limitation for automatic ground level adjustment The default value is set after the setup of the bottom end position value [see P 4] to this value minus 50.	incr.	0	8191	Value of P 4 minus 50	Value of P 4 minus 50	-	X	X	-	X

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Parameter	Description	Unit	Min. Value	Max. Value	Default Std. Doors (EE 0)	Default Speed-Doors (EE 1)	MES	EES	K2	K1E	K1D
P 27	Traffic-light warning time prior to door closure	1/10 sec	0	240 =24 sec	40 =4 sec	40 =4 sec	X	X	X	-	-
P 28	Extension of door closure time The door closure time level settings 6 to 9 (60 to 240 sec) are getting multiplied by the factor defined here	mult.	1	240	1	1	X	X	X	X	X
P 29	Options for the Operations Display on K5 0 = default display mode 1 = limit switches as text, additional display of the inputs 2 = door movements as text		0	2	0	0	X	X	X	-	-
P 30	Option Loop Detector (if K7 installed) 0 = no loop detector connected 1 = 1st canal connected. Door opening by loop 2 = 2 canals with safety loop for one direction only 3 = 2 canals with safety loop for both directions 4 = 2 canals with fading of cross-traffic 5 = 1st canal connected. door is closed when loop is left 6 = 2 canals connected. both open the door, while the door is closed by automatic closure functionality		0	6	0	0	X	X	X	-	-
P 31	Lock time for cross-traffic	sec	0	240	0	0	X	X	X	-	-
P 32	Options for K3 Module's "Input 1" (if K3 installed) 0 = enable automatic closure 1 = dead-man operation mode 2 = fire detector (<i>see chapter 4.2.2</i>)		0	2	0	0	X	X	X	-	-
P 33	Options for K3 Module's "Input 2" (if K3 installed) 0 = half opening height 1 = dead-man operation mode 2 = fire detector (<i>see chapter 4.2.2</i>) 3 = half opening height and additional option to open fully using the UP button		0	3	0	0	X	X	X	-	-
P 34	Options for K4 Module's "Limit Positions Relay" 0 = display of of top and bottom limit positions / break-points 1 = option for express/inching for smooth-start equipment connectors 4,5,6 = On/Off connectors 1,2,3 = express/inching		0	1	0	0	-	X	X	-	-
P 35	Maximum correction during automatic lag adjustment (<i>see chapter 4.2.3</i>)	incr.	0	240	2	2	-	X	X	X	X
P 36	Minimum opening height (in percent) to activate automatic ground level adjustment	%	0	100	30	30	-	X	X	-	X
P 37	Break switch-on delay upward	10ms	0	240	12	10	X	X	X	-	-
P 38	Break switch-off delay upward	10ms	0	240	4	4	X	X	X	-	-
P 39	Break switch-on delay downward	10ms	0	240	12	10	X	X	X	-	-

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Parameter	Description	Unit	Min. Value	Max. Value	Default Std. Doors (EE 0)	Default Speed-Doors (EE 1)	MES	EES	K2	K1E	K1D
P 40	Break switch-off delay downward	10ms	0	240	4	4	X	X	X	-	-
P 41	Initial lag top (see chapter 4.2.3)	incr.	-	-	-	-	-	X	X	X	X
P 42	Initial lag bottom (see chapter 4.2.3)	incr.	-	-	-	-	-	X	X	X	X
P 43	Delay K3 Input UP Outside	1/10 sec	0	255	0	0	X	X	X	-	-
P 44	Reversal Delay for rotation orientation reversal	10ms	6	250	70	70	X	X	X	X	X
P 45	Reversal Delay for safety bar	10ms	3	250	6	76	X	X	X	X	X
P 46	Automatic closure	sec	0	250	0	0	X	X	X	-	-
P 47	Options for K3 Module's Relay Output (Retract Protection) 0 = Test of retract protection 1 = Test of radio safety bar 2 = Test of light curtain		0	2	0	2	X	X	X	?	?

4.2. DETAILED DESCRIPTION OF SELECTED PARAMETERS

4.2.1. Test Mode "Repeating Door Cycles": P 17 = 4

By setting the value of P 17 to 4 the door can be run continuously open and close in cycles (test mode).

The pause between 2 door runs is equivalent to pause for automatic closure. For this mode it is not needed to activate the input for automatic closure on the K3 module.

The repeating door cycling mode is ended as soon as a fault occurs or by pressing the stop button for at least 2 seconds. This also resets the value of P 17 to 0.

4.2.2. Fire Detector: P 32 = 2 or P 33 = 2

In one of parameters P 32 or P 33 an input for a fire detector can be selected instead "automatic closure" or "half opening height". As soon as the fire detector input is activated the error-code F 19 is displayed and the automatic closure is activated.

In case that the safety bar gets activated the door reopens again if parameter P 18 is set to a different value to 0. The automatic closure is retried after the reopening as often as defined by the value in P 18. The pause time before the closure is retried is always 5 seconds (shortest pause time), no matter which value is selected by K2. If during the last retry (defined by the value in P 18) the safety bar is activated again the door stops at the obstacle.

The closure of the door can be interrupted by pressing the STOP button. 5 seconds after the interruption the door continues the closure.

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4.2.3. Lag Correction: involved parameters $P\ 35$, $P\ 41$ ($P\ 10$), $P\ 42$ ($P\ 11$)

The lag is defined as the way between the position at which the relay switches off and the real position the door stops.

A correction of the lag is possible with electronic limit switch only. The lag correction ensures that the door stops as near as possible to the limit switch which was setup. The "lag correction" is not to be confound with the feature "automatic ground adjustment". It does not correct the position of the limit switch but the position at with the motor is switched off. These positions are in a short distance before the limit switch.

During every stopping at the top or bottom limit switch the current lag is recorded and its value stored independently for upward and downward direction. The current value of the lag can be displayed by reading parameters $P\ 10$ and $P\ 11$.

For the next run the value of the lag is added as correction value to the position of the limit switch. The automatic correction of of the lag can be filtered by using $P\ 35$.

$P\ 35$ defines the maximum correction of the lag per door-run. This avoids that isolated "bloopers" can decalibrate the value of lag and it prevents that at the end of the next run the door is too far away from the real limit switch position.

After each new teach-in procedure of the limit switch the values for the lag are reset to the default values and the teach-in procedure for the lags is started. This phase is indicated by the text *E nr* blinking on the K5 module (or a blinking middle bar on the K4 module if no K5 module is installed)

During the teach-in the value of $P\ 35$ for the maximum lag correction is ignored. Rather the current average value is determined by the values measured during the teach-in procedure.

For the teach-in of the lag the has to be fully opened and closed until the indication for the teach-in disappears from the display. After that measured values for the top and bottom lag are stored in the parameters $P\ 41$ and $P\ 42$.

These values stay there unchanged until the door is set up again. The values of $P\ 41$ and $P\ 42$ are also visible while pressing while the UP or DOWN button when in $P\ 10$ and $P\ 11$. The difference between the initial values and the current values of the lag can give some useful information e.g. about the condition of the barrel arbor.

The automatic lag correction can be disabled by setting $P\ 35$ to 0.

The lag can the be set manually in $P\ 10$ and $P\ 11$.

4.2.4. Door Latch: $P\ 23 = 4$ or $P\ 24 = 4$

The outputs of a K3 module can be used for a door latch. As soon as the door has reached the bottom end position the output is activated (latch is set). When the door is opened at first the latch is opened and after a pause of 0.5 seconds the door runs up.

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4.2.5. Radio Safety Bar: $P_{47} = 1$

By setting P_{47} to 1 a radio safety bar can be tested. The radio safety bar has to be connected with the 1st relay contact of the retract protection of the K3 module.

Each time when the door is run down the radio safety bar gets tested by opening the relay contact for a short time and then closing it again before the door run is initiated. During this the signal of the radio safety bar is tested.

The 2nd relay contact is still usable for a single retract protection light barrier.

4.2.6. Light Curtain instead of Safety Bar: $P_{47} = 2$

By setting P_{47} to 2 a light curtain can be tested. The light curtain has to be connected with the 1st relay contact of the retract protection of the K3 module. Each time the door has reached to top limit position the relay contact gives an impulse with a duration of 150ms. The polarity of the relay (open or close) can be selected by dip-switch 1 of the K3 module.

The 2nd relay contact is still usable for a single retract protection light barrier.

4.2.7. Operation Display on K5: $P_{29} = 1$

The top and bottom end positions are displayed as text: .

`_Eo^` end position top
`-E l-` end position half height
`._Eu_` end position bottom

The input states are indicated this way:

`E. 101` Button Down
`E. 102` Button Up
`E. 103` Impulse-Button or Pull-Cord
`E. 104` Pass-Through Light Barrier
`E. 105` Loop Detector 1
`E. 106` Loop Detector 2
`E. 107` Radio Signal
`E. 161` Input Emergency-Off
`E.360` Safety Bar

The Error-Codes `F 01` (Emergency Stop) and `F 03` (Safety Bar) are suppressed in this display mode.

4.2.8. Operation Display on K5: $P_{29} = 2$

Additionally to $P_{29}=1$ door movements are displayed as text (in German):

`AuF` door run upward (opening - German: AuFahrt)
`ZuF` door run downward (closure - German: ZuFahrt)

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5. OPERATIONS INSTRUCTIONS FOR THE K5 MODULE

5.1. Accessing Functions

By default the jumps of the the DIP-Switch on the K5 module are all set to OFF (0).

In this mode the K5 displays status and error-messages.

The features of the software are accessed by setting the jumps of the DIP-switches according to the table listed below. To perform or alter operations after setting the DIP-switches the buttons UP and DOWN have to be pressed as indicated below.

DIP				BUT		Description
1	2	3	4	Up	Down	
5.1.1. Setup-Features						
0	0	0	0			Status Display (Operations and Error-Codes)
0	0	0	1			Teach-In of Electronic Limit Switches
0	0	0	1		↓	Operation: Jump to next step of Teach-In Procedure
0	0	1	0			Re-adjustment of Electronic Limit Switches, Display of switch that is to be currently adjusted
0	0	1	0	↑		Operation: Increase value of Limit Switch
0	0	1	0		↓	Operation: Decrease value of Limit Switch
0	0	1	1			Display direction of rotation
0	0	1	1	↑		Operation: Change direction of rotation
0	0	1	1		↓	Operation: Change direction of rotation (same as above)
5.1.2. Selection of Parameters						
1	0	0	0			Display the Number of the Parameter (P_{--}) (see chapter 4)
1	0	0	0	↑		Operation: Increase the Number of the Parameter (see chapter 5.2. for handling)
1	0	0	0		↓	Operation: Decrease the Number of the Parameter (see chapter 5.2. for handling)
1	0	0	0	↑+↓		Operation: Jump to Parameter P_{00}
5.1.3. Display of a Parameter Value and Editing incrementally (scrolling)						
1	0	0	1			Display of the value of the selected parameter
1	0	0	1	↑		Operation: Increase the value of the selected parameter (see chapter 5.2)
1	0	0	1		↓	Operation: Decrease the value of the selected parameter (see chapter 5.2)
1	0	0	1	↑+↓		Operation: Reset of the value of the selected parameter (to default or 0)
5.1.4. Display of a Parameter Value and Editing digit-by-digit						
1	0	1	*			Display of the value of the selected parameter
1	0	1	0	↑		Operation: Increase the value of the selected parameter by 1
1	0	1	1	↑		Operation: Decrease the value of the selected parameter by 1
1	0	1	*		↓	Operation: Change digit to be edited (jump to next digit left)
1	0	0	*	↑+↓		Operation: Reset of the value of the selected parameter (to default or 0)

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DIP				BUT		Description
1	2	3	4	Up	Down	
5.1.5. Service-Code (C 1 / C 2): Selection and Entering incrementally (for general information about the service code system see chapter 6 of this document)						
0	1	0	0			Display of the selected Service Code (C 1 / C 2) - (C 3 to C 5 for internal use only)
0	1	0	0	↑		Operation: Change selected Service-Code (C 1 > C 2)
0	1	0	0		↓	Operation: Change selected Service-Code (C 2 > C 1)
0	1	0	1	↑		Operation: Increase the value of the selected Service-Code incrementally (see chapter 5.2. for handling)
0	1	0	1		↓	Operation: Decrease the value of the selected Service-Code incrementally (see chapter 5.2. for handling)
0	1	0	1	↑+↓		Operation: Reset the value of the selected Service-Code to 0000
5.1.6. Service-Code (C 1 / C 2): Selection and Entering digit-by-digit (for general information about the service code system see chapter 6 of this document)						
0	1	0	0			Display of the selected Service Code (C 1 / C 2) - (C 3 to C 5 for internal use only)
0	1	0	0	↑		Operation: Change selected Service-Code (C 1 > C 2)
0	1	0	0		↓	Operation: Change selected Service-Code (C 2 > C 1)
0	1	1	0	↑		Operation: Increase the value of the selected Service-Code by 1
0	1	1	1	↑		Operation: Decrease the value of the selected Service-Code by 1
0	1	1	*		↓	Operation: Change digit to be edited (jump to next digit left)
0	1	1	*	↑+↓		Operation: Reset of the value of the selected Service-Code to 0000
5.1.7. Saving of Parameter-Settings Review and Saving of Service-Code (C 2) (for general information about the saving parameters and the service-code see chapter 6 of this document)						
1	1	1	1			Display new (unsaved) Service-Code C 2 (if no unsaved code then all blank!)
1	1	1	1	↑+↓		Save settings and Service-Code C 2 into non-volatile memory
5.1.8. Reset (Erasure of EEPROM) / Selection of Default Parameter-Table (for more detailed information see chapter 7 of this document)						
1	1	1	0			Display of current default parameter-table EE 0 (Standard-Doors) or EE 1 (Speed-Doors)
1	1	1	0	↑		Operation: Selection of Default-Parameter-Table EE 1 for Speed-Doors
1	1	1	0		↓	Operation: Selection of Default-Parameter-Table EE 0 for Standard-Doors
1	1	1	0	↑+↓ min. 2 sec.		Operation: Erasure of EEPROM and Restart ↑ AND ↓ have to be pressed continuously for MINIMUM 2 seconds, then the EEPROM gets erased (All individual setting are erased!). After the erasure the controller gets rebooted with the selected Default-Parameter-Table (EE 0 or EE 1 which was selected prior to the erasure).

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5.2. Functions of the ↑ and ↓ Buttons during Editing (Scrolling)

When a value is to be entered by "scrolling" each short press on the DOWN-Button (↑) increases the value by 1 each short press of the DOWN-Button (↓) decreases the value by 1.

If the button is not pressed short but continuously longer than the increment / decrement is performed in larger steps:

If the button is held for 1 sec: value gets changed by 10 increments per second

If the button is held for 3 sec: value gets changed by 100 increments per second

If the button is held for 6 sec: value gets changed by 1000 increments per second

6. SERVICE-CODE-SYSTEM AND SAVING OF SETTINGS

The settings of a UST1-Family-Controller can be protected against unauthorized changes locking all parameters of the UST1 as well as all dip-switches and buttons of optional installed modules K2,K3,K4.

To enable this locking system a user-selectable max. 4-digit service-code (not equal 0) has to be entered in the parameter [2] (see chapters 5.1.5 and 5.1.6 of this document).

Once the code was entered in [2] the value can be reviewed and must then be stored in the non-volatile memory of the controller (see chapter 5.1.7) to become activated.

During the storage procedure described above also all values of optional installed modules (K2, K3, K4) are stored in the non-volatile memory.



Attention! Please be sure to record the code You store in [2] in Your service-documentation. The unit cannot not be unlocked for altering parameters without knowing this service-code!

For unlocking the controller for altering parameters in future You have to select at first service-code [1] (see chapters 5.1.5 and 5.1.6) and then enter exactly the same code You once entered and store in [2] during the locking procedure.

The unit is then unlocked until the next power-off.

A service-code with the value 0 entered in [2] and then stored in the non-volatile memory disables the service-code system and the unit does not get locked.

Important Note: Beside the 2 service-codes described above ([1], [2]), there are additional service-codes for the internal use of the manufacturer.

Do not access/edit these codes ([3], [4], [5]) as this will void Your warranty!

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7. ERASING THE EEPROM / SELECTING A DEFAULT-TABLE

Before a RESET (which erases the EEPROM and resets all parameter-values to their default) is initiated using a K5-Module one of two default-parameter-tables can be selected to be loaded after the reset.

This makes it possible to start either with default-values for standard doors or as a new feature also with alternate default-values for speed-doors.

Compared to the previous software-version this makes the setup of speed-doors more convenient as more parameters can stay unaltered for instant use.

For details on how to select a parameter-table and how to perform a reset using see chapter 5.1.8. of this document.

If NO K5 Module is installed there exists an alternate procedure to erase the EEPROM: Switch DP1, DP2, DP3 to ON and then press the button S1 for minimum 2 seconds continuously (Attention: no change of default-tables possible without K5 module!).

8. TEACH-IN PROCEDURE FOR END-POSITIONS

During the teach-in procedure (see chapter 5.1.1, Dip 0011 of this document for details) to determine the end-positions of the door has to be run between 2 and 7 times (average 4 times).

The number of runs is determined by the software according to the individual conditions.

When the display indicates "teach-in procedure"

- with K5-Module: **E nr** (from the German word "Einrichten" (engl. setup))
- without K5-Module: Middle horizontal bar is blinking)

the door has to be run up and down between the top and bottom end-positions several times until the "teach-in procedure" indication (with K5: **E nr** / without K5: middle bar blinking) disappears.

9. STATUS-MESSAGES AND ERROR-CODES

If a K5 module is installed Status Messages and Error-Codes are displayed on a 4-digit 7-segment LED-display located on the K5 Module.

If the system is using the standard-display mode ($P_{29} = 0$) in case of an error or fault one of the error numbers listed below is displayed preceded by an "F" (e.g. "F 1").

If the system was configured for an alternate display mode ($P_{29} = 1$ or $P_{29} = 2$) the messages can be different. In this case please consult also chapter 4.2.7 and 4.2.8. of this document.

If no K5 module is installed the error codes are displayed on 1-digit 7-segment LED-display (UST1K/UST1KL: on main board, UST1/UST1L: on K4-module) as a blinking sequence. In this case error-codes with 2-digits are displayed digit after digit.

Example for "Error 12":

Display of "1" and then short dark, Display of "2" and then short dark, then long dark, after this the sequence is repeated

Example for Error 8:

Display of "8", long dark, after this the sequence is repeated

The Error-Code can also be transmitted using a line of a K3 module instead of using that line for its default functionality (limit switch output).

In this case Error 0 is transmitted as Error 10.

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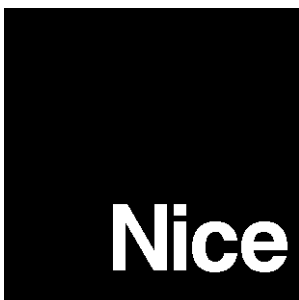
Code	Description	Clearing
F 0	Fault Electronic Limit Switch	automatic as soon as the limit switch is functional again
F 1	Safety Loop	automatically as soon as safety loop is closed again
F 2	Safety Bar defect	in case of electric malfunction: by pressing the STOPP button and running one more test in case of manometric switch malfunction: by one more test on down to the ground only
F 3	Safety Bar signal activated	automatically as soon as the safety bar signal is no longer active
F 4	Bottom End Position not reached (time-limit reached)	by pressing STOP-button
F 5	Top End Position not reached (time-limit reached)	by pressing STOP-button
F 6	Wrong orientation of rotation of the drive	pressing STOP-button
F 7	Intract Light Barrier defective	by pressing STOP-button and retesting after that
F 8	Safety limit switch passed	automatically as soon as the door has left the area of the safety limit switch
F 9	(not used)	
F 10	(same as F 0)	
F 11	(not used, risk of misinterpretation with 1)	
F 12	Test of K4-Relay failed	by pressing STOP-button and retesting after that
F 13	Radio Signal undamped wave	by pressing STOP-button
F 14	Check-Sum Error of EEPROM	by complete erasure of the EEPROM only
F 15	Intract Light barrier activated	by closing the door fully (in dead-man mode) then pressing the STOP-button, and then a successful retesting of the intract light barrier
F 16	Door too fast	by pressing STOP-button
F 17	Fault Loop-Detector 1	automatic as soon as detector defect was solved
F 18	Fault Loop-Detector 2	automatic as soon as detector defect was solved
F 19	Fire Detector attached to K3 got activated	automatic when door is run or as soon as the Fire Detector is no longer active.
F 20	Automatic closure switched off after n unsuccessful tries	after pressing the STOP-button and then at least one successful closure the value of P 18 is restored
F 21	Service due (displayed while door is NOT running only)	by reset of the cycle-counter (see chapter 4.1. P 1)
F 22	Error-Message of the electronic limit switch	see F 0 / F 10

Remark: Errors can be cleared by the STOP-button only while door is NOT running

If more than one errors are active at the same time the errors are displayed in the following order of priority (next error appears after clearing the one before): F15; F14; F0; F8; F1; F12; F4; F5; F16; F2; F3; F19; F6; F7; F17; F18; F13; F20; F21

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MTA9999999999999
EN Rev..2010-09-30
PRELIMINARY PRINT!

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