

FST2XT Software Change History

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FST-2XT V0183 03.04.2024

1) Modbus signals

New top/bottom calls and FST-Reset signals added

2) Inverter controlled Brake Test added

S+ feature added using new Ziehl Abegg DCP control functions

Menu: \Drive\Special Parameters\S+ Options = 00000010

3) FST Recorder

Snapshot of important statuses inserted at start of each daily recording to help *Elevison Playback* identify current conditions

4) DRM Test

New option added to drive with V_e instead of rated speed, to cope with testing in very short shafts

Menu: \System\Factory-Menu\Settings\Miscel-22.7 = 1 (10000000)

5) Elevison Monitoring

Service-Off event added at detected end of service mode

6) Fire-Recall Mode

- Employ fixed 10 sec door re-open hold timer during Fire-Recall "Peek-a-boo" activation. This now ignores the menu *Open Hold Time* which could be set much longer.

- Fix issue of doors not re-closing during Fire-Recall as required if doors set to remain normally-open in menu.

7) I/O Port Car-Call Acknowledgement added

New I/O Port mimics the car-call acknowledgement status for a single specified car call button

00nn7D84 = car call active

nn (bitwise) = ddFFFFFFF

FFFFFF= call floor value

DD = call door value (00=A, 01=B, 10=C)

8) VIP mode 6 added

New VIP mode for Schindler Västlänken project added

9) SPHTR Monitoring

Schindler feature added to disable re-leveling following activation of SPHTR signal

Menu: \Configuration\Inspection\SPHTR Monitor = Yes / No

10) CBM2

Two new hidden menu options added to revert to the CBM2's default settings

Menu: \Drive\CBM Brake Module\EEPROM Functions\Reset CBM2-EEPROM

\Drive\CBM Brake Module\EEPROM Functions\Reset Def.settings

11) Red/Green signal lamps for Car/Pit Inspection access

New option to ignore SBR feedback contact (Anti-creep) when generating the Green Signal status

Port Raw = 000n7F84 = Green Lamp includes SBR status

001n7F84 = Green Lamp ignores SBR status

12) Menu Navigation

New feature added to allow fast direct access of last visited menu parameter using the key combination

SHIFT+ENTER once inside the main menu *ENTER*

13) CBM1 / CBM2

Corrections to handling of calls in case of CAN communication errors

14) EN81-76 Rescue Mode

Correction to V0182 1)

FST-2XT V0182 14.02.2024

1) EN81-76 Rescue Mode

New rescue mode added for self-assisted passenger evacuation. Can be used with Simplex or Grouped lifts.

Menu: \Configuration\Fireman Options\Fire Standards = EN81-76 (Rescue)

\Configuration\Fireman Options\Special Params\Max. wait time = 5..255 seconds

(maximum waiting time in pickup floor, before lift returns to main floor)

\Configuration\Fireman Options\Special Params\Only disabled call = Yes / No

(only respond to landing calls designated for handicapped users)

New Fire-Recall Input I/O Port "Shaft-smoke alarm" option added – when active will inhibit rescue mode
00013F12 / 00013F13 = Shaft Smoke Alarm (note "smoke" bit set, and floor=63!)

New output I/O Ports added:

003D7884 = one or more BA fire-recall alarm signals is active

013D7884 = one or more Phase-1 signals is active

023D7884 = shaft smoke alarm activated

003E7884 = EN81-76 rescue-mode active

2) EN81-72

Workaround added for 2-door lift to illuminate both DO Buttons on floors with 2 openings

Menu: \System\Factory-Menu\Settings\Miscel-22.6 = 1 (01000000)

3) EN81-73

Phase-1 handling optimizations. Note: the **FSM Update V67** is also required for this.

4) Loading Mode options added

• Automatic loading mode activation whenever the doors open from the closed position

Menu: \Configuration\Special Functions>Loading Function\On=Automatic = Yes / No

• Adjustable time parameter for activation via long press on DOB

Menu: \Configuration\Special Functions>Loading Function\Long Press DOB = Yes / No

Menu: \Configuration\Special Functions>Loading Function\ ---“—“--- Time = 3-60 seconds

(Note: this function was for a 20 second fixed period only, and named **20 Sec. DOB**)

5) Evacuation Self-Assisted mode added

Currently only accessible via Modbus

New output I/O Ports added:

000407884 = self-assisted evacuation mode active

6) Handicapped call mode

New menu option added allowing control of the duration handicapped mode (speech output, lengthened door dwell time) will remain active before falling back to normal mode. Handicapped mode is triggered when a specially configured landing call button is pressed.

Menu: \Configuration\Hall Stations\Handicapped Hold = 0..2

0 = maintain handicapped mode until no more calls are queued

1 = maintain handicapped mode until the lift changes travel direction once

2 = maintain handicapped mode until the lift changes travel direction twice

7) Anti-Nuisance modes

New time-filter option added for users who press both Up and Down landing call buttons (similar to the GST function)

Menu: \Configuration\Double Press = 0.0..9.9 seconds (0.0 = no function)

8) Remote special drive functions

New remote special drive controls added for Elevison 4.0

• Car-Priority mode

• VIP-mode

• Override function for locked floors

9) Menu "Miscel-Bits"

FST-Guide help text added

10) S2 Menu parameters renamed

Menu: \Configuration\Installation\S2-System\turn on Install-M
\Configuration\Installation\S2-System\turn off Install-M
\Configuration\Installation\S2-System\turn on Teach-Mode
\Configuration\Installation\S2-System\turn off Teach-Mode

11) CBM2 Menu:

- Parameter **One-Halfwave-Mode** sub-menu no longer required, removed
- FST Guide help text added

12) ESM Mode

Correction to V0180 1)

13) Synchronized gong mode

Correct missing SAM arrival message when using this mode (Miscel-18.0=1)

14) Lon Module Center

Correct problem of LMC not working if the FST is connected over Ethernet to a PAM-E4 Gateway

FST-2XT V0181 01.12.2023

1) Drive DCP Menu

Correct problem of turning menu off introduced in V0180

2) Bypass mode with CAN doors

Prevent Bypass mode activation if the CAN door has lost connection

3) Fireman mode, continuous pressure DOB control

Prevent door from opening fully if the DOB is given a very short "tip"

4) Fire-Recall mode

Allow correct operation for through-door floor with a non-phase1 signal on one side, and a phase1 signal on the other.

5) SDS (Selective Door Security)

Correctly apply group floor offset

6) Landing Calls Off (Left-Arrow button)

Restore functioning of \System\Factory-menu\Settings\ASAUS Protect = Yes, which prevents Landing-Calls-Off mode being activated if any higher prioritised system operating mode is active

7) ASV Error

Prevent ASV-Error occurring on pawl lift when a under-pressure condition attempts to re-pump the main piston immediately following the acceptance of a drive command

8) Guide: Load Weighing display

display for SERAPID/AELIGHT-8 Device shows additional information

FST-2XT V0180 20.11.2023

1) ESM control added for USP (Uninterruptible Power Supply).

Two programmable timers added:

- UPS-Off: sets the lift idle time before the I/O output Port is activated, and should be used to disable UPS charging
- UPS-Off Delay: a one-time delay following every FST coldstart to give the UPS battery a better chance of reaching full charge after the controller was powered down.

Menu: \Configuration\ESM-Settings\UPS Off = 10..9999 minutes
\Configuration\ESM-Settings\UPS Off Delay = 10..9999 minutes

New output I/O Port added

003C7884 = UPS Charge Disable

2) ESM mode

- Improvements to ESM activation/de-activation control
- Correction to invert logic for menu parameter **w. open doors** (allow sleep mode with doors still open)
- Prevent sleep timer from running whilst doors are held open
- Re-leveling functions during sleep mode

3) CBM1 / CBM2 Brake modules

- Improvements to CBM errors in Guide display
- Power saving voltage now operable from 1 sec upwards
- Prevent acceptance of landing, car or pseudo-calls if the the CBM CAN communications are down

4) (S1/S2) Indication lamp control added for showing safe access to pit or car roof

New I/O output Ports added

00017F84 = car top green lamp

00027F84 = car top red lamp

00047F84 = pit green lamp

00087F84 = pit red lamp

00107F84 = ignore SBR-monitor contact (anti-sink) for green lamp

5) Elevision 4.0 Occupancy Detection: new hardware sensor option added

New input I/O Port added

000063F2 = car occupied sensor signal

Menu: \System\Factory-Menu\Condtn.Monitoring\Car-Occupied =

Off	(no detection)
algorithmic	(only)
Hardware Sensor	(only)
Hybrid (S/W & H/W)	(both)

6) Drive-type: Bucher ELRV

Suppress repeated Start-Abort errors during Installation mode

7) Re-leveling timeout error #57 (DRM-RELEVEL.TIMEOUT)

Prevent perpetual attempts to relevel following a shaft-bottom limit-switch error #23 (DRM-EMERG.LIMITSW) activating during a homing drive.

8) Door opening/closing-time monitoring

Prevent premature door open/close error detection during door operator learn drives.

9) Call Acknowledgment during approach blinking phase

Prevent "hanging" blinking status occurring with EAZ-TFT or CAN fixtures in the COP. Not required for FPM modules, which do this automatically.

Menu: \System\Factory-Menu\Settings\Miscel-22.2 = 1 (00000100)

10) LMS-Floor Locking

Apply group floor offset to car-call floor-locking floor value (required for some remote monitoring applications)

Menu: \System\Factory-Menu\Settings\Miscel-22.3 = 1 (00001000)

11) Guide: I/O Port

Apply group offset to I/O Fire-Recall Port floor value

12) Fireman Phase-1 EN81-72

Display Fireman pictogram in car and landing indicators during Phase-1 operation

13) Calibration Mode

Disallow starting a calibration run if the drive is unsuitable for this (DCP04 or CAN-417 using positioning mode)

FST-2XT V0179 10.08.2023

1) FST-3: first customer release

2) FST-3: set PC communications port:

Menu parameter added to select PC-Communications method (FST-3 only):

Menu: \Configuration\Modem\PC/Elevation>Select PC Comm. Type = Serial(X9), USB(X42), Bluetooth

FST-2XT V0178 02.08.2023

1) I/O Port: Door-Stop:

New I/O Port added.

000n64F2 = set specified door(s) to stop

- n: 0 = operate on all doors
- 1 = door-A
- 2 = door-B
- 3 = door-A and B
- 4 = door-C
- 5 = door-A and C
- 6 = door-B and C
- 7 = all doors

2) Door forced-closure:

Return use of door forced-closure during inspection, auxiliary and fire-recall drives

FST-2XT V0177 26.06.2023

1) CBM2:

All CBM2 features added

FST-2XT V0176 26.05.2023

1) Fireman service with manual doors:

Using a new menu switch, the FST will allow Fireman Service to operate when manual shaft door(s) are fitted. Note: this might not be EN-72 conform.

Menu: \System\Factory-Menu\Settings\Miscel-22.0 = 1 (00000001)

2) Hydraulic Clamping System:

A timeout in the rope re-tensioning operation will now be handled internally and not cause a DRM error.

3) Drive-type: DCP03 with Danfoss Inverter for Rope and Hydraulic:

For Inspection and Auxiliary control, apply inverter drive speeds according to Danfoss specifications:

Auxiliary, uses	Vi(inspection speed)
Inspection slow, uses	Vi(inspection speed)
Inspection fast, uses	V1(first intermediate speed)

4) S+, Microport door operator:

Special handling added to allow de-energized mode for S+ Microport operator.

Menu: \Configuration\ESM-Settings\Microport-Off = 0-255 secs

5) Inspection Anti-Surf option:

Can now be used an option independent of the Russian standards (GOST, previously PUBEL).

Menu: \Configuration\Inspection\Anti-Surf = Yes / No

This parameter will be set to Yes automatically if the Project Code 113 (PUBEL) is already set.

The original 2 PUBEL I/O Ports used for Anti-Surf control can now also be used:

i) enable inspection mode. This signal must be set ON in the motor room before Inspection mode can be activated on the car or in the pit.

00000CF2 = Inspection Enable

ii) disable Shaft-door monitoring and enable inspection mode.

Note: If this port is programmed, the Inspection-Enable port (i) is not required.

000024F2 = Anti-Surf Bypass

6) Drive-type: Bucher ELRV:

Add faster drive speed option for Auxiliary mode. For use with version with/without Freq. Inverter.

Menu: \Drive\Special Parameters\Switch-6 = On (Vi), Off (Ve)

7) Inspection drive duration limit:

An inspection drive is now time limited to max. 150 secs. After this time, the FST will automatically invoke a soft stop. The next inspection drive can be continues immediately by releasing and re-pressing the required inspection-pod control buttons.

8) Evacuation for ASV (Pawl) lifts:

Option added to allow full evacuation drive to target floor (as defined in Evacuation Port).

Menu: \Configuration\Evacuation\ASV Evac. Enable = Yes / No

9) Car-Occupied status:

I/O Port option added to directly set the Elevison 4.0 car occupied probability status to 100%. If this port is not used, the FST's internal algorithm will be used to generate the occupied probability status.

Port Raw = 000063F2

10) Safety light-curtain break error:

Correction to V0175 Mod-14 which will caused an endless Light-Curtain break error (#9)

11) Autotest drive:

Prevent lockup when using Autotest random floor selection mode in connection with floor-limit option.

12) SWM Fire-Recall strategy:

Complete overhaul of strategy for SWM

13) Fire-Recall:

Apply group floor-offset to ADM signal when re-opening door in main floor

14) Drive type: ASV - DCP03:

Restore correct operation of Anti-Sink control for ASV-Lifts

FST-2XT V0175 03.03.2023

1) New output ports:

- Car Occupied (Assumed, requires Elevison 4.0 connection) **00397884**
- Photocell interrupted **00nA7884**
 - any door **000A7884**
 - door A **001A7884**
 - door B **002A7884**
 - door A or B **003A7884**
 - door C **004A7884**
 - door C or A **005A7884**
 - door C or B **006A7884**
- Door Zone output **00007B84**

2) Drive-Type: Devehissar:

Devehissar system with Bucher-ELRV block added. Drive speeds Ve, V2 and V3 supported

3) Drive-Type: DCP03-Hydraulic

For Hydraulic systems using DCP03 interface.

Currently available for Algi AZFR with Danfoss Inverter

4) Hydraulic Clamping System:

- When using Mayr weight-measurement system, restrict rope re-tensioning to when the doors are closed

- New programmable max-wait timer added for the clamping & un-clamping operations

Menu: \Drive\Hydr.Clamping\Wait Max. = 5-30 secs

5) Deutsche-Bahn Lift

Correct use of Henning temperature measurement information

6) Daimler EN 81-72 Fireman transport drive:

Correct return of transport-drive back to Normal mode

7) I/O Port Evacuation Complete (40000084)

Prevent glitch on output occurring when using auxiliary drive

8) Car Occupancy Detection (For use with an Elevision 4.0 connection)

- prevent unwanted detection caused by exiting passenger activating DOB or DCB
- LCS / CAN weight information now used in the detection algorithm

9) Inspection Door Test – Door-C:

Correct problem of Door-C not opening

10) Anti-Sink Control:

Prevent unwanted monitoring “type-4” errors (detection between drives) occurring at end of inspection or auxiliary drives.

11) UCM-A3:

Prevent unwanted UCM detection for manual-doored lifts if the safety light-curtain in interrupted mid-shaft

12) Inspection-Reset Pit:

If using the \Drive\Emerg.Stop:Hold option, the Pit-Reset action now also clears the Post-Emergency-Stop status (normally requiring a car call activation to clear).

13) Inspection-Access for Car-roof or Pit:

- When using ADM or I/O Port signal to activate, and waiting for the car to arrive in the floor, prevent a subsequent key-switch activation from causing a crash-stop.
- Door selectivity added. Only the door defined in the ADM or I/O Port configuration will now open

14) Safety Light Curtain:

Prevent the unnecessary generation of an open door contact error (#9) preceding a safety curtain break error (#39)

15) Handicapped landing calls in group context:

Restore functioning of Pre-Selected handicapped landing calls in group mode.

16) IP Security:

Block unrequired IP Ports

17) FST-Menu - LON-Byte Editor

- Added support for following Module types: LCG01, EAZ45

FST-2XT V0174 18.11.2022

1) Fire-Recall / Fireman-Service:

It is now possible to determine the nature of the door-opening in the main-floor separately for Fire-Recall and Fireman-Service. This functions independently of the set Fire-Standard.

Menu: \Configuration\Fireman-Options\Phase-1 door in MF = remains open / returns to closed

\Configuration\Fireman-Options\Phase-2 door in MF = opens automatically / no automatic opening

Note: these options apply to the declared main-floor only

2) CAN-417 Drive:

- Releveling drive no longer causes Stop-Abort error at end of drive
- Fast <-> Slow inspection speed changes no longer cause an unwanted intermediate stop
- Fixed problem of CAN-Drive communication interruptions after approx.. 45 days of on-time
- CAN Drive control status information now shown in the FST Line-3 Debug mode (SHIFT+LEFT+RIGHT)
 - “OUT =xxxx” : displays the current CAN control word to the drive (hex format)
 - “IN = xxxx” : displays the current CAN status word from the drive (hex format)
- CAN Drive control/status information now added to FST recording
- The Drive's error number sent to the FST is appended the FST-Error entry #37 (“Drive Err:nnn”)

3) SAM speech:

new output message option added when the doors reach the fully open position

Menu: \Configuration\Speech output\SAM-Module\”door opened” = On / Off

4) I/O Output Port, Safety-Circuit Failure:

New option added whereby the output turns OFF once the safety-circuit Emergency-Stop inputs re-close. When using the default operation, the output will remain ON until the successful start of the next drive occurs.

Menu: \System\Factory-Menu\Settings\Miscel-23.6 = 1 (01000000)

5) Inspection Shaft Limits (virtual):

New option added to apply the top / bottom-shaft inspection-drive limits for Auxillary drives as well.

Menu: \Configuration\Inspection\Use Aux. Limit: Yes / No

6) Remote Drive-Menu:

Keyboard mapping help graphic for Danfoss Inverters now added

7) Daimler (customer specific):

- Load-dependant top-floor access for Destino project added
- Fireman-Transport drive (hazardous goods), now runs within EN 81-72(2015) standard

8) Hydraulic Rail Clamping:

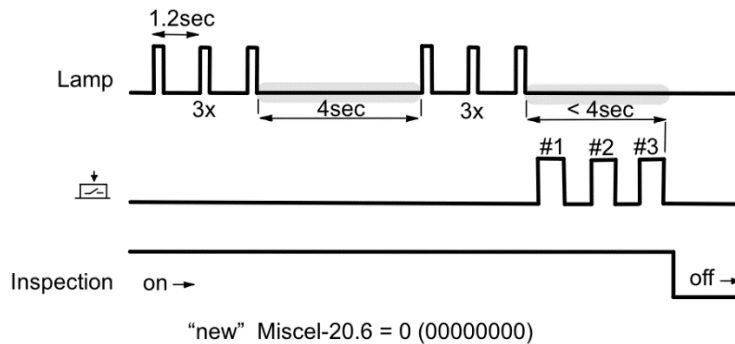
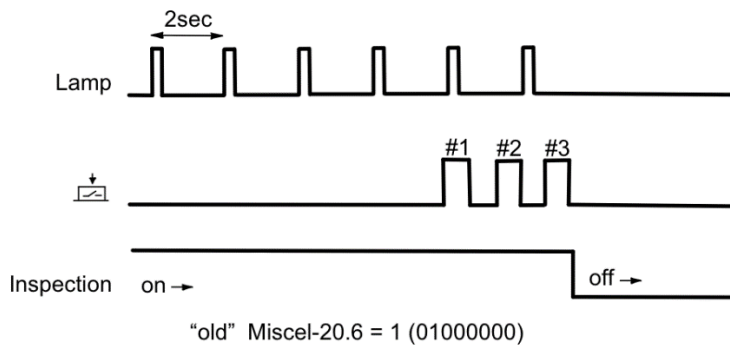
for the automatic lift-rope tensioning mode (FST V0173), the maximum (fixed) operating wait time has been extended from 3 to 8 seconds.

9) Door menu, “Opening Time”:

Menu: \Doors\Door-Selective\Opening-Time = 0.65 secs (extended from 30 secs)

10) Pit Inspection Reset via Landing Call:

When using the bottom landing call button attached to an ADM/EAZ Module, the blink signalling pattern has been changed slightly to work with EAZ modules that cannot read the button input whilst illuminated. If required, the “old” method can be restored using Miscel-20.6



13) Pit Inspection Reset, with S1:

status now held during power-off

12) LCS error “LCS-Timeout”:

problem fixed of unwanted timeout errors, #59, present since FST V0173

13) BACnet UGW:

problem fixed of unwanted hourly serial-interface resets

14) I/O Port input, ASV-Disable (000026F2):

fixed problem of Safety-Bypass being wrongly left activated after turning the Disable OFF (ASV = ON)

15) CAN-door:

fixed problem of not re-closing a previously de-energised door (status = stop). This was occurring when the door did not have an opening on the current floor.

FST-2XT V0173 22.08.2022

1) CAN Load Weight Measurement:

CAN-417 Load-Weighing interface with optional Rope-Difference Alarm detection (Henning AE12).

Special Interface added for Serapid lifts, using Henning AE-Light.

Requires LON/CAN gateway module: LCG02.

Menu: \Configuration\Weight Sensor\LCS-Settings\CAN-417\...

Enabled = Yes / No

Device Type = Generic / AE-12 / AE-Light

Number Sensors = 0..16

Thresh.Slackrope = 0..32000 kg

Thresh.Rope-Diff = 0..32000 kg
Th. Rope-Diff.Stop = 0..32000 kg

2) Error #83 “Door Close Status”:

Option to mask this error,

Menu: Miscel-21.3 = 00001000 Ignore Error #83 “Door Close Status”

3) Interface for ELPS UPS Device:

I/O Port input programs for ELPS UPS, to generate following signals:

• Mains/Battery operation:

Port Raw = 000112F2

This will generate a new event in the FST fault log, #154, “UPS:BATT.OPERATION” when the signal is activated, “UPS:MAINS OPERATION” when subsequently de-activated.

• Low-Battery warning:

Port Raw = 000212F2

This will generate a blocking DRM fault in the FST fault log, #81, “DRM-UPS:LOW BATTERY”.

After stopping in the next possible floor, the lift will be sent to the configured fire main floor, where it is shut down.

• Battery over-temperature:

Port Raw = 000312F2

This will generate a blocking DRM fault in the FST fault log, #81, “DRM-UPS:BATT.OVRHEAT”.

After stopping in the next possible floor, the lift will be sent to the configured fire main floor, where it is shut down.

• General alarm:

Port Raw = 000412F2

This will generate a blocking DRM fault in the FST fault log, #81, “DRM-UPS:GEN.FAULT”.

After stopping in the next possible floor, the lift will be sent to the configured fire main floor, where it is shut down.

4) Evacuation:

Recording events added for inverted-assisted evacuation.

Now waits for DCP Drive-Ready status before reading car-light/heavy status from inverter.

5) iValve:

Fine-valve option for down travel added, using relay K10.

Menu: \Drive\Special-Parameter\Switch-6 = On (use K10 for downwards re-leveling)

6) Sluice doors:

Prevent a lockup situation occurring when an error occurs (eg. safety-cct opening) which would interrupt the arrival of a lift into a floor having sluice-doors (“Sequence” or “Order..”).

7) Temperature control using TDF Module:

Prevent the Lift-Off function (activated at critical threshold level) from timing-out after a few seconds.

8) Danfoss LD302:

New option added to turn the direction and main-contactor signals off together during the stop sequence.

Menu: \Drive\Special-Parameter\Switch-4 = On (Direction & Main-Contactor turned off simultaneously)

9) Fireman Transport Drive:

New optional version of existing Fireman Transport Drive (Version-2)

Basic operation of Version-2 Transport Drive:

- Phase-1, (unchanged), lift brought to main floor, remains with doors open
- Phase-2, started with car key-switch
- Call can only be entered with key-switch On, the acknowledgement light is illuminated, but the doors remain open.
- Entering a second call will clear any previously entered call.
- The key-switch is turned to the Off position, and after a 15 second wait, the doors begin to close.
- After the doors have closed, the placed call is accepted and used to start the drive.
- After reaching the target floor, the doors open and remain open.
- This sequence can be repeated as required, the lift must be returned to the main floor to return to the Phase-1 status.

Required Settings:

Menu: Miscel-21.4 = 00010000 FM-Transport Drive Version-2

Menu settings for existing menus:

\Configuration\Fireman Options\Fire Standards = FM-Transport Drive
\Configuration\Fireman Options\Fire->Fireman (ADM) = No
\Configuration\Fireman Options\Fire->Fireman (I/O) = No
\Configuration\Fireman Options\Off only in M-Flr = Yes
\Configuration\Fireman Options\Fire sig. Pulsed = Nein

10) S+ K14a Testing (error #72, "DRM-Door Bypass)

Changed to be compatible for cars with manual shaft doors and no automatic car doors.

Required settings:

\Doors\Door-Selective\Type = None
\System\Factory-Menu\Settings\Miscel-14.5 = 0
\System\Factory-Menu\Settings\Miscel-15.1 = 1
\System\Factory-Menu\Settings\Miscel 17.5 = 1

11) Elevision 4.0:

Occupied status no longer set during autotest drives

12) Fireman Düsseldorf:

Changed to prevent entry into Fireman-mode if ADM-sourced signal has not already been activated.

13) Quickstart iValve:

Operate for upwards drives only and without VVVF control

14) Hydraulic Rail Clamping:

New option added for automatic lift-rope tensioning based on Clamping units own load-measuring sensor.

Menu: \Drive\Hydr.Clamping\Enable = Yes/No (general FHV enable)
\ Drive\Hydr.Clamping\Rope-Tension = Yes/No (activate new tensioning function)
\ Drive\Hydr.Clamping\RT Time Max. = 0.5..20.0 sec (operation timeout, default = 5.0s)

new I/O Ports:

000062F2	re-level downwards,	increase rope tension
000162F2	re-level upwards,	decrease rope tension

15) Siemens AT40M CAN-417

Option added to force AT40M (Meiller version) CAN device identity for FST. Required for some Elevision 4.0 data collection).

Menu: Miscel-21.5 = 00100000 (force identification of Siemens AT40-M CAN device)

16) Error #72 "DRM Door-Bypass"

Prevent this being generated as a follow-on error directly after an error #11 "Door Open Failed" has occurred

FST-2XT V0172 17.05.2022

1) new "Hands-Free" automatic call mode for 2-floor lifts

Uses CEDES TOF sensor to generate automatic landing/car call sequence for 2-floored lifts. Typically used for Railway lift application. Documentation available.

Menu: \Calls\Special Call Mode = 2-Floors, Hands-Free (new call mode option)

2) I/O Port "Clear all calls and direction" xxxx1FF2:

Improvements to:

- ensure drive-pause function gets cleared when drive-cancel option is used.
- new 'd' option added to reset door status (clears "in-fahrt" mode)

Menu: Port RAW 0000 0000 0000 0dcs 0001 1111 1111 0010 (000x1FF2)

s = stop at next possible floor

c = cancel current drive (hard stop!)

d = reset door

3) Algi AZFR, AZRS

Option added to not test the A3-Valve position during Re-leveling. This has been know to occasionally cause unwanted errors.

Menu: \Drive\Special-Parameters\Switch-6 = ON (A3 Drive test not executed during re-leveling)

FST-2XT V0171 22.04.2022

1) CAN-Open Doors: Finger Guard Protection

Following detection, the FST now waits for the door controller to return to normal operation

2) Drive Type: Danfoss LD302

New option added to allow delay between output of speed and direction signals before applying enable (K0)

Menu: \Drive\Special-Parameter\Time-2 = 0..9999mS (delay before enable is output)

3) Fireman-Service: for lifts with through-doors and one car call button/floor

Although not strictly EN81-72 conform, this option will restrict the door opening on a floor with through-doors to the side configured in the Fireman-Settings Safe-Area.

Menu: Miscel-20.2 = 00000100 (force Safe-Area door-side during Fireman Service)

4) Elevision 4.0: “last known..” feature added

The FST provides Elevision with the last time certain actions occurred: drive, park-drive, car call, landing call, re-leveling and service activity.

This list can be also be viewed from the FST menu directly, using the Line-3 **Shift+Left+Right** Information option.

Use **Shift+Left** to access the “Time-Last...” entry and then press Guide **Select** to step through the list of events.

5) Elevision 4.0: Car-Occupancy Detection

An new algorithm in the FST calculates the percentage chance of the lift car being occupied with one or more passengers. Values = 0% (not occupied), 10% ...100%(certain occupation)

Menu: \System\Factory-Menu\Condtm.Monitoring\Car-occupied = Yes / No (default = Yes)

An I/O Output Port is available if the detected occupation is > 0: **00397884**

6) CEDES Safety Light Curtain Test

Prevent a lock up situation when the safety-circuit does not re-close following the CEDES pre-start activation check.

7) Drive Type: Bucher iValve

Prevent generation of a SMA error due to lack of motor runoff time at end of Pawl-Lift (ASV) sink manoeuvre.

8) Fire-Recall when used with drive Quickstart mode

Fix problem of the lift not reaching the fire-recall floor, if Fire-Recall is activated during the drive start preparations

9) Drive-Blocking mode

Fix problem of not being able to edit the menu current time/date settings whilst the FST is in Drive-Blocked mode

10) Anti-Sink Protection

Various problems fixed: including unwanted fault condition following power-up and during inspection drives.

11) Inspection-Access via COP

Changes made to allow activation of Car-roof or Pit Inspection access whilst FST is in Landing-Calls-Off or Car-Priority mode

12) Door Closure Delay

Problem when using large values for \Doors\Doors-Selective\Min.Land.Time. If a landing call is entered for the current floor after the door has fully opened, pressing the DCB will be ineffective until the entire **Min.Land.Time** has expired. The waiting time is now limited to 3 seconds.

FST-2XT V0170 14.02.2022

1) Elevision 4.0: service mode

An improved automatic service-mode detection algorithm has been added to recognize on-site service activities, and also discriminate between these and remote commands generated via Elevision.

Initial detection occurs if either: Inspection, Auxillary or Landing-Calls-Off are activated. An 'm' will flash in the FST menu line-4, char-1 to show active maintenance. Pressing the FST's keyboard on-site will re-trigger the service-mode detection.

Once all service indicators have been deactivated, a service-mode exit timer is started holding the Elevision service-mode for a set number of minutes. The held service-mode status for Elevision allows the lift to return to normal immediately, but keeps the remote status showing "service" to bridge gaps that might otherwise occur, eg. Inspection ON -> OFF -> ON -> OFF.

Once a set number of car or landing calls are made away from the current floor, the held service-mode will turn OFF automatically, the sign for the Elevision user that the engineer has now left the site.

\System\Factory Menu\Condtn.Monitoring\Service-Mode\Hold-Time = 1..60 (minutes, default = 5)
time for which the Elevision Service Mode is held virtually after the last recognized local service activity.

\System\Factory Menu\Condtn.Monitoring\Service-Mode\Early Release = 0..10 (calls, default = 5)
number of car or landing calls placed to allow service-mode to release earlier than the hold-timer.

\System\Factory Menu\Condtn.Monitoring\Service-Mode\Ignore Errors = Yes / No (default = Yes)
prevent FST errors/events generated during service mode being forwarded to Elevision

\System\Factory Menu\Condtn.Monitoring\Service-Mode\Exit Hold-Time = Yes / No
one-time activation to force the hold-timer to expire immediately

2) Emergency Stop Error (#3)

The error #3 text in the FST menu now displays the following states:

EMERGENCY STOP-ON

EMERGENCY STOP-OFF

EMERGENCY STOP-SHORT (occurs when the actual activation time is less than **\System\Factory Menu\Settings\EmergStop-Time**)

3) Manual Door Monitoring

allow the registration of a manual-door monitoring error (Error #82 **SHAFT-DOOR-ACCESS!**) in spite of another existing DRM condition. This allows the manual-door monitoring error output port to function correctly.

4) Drive type: Devihissar

continual pawl monitoring added during driving for all Devihissar drive types

5) CAN-Open Doors:

Door position (mm) added for display in Elevision 4.0 Live view

6) Error #52 SAFETY CCT BRIDGED

This legacy error detection has now been removed. Error #77 DRM-DOOR BRIDGED replaced this in V0137.

7) Error #92 AWM SHUTDOWN

Added for critical AWM errors

8) Drive Type: Bucher iValve

Quickstart option added. Uses the standard FST Quickstart controls.

9) Drive Type: 2-Speed Traction

Unregulated 2-speed drive used in conjunction with the NEW LIFT CBM Brake Module. A programmable delay has been added which is applied during the start between the motor and brake activations.

\Drive\Special Parameter\Time-1 = 0..1000mS delayed brake activation at start

10) Fireman-Standard Düsseldorf

Changes made for newer fire regulations:

- COP "call-clear" button: limit call entry to one only
- prevent DOB/DCB being enabled unless COP firemans switch is ON
- allow exit from fireman-service if turned OFF and the fully opened door (end-switch) has status *stopped*

11) Schindler PORT mode

Allow Schindler PTG to drive Schindler displays in non-PORT lifts.

Menu: Miscel-21.0 = 00000001 Schindler-PTG used in read-only mode for non-PORT lifts

12) Elevision 4.0: AT-40 Display Code

The Siemens AT40 door controller 7-segment display is now mirrored on the Elevision 4.0 Live view

13) Car Priority mode

An option added for cancelling an acknowledged COP floor button during Car-Priority mode when using the "Hard" menu option (single call only allowed).

Menu: Miscel-21.1 = 00000010 current target floor can be overridden by pressing another call button

14) Secure Landing-Priority mode

Fix to prevent a lock-up situation when the car loading state changes to not-empty after a decision has been made to accept the Secure Landing-Priority call and bring the car to the calling floor. The door will now not be allowed to close whilst the car remains not-empty.

For help during commissioning, the FST now displays "WAIT FOR EMPTY CAR.." in line-2.

A new I/O Output Port option as now also available that will activate when the car is waiting to become empty:

00387884

15) Loading Mode

Changes made to the handling of the Loading-Mode switch input signal (either from I/O Port or LON/CUS-Module) with respect to all possible door configurations: single-door, 2 door-selective, 2 door-sequenced.

16) Error #89 "DRM DOOR REVERS.MAX"

Anti-nuisance filtering added to prevent unwanted detection

17) Anti-Sink Protection

Prevent unwanted error detection if a follow-on drive is started before the time-delayed relay output has relaxed.

FST-2XT V0169 20.12.2021

1) CAN-Open implementation for Drive

CAN-417 Drive Positioning Mode added

FST-2XT V0168 29.11.2021

1) CAN-Open Drive

CAN-417 Drive Velocity Mode added

2) CAN-Open CBM (Contact-less Brake Module)

Settings and Status over CAN now implemented.

3) Auto test drive

New options added:

Menu: \Configuration\Auto Test Drive\Door-Closed = Off, Top, Bottom

Door(s) do not open at end of test drive into specified end-shaft floor

Menu: \Configuration\Auto Test Drive\Photocell = Off, low, middle, high

To allow better exercising of the door(s) during test drives, a simulated photocell reversal is introduced

when the door is closing. The chance of this option being activated each time is:

Off=none, low=25%, middle=50%, high=75%

4) Loading Mode

I/O Port control to cancel loading-mode added in V0167, now available for CUS applications

5) Fireman Service: Daimler Type-C

Transport-mode drive will now restart automatically following power-loss

6) I/O Port Function: Radar

Option added to prevent the door being forced closed during Fire-Recall if the Radar-Port is currently active.

7) Turn-In-Shaft feature

Longer delay between the two drives introduced to prevent Inverter error

8) Auxiliary Brake Time

Menu: \Drive\Aux-Brake Max.Time now displayed for **DCP04** as well as **DCP03** previously

9) Fire-Recall

Correct incorrect door-side opening for ADM sourced Fire-Recall signals

10) Car Top Service Access, COP method

Now works correctly with doors having lengthy opening/closing times

11) Non-Collective call mode

Prevent lock-up condition arising if doors have Stopped status

12) Door closure

Ignore the Open end-switch status during closing. This change requires a FSM update to V63.

FST-2XT V0167 26.10.2021

1) Loading Mode Disable Port

New I/O Port added to kill existing Loading-Mode operation and prevent further excitation

Menu: I/O Input Port 0000 0000 0000 0000 0101 1111 1111 0010 (**00005FF2**)

2) Fire-Recall Modification (2) from V0165

Prevent the software updates V0165 or V0166 causing neither door to open due to incorrect menu configuration

3) S1 and CBM

Support added for the parallel operation of both CAN devices: S1 and CBM

FST-2XT V0166 22.09.2021

1) Modbus Signal Extensions for PAM-E4 Gateway

numerous extra Modbus signals now available - ask NEWLift for the latest EDS

2) CAN-Open Door Control

- stability improvements. FSM V62 and FSM-CAN V1.04 updates required

- new manual reset options added when **\System\Factory-Menu\Hidden-Menus = Yes**

\System\Reset FSM

\System\Reset FSM-CAN

- new CAN door Position and Status display in the Line-3 Door area (Shift+Left or Shift+Right)

examples:

"**A= 123mm**" = door-A is 123mm open. The door-A CAN-connection status is Operational-Mode

“**B=PRE-OP!**” = door-B CAN-connection status is Pre-Operational Mode

“**A=NO-CON!**” = door-A CAN-connection status is Not-Connected

3) Higher Temperature Value Update Rate for TDF Module

Forces a temperature update every 30 seconds instead of the standard 10 minute interval.

Warning: extra data costs!

Menu: Miscel-20.0 = 00000001 (fast temperature update)

4) Anti-Nuisance - Empty Car

Function now changed to accept a configurable maximum number of registered car calls when the car's loading status is Empty. Above this maximum, new car calls will not be accepted. If the car becomes Empty after more than the maximum allowed number of car calls have been entered, all current car calls will now be cleared

5) Drive Time Monitoring (DRM Test)

For hydraulic lifts - restore homing to bottom floor function after activation

6) Automatic Unpowered Evacuation

Fixed problem of not opening door-C when floor is reached

7) Fireman Service EN 81-72 5.8.8.g - Forced Return to Main Floor

Fixed problem of door not always opening after returning to main floor

8) CBM Brake Module

Fixed problem of an Inverter DCP-Timeout occurring when the CBM is connected to the FST over CAN. This was causing occasional unwanted stops.

9) S1: Missing Zone Error

- Fixed (configuration dependent) problem of a Missing Zone Error occurring when both the FST and S1 are started
- For ASV (Pawl) lifts, fixed problem of Missing Zone Error occurring when turning Auxiliary/Inspection OFF

FST-2XT V0165 06.08.2021

1) Miscel-15.0 (00000001) (DOB coupling for A+B doors continues during Fireman Service)

Restore functionality of this menu control, not working correctly since V0127

2) Fire-Recall

When reacting to a smoke-alarm and driving away from the declared main floor, use the Fireman-Settings Safe-Area to select the door side to open

3) FST Menu - S1

Fixed bug in \Configuration\Installation\S1-System\Config Deceleration, which was displaying Yes/No wrongly instead of 00000000

4) FST.-Menu - LON-Byte Editor

- Added support for new Neuron 6050 Modules.
- Added support for following Module types: ADX02, ADX013, ADX016, FPM021, FPM022, FPM03, CUS69, CUS11, CUS1W, CUS3K, CUS4C, CUS4I, CUS7H, CUS7J, CUSAD, CUSAE, CUSAI and CUSAQ

FST-2XT V0164 25.06.2021

1) Neuron-6050

LON-Update now works with the new Neuron 6050 processors

2) Temperature Control using TDF Modules

The new Temperature Control facility allows up to 5 TDF Modules to act as the source temperature to provide a

programmable response for under and over-temperature conditions. A full description of this facility can be found in the latest FST Handbook

Menu: \Configuration\Temp.Monitoring

FST-2XT V0163 16.06.2021

1) Missing-Zone Error (#19)

Change to feature added in V0161, now applied to Rope Lifts only

FST-2XT V0162 14.06.2021

1) Menu-activated O/P Pulse-Ports

New feature provides up to 4 output Pulse Ports to be individually activated from a menu command. These can be used for example, as a method for resetting an external device on demand. The “one-shot” pulse width is individually programmable on each port.

Menu: System\Factory-Menu\Test Action\Activate O/P-A(..D)

Menu: I/O Port Output-A = tt0C3E84

B = tt0D3E84

C = tt0E3E84

D = tt0F3E84

tt = pulse width x50mS (in hex)

eg. **200D3E84** = 1.6 second pulse generated when **Activate O/P-D** is selected on the menu
(20(hex) = 32 * 50mS = 1.6 seconds)

2) DCP04 and Test-menu Buffer-Test function

Both Buffer-Test and End-Switch drives now work correctly when using DCP04

3) Missing-Zone Error (#19)

Correction to new feature in V0161

4) DRM-Brake Error (#20)

Correct problem of not detecting this error after returning to Normal mode brake monitoring signals were removed during Auxiliary (example during safety inspection)

5) Drive Type: ASV - DCP03

Prevent false DRM-Brake error reporting when returning to ASV operation after being Disabled. This affected Rope-ASV lifts only.

FST-2XT V0161 01.06.2021

1) Safebox S1

Now fully integrated as part of the standard FST software

2) Drive Inhibit function

New option added for the wait-with-closed-doors mode. A passenger in the lift can now force the doors to reopen using the DOB. Only relevant for the “S=1” option (wait with closed doors)

Menu: I/O Input Port Drive-Inhibit 0000 0000 0000 0000 00DM RULS 0010 101x

S : 0=wait with doors open, 1=wait with doors closed

L : 0=re-levelling status ignored, 1=drive-inhibit also controls re-levelling
U : 0=drive direction independent, 1=apply for upwards drives only
R : 0=inspection/aux. allow during inhibit, 1=inspection/aux. observes inhibit status
M : 0=no max. time monitoring, 1=max. 20 secs wait allowed
D : 0=door reopening during wait not possible, 1=DOB can be used to reopen the door

(3) Door-Open Delay

New I/O Port option will prevent the door from opening when the lift arrives for as long as the input remains active.

Menu: I/O Input Port 0000 0000 0000 0CBA 0101 1101 1111 001x

A = door-A

B = door-B

C = door-C

eg. 000015DF2 = prevent door-A opening during arrival

4) Door-Open-Error (#11)

Improved post-error handling. When a Door-Open Failure is detected, the FST now stops the door for a short while, then attempts to re-close the door and drive away back to the previous starting floor.

If not wanted, this automatic drive feature can be turned off with the following setting:

Menu: Miscel-19.3 = 00001000 (disable automatic recovery drive following a door-open error)

5) Loading Mode - DOB Long-Press function

New option to activate Loading-mode by pressing for 20 or more seconds on the DOB (Door OPen Button).

The loading function will remain activated for as long as the menu parameter **Load Time-Max**, and cannot be extended. Cancelling is done by giving a short tap on the DOB.

6) Missing-Zone Error (#19)

New function added to make possible an automatic post-error recovery, if the cause of the error was a brief Zone-Enable dropout. This does not apply if the cause of the error was either one or both of the Zone A/B signals missing. In the case of a recovery, a event **ZONE-ENABLE RESTORED (#152)** is entered into the fault log.

If not wanted, this automatic recovery feature can be turned off with the following setting:

Menu: Miscel-19.4 = 00010000 (disable automatic zone-enable error recovery)

7) Ramp-Mode

New "no-limit" mode added.

Menu: I/O Input Port Ramp-ON = 000009D2 = Activate Ramp-Mode with "no-limit" function

8) ESM Mode

Improved Drive-Error rejection when entering sleep-mode and when waking-up

9) Test-Menu Door-Open, Door-Close options

New **Test-Menu** commands added to provide a quick access method of opening or closing the doors(s)

Menu: \Test-Menu\Doors-Open

\Test-Menu\Doors-Close

10) 3-Door Cars

Fix problem of Door-C occasionally opening following a controller restart

11) Automatic Un-Powered Evacuation Mode

Fix problem of door(s) not opening when the floor is reached, if the evacuation was initiated during a powered drive.

12) Unwanted Door-Opening Error (#11)

A problem can exist since V0157"R" in which unwanted Door-Opening Errors might be occasionally generated. The problem is fixed in this version, but for Version 157"R" through 160"X" and can in these versions only be avoided by setting **Miscel-19.1** to "1" (00000010). In this version (V0161), **Miscel-19.1** is automatically cleared to "0" and should no longer be used.

13) **Manual-Door Monitoring**

Prevent false error reporting following unexpected safety-circuit openings.

14) **Elevison-2, Floor-Locking**

CUS-Module Floor-Lock Override now possible (Elevison-2 only)

15) **Forced-Stop Function**

Now made reset-safe

16) **Drive Type - 4-Valve Hydr. + ASV / Giehl-AZFR**

Problems with unwanted A3-Drive Errors now fixed

17) **FST-Guide Help Text**

Help text for the Line-3 Debug information display now corrected.

FST-2XT V0160 26.02.2021

1) **CBM Contactor-less Brake Control Interface added**

CAN Interface, Elevison-4.0 Live monitoring, Menu and Guide app. added

2) **Elevison-4.0**

- Detail - Live-View extended status parameters added
- Total-Distance-Driven added
- Total-Door-Open time added
- Re-Levelling / floor added

3) **EAZ-Text option "Door-Unlocked"**

for use with automatic or manual-doors. The EAZ will show "**Door-Unlocked**" when the door has reached the fully open position.

- should not be used with **Miscel-8.4** or **Miscel-8.5** together
- use is independent of departure-arrow settings
- the EAZs need to be configured as landing-displays with corresponding floor setting

Menu: Miscel-19.0 = 00000001 ("Door Unlocked" EAZ-text generated)

4) **Emergency-Stop**

Correct operation of Drive-menu option "**Emerg.Stop:Hold**". Pressing a car call to release a latched emergency-call condition is now working.

5) **Manual Door**

Fix problem of a closing car door not reopening if the manual door is opened.

6) **Loading Mode**

Loading-Mode option to cancel on second Loading-button press (**Miscel-7.2**) now applied to all doors

7) **Drive Type - 4-Valve Hydr. + ASV / Giehl-AZFR**

Correction to Fine-Pump option added in V0158. If the Fine-Down Pump option is not being used, the K11 Downwards-Protect function is restored.

8) **DCP03 / DCP04**

Ignore very brief (probably unintended) DRM-Motor activations sent from the inverter via DCP

FST-2XT V0159 04.02.2021

1) Contactor Monitoring - ASV

For ASV lifts. Correct monitoring failure if X1.23 removed during drive.

2) Test-Menu Text

Correct highlighting problem cause by V0158

3) Drive Menu Text

Correct presence of selectively used hydraulic drive parameters

4) DRM-Programmable 1 & 2

Correct operation of Auto-Clear option when using Miscel-18.2 / Miscel-18.3

5) Drive Type - iValve

- Correct the use of **Valve-Time** for Star-Delta operation
- Correct Dynamic Throttle operation

FST-2XT V0158 25.01.2021

1) Pit-Inspection Reset

Can now be activated from EAZ or ADM modules using the Soft-Switch #24 setting (LON-Module Center)

2) I/O Port: Ventilator Control

New mode added to exactly mimic the COP "Button" mode operation

Menu: Port Raw 0000 0000 0000 0001 0101 0100 1111 001x

eg. 000054F2 = Car Ventilator operates as a latching switch

eg. 000154F2 = Car Ventilator operates as a push-button switch

3) Error #9 (opened safety circuit)

Textual change, now shows the cause of the safety circuit opening:

DOOR CONTACT ERR + (one of the following) SKZ, SPB, SPA, TKA, TKB or TKC

4) Door End-switches

New Normally-Open operation option added (required for Siemens AT12). **Requires FSM V59**

Menu: Doors\Doors-Selective\Endswitches = No or Yes(NC) or Yes(NO)

5) Drive Start Abort Error

New control added to limit number of automatic retry attempts before a new error is generated:

DRM-START ABORT MAX (#87)

Menu: new System\Factory-Menu\Settings\Start Abort Max = 0..30 (default = 8, 0 = no function)

6) Door Reversal Monitoring

New control added to limit the number of door reversals due to mechanical or optical sensor activations whilst attempting to close.

DRM-DOOR REVERS.MAX (#89)

Info = door-ID (0=A, 1=B, 2=C) + cause (4=photocell, 8=rev.switch)

Limit for reversing-switch activations

Menu: new System\Factory-Menu\Settings\Door Revers.Max = 0..30 (default = 30, 0 = no function)

Limit for photocell activations

Menu: new System\Factory-Menu\Settings\Door Rev.PC Max = 0..50 (default = 50, 0 = no function)

7) Door Blockage Monitoring

New control added to limit the time that a door is blocked due to mechanical or optical sensor.

DRM-DOOR BLOCKED (#90)

Info = door-ID (0=A, 1=B, 2=C) + cause (4=photocell, 8=rev.switch)

Menu: new System\Factory-Menu\Settings\Door Block.Max = 0.255 mins (default = 0 no function)

8) Lift Immobiliser Function

New option added to allow service person to put the lift out of service and thereby generating a fault condition (DRM Class) which to notify the BMS or other remote station. The immobiliser function can be triggered from the **Test-menu** or remotely using **Elevision 4.0**. Once triggered, the Immobilised condition must be cleared using **Test-Menu\Fault Reset** or the **Elevision 4.0 Fault-Reset** remote control option.

IMMOBILISED-LOCAL (#88) is shown in the fault list if triggered using the **Test-Menu**

IMMOBILISED-REMOTE (#88) is shown in the fault list if triggered using **Elevision 4.0**

9) Service Counters

New- the service counters (Hours, Drives and Door Cycles) now also show the monthly totals for the current and previous months.

eg.

Service\Service Counters\Drives\This Month : 0012342

Service\Service Counters\Drives\Last Month : 0043215

10) Elevision 4.0

- AWE Lift Warden functionality added
- Condition Monitoring \ Door-General \ door-close time measurement improved
- Condition Monitoring \ Door-General \ photocell data added
- Condition Monitoring \ Siemens AT40 now works correctly for all door-sides
- Condition Monitoring \ Wittur CAN interface compatibility changes
- Condition Monitoring \ recording data size corrections
- Status \ Details \ Live \ new extended data fields added
- Status \ Details \ Live \ new FST configuration info fields added
- Diagnose field Condition Monitoring "CM" added to FST Line-3 Information display. Use either Shift+Enter or Guide-Select keys to cycle through fields.

11) Drive Type - DCP04

Quick start. Correct occasional failure to cancel energised drive correctly following unplanned door reversal.

12) Drive Type - Bucher iValve

For Star/Delta operation, **DriveValve-Time** is now applied before starting

13) Drive Type - CAN-417

Initial implementation added

14) Drive Type - 4-Valve Hydr. + ASV / Giehl-AZFR

Accessory Pump Up / Down option added.

menu: Drive\Pawl Control\Fine Pump-UP = Yes / No (uses K12)

menu: Drive\Pawl Control\Fine Pump-DN = Yes / No (uses K11)

15) Drive Type - DCP03 / DCP04

DRM-Motor. Prevent very short durations (<3sec) of overheat pre-warning condition received from Inverter from activating the FST DRM-Motor function.

16) ASV Rope lifts (ASV-DCP03, ASV-MFC, ASV-CT)

Prevent DRM-Brake error from false triggering when Pawl-Control is being re-enabled from the I/O Port function (Port Raw: 000026F2)

17) Door Close Error (#12)

Prevent unwanted error generation for lifts with following configuration: 2-doors, end-switches=No, De-energise = Yes.

18) **Fire-Recall**

For the case where the fire main floor has 2 door openings, but only one door should remain open in fire-recall mode, ensure that the other door closes if the photocell is interrupted before the fire alarm is activated.

19) **Destino Lifts**

Do not apply anti-nuisance measures that cause car call cancellation

20) **Menu Language**

Trap illegal language index which would prevent FST from starting. In this case system defaults to German.

21) **Car-Priority Operation**

- Correct Auto-Hold function **Car-Prio Auto-Hold**. This has been faulty since V0137.
- Constant Pressure Mode: DCB mode corrected. Prevent old target being "re-used" if DCB is pressed again

22) **X9 Serial Data**

Prevent occasional message corruption

23) **CAN Door B-Side**

Door position value corrected

24) **FST Lithium Battery LOW**

Automatically set Recording Filter to DETAILS in this case (to prevent loss of recording functionality)

25) **Fireman Standard: Daimler Type-C**

Multiple changes and corrections

26) **CUS Module reset**

Now sent automatically regardless of set Project Code

27) **BACNET Gateway**

Current lift speed now sent as Absolute value (was signed)

28) **DRM-UCM A3**

Prevent warm-up drive occurring after error

29) **Inspection access from COP**

All landing calls and park/homing drives now disabled correctly

30) **Inspection mode**

Prevent previously activated door forced-closure mode from persisting during Inspection

31) **Error DOOR CLOSE STATUS (#83)**

Prevent this error occurring if **Doors\Door-Selective\Type = No Car Door**, or no door is fitted on current floor/door-side.

32) **Group-Member and Loading-Mode**

New option: Allow a lift with loading-mode to remain in the group (and take calls)

Menu: Miscel-19 = 00000100 (lift with loading-mode remains group member)

33) **LON-Byte Editor**

CUS-5E added to list of editable modules

34) **COP Repeated Press Clear-Call Function**

The **\Configuration\Car-Operate-Panel\2xCall=Clear** option now operates on all door sides

35) **SAM output during Loading-mode**

Prevent unwanted repeats of SAM announcements when Loading-Mode timer is extended

36) **I/O Port "Clear All Calls and System Direction"**

For the I/O Port (**Port Raw = xxxx1FF2**), prevent generating an unwanted drive under certain circumstances

37) **Emergency-Stop / DRM conditions**

Handle the parallel occurrence of certain Emergency-Stop and DRM conditions correctly (eg. Speed-Governor).

38) **Car Door Locking**

Prevent occasional non-release of the car-door locking output during opening

39) **DCB Coupling (A+B) during Inspection mode**

Door Close Button now operates on single door during inspection mode.

40) **Inspection Start Delay**

Restore functionality of **Configuration\Inspection\Start Delay Up,Start Delay Dn**

41) **Buffer Test**

Now correctly shows **Buffer-Test** in Line-2

42) **Anti-Sink with “Inspection-Only” option**

Operation corrected

43) **Forced Stop I/O Port Function**

Prevent the toggling of this input Port from clearing other currently set DRM conditions.

44) **Error Missed-Target (#10)**

Limit number of automatic retry attempts to 3 (fixed)

45) **Door-Cam Operation Type-1 (“Austrian”)**

Ensure correct order of door closing when initiating a UCM-A3 Test

FST-2XT V0157 16.06.2020

1) **Drive Type – ASV-ZA-1DF**

Correct upwards auxiliary drive

2) **All ASV Rope Lifts**

Suppress persistent overload condition. Accept only overload status from the Inverter, and not until the car is raised off the pawls.

3) **Drive Type – DCP04**

Correct Inspection control for Slow <-> Fast speed transitions

4) **Drive Type – Giehl AZRS / AZFR**

Prevent unwanted A3-Drive Error occurring at the next start attempt following an aborted drive.

5) **Drive Type – AZFR**

The AZFR when started with Ve crawl speed drive faster than if decelerating from V2 or V1. This effect requires post-calibration adjustment to the leveling distances, and causes incorrect leveling when driving short distances with Ve. A workaround is now made to start with a brief application of V1 before dropping back to Ve. The time for this short period should be set to 500mS

\Drive\Special-Parameter\Time-2 = 500mS (0mS = feature disabled)

6) **Inspection access for Car-roof / Pit**

New key-switch option for all ADM / EAZ modules, using the Soft-switch function #23.

The first key activation will bring the car into the floor when no longer busy. After arrival, the key must be activated for a second time within 15 seconds, after which the car will move automatically to the required position, downwards for the car-roof or upwards for the pit. At this point a brief sounding of the car mounted bypass horn is made to signal that access is possible.

7) **Output Port – Installation Mode**

This port will remain activated regardless of any higher-ordered status such as Inspection, Auxiliary, Emergency Stop etc.

Note: it is recommended to use this port for Installation-Mode rather than the *Flag* output 00040000 (Installation mode).

menu: new Output Port : Installation Mode : 00347884

8) **Lift-Off – car light**

Car-light now turned off after Lift-Off Pseudo-Floor (option) is reached

9) Landing-Calls-Off

To differentiate between the service-mode landing-calls-off status caused by the Left-Arrow key, "LIFT RESERVED" is now shown in Line-2 during Non-Collective call mode.

10) Loss of target floor internally

prevent the very rare occurrence of the planned target floor being internally overwritten.

11) K14a Bypass Monitoring

Method changed for more reliable operation over all door timings.

12) Safety-Circuit Bridging Detection

Maximum time now extended for extreme situations

13) Constant Pressure Door Option

New option for use in Car-Priority mode, to help prevent unauthorized taking of the car. In order to commence driving the doors require constant pressure on either a) the call button or b) DCB. If released before closure, the doors-reopen and the call is cleared.

new menu: \Configuration\Prio. Landing/Car\Door Closure =
Automatic, or
const.pressure call, or
const.pressure DCB

14) I/O Port Door-Close Function

new auto-repeat option added

new menu: 00010d42 (d = door number) '1' = door close signal is auto-repeated

15) EAZ-Displays - Special Text messages

Messages such as "Car-Here", "Car Reserved", "Lift being Serviced" etc, are now cleared to allow more status messages for conditions such as Fault, Emergency-Stop, Fire etc.

16) Park Drive

a) Very occasionally a wrong park floor is chosen internally. Also very occasionally, the "Park Drive Active" text will remain shown on Line-2 after the drive has completed. Both effects now corrected.

b) The park program timers now allow values up to 24:00 (previously 23:45):

17) UCM-A3 Detection

now ignored during the Calibration drive

18) Destination Control Lifts (both Destino and Schindler Port)

In the case that a lift has been left between floors following a power failure, a passenger in a Destino or PORT lift is unable to enter a new call. If no other exceptions are present, this option automatically places a call to a designated evacuation floor 4 seconds after the FST starts.

Menu: \Configuration\Evacuation\Auto-Evac at Start\Enable = YES / NO
\Configuration\Evacuation\Auto-Evac at Start \Target Floor = (0..63)

19) Anti Creep Monitoring – option to disable during Re-Leveling

This should be used in conjunction with the setting: \Drive\Anti-Creep\On-Releveling = YES

Menu: Port RAW 0000 0000 00Ne dcba 0100 0011 1111 001x

a = '1' = mask ASS Error Type-1 (test pre-start condition)

b = '1' = mask ASS Error Type-2 (test start condition)

c = '1' = mask ASS Error Type-3 (test stop condition)

d = '1' = mask ASS Error Type-4 (continuous test whilst not-driving)

e = '1' = mask ASS Error Type-5 (continuous test whilst driving)

N = '1' = no monitoring during Re-Leveling

20) Fireman Mode with ASV Lifts

ASV operation is now automatically disabled during fireman mode, and restored again after leaving. This can be used in conjunction with other methods for enabling/disabling ASV, such as I/O Port, Menu etc.

21) Fireman Mode – “Type-C Daimler”

new Transport-drive mode added.

22) Fire-Recall

prevent a Phase-1 evacuation drive being interrupted due to a premature Retiring-Cam Release, if it follows a previous drive due to a smoke-alarm activation.

23) Miscel-10.0 and Miscel-18.4 used together

Prevent the conflict of a de-energised opened door (Miscel-18.4) from being re-energised when another opens (Miscel-10.0)

24) Critical Module Monitoring (CMM)

- a) additional modules now added to the CMM category: ADM-RIO, ADM-F, all TFT types
- b) If the Module was responsible for NC Fire Signal(s), the respective expected Fire Action is now executed when the CMM fault is triggered.
- c) Status Information added to Line-1 and Line-3-Info displays for CMM diagnosis.

25) Elevision 4.0

- a) Statistics: data feed from the FST added
- b) Condition Monitoring: standard door data added
- c) Gossen Energy Meter: reading scaling/value issues corrected

FST-2XT V0156 31.01.2020

1) Car-Roof Access from COP

New feature: From the COP the user can enter a coded button combination to allow easy level access to the car roof for inspection drives.

to activate

- Enter car
- Press DOB (Door Open Button) for 3 seconds minimum and keep pressed
- Press the car floor button for current floor 3 times
- Release all
- Leave car(!)

sequence:

- Car display shows “Service Mode”
- Short Beep every 3 seconds until doors have closed
- Doors close
- Car drives to arranged position relative to current floor *\Configuration\Inspection\Access Car Roof or Pit*
- Long Beep from car
- User opens shaft door, turns Inspection ON (note: 2 minute timeout!)
- *User performs service activities...*
- User turns Inspection OFF, opens shaft door and leaves shaft
- Lift will drive into current floor, and open doors under NORMAL condition.

Menu: new \Configuration\Inspection\Access via COP = YES / NO enable this feature

2) DCP04

Can now be used without the previous requirement that DCP03 be first used to establish a FST-Calibration drive. Now simply set DCP04 as Drive-Type and the FST will follow the Speeds set in the Inverter.

3) Quickstart

prevent a delay in canceling an activated start should the door be re-opened

4) Car Priority Mode

Under certain (seldom) conditions, it is possible to experience a standstill where Car-Prio mode has been set, a call given and the doors will not close to drive. Corrected.

5) Fire-Recall

Following the changes made for the revised EN 81-73, if a Smoke Alarm signal has already taken the lift into Fire-Recall and away from the main floor, the fireman's Phase-1 Fire-Recall switch will no longer override the smoke-alarm and bring the lift back into the main floor. Corrected.

6) ASV Lifts

A new parameter added to allow a configurable wait between the end of pawl retraction and the main drive start. This was previously fixed at 1 second.

Menu: new \Drive\Pawl-Control\Pawl Deb.Time = 1000-4000mS

7) ASV Lifts and DRM Contactor Monitoring

The optimized ASV Disable/Enable control option added in SW V0151 could allow a DRM Contactor Monitoring failure to occur when Enabling the ASV mode. Corrected

8) Standstill

Prevent very seldom cases of complete standstill in lifts that are primarily used very rarele.

10) Photocell Error I/O Port (xxxx4CF2)

is now disabled if the `\System\Factory-Menu\EN 81 Options\EN 81-20\Test Photocell` is set to NO

11) DRM Safety Gear, Error #75

This error is now ignored if either Inspection, Auxiliary or Installation-Mode is activated.

12) Loading Mode

prevent Radar Sensor activations from re-triggering Loading-Mode.

FST-2XT V0155 19.12.2019

1) Parking

Restore correct parking functionality for non-Bank-mode situations (ref. V0154 mod-7)

2) EN 81-76 Evacuation for Disabled Persons

Implemented

Menu: \Configuration\Fireman Options\Fire Standards = EN 81-76 (Evac)

3) Fire-Recall

Prevent Fire-Siren output from activating if Installation mode set – regardless of higher set operating modes eg: Inspection/Auxiliary/Emerg.Stop

4) Door Close Status Monitor: error #83 (DOOR CLOSE STATUS)

Prevent incorrect detection of lower ordered doors if higher ordered doors are opened (C > B > A)

5) Automatic unpowered evacuation

New Option: observe current I/O Port sourced floor-lock status. Door sides currently locked will not be opened when the evacuation completes.

Menu: Miscel-18 = 10000000 (currently locked door-sides will not be opened)

6) **Safety Light Curtain Test (Cedes Li) for 3rd Door**

Allows individual sequential testing of 3 Cedes modules before each drive.

As previously, Door-A and Door-B are tested using the FSM K1 and K6 relays. In order to test Door-C, a new I/O Port must be used in connection with an external relay. The menu setting which previously allowed 2-door testing ("A+B") has now been extended to allow 1-, 2- or 3-door modes.

Menu: new Output Port 00007A84 (Door-C Safety Light Curtain test)

Menu: \Doors\Doors Basic\SS-Curtain A+B, changed to: **SS-Curtain Num = 1..3**

FST-2XT V0154 05.12 .2019

1) **CBM Contactless Brake Module**

FST Menu and Guide App added. Functionality will be added shortly.

2) **Penthouse Mode**

- Correction to V0151 mod.24. Certain B-Side Penthouse calls were ignored.
- Ignore Car-Level status when considering if car can be used for penthouse drive (prevent cause of standstill in Penthouse mode)

3) **Fire-Recall**

- Prevent Fire Siren sounding in Fireman Mode when Shaft Access Door is opened (SHK Emergency-Stop)
- Ignore photocell status to re-closing the doors in the main floor after 20 seconds (EN81-73)

4) **Automatic unpowered evacuation**

- New Option: use the door lock. In order to start evacuation, the door-lock output is activated and voltage must be present on the SHK SPB/SPA inputs.
- Exception rule changes for which DRM errors are NOT to be ignored

Menu: Miscel-18 = 00100000 (Door-lock output activated during unpowered evacuation)

5) **Door Close Status Monitor: error #83 (DOOR CLOSE STATUS)**

Maximum wait time extended from 2.0 to 4.0 seconds.

6) **CAN door**

For Bypass Mode the proof of door closure is now derived from the CAN door status (and not from the end-switches).

7) **Bank Mode + Parking**

Prevent Parking if a Bank Mode User-Group is currently active.

8) **Door Forced Closure**

- in case of a door re-opening/closing cycle following either an Error #35 (DOOR LOCK TIMEOUT) or Error #83 (DOOR CLOSE STATUS), ensure that the forced closing optical and acoustic warnings are issued.
- New Feature: temporarily disable Forced-Closure mode if Inspection-Mode Door-Close Test is detected.

9) **Loading Mode**

New option - a secondary Loading Time. Activating Loading-Mode initially will (unchanged) use the menu value Load Time-Max to keep the doors open. All subsequent activations of Loading Mode will use a second timer value Load Time-2nd.

Menu: \Configuration\Special Functions>Loading Function\Load Time-2nd. = 0-9999 seconds
(0 = no function)

10) **Test-menu End-Switch Function**

Prevent this test from being activated unless the lift has first stopped.

11) DRM-SPEED GOVERNOR

Direction used for Error Text and Info-Byte, now taken from the drive direction (not the current physical direction which has proved unreliable).

12) I/O Output Port: non-specific DRM Fault

New Feature outputs if any DRM fault has occurred

menu: new Output Port : Any DRM : 00307884

13) DRM Fault - Hydraulic Lifts

New Option: prevent homing drive to bottom floor in case of DRM failure.

Menu: Miscel-18 = 01000000 (No homing drive for DRM faults with Hydraulic Lifts)

14) Drive-Type: iValve

New Devehissar Option added.

- Important: this uses the Drive-Type = *Bucher iValve* and NOT *Devisshar* !!

Otherwise all FSM I/O Port requirements are identical to those of the Devehissar Driver

Menu: \Drive\Drive-Type = Bucher-iValve

\Drive\Special-Parameter\Time-1 = 0-200mm raising height to clear pawls (as Devehissar Driver)

\Drive\Special-Parameter\Time-2 = 0-5000mS maximum time for pawls to retract

\Drive\Special-Parameter\Switch-3 = ON Devisshar Mode

All other settings same as Standard Bucher-iValve Driver

FST-2XT V0153 13.09.2019

1) DCP04 Corrections

- Evacuation Drive speed now applied correctly (crawl speed would most likely have been used before)
- Quickstart function: improved, but is still not 100% error free (occasional start aborts have been recorded)

2) Schindler-PORT

Automatic return drive to main floor made (once only) 8 seconds after FST restart in case of power failure (no COP in car). For Schindler Project-Code #143 only.

Menu:\Configuration\Project-Config\Basis[0] = 64 + Main-Floor

eg: Basis[0] = 0 function disabled

Basis[0] = 64 automatic drive to floor-0

Basis[0] = 66 automatic drive to floor-2

3) Drive-Type: iValve

Star/Delta start option added

4) Fire-Siren Output Port (00002784)

- now not output in Installation Mode
- now not output if car in the Main Floor
- option to use the FST-2XTs Beeper as "Siren"

Menu:\Configuration\Fireman-Options\Onboard Beeper = YES (2XTs only)

5) Bank Control

new option to allow temporary overriding of the currently set Bank User-Group. This new override function will allow any car call, regardless of user-group, as long as new I/O Port input is active. Typically this Port will be connected to a card-reader output in the COP. Multiple car calls can be entered during this time, and all calls will be executed. The override mode will be automatically deactivated when all set calls have been completed, at which time the Bank-Control will assume the User-Group of the currently open floor/door

combination.

This new feature is activated using a new "G" bit in the Bank-Mode-Disable input Port:

Input Port : 0000 0000 0000 000G 0000 1111 1111 0010 Bank Mode Disable Function

G = Bank-Override mode

eg: 00000FF2 = Bank Mode Disable

00010FF2 = **Bank Mode Override** (Bank Mode continues, User-Group Filtering is turned OFF)

6) Manual Door Monitoring

The Shaft-"Head" monitoring option added in V0151 now monitors all floors above the bottom floor.

7) USB-Tethering

Added for Android Mobile devices.

8) Drive-Type: Algi AZRS V2.0

Control added for the new re-levelling function:

For the new AZRS V2.0:

Menu: \Drive\Special-Parameter\Switch-1 = ON

Menu: \Drive\Special-Parameter\Switch-2 = OFF

For earlier AZRS versions:

Menu: \Drive\Special-Parameter\Switch-1 = OFF

Menu: \Drive\Special-Parameter\Switch-2 = ON (if Fine (Auxiliary) Up-Pump fitted)

Menu: \Drive\Special-Parameter\Switch-4 = ON (if Fine (Auxiliary) Down-Pump fitted)

9) Drive types: 4-Valve Hydr + ASV

Prevent short activation of K0 VST Relay during FST power start-up

10) Hydraulic Alignment Drive

Required to regularly align systems with more than one hydraulic pistons, and generates "buffer-drive" to bring the car to its lowest position. This input Port is typically fed from a timer output Port to activate automatically every night.

Menu: new Input Port : 0000 0000 0000 vvvv 0101 0111 1111 0010 Alignment Drive

vvvv = Drive Speed to use (normal Ve or Vn)

eg. Alignment Drive with Ve = 000857F2

Alignment Drive with Vn = 000B57F2

11) Manual Door with Cam type-1 ("Austrian")

Correct problem of Cam not de-energising if the closing car door is reversed by breaking the light curtain.

12) Group Overload Function

Corrected

13) Error #77 DRM Door-Bridged

Prevent false error detection with Manual Door if the door is mechanically prevented from opening in the floor (eg. user tugs on the door handle during the car's approach into the floor, thereby preventing the cam from releasing).

14) BACnet Gateway

New System Time/Date Signal added for remote watchdog monitoring

15) DBahn Interface

Auxiliary Car Light Monitoring option added.

Menu: Input Port 000058F2

16) Service Mode Activation

When Service Mode is requested (either from the Test-Menu or I/O Port Input) the FST will hold off from activating Service Mode until all currently active calls are completed. For Grouped Lifts, the GST will not allocate any new landing calls during this time, making it easier to reserve a car from the motor room. The pending Service Mode status is shown with a blinking message in the FST Line-2 display.

17) Synchronised Departure-Arrow/Gong Timing

New option added to ensure gong tones at the same time the departure-arrow illuminates.

Menu: Miscel-18 = 00000001 (Synchronised Departure Arrow and Gong)

18) ESM Mode

New Remote Disable Option added for CUS applications

19) DRM-Drive-Error with ASV lifts

Prevent the Drive Activity timeout failure from occurring if the raise manoeuvre takes too long. The internal timer is now started once the car has been raised and the pawls retracted.

20) Standstill: doors with Stopped-Status

Prevent a system Standstill caused by the doors achieving Stopped-Status after they have been closed in preparation for driving.

21) CAN Door

Show FSM-CAM Software Version in the FST-Info Display ("Shift + Enter")

FSM: FSMxxxxx CAN:Vxx

22) De-energised Door Mode

\Doors\Doors-Selective\Deenergise = YES now only operates on doors in the closed position. When the door is fully opened it remains powered.

This is now the standard mode. Previously, the door-type "Masora" had to be used to achieve this. If the doors must be de-energised in Closed and Open positions, this new special setting is required:

Menu: Miscel-18 = 00000000 (Use only to De-energise in both Open and Closed positions)

FST-2XT V0152 09.05.2019

1) EN81-20 5.12.1.9 Safety Circuit bridging detection:

Correction made prevents false detection when doors open during Lift-Off operation.

2) Siemens AT40 Condition Monitoring handling added:

Requires FSM S/W V055, CAN Node Software V1.02

3) EN81-20 4.1.6 Emergency-Call Filter:

New feature added to allow test activation of the emergency-call through prolonged switch pressure. A new input Port is used to provide a signal parallel to the emergency-call button. If the switch is pressed for longer than the configured time, the emergency-call filter in the FST is disabled, allowing activation in the floor with open doors.

Menu: Port RAW 0000 0000 000t tttt 0101 0110 1111 0010

tttt = minimum hold time for the emergency call button in order to defeat filter

eg. 000F56F2 filter defeat time = 15 secs

4) Elevision-4 Gateway:

Change made to allow an FST IP connection to Elevision-4 without requiring an IPK Module

5) LAN Mode for Standard GST:

Changes made to allow the FST to be used with a LAN-Backbone in a standard GST-XT group.
Requires GST-XT S/W V0030

FST-2XT V0151 23.04.2019

1) I/O Output Port, Speed Threshold (xxnnnnBC / xxnnnnBD):

Correct a real-time reliability problem when this output signal is used for end-shaft Speed Monitoring. In this configuration the FST detected speed is compared with a similar signal from the Inverter. Any unplanned time delay in the generation of this signal can result in the monitor circuit tripping unnecessarily.

The regular generation of the Speed Threshold output can now be guaranteed, if the following requirements are met:

- the Speed Threshold function should only be used with Port numbers 0..7
- only the first (lowest numbered) Speed Threshold Port will be handled this way. A second Port of this type will be subject to occasional small time delays as previously encountered.

Additionally, the revised port handling will prevent unwanted activation during FST cold or warm starts.

2) EN 81-20 Bypass:

During Bypass operation, the continual monitoring of the door closed status using the door end-switch has now been extended to cover Auxiliary mode.

3) EN81-20 5.12.1.9 Safety Circuit bridging detection:

New algorithm employed. Improves reliability, allows operation with through-doors, and 3-door-cars.

4) I/O Input Port, Gong Inhibit:

The input port 001011F2 previously only operated on hardware gongs. It will now also inhibit the sound phrases used for gong output on the SAM speech modules.

5) FST LCD displays:

"L" added in LCD Line-4 Char-1 to show a functioning LAN connection.

6) I/O Input Port, Car Ventilator Switch:

new Port function added as control input for the ventilator operation

Menu: Port RAW 0000 0000 0000 0000 0101 0100 1111 0010

eg. 000054F2 Car Ventilator

7) Inspection Pit-Reset Signal:

Output Port value 00007484 corrected

8) I/O Input Port Inspection-Access (Car/Pit):

new service function added. This brings the car into the floor, opens the door briefly to check that it is empty, then move the car up/down a programmable distance to allow easy access to the car roof or pit. After the car has achieved the service position, the operator has maximum 2 minutes time to switch the Inspection mode ON, otherwise the system will return back to NORMAL. After inspection is finally turned off, the car will return to the original called floor in the level position and re-open/close the doors.

Menu: Input Port RAW 0000 000P dfff ffff 0101 0101 1111 0010

P = car/pit: (0=car-top access 1=pit access)

dd = door side: 00=A 01=B 10=C

ffffff = floor

Menu: \Configuration\Inspection\Access-Car or Access-Pit (mm)

distance to move car for service access

eg. 004155F2 Car Top access, floor-1 door-B

9) New Drive Type ASV-Ziehl-Abegg-1DF:

Pawl control in combination with ZA-1DF inverter. The pre-selection operation is compatible with a SEW 500V Inverter

Menu: \Drive\Drive Type = ASV-ZA-1DF

10) Shaft end-switch monitoring:

The existing option for rope-lifts is now applied to the top floor in addition to the already handled bottom floor. A DRM-End-Switch error is now only generated if the car was actively driving at the time of the switch activation, and the car position is greater than 10mm beyond the floor level position. The option for both top and bottom end-switch monitoring for rope-lifts must be explicitly enabled using the following menu switch:

Menu: Miscel-16 = 00100000 (Rope-Lift End-Switch Monitoring for bottom and top floor)

11) Drive types: 4-Valve Hydr + ASV & ASV – DCP03 :

I/O Input Port ASV-Disable option, (Port RAW = 000026F2). When re-enabling the ASV operation, the lift will now be automatically set to a safe condition, by raising, extending the pawls, and sinking back to a supported position.

12) Drive DCP04:

- Inspection drive correction, now stops as required at the inspection end limit positions.
- Evacuation drives with Fixed Speed corrected (target overshoot correction). Now changed such the only fixed evacuation drive speed is Ve (crawl). All other fixed speed evacuation drives will use the standard DCP04 position-control method – ie. the peak drive speed is determined dynamically by the inverter.

13) Drive DCP03:

Emotron Drive added to recognized manufacturer list.

14) DRM-Test:

The Tüv run-time monitoring test can be used when the end floors are locked.

15) Battery Voltage:

Lithium Battery Error detection threshold reduced from 2.0V to 1.7V.

16) FST-2XTs Lithium Battery:

Correct premature battery drainage (estimated life reduced to 3 years).

17) Contactor Monitoring:

From changes made in FST V0149, now prevent false error detection if the drive is cancelled due to a drive-error.

18) Machine-Room-Temperature Error #48 (MOTOR-ROOM OVERHEAT):

Prevent this error being cleared unwantedly by an Emergency Stop condition or the FST losing power.

19) Lik-Errors:

Correct the Diagnose-Menu Lik-Error left-hand value - data transfer errors. This will now display the actual error count

20) FPM Inverted Fireman-Switch option:

New option to allow a NC Fireman's switch with the FPM-1 or FPM-2 boards.

Menu: \Configuration\Car-Operate-Panel\Fireman-NC = YES / NO

This mod. requires updates for:

FPM-1 V62

FPM-2 V22

21) Fireman EN 81-72 (2015):

corrected:

a) prevent entry into fireman mode outside of the Fire Main Floor

b) for Swiss SIA operation, provide an option to prevent driving to the top floor for the EN 81-72:

Menu: \Configuration\Fireman Options\Disable top floor = YES / NO

Note: this option was previously set automatically when using the fire-standard „SIA”.

22) Door-Close-Error:

Detect condition where door closed end-switch has activated, but the respective door safety-circuit contact TKA, TKB, TKC has not closed. This new control function will re-open the door if the TKn contact does not close within a fixed time of 2 seconds of the door closed end-switch activation. The time for the door to reverse before attempting to close again, and the number of re-close attempts is given by the existing door-lock menu parameters: **“Retry Time”** und **“Lock Fail Max”**.

new Error #83 = **“DOOR CLOSE STATUS”** This error is generated each time a re-closure is attempted

After the nth (Lock Fail Max) attempt to close, a **DOOR CLOSE FAILED** error (#12) is output. The 1st Error Byte shows the door number (0=A, 1=B, 2=C), and the 2nd Error Byte is set to 7 identifying this situation.

23) DRM-USER1, DRM-USER2:

option added to allow DRM state to clear if I/O Input Port resets

Menu: Miscel-18 = 00000100 (DRM-User-1 set to auto-reset)

Menu: Miscel-18 = 00001000 (DRM-User-2 set to auto-reset)

24) Penthouse Mode:

prevent standstill problem in which the Penthouse Calls no longer get serviced.

25) Fire-Siren Signal added for PIT Module:

required for V07 PIT Module

26) Fire-Recall / Forced Door closure:

- fix occasional non-activation of forced door closure when the lift should drive to the main fir floor.
- correct behavior whereby Forced-Door Mode continues after doors have closed (COP acoustic warning)

27) Error-List #135 Software Update:

New entry added to Failure/Event list whenever the software is updated.

The Version number is added to the Error Text:

```
EVENT          [ 045/046 ]
28.02 14:09:13 [ 135 ]
SW-UPDATE 2.000.0151
```

Note: updating with pre-release Beta Software versions (2.00B.0149) will not be shown

28) EN 81-73 changes:

a) option added to delay showing Fire-Recall status in the EAZ's until the car has reached the main floor.

Menu: Miscel-18 = 00000010 (do not display Fire-Alarm in the car until the car has reached the main floor)

b) fire siren operation corrected

c) door reversing switch function no longer deactivated 20s after waiting to leave for main floor.

29) Backup/Restore of Battery Backed-up Data:

The FST now makes a daily backup of the non-volatile RAM data area into a new file on the on-board Micro-SD card. The RAM data contains all of the service counters, including the rope direction change counters. This operation occurs every night at 03:00 at the same time the daily recording is restarted.

The RAM data backup file nvddata.lfs is stored in the lconfig XXXXXX folder, (“XXXXXX” is the FST serial number).

- a) To force a backup of the current RAM data, use the existing menu option **\System\Copy to\Config -> USBStick**. This will copy the configuration files AND generate a new version of nvddata.lfs using the current RAM data.

- b) To restore the FST service counters with the nvdata.lfs file stored on a USB-Stick, use the new menu option:
\System\Copy from\USBStick ->Counts
- c) The existing FST-Clone option has now been extended to automatically include the RAM data, providing the software version on the old FST is V0151 or later.

30) Recording:

Prevent recorder entering sleep mode if a call and resulting drive is still being processed.

31) Schindler-PORT:

disable special "sticky" door-open mode during Fire-Recall and Fireman-Service modes

32) ASV:

correct behavior where door does not open automatically when the car achieves "supported" status

33) Manual Door Monitoring

facility from V0146, changes made:

a) **Menu item:** \Configuration\Inspection\Man.Door Mon. has now 4 possible values,

"OFF"

"PIT" (Bottom floor - Pit)

"HEAD" (Top floor - Head)

"P&H" (Bottom and Top floors),

b) The manual-door monitoring facility is now limited to the end floors only.

c) Option added to disable the continuous monitoring of the ADM signal:

Menu: Miscel-17 = 00000001 (Disable continuous monitoring of the ADM signal by regular door openings in the selected floors)

34) Evacuation – Door Open Hold Time:

the Evacuation drive option to open and subsequently close the doors currently uses the standard menu door-open-hold time value (**\Doors\Doors-Selective\Open Hold Time**). The software will now use a minimum door open time of 15sec during Evacuation. If the menu setting is longer than 15sec, the menu setting value will be used instead.

35) non-EN-72 Fireman Standards:

Correct problem which prevented B-Side car calls being accepted.

36) EN 81-72 2015:

5.8.8.c : In the case of a „Turn-Stop in shaft“ feature, the lift should continue automatically to the last entered target floor.

37) Power Fail Safe Automatic Call Restoration:

correct problem of car call LEDs being cleared shortly after the calls have been restored.

38) Buffer-Drive:

problem caused by "micro"-drives of very short distance made with Vn (Relevelling-Speed) – if V1 speed has not been calibrated. This can result in a DRM error. Corrected.

39) BACnet/Modbus Universal Gateway:

Allow the BACnet/Modbus Gateway and Elevison Monitoring via LAN to operate correctly together

40) LON Byte Editor:

correct editing operation for CUS-3P and ADM-F (ID = ADX03)

41) Overload Status with Grouped Lifts:

Particularly for Destino groups, the current reaction to an Overload Status is undesirable: ie, all destinations calls for the lift are cleared immediately. This leaves any passengers in the car without a destination, and with no method to re-enter these!

New method: For FSTs operating in a group, the overload status must now persist for a programmable time before

this lift will be taken out of the group, and the calls cancelled.

New Menu: **\System\Factory-Menu\Settings\Grp Overload** (0..255 secs, default = 60secs)

FST-2XT V0150 28.02.2019

1) Software compatibility changes for new CPU Module hardware version:

If the new CPU module hardware version is detected, a software downgrade below this version will not be possible.

FST-2XT V0149 14.09.2018

1) Inspection Output Signal:

correct operation of the I/O Port Output Signal:Inspection, 00nn6D84 (incorrect since SW V0148).

2) Manual Door Monitoring:

- a) Auxiliary control no longer blocked during Shaft-Access mode (reverses change from V0146)
- b) Correct operation of Menu option "**\Configuration\Inspection\Man.Door Mon.**" - in the Disabled state

3) New Output Port added "Floor Locked":

new pulsed I/O Port will activate for a programmable duration following the rejection of a car call due to floor locking

Menu: Port RAW nnnn nnnn 0000 1010 0011 1110 1000 010x

nnnnnnnn = pulse duration (x 50mS)

eg. 140A3E84 will pulse for 1 secs when any car-call is rejected due to floor locking.

4) Drive Type: DCP04-Hydro:

in Evacuation Mode, downwards drives are now allowed in spite of the Inverter being without power.

5) Drive Type: ASV - DCP03: Prevent hydraulic pawl motor being left permanently on during Inspection or Auxiliary operation.

6) Fire-Recall according to EN 81-73 (2016): Many changes (and bug fixes) made to the latest Standard:

- a) Dynamic Smoke Evacuation : Correct unwanted target floor changing problems caused by setting:- *Smoke Alarm Prio = YES*.
- b) Dynamic Smoke Evacuation : Correct behavior whereby the lift would drive through a "smoked" floor.
- c) Non-Phase1 door-open dwell-time now extended from 15s to 20s.
- d) Door Open button now enabled throughout the Fire-Recall evacuation procedure.
- e) Option (5.3.5.b) added to allow doors to remain open after arrival during a non-Phase1 evacuation. To set this option, set the fireman mode menu parameter: *Door Open in M-Flr = YES*.
- f) Forced Door Closure now only applied if the lift is not yet in the Designated Landing.
Also, ensure that the door reversal time is extended enough to ensure an object will not become jammed by attempting to re-close too soon.
- g) Onboard Temperature Sensor reading disabled for Fire-Recall and Fireman Service modes.
- h) Group Mode: Pressing any ADM in the Main Floor will now open the doors for all grouped lifts (non-Phase1 evacuation).

This requires a GST Update V0028.

Recommended settings for the **\Configuration\Fire-Options** menu when using the new EN 81-73:

Fire Standards	EN 81-72 (2015)
Fire->Fireman (ADM)	NO / YES
Fire->Fireman(I/O)	NO / YES
Only ADM->Fireman	YES
Off only in M-Flr	YES
Door Open in M-Flr	YES*
Fire Main Floor	1
Fire MainFlr Doors	door A only / door B only
Safe Area	for each floor, set Door-A / Door-B
Smoke Evac Plan	MainFlr/MainFlr+1
Smoke Alarm Prio	YES
Smoke Drive Thru	NO
Fire Sig. Pulsed	NO
Deadman Door Closed	NO
DO Allowed	NO**
Safety Curtain	is not tested

*For a fireman's lift (using a Phase-1 Recall), if this parameter is set to YES, the doors will open automatically and remain open in the main floor when in fireman-service.
For the non-fireman's lifts (not using Phase-1 Recall), this parameter is used to define the default door position in the designated floor (5.3.5.b)

**This Door-Open Button parameter is only optional for certain legacy fire standards (eg Hong Kong). In the new EN standard, the DOB is automatically enabled.

7) Fireman-Service, EN 81-72 (2015):

Many changes made for conformity with the latest Standard:

- Problem of early release of the Call-Button early whilst closing the door now, fixed (door would sometimes continues to close).
- New Dual-Entry Car requirements implemented.

new Menu: \Configuration\Fireman Options\Safe Area\Floor [0..63], Door Side = Door-A, Door-B

Note: For Single-Entry Cars, the *Safe Area* floor- table is ignored.

c) New Dual-Entry Car, Door-Open Button illumination implemented.

There are 3 methods of connecting the DO button lamps:

i) I/O Port

new Output Port: Door Open Button Lamp, Door-Side A : **002E7884**

new Output Port: Door Open Button Lamp, Door-Side B : **012E7884**

ii) FPM-1

option to use the top EAZ Output bits, p9,p25 (Not yet implemented!)

iii) FPM-2

X1p14, X2p14 driven directly from bi-directional I/O Line. (Not yet implemented!)

d) In case of Door-Lock Timeout Failure (Error #35) during door closure, prevent the wrong door being re-opened for a second attempt, and instead proceed direct to a Door-Lock Failure (Error #13). The door will completely re-open and remain open until a new call button is pressed.

8) Car Priority I/O Port Input Signal (xxxx0EF2):

the standard Car-Priority operating strategy is always to re-open the last used car door. If Selective Door Control for Car-Priority control is required – eg. when using individual Input Port Signals for the A and B doors sides, then this modified software and Miscel-2 Bit-5 (00100000) must be used.

9) Anti-Nuisance “always clear up/dn”:

The old „smart“ method for this feature is now only used when the Factory Menu option is set as shown below. The new standard “simple” method will always clear both Up and Down landing calls during arrival in the floor.

New Menu: Miscel-17 = 01000000 (Use previous “smart” for clearing both direction landing call buttons)

10) Drive Type DCP04:

- a) Compatibility changes now allows Inspection and Auxiliary Drives with Magnetek Inverters.
- b) Auxillary Drive now uses inspection speed (Vi).
- c) for short drives ensure that the pre-opening door function works correctly.
- d) prevent the FST menu values \Positioning\Floor\Level-UP and Level-DOWN influencing the resulting drive positioning accuracy

11) I/O Port, EAZ Output:

option added to allow Gray Code output to count from "0" upwards. The standard method counts from "1" upwards.

Menu: I/O Port : xxxx xxxx xxxx xHxx Gxxx 0011 010x

Bit 'H' which previously only worked to set the HEX count from "1" upwards (with "G" = "0") is now also used to specify that the Gray count should count from "0" upwards.

examples, (all showing EAZ Bit-0):

Gray, counts from 0..n : 00000834

Gray, counts from 1..n : 00004834 <<<< new!

Hex, counts from 0..n : 00000034

Hex, counts from 1..n : 00004034

FST-2XT V0148 29.06.2018

1) Door Opening issues:

a) prevent the door opening immediately power is applied. This can occur when using Door End-Switches, Light Curtains with NC signalling, and the newer EN 81/20 conform doors using a cam "relaxing" mechanism.

NB: this requires an update to the FSM V51

b) Following Auxiliary, Inspection or any other circumstances after which the door(s) are left in a Stopped condition (FST Display = "-A- -B-"), a Landing Call issued from the floor in which the car is standing does not cause the doors the open. Now corrected.

2) Service Mode:

In S/W V1046 the Service Mode operation was changed to set Landing Calls Off automatically. This feature has now been made optional.

Menu: Miscel-17 = 00010000 (Service Mode, Landing Calls: "0" = OFF, "1" = ON)

3) FST Display:

Important Status messages that are shown to blink alternatively with the Line-4 Time Display (such as BYPASS or SLEEP) are now painted in Yellow instead or Red to improve legibility.

4) Anti-Creep Control

New option added to use the Anti-Creep for Inspection mode only. In all other circumstances the Anti-Creep solenoid will be permanently ON (100% duty cycle required!)

Menu: \Drive\Anti-Creep\Insp.Mode Only = YES

5) Car Light Off:

Option added to prevent the car light from being turned Off if the car is not empty. Similarly, a transition to ESM Phase-2 will be prevented unless empty.

Menu: \Configuration\Car Light\Off Only If Empty = YES

6) FST Recording:

FST Status message LON_FSTAT3 is now added to the standard default "Detail" Recording Filter.

7) USP Test Option:

In conjunction with the CUS-9Z Module, a USP Battery Test Cycle can be initiated with the following new menu option:

Menu: \Service\Start Accu Test = YES

8) Inspection-Pit Reset:

Improved method of ensuring that the Safety Circuit gets closed in order to allow leaving Inspection-Pit mode. Once the bottom floor Landing Call Reset-Code or Key-Switch request has been received, the FST will briefly automatically activate all actuators required to drive, without actually starting the drive.

9) Fixed Door-Cam operation:

Corrected problem when driving with Fixed Door-Cam operation under inspection or Auxiliary control.

FST-2XT V0147 09.05.2018

1) Pawl Lifts:

Change to avoid standstill condition when \Drive\Pawl-Control\Door Lock = YES and the Lift is not seated. If a landing or car call is entered at this time from the same floor, the lift will remain effectively blocked until the car becomes seated, and the door is unlocked. This situation will also prevent calls from other floors being processed. A special case handling for the ASV lift door-locking which was causing this standstill has now been removed and now uses the standard door-lock method.

2) Drive-type 4 Valve Hydr. + ASV, and Evacuation:

The Pawl control will now abort a started drive if Evacuation is activated before the main drive has commenced. This covers the initial drive to raise the lift, and the pawl retraction process. During this time, should the Evacuation activate, the pawls will be re-extended and the lift lowered back into the floor- thereby completing the evacuation process.

3) EN81-20 5.12.1.9 SHK Door-Lock bridging detection:

The functionality of SHK Bridging Detection for lifts using neither Re-Levelling nor Pre-Opening Doors now restored (was missing in V0146).

4) Drive-type DCP04-Hydro:

- Calibration now possible
- Inspection issues corrected
- Giehl/Bucher control corrected

FST-2XT V0146 20.04.2018

1) EN81-20 5.12.1.9 SHK Door-Lock bridging detection:

- a) Fixed problem of false detection if a full-load condition activates when the doors are opening
- b) Fixed problem of false detection (stuck Door-Closed End-switch failure, Infobyte = 4 or 5) when using manual doors.

2) Loading Mode:

Fixed problem caused by the Door-Close button no longer clearing an active Loading-Mode if a Landing Call is entered twice or more during the door opening cycle.

3) FST initialisation:

Prevent problem with TFT Initialisation during booting that can cause the controller to "hang" with a white or black screen.

4) Drive-type 4 Valve Hydr. + ASV, HydrUnit = iValve:

- a) Correct hard stop for the ASV small Raise and Sink drives during Starting and Stopping.
- b) Fixed 10sec delay added after landing before the low-pressure control is enabled
- c) New automatic landing + seating operation for the end floors in Inspection Mode.

Menu: \Positioning\Global\Miscel-D2 = 00001000

5) FST Start:

Correction to prevent unwanted door opening following the FST reset

6) DRM-SAFETY GEAR and DRM-SPEED GOVERNOR:

Correction made to prevent these fault conditions from being reset when an Emergency Stop condition occurs.

7) BACnet / Modbus Gateway:

Correct functioning of the following signals:

- Command Present
- Full-Load
- Overload

Also, the Emergency-Call Button status is now "stretched" for a further 5 secs after the button is released

8) Evacuation Drive with "Turn-In-Shaft" option set:

Prevent Standstill failure if the evacuation command signal occurs whilst the lift is driving but is still within the same floor from which the drive started.

9) Liftboy mode for Group use:

Liftboy mode can now be used in a group context. If one of the "Liftboys" answers a landing call, the flashing car-call indication of this pending request will now be removed all other participating lifts.

10) CUS-Module Support:

New "Open and Stay Open" Door operating mode added.

New Secure Landing Priority mode option added.

11) CUS-9Z UPS-Monitoring Module:

New error handling options added

12) Car/Pit access Modes for Destino and Standard usage:

New modes added to allow easy controlled access to the car-roof or shaft-pit for Inspection activities.

These parameters define the distance the car should move from the level position to allow best access:

Menu: \Configuration\Inspection\Access-Car = (0-9999mm)

Menu: \Configuration\Inspection\Access-Pit = (0-9999mm)

Menu: I/O Port Access-Car = n03A50F2 ("n" = start floor 0..15)

Menu: I/O Port Access-Pit = 013A50F2

13) Drive-Type: iValve and iValve-ASV:

For Re-levelling operation, the SMA Monitoring is now disabled unless

\Drive\Special-Parameters\Switch-5 = ON

14) Shaft-Access monitoring for lifts with Manual Doors:

New shaft-access monitoring option added.

Menu: \Configuration\Inspection\Man.Door Mon. = YES/NO

new Error: Error #82 SHAFT-DOOR ACCESS!

15) Test-Menu:

New Inspection-Pit Reset option added

Menu: \Test\Reset Insp.Pit

16) Departure Arrows:

For the EAZ-256 Displays, the top and bottom floor indexes are now sent automatically after each FST reset to generate the correct Up and Down arrow appearance in the shaft end floors.

17) Error #48 MOTOR-ROOM OVERHEAT:

This condition will now be ignored if either Fire-Recall or Fireman Service modes are activated.

18) Evacuation and A3-Drive Monitoring:

A3-Drive Monitoring Errors are now suppressed during Evacuation Mode

19) I/O Port Output "Door Opening":

The I/O Port output signal for Door-Opening has a new option which will react as soon as the FST issues the door-open command, and not wait for the door-status to reflect this change.

Menu: I/O Pre-emptive Door-Opening A = 00013A84 (standard = 00003A84)

Menu: I/O Pre-emptive Door-Opening B = 00013B84 (standard = 00003B84)

Menu: I/O Pre-emptive Door-Opening C = 00013C84 (standard = 00003C84)

20) Bank Control:

New option added to allow free definition of the Inter-group change time (previously only 1 or 10 secs possible)

Menu: \Configuration\Special Functions\Bank Control\Group Change Time = (1..255 secs)

21) Schindler PORT:

Door selectivity added for the "planned stop" outputs.

22) Fire-Recall, EN81-73 5.3.2.c:

The maximum wait time for door closure, for a stationary lift not yet in the Recall-Floor, has been reduced to 120 to 20secs.

23) New Pulsed Output Port "any error":

New I/O Output Port will pulse once for a programmable duration the occurrence of any unspecified error (Nos. #1..#127)

Menu: I/O Output = nn093E84 ("nn" = pulse duration x 50mS)

24) Hydraulic Clamping:

Is now controlled independently of the used Drive-Type, and can therefore be used with any Drive-Type.

25) Fixed Door-Cam operation:

For 2-floor lifts with a Fixed Door-Cam requiring a permanent Door Bypass output:

Menu: \Positioning\Global\Miscel-D2 = 00010000

26) Evacuation Drive with ASV Lifts:

New option added to allow a ASV lift already in the landing phase when Evacuation activates, to continue the planned landing and seating operation to complete the Evacuation drive without thereafter attempting to drive the originally designated Evacuation Floor.

Menu: Miscel-17 = 00001000 (ASV lifts will stop and remain in the current landing floor)

FST-2XT V0145 05.12.2017

1) EN81-20 5.12.1.9 SHK Door-Lock bridging detection:

Fixed issues when using manual doors, and also when Door-Lock Type = 1 (Austrian)

2) Inspection-Pit:

a) the ADM Landing Button Pit-Release method didn't work if the ADM was configured as a Disabled Call. Corrected.

b) option added for Manual Doors. If the Manual Door is closed, the car door and door-lock contacts are ignored.

Menu: MISCEL-17 = 00000100

"0" = TKA/TKB must be ON, "1" = TKA/TKB are ignored if manual door is closed

c) the EN 81-20 requirements for Inspection-Pit release are ignored if the lift is running in Installation mode.

d) after the Inspection-Pit has been switched off, the car doors and door-locks are now closed automatically in preparation for the Inspection-Pit release operation.

3) EN81-20 5.12.1.8.1 : Bypass Switch

The door closed end-switches are now monitored continuously during Bypass operation.

4) FST Coldstart:

prevent unwanted occurrences of Coldstart due to:

- a) CMM mode activation
- b) if neither A nor B doors are configured in the bottom floor

5) Drive Type Bucher iValve:

prevent SMA error detection during very short re-levelling drives

6) DriveType ASV-DCP03:

prevent K1 remaining ON during the Pawl Extend/Retract operations

7) Drive Type DCP04:

- a) drive start issue with CT Drives corrected
- b) correct over-travel of inspection end-switch

8) Safety Light Curtain:

short interruptions of less than 1 sec were not detected. Corrected.

9) Fire-Recall:

If using the "Fire-Sig. Pulsed" option, and either Fire-Recall or Fire-Recall-Reset I/O Port inputs remain activated, the FST Error-List will be flooded with Fire-Recall Events. Corrected.

10) I/O Port Speed Threshold Output:

prevent this output from toggling briefly when any FST menu configuration changes are made

11) Glass Door Error Detection:

- a) prevent Door-Open Error being issued during the stopped door phase
- b) correct behaviour of the door reversing switch when the doors are closing.

NB: this requires the update FSM V47

12) Drive Type 4-Valve Hydr. + ASV:

new options added to improve the recognition of the status "Car-Seated".

a) do not use low-pressure input as requirement for Car-Seated status. The parameter "*Seating-Zone*" must be used instead. During the sink drive onto the pawls, the "*Seating-Zone*" distance is used as the "*level-down*" position.

Menu: \Positioning\Global\Miscel-D2 = 00000010

b) when using the "*Seating-Zone*" option, the car is allowed to sink below the seating-zone, and still be considered "Seated".

Menu: \Positioning\Global\Miscel-D2 = 00000100

13) I/O Port Non-Collective Call Disable:

new I/O Input Port allows Non-Collective to be disabled (returns to Full-Collective control)

Menu: I/O Port, Non-Collective Control Disable = 00004FF2

14) ESM remote control:

added for GST applications

15) I/O Port Bypass Switch Active:

new blink option added for the I/O Output Port Bypass Active.

Menu: I/O Port, Bypass Switch Active = 000n7284

n = 1: the output Blinks for use with a Buzzer or Lamp

16) Schindler PORT:

"planned stops" I/O Port output added

17) I/O Port FST Internal Status:

new I/O Output Port added for setting an output according to a large selection of internal FST signals.

Menu: I/O Port = xxnn7884 for complete details see "FST_Port_7884_InternStatus.pdf"

FST-2XT V0144 06.11.2017

1) FST TFT module, type DLC:

Software Driver change for the new "DLC" (manufacturer) TFT module.

Note: from this version onwards if the FST software detects this TFT type fitted, it will not be possible to downgrade to an earlier Software version.

FST-2XT V0143 29.09.2017

1) EN81-20 5.12.1.9 SHK Door-Lock bridging detection:

Fixed issues of incorrect failure detection.

2) Drive Type ASV – DCP03:

Special K2/K3 Relay control features now added, as in the standard DCP03 operation

3) Super Priority Mode:

Repeating SAM output added for passenger warning if a an intermediate stop is required

4) Test-Menu\Brake-Test:

fixed issue of Brake Monitoring being disabled after any of the Test-Menu Brake-Test options have been activated.

5) DRM-Anti-Creep:

This error will now be shown in the FST display should it occur during Inspection or Auxiliary Modes.

6) DRM-Safe-Room (shaft top and bottom):

The allowed tolerance for the detection of this error is now increased from (+/-) 100 to 300mm.

7) Calibration Drive:

Following a calibration drive, the Inspection Limit Parameters will now not be overwritten if the new value would be smaller than the existing value. The minimum Fast Inspection limit has now been increased to 2000mm.

8) Safety-Light-Curtain:

Improvement made for the detection of an interruption in the Safety-Light-Curtain during driving. Also prevents a possible lockup if an Emergency Stop switch in the car is activated when a SLC is fitted.

FST-2XT V0142 25.08.2017

1) DCP Interface:

Drive manufacturers **Yaskawa** and **Danfoss** added

2) DRM-A3-DRIVE-ERROR Giehl-ARZS/AZFR:

prevent unwanted error condition occurring following a safety circuit opening during driving

3) Door Opening with Sluice Doors – CUS-5E:

prevent an unscheduled door opening in connection with the CUS-5E (Traffic Light Control) and Sluice Doors.

FST-2XT V0141 24.07.2017

1) Inspection-Pit:

prevent return to Normal unless Safety Circuit is completely closed (S/W V0140 Change-10): can now optionally allowed to ignore the status of the Door-Lock inputs (SPA/SPB).

Menu: MISCEL-17 = 00000001

"0" = SPA/SPB must be ON, "1" = SPA/SPB are ignored

2) FST-Guide, Weight Sensor Page:

the Pawl Lift (ASV) Overload Status has been corrected

3) Secure Landing Priority Mode:

option added to show the lift user on the EAZ displays that a Landing-Priority Request has been registered, and that the system is now waiting for the car to become empty.

Menu: MISCEL-17 = 00000010
empty

"0" = EAZ Text "Special Drive" shown only when car becomes

"1" = EAZ Text "Special Drive" shown as soon as call is entered

4) Schindler PORT Interface:

new output on the FST added to show Emergency Drive Status

5) Drive Type: Giehl-AZRS + ASV:

DRM A3-DRIVE ERROR now correctly handled for downward drives

6) Ramp-Drive:

prevent problem occurring with 2 Manual Doors in connection with a Safety Light Curtain, following a ramp-drive cycle.

7) Hydraulic Clamping Device:

prevent problem occurring when a normal drive is interrupted by a door-contact or door-lock opening.

8) FST Start-Up > Grey Screen:

prevent condition whereby the FST user display occasionally remains dark following a power-up (although the system is still working).

FST-2XT V0140 26.06.2017

1) EN81-20 5.3.6.2.2.1 Photocell Monitoring:

support for devices with self-test option added.

Menu: I/O Port, Photocell Error = 000n4CF2 xxdd=door side, xx00=A, xx01=B, xx10=C

2) Loading Mode:

Bit-0 of the menu parameter **\Configuration\Special Functions>Loading Function\Options = 00000000/1** is used control whether Loading Mode should **force the door to open** ("0") or **only apply Loading Mode to open doors** ("1"). If the "force-open" option ("0") is being used, and Loading Mode is activated on a floor which has 2 Selective-Door openings, both doors will now be opened.

3) DRM-Brake-Failure:

This condition will now no longer be cleared should an Emergency Stop condition occur afterwards.

4) I/O Ports type SIGNAL:

Maximum number of used SIGNAL Ports increased from 16 to 32

5) Error-Lists, Statistics, Counters:

new option added to help prevent the unwanted casual clearance of the FST Error-List, On-Board Statistics, Drive-Count(FZ) and Operating Hours(BS).

6) "No Errors":

prevent the unwanted display of this (Yellow) text in line-2

7) Car-Priority Mode:

correct problem occurring with certain CUS applications, when exiting Super-Priority Mode

8) Drive Type: 4 Valve + ASV:

-correct drive behaviour when covering very small distances (typically < 30mm).

- prevent the Pawls from extending during an inspection drive when the upper inspection limit switch is reached.
- prevent a Hydraulic Pawl Motor from being energized throughout the entire drive, if the lift needs to start from a position outside of the door zone.

9) Car Call Blinking:

during landing in a floor with "Sluice" doors, the car call button on the waiting door-side (ie the door which will be opened after the opposite door side opens and closes), will stop blinking as the first door opens. Now corrected, the button will continue to blink until the second door opens.

10) Inspection-Pit:

- prevent return to Normal Mode unless the Safety Circuit is completely closed.
- The condition "Inspection-Pit", including the wait for reset state after the Pit switch has been turned off, has now been made Reset-Safe.

11) Drive Type: Bucher iValve:

prevent unwanted activation of the Bucher SMA input signal monitoring. The maximum allowed reaction threshold has been slightly extended.

FST-2XT V0139 26.04.2017

1) Inspection ON->OFF:

if the car is stopped outside of the door zone, the door not completely closed, and the photocell interrupted, the door might open when inspection operation is turned off. Corrected.

2) EN81-20 5.3.6.2.2.1 Photocell Monitoring:

a) in case of detected photocell failure, a new option will generate a blocking DRM condition.

Menu: MISCEL-16 = 10000000

"0" = non-blocking error.....#76 PHOTOCCELL FAILURE

"1" = blocking error.....#80 DRM PHOTOCCELL ERR

b) problem corrected where FSM K5 is not energized when the doors open, a situation which will probably lead to a standstill since the doors will be thereafter prevented from closing.

c) improved method employed for the FSM Photocell Failure Detection. Requires update to FSM V44 or later.

3) SIEI Inverter:

change to the option to use a faster Auxiliary speed. Now uses Vis (Fast Inspection) instead of Ve (Crawl) as used previously.

Menu: \Drive\Special Params\Switch-3 Auxiliary speed: **ON** = Vis, **OFF** : Ve

4) "Sluice" Doors (exclusive opening):

correct issue of loss of call direction when changing the open door side.

5) Stopped Doors:

correct problem for CUS Applications when returning to Normal Mode after Emergency-Stop, Inspection or similar conditions in which the doors are held in a Stopped condition.

6) Shaft-Pit Safe-Area Monitoring:

new I/O Port function added to complement the Shaft-Head Safe-Area Monitoring feature added in S/W V0118. This new Shaft-Pit roller-switch input is identical in function to the Shaft-Head option. The detected car position during an I/O Port activation is compared with a reference position defined in the Port RAW value. A maximal tolerance of +/- 100mm is allowed, otherwise a DRM condition is generation.

Menu: I/O Port, Headroom Monitor = nnnn4EF2 nnnn=distance (mm) of expected shaft switch above the bottom floor.

Error: generated when the read signal position is incorrect or not present. **Error #73 DRM Safe Room PIT**

7) Destino, Door-Close button:

Prevent the car passenger from using the DC button to cancel the door opening from a newly issued group call.

8) Destino VIP drives:

changes made for Destino VIP drives

9) Inspection-Pit:

allow Inspection-Pit reset inputs for key-switch operation on PIT and ADM modules.

FST-2XT V0138 03.04.2017

1) Car Cleaning Mode:

new mode added to facilitate cleaning of the lift car. Once activated, the displays will show the cleaning status, and the doors remain open. The lift is removed from a group during cleaning. To allow access to the internal door surfaces, the doors may be closed using the DC button. Additionally, the car calls can be either enabled or disabled during cleaning. Activation is either via I/O Port or LON command.

Menu: Port RAW 0000 0000 0000 000c 0100 1101 1111 001x (activate car cleaning mode)
c = disable car calls

example: 00004DF2 = car cleaning mode, car calls disabled
00014DF2 = car cleaning mode, car calls enabled

2) EN81-20 Inspection Control:

Correction made to solve problem of conflicting Up/Down Inspection commands when given simultaneously from Car and Pit users. The FST V0133 solution for this same problem was not completely successful, but now corrected.

FST-2XT V0137 30.03.2017

1) New Drive Type- ASV – CERN 25T:

added

2) EN 81-20 5.12.1.9 Door-Lock Bridging Detection:

added to Safety Circuit Door Contact and Door-Closed End-switch Bridging Detection facility. All of these 3 detectors are controlled by the same menu switch:

\System\Factory Menu\EN 81-20\Test Door Scct = YES/NO.

If the test fails, an **Error #77 DRM DOOR BRIDGED** is generated. This cause of failure can be identified by the INFO-Byte, which shows the door-lock + 16 (SPA = 16, SPB = 17).

3) Car-Priority:

correct operation for exiting Car-Priority when the Car-Priority-Hold Feature is being used (**Car-Prio Auto.Hold**)

4) Fireman Service:

correct entry into Fireman-Service from Fire-Recall, when using the automatic transition option: **Fire->Fireman (ADM)**, either in conjunction with an existing Fire-Recall condition, or when using the **Fire Sig-Pulsed** option.

5) Blocked Door Status:

correct problem with premature generation of a BLOCKED-DOOR condition (used for the GST group algorithms). This can occur when the photocell is interrupted during the door state transition from Opening to Fully-Open. This corrects an effect apparent since S/W V0133, mod.5.

6) SWM München:

new Interface changes and special Fire-recall strategy added.

7) Hydraulic Lifts with Pawl-Control:

new option to allow Re-Levelling during Pawl operation for all Hydraulic ASV drive types (those accessible from **4-Valve Hydr. + ASV**)

New menu: \Drive\Pawl Control\Re-levelling = YES / NO

Note: The main setting \Antrieb\Nachholung is still observed, and must be enabled additionally if ASV-Nachholung is required.

\Drive\Re-levelling	\Drive\Pawl-Control\Re-levelling	ASV-Disable (I/O Port)	= Re-levelling enabled
No	No	Off (ASV = On)	NO
No	No	On (ASV = Off)	NO
No	Yes	Off (ASV = On)	NO
No	Yes	On (ASV = Off)	NO
Yes	No	Off (ASV = On)	NO
Yes	No	On (ASV = Off)	YES
Yes	Yes	Off (ASV = On)	YES (new)
Yes	Yes	On (ASV = Off)	YES

8) Elgo Position Encoder:

In the (very rare) event that the mounted magnet band should result in the absolute position for the bottom floor being less than 2000mm, the FST would normally generate a permanent DRM-Encoder failure. A new

hidden menu option will now reduce the minimum available distance below the bottom floor to 500mm.

Menu: \System\Factory-Menu\Hidden-Menus = YES

\Positioning\Global\Encoder = 10000000

FST-2XT V0136 01.03.2017

1) BACnet / Modbus:

signal changes and corrections made:

- door errors (open-error, close-error, door-lock-error) now report without requiring the DRM-Door option
- LCS full-load now working
- car-light fail now not reported if the menu car-light-monitoring parameter is turned OFF
- photocell-error (EN 81-20) status output
- fire-recall completion status corrected

2) Shaft End-Switch for rope lifts:

this facility must now be enabled from the menu if required, it is turned OFF as default:

Menu: MISCEL-16 = 00100000 ("1" = shaft end switch monitor for rope-lifts enabled)

3) SWM Interface:

operation for grouped lifts corrected

4) Destino Lifts (Hall Destination Call):

necessary changes for use with the Destino Software V0048 onwards

5) Door Reversal Timing:

new option added for helping slower boarding passengers. Doors\Door-Selective\Reversing-Time will be triggered at the end of the photocell activation (normally start), to prevent the doors immediately closing after a long train of leaving passengers.

This requires FSM Software V42.

Menu: MISCEL-16 = 01000000 ("1" = Reversing-Time triggered at back end of photocell signal)

6) Fireman operation EN 81-72:

- correction to operation when fireman key-switch is turned OFF with car away from main floor.
- EN 81.72 5.8.8.g implemented

7) Configuration Files:

prevent configuration files generated entirely on the FST-Editor causing unwanted parameter changes during import into the FST.

8) SIEI Drive:

option added to provide 4th main drive speed (now V1,V2,V3 and V4).

This uses the 3-bit digital selection code D0=ON, D1=ON, D2=ON

Menu: \Drive\Special Params\Switch-2 = ON (4-speed option)

9) DST (Daylight Saving) Australian Standard:

changed to operate on 1st Sundays of April and October

FST-2XT V0135 26.01.2017

1) VNC Server:

added to FST for use with mobile app.

2) Internal BACnet interface removed:

the FST-internal BACnet server is now longer supported. A fully certified BACnet I/P and Modbus I/P interface are supported using the external NEW LIFT BACnet/Modbus Gateway.

FST-2XT V0134 25.01.2017

1) Chime Function:

new option added for parameter **\Configuration\Chime-Functions\Chime when in flr**

previous value **NO** now renamed **Never**

previous value **YES** now renamed **With Closed Door**

new value **Always** (disregards door status, intended to be used for groups where the door is recessed)

2) Door-Selective Chime Output:

new option added when using the EAZ-TFT display for car chime output. This parameter should be used to determine if the door-selectivity should be observed or ignored.

Menu: \Configuration\Chime-Functions\Car Gong = Not Selective / Door Selective

3) SAM Speech Output:

The "Driving Up" and "Driving Down" announcements are now added to a list of those not output when the "Only Disabled" – and a Disabled-Call is not currently being serviced.

4) Correction to S/W V0133 Mod 8:

Two unwanted side-effects caused by the implemented LON Bandwidth limitation changes:

- restore Emergency-Call filtering during driving.

- prevent the GST group controller (both Standard and Destino) falsely recognizing a FST dropout, if not running in LAN mode.

5) EN 81-20 Door-Closed End-switch Monitoring:

Monitor added to test that when the door has reached its open position, that the door-closed end-switch is in the inactive state. If the test fails, an **Error #77 DRM DOOR BRIDGED** is generated. This cause of failure can be identified by the INFO-Byte, which shows the door-number + 4 (Door-A = 4, Door-B = 5, Door-C = 6)

6) Orientation Drive:

The automatically chosen drive speed for Orientation Driving, is now generally one speed step lower than the rated speed. eg. Speeds Available = V3,V2 & V1 Orientation Speed = V2.

A further decrease in speed can be forced by using this new option:

Menu: \Positioning\Incrm.Positng.\Control = 00001000 This setting will choose the next slower drive speed. eg. Speeds Available = V3,V2, & V1 Orientation Speed = V1

FST-2XT V0133 13.01.2017

1) Bank Control:

Correct a problem in which the parameter **\Configuration\Speech Output\SAM-Module\Floor Locked** = **OFF** will cause the Bank Control to accept a call from a user-group it should reject.

2) SAM Menu error:

Correct a cross linking of 2 SAM menu parameters: setting one of these will set the other.

\Configuration\Speech Output\SAM-Module\Full-load
\Configuration\ESM-Settings\w.open doors

3) I/O Output Port "Penthouse Control Active" (xxxx6284)

New option added: The output is only set when the specified entrance (floor/door) is involved in the current Penthouse Drive, for either collect or destination targets.

Menu: Port RAW xxxx xxxS DDFF FFFF 0110 0010 1000 010x

S = Output only when specified entrance is used for the penthouse drive

DD = Specified door side, 00=A, 01=B, 10=C

FFFFFF = Specified floor number

eg. 000062F2 : Activate when any Penthouse Drive is underway
010462F2 : Activate when entrance 4A is being collected from or driven to
014362F2 : Activate when entrance 3B is being collected from or driven to

4) S+ Inspection Control:

Inspection drives now made with Slow/Fast 2-Speed control as default, and with a menu option for Inspection using Fast speed only.

Menu: \Configuration\Project-Config\Basis[0] = 0000 2-Speed Inspection Drives
\Configuration\Project-Config\Basis[0] = 0001 Fast Inspection Drive Only

5) Group Mode, Blocked-Door Status:

The group controller will normally ignore a car whose photocell is blocked longer than **\System\Factory-Menu\Settings\Photocell-Max**. Previously, the blocking condition would only be tested if a car or landing call had already been accepted. A cleaning bucket placed to hold the door open would not lead to a blocked door status if introduced before a call was placed. Now corrected to operate in all conditions.

6) EN 81-20 Inspection Control:

Lockout introduced for case when inspection drive requests are made for opposite drive directions from both Pit and Car stations simultaneously.

7) Anti-Sink Control:

New option to the Anti-Sink (ASS) I/O Input Port to allow masking of the ASS error categories:

Menu: Port RAW 0000 0000 000e dcba 0100 0011 1111 001x

a = '1' = mask ASS Error Type-1 (test pre-start condition)

b = '1' = mask ASS Error Type-2 (test start condition)

c = '1' = mask ASS Error Type-3 (test stop condition)

d = '1' = mask ASS Error Type-4 (continuous test whilst not-driving)

e = '1' = mask ASS Error Type-5 (continuous test whilst driving)

8) LON-Bandwidth reduction methods:

Changes made to reduce the amount of LON-Bus Traffic in large groups. A number of modifications have been made, the most significant of these change being a LAN backbone (currently for Destino Groups only). Group/FST status control and selected messaging now moved to LAN.

9) Destino & Full-Load:

Change made to limit use of Full-load Status in Destino Groups.

FST-2XT V0132 14.12.2016

1) FST Update:

Correction to ensure that the new accelerated update method introduced in V0131 will work on certain older FST boards.

FST-2XT V0131 13.12.2016

1) Swedish Text:

Final correction

2) Anti-Nuisance “always clear Up/Dn”:

This option was not always clearing the non-driven direction- now corrected.

Note: this feature reacts to a car call placed following the car's arrival. The landing call set in the opposite direction to the cars departure direction will be cleared.

3) Fire-Recall:

EN81-72 correction made to better distinguish if a Fire-Recall or Fireman-Service Phase-1 condition exists.

4) PUBEL (Russian Standard) Inspection Control:

Restore correct operation following the EN-81 20 Inspection changes.

5) DCP04 / DCP04-Hydro:

Correct issue with “V=” indicated Speed measurement value. It was showing approx.. +10%.

6) Door-Bypass (S+ K14a Monitoring):

Correct functioning with manual doors.

7) UCM-A3 (S+ usage):

Correct K1 issue.

8) Drive Type- Bucher iValve:

Fine-Pump Upwards option added. Uses the FST K9 VST Relay.

Menu: \Drive\Special Parameters\Switch-2 = ON (Use K9 for Releveling upwards)

9) Drive Type: Schindler Dynatron-F (and VF-xx series):

restore Inspection Drive functionality.

10) Guide-Load measurement, LCS status:

Correct display problems resulting with small values of rated load (<500kg)

11) Car sits Un-Level in a Non-Collective Floor:

Correction for case where car arrives initially Level in the floor, then whilst the doors are still open, moves Un-Level. If re-Levelling is not set to correct this situation, this can cause a standstill where further landing calls are accepted but not executed.

12) BACnet Gateway, Signal #44 “Collective Fault”

Signal now correctly assigned, not the “Out-Of-Order” Status that was being used.

13) EN81-20 Inspection-Pit, ADM-Reset method:

Menu option added to disable the ADM-Reset method.

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Insp.Reset-ADM = NO

14) FST Update Method:

The USB-Stick Update method has now been changed, this can be recognised by the *Blue* “UPDATE” text. The update process should now be about 50% quicker.

FST-2XT V0130 04.11.2016

1) Swedish Text:

Correction made to Swedish text files that caused menu corruption.

2) Evacuation:

New option added to ensure all Drive Errors are ignored during evacuation.

Situation: When using the drive type “DCP04-Hydraulic”, an evacuation drive downwards into the bottom floor (using the down valves only), and the Inverter is supplied with emergency power. The Inverter will react with diverse errors (DRM-xxx), any of which could prevent the evacuation drive from completing.

The solution is to provide a setting which specifies: “Ignore All Drive Errors”.

Menu: The Evacuation I/P Port is composed as follows:

MHHF IIIR BADV **vvvv** 0Gff ffff 1001 1010

to use the new option, set the value of “**vvvv**” to “**1111**”, and leave “**V**” as “**0**”.
This will notify that during evacuation mode all drive errors are to be ignored.

eg. 000F009A = evacuate into the bottom floor, ignore all drive errors.

3) Emergency-Call Enable:

Facility added to allow bypassing of the Emergency Call Anti-Nuisance options in the car, in order to test the Emergency Call facility (eg. whilst the doors remain open).

Press the Door Open button continuously for at least 5 seconds to disable the Emergency Call Anti-Nuisance features.

4) On-BoardTemperature Sensor:

following improvements made:

- if the Max.Temp Threshold value is changed to zero (=function disabled), and a MOTOR-ROOM OVERHEAT condition is already active, this condition will be cleared upon saving the value zero.
- by making and saving any changes in the Temperature Sensor Sub-Menu, a new temperature measurement will be made immediately, refreshing any new threshold switching that might result.

5) Speed Threshold O/P Port:

Correct problem where if a Speed Output Port (RAW=xxxxxxBC) is used on any of the FST on-board Ports (X1 Ports-0..7), and no other Output Port is configured anywhere (Ports-0..79), then this Speed Output

would not operate.

FST-2XT V0129 14.10.2016

1) EN 81-20 Inspection-Pit Exit (Alternate version with Standard ADM):

the timing constraints have been relaxed further to make it easier to use. Also, the ADR-Freigabe will now be activated 1 second after turning the PIT switch OFF.

2) ASV for Bucher iValve:

Monitoring for A3-Drive (iValve SMA signal) for use in the ASV mode now correctly implemented.

3) Fire-Recall:

for Fire Standard EN 81-72 Old (2003), "Phase-1" / "Phase-2" FST information corrected.

4) Safety Circuit Monitor I/F:

Interface added for the SCI/SCD modules, using a special display-less SCD module.

Err #79 (the actual error text is determined by the error code supplied from the SCD module)

5) On Board Temperature Sensor:

can now be used for generating 2 conditions:

- a) Temperature level-1 reached: set output, Signal 00007584, which can be used to turn a cooling fan on.
- b) Temperature level-2 exceeded: generate a **MOTOR-ROOM OVERHEAT** condition (similar to X1.16)

Menu: \Configuration\Temperature Levels\Lev-1:Turn Fan On (0..99 Deg, 0 = disabled)
\Configuration\Temperature Levels\Lev-2: Stop Lift (0..99 Deg, 0 = disabled)

The **Error #48 MOTOR-ROOM OVERHEAT** Info-Byte is now given the values:

- '0' if the condition has been caused by the X1.16 Input, or
- '1' if the condition has been caused by the new on-board sensor

Notes:

-The temperature sensor is updated once every minute (on the minute).

-View the current temperature via SHIFT+LEFT+RIGHT and SHIFT+RIGHT to find "Batt:2.34V Temp:+29C

-Settings Example:

Stufe-1 = 30 deg. – The fan will turn on at 30 deg. and turn off at 29 deg.

Stufe-2 = 45 deg. – The "Lev-2:Stop Lift" condition will turn on at 46 deg. and turn off at 43.75 deg.

FST-2XT V0128 29.09.2016

1) Service Counters:

The service intervals and counters for Drives and Door-movements have now been increased in size from 5-digit (0-9999) to 7-digit (0-9999999).

2) Recording Filter:

filter out DST_SETTING messages from standard recording

3) ASV for iValve added:

Menu: for Drive Type = 4-VALVE HYDR. + ASV, new Pawl-Control\HydrUnit = iVALVE

Options: **Fine Pump: Pawl-Control\Fine Pump-Up = YES**
with Inverter: \Special Parameter\Switch-1 = ON

The VST relay usage is the same as the standard iValve driver, the new Fein-AUF option uses K9

4) SWM-Skytec Interface:

Issue with Local/Remote Lift-Off mode now resolved.

FST-2XT V0127 19.09.2016

1) Giehl AZRS :

Star/Delta operation corrected.

2) I/O Port Fire-Recall:

new "Phase-1" option added. Setting the Phase-1 bit will cause the Fireman-Evacuation drive to behave as a firemans lift and once in the fire-recall floor to wait for the fireman operation Phase-2 with open doors (EN 81-72 2015).

Menu: Port RAW = 0000 000P NDrs dfff ffff 0001 001x

P=declares this activation as fireman Phase-1 recall drive

example:

without phase-1 option: 00000112 (fire-recall into floor-1, doors will open and then close)

with phase-1 option: 01000112 (fire-recall into floor-1, doors open, stay open, await fireman key-switch activation)

3) I/O Port ADR:

new Disabled and Inhibit-Override options added

Menu: Port RAW 0000 0000 0ihb bbDD dfff ffff 0000 101x

ffffff	:	floor	
dd	:	door	
DD	:	direction	
bbb	:	bus	
h	:	disabled	<<<< new in this version
l	:	inhibit-override	<<<< new in this version

4) Disabled Mode for Destino use:
corrected.

FST-2XT V0126 06.09.2016

1) EN 81-72 2015 / 81-73 :

partial implementation- The "basic" features of the new 2015 revision have been implemented- importantly the door opening/closing interaction with the DO/DC buttons. So far not included are the 2-door car options, these will be added in a later version.

Menu: \Configuration\Fireman Options\Fire Standards = EN 81-72 (2015) (added, new)

Menu: \Configuration\Fireman Options\Fire Standards = EN 81-72 (Old 2003) (changed)

2) EN 81-20 Inspection-Pit Exit:

Alternative ADM signaling method now available to exit the Pit-Inspection mode, using a standard (unmodified ADM) Exit sequence on the ADM on the bottom floor = <Press>,<Press>,<Press>,..gap.. <Press>,<Press>,<Press>. The whole sequence must be completed inside 13 secs, the minimum gap between presses is 300mS.

FST-2XT V0125 05.09.2016

1) TCP/IP Access Control (car call locking)

Security system's (TCP/IP client) connection status is displayed in the Information page (SHIFT+ENTER) for debug purposes.

"AufzugID:A TCP:0" = client is disconnected,

"AufzugID:A TCP:1" = client is connected.

2) GWG Interface for MS-Digifon MSD4104

Shorten delay time on FST power off to 0mS for normal operating and to approx. 200ms if the GWG Project Code is set (#000138)

3) EN81-20 5.12.1.9. SHK bridging detection added.

Error #77 DRM DOOR BRIDGED

A supervisor switch is available to disable this facility:

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Test Door Scct = NEIN

4) EN81-20 5.3.6.2.2.1 Glass door entrapment detection.

A supervisor switch is available to enable/disable this facility:

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Glass Door Mon = JA/NEIN

Error #78 GLASS DOOR STOPPED

Menu: the Line-3 Door Status display now shows: <A#> for an active Reversing Switch and (unchanged) <A*> for an active photocell.

The glass door entrapment detection feature requires an FSM2_V2 Update to V39

6) EN81-20 5.2.1.5.1 Inspection-Pit mode reset.

a) Reset using I/O Port option: Can be used instead of the ADM method to clear the Inspection Pit operation.

Menu: I/O Port,Pit Inspection operation reset = 00004BF2

b) Reset using ADR „Morse code“ option:

requires a ADM update to V24

After the inspection-Pit input switch has been turned off, the bottom-floor Up-call ADM LED will blink ON / OFF / ON at 1Hz until the inspection-Pit mode has been successfully reset.

Press the bottom-floor ADM button in the following sequence:

[PRESS 3-sec] [release 1-sec] [PRESS 3-sec] [release 1-sec] [PRESS 3-sec] [release] (all times +/- 0.5sec)

7) Photocell/Reversing-Switch Inputs:

new menu option allows separate NO/NC settings for Photocell and Reversing Switch inputs.

Menu: \Doors\Doors-Basic\I/P Photocell = NO / NC (previously called Photocell Input)

\Doors\Doors-Basic\I/P Revers.Sw. = NO / NC

This new feature requires an FSM2_V2 Update to V39

8) LON Module Update.

After finishing Update Lon Module from USB, following information will stay on screen until next key press.

Line-2: Scrolling text at Line-2 "**UPDATE COMPLETE! - Press any key to continue....**"

Line-3: "**Update Module = xx**" text at Line-3

9) EN81-20 5.3.6.2.2.1 Photocell Power Control and Function Test added.

10) I/O Output Port „Inspection“ added.

The existing output port added in S/W V0096, is now extended for use with the EN 81-20. The output "Inspection Active" can now be qualified to output only if Car or Pit mode is activated.

Menu: Port RAW 0000 0000 000B pcnn 0110 1101 1000 010x

nn = 00 : Option-0, output if Inspection Mode is turned ON

nn = 01 : Option-1, output during DRIVE period

nn = 10 : Option-2, output during DELAY period

nn = 11 : Option-3, output during DELAY and DRIVE periods

c = 1 : Output only if Inspection-Car mode is activated (<<<NEW)

p = 1 : Output only if Inspection-Pit mode is activated (<<<NEW)

B = 1 : Blink mode DELAY and /or DRIVE periods pulsed

The „c“ or „p“ serve as qualifiers for the output, the remaining control bits „nn“ and „B“ are observed as previously. If neither bits „c“ or „p“ is set, the source of inspection (Car or Pit) is ignored

11) EN81-20 5.3.6.2.2.1 new I/O Port input for self-testing Photocell units.

Menu: Port RAW 0000 0000 0000 00dd 0100 1100 1111 001x

dd = door side: 00=A, 01=B, 02=C

12) Menu Access Level: System\Update LON Module\Update f. USB-Stick

now changed to require Mid-Level Access (was High-Level)

13) Safety-Gear-Manual.

Prevent Anti-Sink Monitoring preventing the Manual Safety-Gear test facility from working properly.

14) EN81-20 5.12.1.7 Service Mode.

Prevent all remote control options from causing uncontrolled lift movements.

15) I/O Port Signal Departure-Arrow.

Correction made to feature added in FST V0120. The selective output of A/B-side Departure Arrow signals is now coupled to the gong activations. This facility is intended to be used by customers hard-wiring external gong modules directly on the direction arrow outputs (uses the "arrow only when door open" option, **Depart.Arrows Max.= 9999s**). The arrows and also the gongs should only fire when the door side is due to open. Now operates correctly.

16) BACnet/Modbus I/P Gateway.

Correction to make Gateway work in grouped FST's with FST-ID "B"..H"

17) Copy Error List to USB.

Correct Error list copied to USB. Error list may have maximum of 100 errors. Previously FST was copying internally stored 100 errors repeatedly if the error counter was higher than 100.

FST-2XT V0124 18.07.2016

1) Summary of all EN 81-20 Items:

EN81-20 5.2.1.5.1 : Inspection Pit/Car control implemented.

Both LON "PIT" module and "Auxiliary Overlay" method now possible. For the Auxiliary overlay method a new I/O port is used to signal the PIT inspection usage:

Menu: I/O Port,Pit Inspection operation active = 000047F2

EN81-20 5.3.6.2.2.1 : Photocell Power Control and Testing.

Partial Implementation only! – no testing and failure handling yet!

Menu: I/O Output Port, Photocell Power On = 00007384 (alternative FSM K5)

Error #76 PHOTOCCELL FAILURE

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Test Photocell= YES

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\PC PowerFSM-K5 = YES

EN81-20 5.3.6.2.2.1 : Glass door reversal monitoring.

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Glass Door Mon = YES

EN81-20 5.6.2.1.4.3 : Safety Gear Activated.

Menu: I/O Port, Safety-Gear Activated = 000048F2

Error #74 DRM-SAFETY GEAR (Dn) / (Up) / (-) = detected physical direction at the time of activation

EN81-20 5.6.6.7 : Speed Governor Activated.

Menu: I/O Input Port, Speed Governor Activated = 000049F2

Error #75 DRM-SPEED GOVERNOR

EN81-20 5.9.2.7.3 : DRM-DRIVE MONITOR made reset-safe

EN81-20 5.10.4.4 : A motor overheating error for Hydraulic Lifts causes an immediate controlled stop before driving down to the bottom floor.

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Hydr. Turn-stop = YES

EN81-20 5.12.1.5.2.1 : Fast-inspection drive suppressed so long the lift is within the inspection slow-down areas- for both directions.

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Insp-Fast Ctrl. = YES

EN81-20 5.12.1.8.1 : Bypass Switch

Menu: I/O Input Port, Bypass Switch = 00004AF2

Menu: I/O Output Port, Bypass Switch Active = 00007284 (alternative FSM K4)

Error #151 BYPASS SWITCH-ON/OFF

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Bypass FSM-K4 = YES

The Relay K4 will blink on/off/on during the Inspection-On-Delay time, and change to solid-on once the drive start command has been issued.

EN81-20 5.12.1.9 : Continuous door safety circuit contacts testing.

Menu: (Hidden Menu) \System\Factory Menu\EN 81 Options\EN 81-20\Test Door Scct = YES

EN81-20 5.12.5.6.1 : Auxiliary speed limit implemented.

Menu: System\Factory-Menu\Settings\V-RevisionMax changed to **V-Inspect.Max**
System\Factory-Menu\Settings\V-AuxiliaryMax added (default=300mm/s)

New central UCM-A3 menu: (these entries mirror the existing control switches.)

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ Enabled = YES

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ A3-Drive = YES

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ Err-Hydraulic = YES

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ Err-No Inspect = YES

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ Test with Spd. = YES

System \ Factory Menu \ EN 81 Options \ UCM-A3 \ Test w/o ASS = YES

Note-1: "Enabled" mirrors the current switch: Miscel-11 00001000
"A3-Drive" mirrors the current switch: Miscel-D1 00100000
"Err-Hydraulic." mirrors the current switch: Miscel-13 00000100
"Err-No Inspect" mirrors the current switch: Miscel-13 00001000
"Test with Spd." mirrors the current switch: Miscel-D1 00000001
"Test w/o ASS" mirrors the current switch: Miscel-15 00001000

New EN 81-20 menu:

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Insp-Fast Ctrl = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ No Rem.Access = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Bypass FSM-K4 = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Test Photocell = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ PC PowerFSM-K5 = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Hydr. TurnStop = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Test Door Scct = YES

System \ Factory Menu \ EN 81 Options \ EN 81-20 \ Glass Door Mon = YES

System \ Factory Menu \ Settings \ V-Inspect.Max (default = 700mm/s)

System \ Factory Menu \ Settings \ V-AuxiliaryMax (default = 300mm/s)

Summary of new EN 81-20 Input Ports:

Inspection-Pit Activated: 000047F2

Fang-Contact Activated: 000048F2

Speed-Governor Activated: 000049F2

Bypass Switch Activated: 00004AF2

Summary of new EN 81-20 Output Ports:

Bypass Switch Activated: 00007284 (optionally via FSM K4 Relay)

Photocell Power On: 00007384 (optionally via FSM K5 Relay)

Note-2 : for the new EN 81-20 features the FSM must be updated to V38!

Note-3: The PIT LON Module has been added to the FST "Critical Module" list – for the CMM function.

Note-4: The Inspection-On-Delay function is now only applied to inspection drives made during Bypass operation.

2) Calibration-Drive :

Protect against using an un-calibrated system for normal driving.

During the pre-delivery checks, the status "Calibrated" should be cleared using:

Menu \ Configuration \ Installation \ Clear Calibration (YES)

Thereafter, until the FST is re-calibrated, any attempt to enter a normal drive request will be rejected, and the scrolling text message "**NOT CALIBRATED!**" shown on the FST LCD Line-2.

To activate "un-calibrated travel" monitoring, use this supervisor switch

Menu: MISCEL-16 = 00000100 ("1" = "un-calibrated travel" monitoring activated)

3) Active shaft-end limit switch warning (S+) :

Notify the user of any attempted Calibration or Learn Drive whilst the Shaft-End limit switches are activated. A scrolling text message "Schachtend Etage gesperrt (E/A Port ----41F2)" will be shown on the FST LCD Line-2.

4) Brake Test :

Functionality restored- fixes the "Brake Test Abort" Report.

5) Landing Calls :

Prevent door opening being prematurely cancelled by car passenger using the Door-Close button.

A passenger who makes a landing call whilst the doors are closing in the same floor expects the doors to reverse fully again to allow him to enter the car. Currently a passenger in the car by subsequently pressing the DC button, will cause the doors to stop and start closing before they have fully opened. Now corrected- after a landing call is made, the doors will be allowed to open fully before the DC button is operative.

6) Fire Recall :

Doors do not open. If after powering-up, the very first door opening request comes from a fire-recall signal (ADM or I/O Port) and the lift is already in the fire-recall floor, the doors will not open. Now corrected.

7) Anti-sink (ASS) Protection:

Prevent a follow on ASS error being generated as a result of a crash stop due to a DRM-Drive error.

8) Inspection (S+) :

FAST Inspection is now forced permanently ON with the S+ Project Code.

9) BACnet :

expansion of signals

10) DCP04 :

inspection slow>fast, fast>slow now working

11) On-board temperature sensor:

FST temperature sensor now operational, current value can be read in Line-3 debug menu. eg. "Batt:2.6V Temp:+31C". Use as a control cabinet sensor, with fault- and DRM generation will follow soon.

12) EN81-20 "Inspection Safe-Area Reset Allowed" Output:

new output can be used to signal the following conditions:

- Not driving AND
- Not in Inspection or Auxiliary AND

- Safety Circuit fully closed

Menu: I/O Output Port, Safe-area reset enable = 00007484

Note-6: further feature/corrections to the beta V0123X EN 81-20 software are now included:

- Bypass control operates with inspection and auxiliary
- Bypass output signal function corrected
- DRM Functional corrections

13) **Menu: Factory-menu\Settings\EmergStop-Time** parameter returned to menu, it had disappeared.

FST-2XT V0123 30.05.2016

1) **Through-Doors:** new option added to disable the Through-Door operation dynamically. Once disabled the doors will operate as normal Selective Doors in all floors where Through Doors are configured (shown as "Program=Through A+B" in the Calls\Call-Floor menu).

a) disable Through-Door operation via I/O Port:

Menu: I/O Port, Through-Door Disable = 000046F2

b) disable Through-Door operation automatically whenever Car or Landing Priority is active.

Menu: MISCEL-16 = 00000001

2) **Portuguese Menu:** updated

3) **Light Curtain Test:** test now no longer performed during UCM-A3 test.

4) **I/O Port function, FPM-Disable:** this function previously disabled all FPM switches, including the Door-Open Button. Now changed such that the Door-Open Button will continue to function unless the "Disable DO Button" option in the I/O Port Program is specified.

FPM Disable I/O Port:

Menu: xxxx xxxx xxxx xxxxD 0010 1000 1111 0010

D: disable DO button, 0=door open enabled 1=door open disabled

Note: **FPM Software updates are required for this change to function: FPM V60, FPM2 V20**

5) **Loading-Mode & Car-Reserved:** correction for case when EAZ Scroll text options for both Loading-Mode and Car-Reserved are in use.

6) **Door-Open/Door-Close during Inspection:** now changed such that only DO/DC commands received via I/O Ports on the FSM (car top) will be accepted during Inspection Mode. In case this restriction is not wanted it can be turned OFF using the following setting:

Menu: Miscel-16 = 00000010 "1": return to "old" method, DO/DC commands accepted from any source in inspection mode

7) **Door Pre-Close function:** now no longer activated during Inspection Mode

8) **Fire Standard-Hannover:** changes made:

- door to re-open/re-close if the Door Open/Close button is released before the end-switch position is reached
- a call is only accepted if the doors are closed,
- only one call can be placed at any one time,
- a set call can be cleared by pressing the dedicated "clear-call" button

FST-2XT V0122 02.05.2016

- 1) **Automatic Unpowered Evacuation:** changed to output the SIGNAL Evacuation Complete when the automatic unpowered evacuation reaches the target floor.

- 2) **Door Safety Bypass:** prevent condition whereby the Bypass remains on after arrival in the floor, if the car has stopped unlevel.

- 3) **DRM-User-3:** The DRM-User-3 I/O Port program (to provide a demobilizing condition) is now Reset-Safe. After activation, the programmable user text will remain visible on the FST display under all circumstances until a menu Fault Reset is given.

- 4) **Portuguese Menu:** updated

FST-2XT V0121 12.04.2016

- 1) **Inspection / Auxiliary:** prevent Pseudo-Calls with IDR-Enable Override option activating during Inspection or Auxiliary operation.

- 2) **Evacuation Drive:** new option added to allow relevelling during the evacuation condition. Is primarily intended for hydraulic lifts, but can also be used for roped.
Menu: MISCEL-15 = 00100000 Relevelling allowed during evacuation

- 3) **S/W -> USBStick:** menu copy option "Update Software from FST to USB" now removed- until this function is available.

- 4) **I/O Door-Open Port, "Radar option"** : new Radar mode added to the Door-Open I/O Port (RAW = xxxxxx3A).
Features:
 - If the door is closed, it will not reverse due to the Radar input.
 - A programmable counter can be used to limit door reversals caused by the radar. This counter is reset each time the door closes.
 - A programmable maximum timeout for constantly active Radar input. After this time, the Radar input will be ignored and the door allowed to close.
 - An active Radar input is shown as "<Ar>" in the line-3 door status display.

Menu: xxxx TTTT xMMM RACF ddFF FFFF 0011 1010

R = Radar mode

MMM = maximum number of Radar door reversals (0..7 0=no max.)

TTTT = Radar timeout (in 5_sec units, 0=no timeout)

Note: it is not necessary to use the "A" bit, as this feature (do not operate on closed doors) is inherent to the radar mode, but if set, the "r" bit in the Line-3 status display will show even when the door is closed. Can be used for fault finding.

Examples: 0008003A = Radar Mode, door-A, no restrictions
 0438003A = Radar Mode, door-A, timeout=20secs, max radar activations=3

- 5) **Remote Command "Service Mode" added:** GC_SERVICE (#48)

- 6) **ELGO Limax:** Shaft over travel limitation for 500 mm now removed. The standard limit of 2000mm over travel now applies to ELGO encoders.

- 7) **EAZ-TFT.210:** new NEW LIFT TFT type added to EAZ Type menu.

- 8) **\Configuration\Project-Config\Basis[0..9]:** range of the "Basis" values extended to 0..65535

- 9) **Loading Mode:** new option for lifts with 2 car doors and 1 loading switch. The loading switch will be applied automatically to the correct door side present on the current floor.

- 10) **Dynamic Fire-Recall control:** correction to the avoidance of smoked floors, particularly when using the "Smoke-Floor Prio" menu option.

FST-2XT V0120 24.02.2016

- 1) **DRM-EMERG.LIMIT SW:** correct wrong display of this error in the error-list and LCD Line-2 ("no Errors" shown)

- 2) **Changes to Deutsche Bahn UGW**

- 3) **Auxiliary Brake Monitoring:** full functionality now restored (output on K10, input RAW=000031F2)

- 4) **Fire Recall Override Input:** new input port option added to fulfil EN-81 5.3.7 (iss. 2005)

Menu: I/O Port, Fire-Recall = 0008xx12 xx=don't care

(This is a new option added to the existing standard Fire-Recall Input Port)

When this signal is activated, any current Fire-Recall condition is cleared, and any new Fire-Recall signal will be ignored. If the Fire-Recall override is deactivated, any outstanding Fire-Recall input signals still active will cause the Fire-Recall condition to activate.

5) **Door Forced Closure (Nudging):** for the automatic Nudging feature added in V0117, a new option is now added so that Nudging is not activated during Inspection and Auxiliary operation, and only during Fire-Recall .

Menu: MISCEL-15 = 00010000 (No Nudging used for door closure during Inspection and Auxiliary)

6) **Manual Evacuation:** correct behavior when the manual evacuation is activated during a normal drive. The current drive will now be aborted immediately before starting the evacuation drive.

7) **Fire-Recall:** prevent the door open button from functioning during a turn stop before the fire-recall floor is reached.

8) **Departure Arrows as I/O Port outputs:** new Output Port option to provide an alternative for the EWG module.

Menu: Port RAW = 0000 0000 0000 0dBA 0111 0001 1000 040x (00nn7184)

A=only for door-side A

B=only for door-side B

-If both A and B are "0", the door side is ignored (Door-A OR Door-B)

d=arrow direction, 0=down arrow, 1=up arrow

example: 2 Departure arrows for door-side A

Up-Arrow = 00057184

Dn-Arrow = 00017184

example: 2 Departure arrows for either door side

Up-Arrow = 00047184

Dn-Arrow = 00007184

9) **Fire-Recall and door close errors:** in case the doors cannot close properly during a Fire-Recall drive (due to door-gate or door-lock faults), ensure that the doors are made to reverse once completely before re-attempting. This to prevent passenger entrapment.

10) **Bucher iValve:** new Anti-sink Valve control option added, uses K11. Accessed with **\Drive\Down Valve Shut-off** timer.

11) **Anti-Creep:** prevent false error reporting during power up if the Anti-Creep I/O Ports are attached to an external RIO module.

12) **EAZ-TFT110 / SAM function:** due to current problems with occasional malfunctioning of the SAM speech output of the EAZ-TFT110 display, a nightly reset option for the display module can be set in the FST. This is set using the following I/O Port RAW program, but does not actually requires a physical Port to function- ie. Simply use the next free Port, regardless if a RIO is physical present or not.

Menu: Port RAW = 0111 0001 tttt tttt 0011 1000 1000 0400 (71tt3884)

ttttttt = time in 15 minute units

eg. 71083884 = reset at time of day: 02:00

71093884 = reset at time of day: 02:15

710A3884 = reset at time of day: 02:30

Note: the TFT-110 LON software version V27 or later is required

FST-2XT V0119 01.02.2016

- 1) **Full collective landing calls:** correction condition whereby landing calls are registered but not executed if any car calls are set as more distant target in the same drive direction.

FST-2XT V0118 27.01.2016

- 1) **I/O Input Ports:** a new programmable debouncing parameter is available to selectively filter any of the I/O input ports (On-board, RIO, FSM etc).

Menu: \Configuration\I/O-Configuration\I/O Ports\Raw Value (renamed!)

Menu: \Configuration\I/O-Configuration\I/O Ports\Debounce (0.0s .. 25.5s)

Note: 0.0s is equivalent to the previously employed 2-stage debouncing method, and should be used for signals requiring the fastest response (typically Remote-ports, Speed-detector, etc)

- 2) **Oildynamic NGV-A3:** Start/Delta operation corrected

- 3) **Loading Mode:** new option added such that pressing the Door-Open button does not cause the loading timer to restart.

Menu: MISCEL-15 = 00000100 (do not restart Loading Timer after DO pressed)

- 4) **Loading Mode:** "Countdown" mode now overrides the Departure Arrows of the EAZ displays if this is currently being shown.

- 5) **FST Recordings:** can now be collected remotely using Elevision. Documentation describing the procedure will be made available.

- 6) **Manual-Door:** unwanted automatic car-door opening corrected for locked entrances, when a manual-door on the opposite unlocked side is opened.

- 7) **DRM conditions:** correction to prevent unwanted clearance of latched DRM conditions, when "transient" DRM's (eg, motor, drive etc.) are cleared automatically.

- 8) **Automatic Unpowered Evacuation:** now inhibited if Installation mode is activated.

Also, a currently active Automatic Unpowered Evacuation run, will be now correctly deactivated if the Auxiliary control is used.

- 9) **End Shaft Floor Blocking feature:** changed to react immediately if the floor blocking signal is activated once a drive has been initiated.

- 10) **UCM-A3 Test:** new option added to activate the Anti-Sink output during the UCM-A3 test.

Menu: MISCEL-15 = 00001000 (Anti-Sink output activated during UCM-A3 Test)

- 11) **Bucher-iValve:** the option to disable the UCM-A3 Drive Monitoring feature is now applied also to the iValve SMA monitoring feature.

- 12) **Encoder Belt Monitoring:** this feature is now operational in the FST-2XT.

- 13) **Shaft Headroom Monitoring:** new feature to provide a monitor for the reduced height inspection-area roller-switch. One contact from the roller switch should feed the new I/O Port:

I/O Port RAW = nnnn nnnn nnnn nnnn 0100 0101 1111 0010
nnnn..nnnn = distance (mm) from the top floor to the roller-switch

eg. roller switch is sited 1200mm underneath the top floor.

1200 = 04B0 (hex)

RAW = 04B045F2

14) **FST-2XTs Auto-Stop Evacuation mode:** the “stutter”-mode evacuation feature is now operating in the FST-2XTs.

FST-2XT V0117 18.12.2015

1) **Anti-Creep Monitoring:** prevent Monitoring error if menu Fault-Reset option is activated whilst driving.

2) **Relevelling Timeout:** now leads to a DRM-RELEV.TIMEOUT error for Rope lifts. Previously a non-blocking RELEVING ABORT error would result, but now this condition is handled similarly for Hydraulic and Rope lifts. The timeout period is now shortened to 40sec.

3) **Door Forced-Closure (Nudging):** a forced closure is now invoked for all conditions when the doors need to be closed with the photocell disabled: ie Fire-Recall, Inspection and Auxiliary.

During Forced-Closure, the FSM relays K1 and K5 will energize, and can be used to select a slower door profile on the door-controller. A FSM2 Update V34 is required for this.

During Forced Closure, the FPM-2 will output a beep-beep-beep acoustic warning tone. A FPM2 Update V19 is required for this.

4) **Car Ventilator Switch:** On the FPM-2 the car ventilator switch input X1.14 is now bi-directional and can be used to drive a lamp showing the activated status of the ventilator.

5) Operating System: **New Boot Screens and driver changes for better SD Card handling**

FST-2XT V0116 08.12.2015

1) **Guide Apps:** new Guide App added:- Positioning, Door Status, Weight Sensor, Safety Circuit, Drive Curve and I/O Ports.

2) **Quick-start:** a quick-start is no longer performed if the door is closed at the time the drive start is initiated.

3) **LON-Byte Editor:** support for CUS-8U added. Also ADM-F now includes access to all 49 configuration bytes.

4) **Drive- DCP04/Hydraulic (Giehl):** special handling for stop upwards implemented.

5) **Re-leveling:** prevent overload condition occurring once re-leveling has started.

6) **LON-Interface:** improve reaction to heavy traffic loading.

7) **Line-3 Info “LON Pkts/s”:** values now shown corrected.

8) **Anti-Creep Monitoring:** correct problem when Auxiliary turned off/on in quick succession. Also prevent incorrect detection during power-up.

9) **UCM-A3:** new option added to allow disabling of the over-speed detection component. May be needed in case of excessive rope slack in lower floors.

Menu: \Positioning\Global\Miscel-D1 = 00000001 (**UCM-A3 speed detector disabled**)

10) **I/O Port, EAZ output:** option to observe group offset value in output signal

Menu: Port RAW = +00008000 eg. Gray code, EAZ-bit-1, with group offset = 00008934

11) **Error “DRM-Emerg. Limit Sw”:** changed to remain set throughout a power-failure.

12) **SAM options menu “Special Drive”**: the existing “Special Drive” switch now includes the Landing Priority messages as well as those of Car-Priority:

13) **I/O Port Signal- Fire-Recall Complete**: new floor-qualifier option added. Output will only activate when lift reaches specified floor.

14) **I/O Port Signal Fire-Recall-Completed**: new floor-qualifier option added. Output only when lift completes fire-recall in specified floor.

Menu: Port RAW = +00nn0000, where “nn” = 0Fff ffff

F = use floor qualifier

ffff = specified floor

eg.

without floor qualifier option: 00002284 (output when recall completes regardless of floor)

with floor qualifier option: 00412284 (output only if lift completes recall in floor-1)

15) **French Language**: correct some menu irregularities present since S/W V0112

16) **Menu- Car-Operate-Panel \ Open = A+B** : is automatically disabled during fireman service operation (since S/W V0113). Option added to override this:

Menu: MISCEL-15 = 0000001 (door open coupling also enabled during fireman service)

17) **Event- “Fireman Mode-OFF”**: suppress the generation of this error list event following a FST reset.

18) **Door Bypass Monitoring**: special customer specific option added for external “K14a” monitoring.

Menu: MISCEL-15 = 0000010 (enable K14a Monitoring. MISCEL-14 00100000 must also be set)

19) **Overload and Manual-Doors**: In an overload condition, prevent car from driving away from the floor.

20) **Headroom Monitor** : new input I/O Port to continuously test the correct physical position of the roller switch used to mark the start of reduced shaft headroom area.

Menu: Port RAW = dddd dddd dddd dddd 0100 0101 1111 001x

dddddddddddd = Reference distance between the roller switch and the top floor level position (mm).

eg. roller switch is sited 1000mm underneath the top floor.

1000 = 03E8(hex)

Port RAW = 03E845F2

FST-2XT V0115 09.10.2015

1) **SD-Card Recording**: SD-Card handling issues corrected. Recording Disable option from V0114 (MISCEL-14 00000000) now CLEARED (recorder enabled).

2) **ESM wakeup**: Correct problem waking-up from energy-saving mode with a ZA-4C drive for sleep periods of 1min or longer.

3) **Menu Correction** \Configuration\Fireman Options\DO-allowed: YES/NO value showed inverted value- now corrected.

4) **Car Priority**: irregularity with door reversal action corrected.

5) **Anti-Creep**: additional functionality to Anti-Creep function added in V0106. Monitoring of feedback input

now extended to cover periods between and during drives.

6) **Loading Mode:** behavior in connection with Sluice Doors now improved to ensure user is given priority over new landing call requests, in order to complete a loading/drive/unloading sequence.

7) **Drive 4-Valve Hydr.+ASV:** when fine-pump (Switch-2 ON) is used with disabled ASV (car or motor-room switch), re-leveling would not function as required. Now corrected.

8) **FST-Information menu:** correct memory leak associated with this menu.

9) **Safety Circuit Bounce:** correct occasional lock-up condition when the door-lock safety circuit re-opens permanently within the safety-circuit de-bounce wait time.

10) **Fireman Operation:** whilst under dead-man door control, prevent the door opening completely, if a very short DO button press is enacted after the car first arrives in the floor.

11) **FST Loading Signal Inputs X1.17/X1.18:** if using a LCS weight sensor, the on board load inputs X1.17/18 are now disabled as default. They can be re-enable with the following switch:

Menu: MISCEL-14 = 00010000 (X1.17/X1.18 enabled)

11) **Doors\Doors-Basic Re-Try Time:** maximum menu value now extended from 4 to 20 seconds.

12) **EAZ-Type EAZ-TFT.45:**added

13) **Door Bypass Relay K20:** new monitoring option added. Detected failure results in a “**DRM-Door Bypass**” Error #72. Monitoring is turned off as default.

Menu: MISCEL-14 = 00100000 (Door Bypass Bridging Detection = DISABLED)

14) **GWG Interface:** added GWG serial interface to MS-Digifon MSD4104

15) **Overload condition:** correct occasional incorrect overload condition.

FST-2XT V0114 07.08.2015

1) **SD-Card Recording Disable option:** added to prevent the automatic daily recording restart from activating. This option now SET as default (recorder disabled).

Menu: MISCEL-14 = 10000000 (disable SD-Card recorder)

FST-2XT V0113 23.06.2015

1) **I/O Port output for FST V3.1 Boards:** I/O Ports used as outputs on the original first release FST-2XT V3.1 boards, will not be performing correctly since V0109. Now corrected. Later issue boards are not affected.

2) **Fireman Standard - Hannover:** dead-man door control operation corrected.

FST-2XT V0112 16.06.2015

1) **Automatic unpowered evacuation drive:** post Evacuation door status now corrected.

2) **Anti-creep control:** correction to the recently introduced Anti-Creep control , including disablement during a UCM-A3 test.

3) **SAM control:** new option allows SAM speech output only when a disabled (when activated by persons with a physical disability) call has been placed.

Menu: \Configuration\Speech Output\SAM-Module\Disabled Mode=YES/NO

4) **MA35 (TÜV Austria):** drives generated by the FST for the MA35 operation will now work with locked floors.

5) **Bed-Lift Mode:** new Car-Priority mode added, typically for use with Hospital-Bed transport. The **Landing Prio, Prog\Auto2 Mode** must be in set. When the lift arrives with Landing Priority in the calling floor, the door opens, and lift automatically assumes Car-Priority Status (standard operation). Using the new **Bed-Lift time** (secs) parameter, even after a car call is entered, the doors will remain open until either:

- the *bed-lift timer expires*, or
- the *door-close* button is pressed.

If the *door-open* button is pressed, the bed-lift timer will be re-started.

Menu: \Configuration\Prio-Landing/Car\Bed-Lift Time (0-255 secs, 0=no function)

Note: using **\Doors\Doors-Basic\Prio-DC**, the same door blocking effect during Car-Priority mode is achieved, but the doors will remain open *endlessly* until the door-close button is pressed.

6) **UCM-A3:** Delay now added between the car arriving in a floor, and the enabling of the UCM detection. Prevents false UCM triggering when an unexpected stop occurs within the door zone.
Also, short delay added between start of UCM-A3 Test start, and the activation of the I/O Port output used to open the Safety Circuit.
Also, an Emergency Stop condition occurring as a result of the UCM-A3 test will no longer hide the UCM-A3 Failure status.

7) **ASV – Thyssen-MFC:** Problem encountered when using the Giehl-Hydraulic Levelling device option, the RIO-2 outputs do not always switch as required. Now corrected.

8) **Super-Priority Mode:** a new operating mode (Remote Super-Prio) added to allow the Super-Priority mode to be switched dynamically from the remote sources, such as GST, I/O Port etc. This is functionally similar to the **MISCEL-13 00100000** option for the standard Super-Prio operation. Both mode operates without timeout, the remote source controlling this mode must switch super-prio ON *and* OFF.

Also, a new special user-string for notification of the Remote Super-Prio mode on the EAZ displays, is now available:

Menu: \Configuration\Prio-Landing/Car\SuperPrio-Text2 (20 characters)

Menu: \Configuration\Prio-Landing/Car\SuperPrio-Control has new options to control this text output:

SuperPrio-Control = xx6543210

- | | |
|--------------------------------------------|-------------------------|
| 0 = SuperPrio Text Enabled | (unchanged from before) |
| 1 = SuperPrio Text Large Text | (unchanged from before) |
| 2 = SuperPrio Text Show on Car EAZ | (unchanged from before) |
| 3 = SuperPrio Text2 Enabled | (new) |
| 4 = SuperPrio Text2 Large Text | (new) |
| 5 = SuperPrio Text2 Show on Car EAZ | (new) |

9) **Language-Czech**: menu language added.

10) **I/O Port "Special-Drive"**: locked-floor *override* option now corrected to work with selectively locked doors (previously this work with through-doors only).

11) **FST Recording**: LON-Message "PH_NORM_EXT" now moved from the standard "Detail" filter to the RIO-traffic filter, to prevent excessive recording file sizes.

12) **Fireman Standard- SIA (Switzerland)**: new option added to allow a fireman's drive into the top floor (normally blocked).

Menu: MISCEL-14 = 00000100 (SIA fireman mode: allow drives to top floor)

13) **"Search LON Modules"** :occasionally returned an empty module at the start of the displayed **Show LON Modules** list. Now corrected.

14) **Bucher Orien-Alpha**: new option added to reduce (half) all drive speeds during evacuation mode. This is done by activating the K8 VST Relay.

Menu: \Drive\Special Parameters\Switch-5 = ON (Half speed during evacuation)

15) **Lift-Off**: "Hard"/"Soft" mode option is now changed as follows:

- "Hard" – unchanged in functionality
- "Soft" – now *always* allows drives to all set car calls to continue, before generating the Lift-Off condition. New car calls are not possible during this time.

The Lift-Off I/O Port is now changed to allow mode control:

I/O Port RAW = xxxx xxxx xxxx xxxx xxxx xxHM 0001 1010

M = 0: Hard/Soft mode taken from menu: **\Configuration\Lift-Off\Lift-Off Program**

1: Hard/Soft mode taken from "H" bit in I/O Port RAW

H = 0: Soft

1: Hard

Note:

-Lift-Off sourced from X1.13, Car-Light Off input, Hard/Soft is determined by the menu setting.

-Lift-Off sourced from a car-light error, Hard/Soft is determined by the menu setting.

-Lift-Off source remotely (GST or Elevision), Hard/Soft is determined by the remote unit.

Also, the car light was not turned off after the Lift-Off operation had completed. Now corrected.

16) **DBahn UGW**: current Software version status added

17) **FST Reset from Elevision** : new remote control option to invoke a full (Operating System) restart of the FST.

18) **Fireman Standard - Hannover**: new fire standard added:

Menu: \Configuration\Fireman Options\Fire Standard = Hannover

- 19) **Through Doors:** correct unreliable re-closure of both doors, following use of the door-open button to re-open the doors in preparation of a drive. This effect would only happen if the FST menu (rather than the standard real-time display) was being displayed. Now corrected.
- 20) **Car Light Monitoring:** car light failure detection is now subject to a 2.5 sec filter, to prevent occasional erroneous car-light failure reporting.

FST-2XT V0111 31.03.2015

- 1) **Calibration/Learn Drive:** ensure that doors set with normally open status, close reliably at start of Learn or Calibration drives.
- 2) **FST S/W Update procedure:** prevent watchdog timer preventing complete FST Software Update.
- 3) **Drive Start Monitoring:** In the case that drive start monitoring is disabled (**\Drive\Start Monitoring = 0 sec**), ensure that a start failure resulting in less than 2mm of car movement, will result in a Drive Monitoring failure.
- 4) **Menu access, password levels:** detail changes in the menu levels hierarchy.
- 5) **Car Calls – Security swipe cards:** new option to improve reaction times with “slow” swipe card reader units. If the card reader unit is slow to operate its contact in response to a card swipe, the user may be quicker in pressing the floor button. To improve the chances of “mating” the button press with the card reader activation, the button release event can be used internally by the FST to provide a simulated 2nd press event, thus giving a further delayed opportunity to catch the floor enable condition invoked by the card reader. This option effectively generates 2 car calls for each car button activation, but should normally not cause any unwanted side-effects.

Menu: MISCEL-14 = 0000010 (Car-Calls: use both Press and Release events)

- 6) **Russian Gost (ex Pubel) mode:** “Anti-Surf” open shaft door warning, floor number received from special ADM now subject to group offset.
- 7) **Automatic unpowered evacuation drive:** detail changes

FST-2XT V0110 12.03.2015

- 1) **DBahn UGW:** car light status added

2) **Penthouse Mode:** conflict between simultaneous activation of a Penthouse Drive with a Car or Landing Priority Call now correctly handled. Additionally, a flashing 'A' is shown on Line-4 if any Penthouse Calls are registered.

3) **Orientation Drive:** new option added to force a downwards Orientation Drive, if the KU switch is not active.

Menu: \Positioning\Incrim.Positng\Control = 1xxxxxx

4) **Pawl Drive Types: 4-Ventil Hydr + ASV / ASV DCP03:** correct problem when a very small **seating zone** value is used, and the car is outside of this zone.

5) **DRM-Door:** ensure that Inspection or Auxillary activation completely clear this failure type.

6) **Light Curtain:** LCD Line-2 display now shows status correctly in English.

7) **Wittur Hi-Pump:** control for Down Shut-Off Valve K11 added.

8) **Automatic Unpowered Evacuation Drive:** complete rework, and new menu controls added.

Menu: \Configuration\Evacuation (new sub-menu)

Menu: \Configuration\Evacuation\Start Delay (0..255sec) for use with all evacuation drives

Menu: \Configuration\Evacuation\Autom.Unpowered\Zone (0..255mm)

Menu: \Configuration\Evacuation\ Autom.Unpowered\Speed Max. (0..500mm/s)

Menu: \Configuration\Evacuation\ Autom.Unpowered\Speed Limit (0..700mm/s)

Menu: \Configuration\Evacuation\ Autom.Unpowered\Time Limit (0..999sec)

9) **Penthouse Mode:** all Penthouse ADM acknowledge lamps now cleared in case of FST exception or error.

10) **Pseudo Calls:** prevent acceptance of multiple Pseudo Calls (via I/O Port or CUS application)

11) **Keyboard Locking:** keyboard no longer locked if menu is active

12) **Menu: Group Offset:** limit parameter to positive values

13) **Drive Type: ASV-MFC:** correct Pawl Retraction/Extension monitoring

14) **Drive Type: Dietz-5445:** Slow Intermediate speed V1 control added

15) **Drive Type: DCP04-Hydraulic:** new VVVF control option for basic unregulated hydraulic blocks

16) **new SIGNAL Output "Door Locked":** output will activate if any door is locked. The source of *the door locking can be specified

Menu: Port RAW 0000 0000 0000 0EDM 0111 0000 1000 010x

E = 1, door(s) has been locked via I/O Port (00001EF2)

D = 1, door(s) has been locked via the Drive Processor (eg ASV control)

M = 1, door(s) has been locked via the FST Test Menu

examples:

00007084 : output if any door has been locked for any reason

00017084 : output if any door has been locked via I/O Port

00067084 : output if any door has been locked via Drive or Test-Menu

17) **FST LCD Screen:** issue with screen clearance fixed

18) **Serial-Port Baud Rate adjustable:**

Menu: \System\Factory-Menu\Settings\Ser. X9 Baud=(4800,9600,19200,38400,57600,115200)

19) **FST IP and BACnet Protocol:** both IP and BACnet protocol on the Ethernet Port can now be used when

enabled with the **IPK** (Internet Protocol Key) LON Module.

20) **Recording**: new cached buffering mechanism employed to fix issue of unwanted recording stoppages on latest generation SD Cards

21) **ESM Mode**: prevent problem when ESM is enabled, the ESM start/stop timers are in range of the current time-of-day, and the car light is occasionally subject to a unwanted short off/on cycle even though the lift is in use.

FST-2XT V0109 18.12.2014

1) **FST-2XTs**: official software release for new controller. Both FST-2XT and FST-2XTs now share the same software.

2) **Menu Security Levels**: overhauled.

3) **Door Open Button**: dead-man operation during Inspection mode, now corrected to prevent door opening further after DO button has been released.

4) **FST "Emergency Mode"**: changes to suppress the recording in Emergency Mode, and prevent the FST from hanging during a warm-start when in Emergency Mode.

5) **DCP03**: control added for situation where the Brake Monitoring Contacts are not monitored by the Inverter. This modification is needed for the DCP drive-stop handling changes made in S/W V0106.
Menu: Drive\Special Parameters\Switch-4 = ON

6) **DCP03**: Interface for Magnetek drives added

7) **Drive NGV**: Fine-Up Pump option for re-levelling added. Uses K9 VST relay.
Menu: Drive\Special Parameters\Switch-2 = ON

FST-2XT V0108 03.12.2014

1) **UCM-A3**: prevent further DRM fault detection after initial A3-Detection (UCM or Drive) has occurred.

2) **UCM-A3**: detection software now uses the Hardware Zone input instead of the virtual Software Zone.

3) **DCP03**: allows use of the DCP speed threshold status (bit S4) to replace the relay K360.

4) **Drive control**: correct the following drive control details that were wrongly handled since S/W V0106:
Giehl 4-Valve with Switch-2 Option (Fine Down Pump): problem- K11 doesn't energize
Giehl-AZFR: problem-K11 doesn't energize
DCP03: problem-pre-start weighing option will not work

5) **Brake Tests**: improved test monitoring

FST-2XT V0107 03.11.2014

- 1) **UCM-A3 Test:** removed delayed keyboard blocking after end of A3 test.
 - 2) **UCM-A3 Test:** fixed problem with A3 test when doors are set to remain open (effect since SW V0106)
 - 3) **Bucher iValve VVVF option added:** inverter operation with Bucher hydraulic iValve system now possible with:
Menu: Drive\Special Parameters\Switch-1 = ON
 - 4) **Folding-Skirt:** in conjunction with Incremental Positioning. Correct the situation when an extended skirt prevents an Orientation Drive from starting.
- 5) Safeline GSM Modem: **support for the Safeline SL6 GSM added.**

FST-2XT V0106 03.11.2014

1) new Anti-Creep option added. This is intended to replaced the previously used anti-drop circuit which used the I/O Ports xxxx2984(o/p) and xxxxxxC2 or xxxxxxC3(i/p), and was centred on the door-cam timing. This option will continue to operate with the new software.

The new Anti-Creep concept will always activate an output, and wait for in input feedback before starting the drive, and is tied to the FST central drive timing.

new menu options:

\Drive\Anti-Creep\Enable = YES / NO (NO = output port will not be activated)

\Drive\Anti-Creep\on releveling = YES / NO (NO = no output activation during re-leveling)

\Drive\Anti-Creep\Max.wait time = 0..4000mS (0 = no monitoring)

\Drive\Anti-Creep\Off delay = 0..4000mS

new I/O Port – output = **00006F84**

new I/O Port – input = **000043F2 (NO) or 000043F3 (NC)**

new Error = **No.71 DRM_ANTI-CREEP MON.**

2) DCP03: improvements to drive control over the DCP bus:

- during stopping, the FST will now follow the inverter's drive-ON and brake-ON status, to allow tighter timing during the stop. The FST's **\Drive\Brake-Delay** time can now be drastically shortened. This time need now only be long enough to allow the brake to mechanically close before the inverter's drive-enable signal is withdrawn, without causing roll-back. A time of 100-200mS should be sufficient.

- error messages sent from the inverter. The first 8 characters of the error text will now appear in the FST error list. This will now allow the error messages from Ziehl-Abegg and Control Technique drives to be correctly identified.

3) FST menu LON byte-editor (**\Configuration\LON-Configuration>Show LON Modules**) now supports the ADM-F module.

4) USB / SD card insertion/removal: issues concerning occasional unreliable device mounting resolved.

5) Loading Mode : special door operating modes "**Sequence**" and "**Order..**" (allow only one door to be open at any one time) can now be used with the FST's Loading-Mode.

6) RIO module reaction times: output signals on remote RIO modules will now change state faster, the RIO output messages are now sent on an event-based logic. Additionally, the base RIO message timing has now

been increased to provide a 100% improvement for the input signal reaction time.

7) The safety-circuit monitoring error "**OPEN DOOR LOCK**" now reacts faster for detection and reporting of shorter breaks. The first error information byte:

```
ERROR [00151/00152]
02.11 10:02:13 [009]
OPEN DOOR LOCK
Floor:10 V40 R24 I00 (press down key)
```

```
ERROR [00151/00152]
02.11 10:02:13 [009]
OPEN DOOR LOCK
5F 00 00 00 00 00 00
```

"5F" now represents all 8-safety circuit signals in hex.
For each bit, a "1" means the signal is present (230V applied).

Bit-7 (SKZU)	Safety Circuit Closed	(left most bit)
Bit-6 (SPB)	Door-lock-B	
Bit-5 (SPA)	Door-lock-A	
Bit-4 (TKA)	Door contact-A	
Bit-3 (TKB)	Door-contact-B	
Bit-2 (TKC)	Door-contact-C	
Bit-1 (NH)	Emergency Stop Shaft	
Bit-0 (FKNH)	Emergency Stop Car	(right most bit)

8) Car Priority: If the car-priority key-switch is activated whilst the door is already closing, with no drive command currently set, currently the doors would continue to close and then only re-open once they were fully closed. The operation is now changed to force the door to reverse as soon as the key-switch is activated.

FST-2XT V0105 20.10.2014

- 1) A3-Actuator Test: bug from S/W V0102 corrected , whereby the Actuator test would continue to run after the allocated 10 test drives had completed.
- 2) Inspection / Auxiliary modes: ensure that doors are set to Stop after all drives whilst on inspection or auxiliary.
- 3) "Door-Close-Error": Improved reaction of the FST to a detected door-close error; the FSM is no longer reset, which under certain circumstances can cause further problems.
- 4) FST "4-finger-reset": prevent black screen lockup which can occur following a 4-finger (white-keys) reset.
- 5) Guide area Emergency Status Monitor: prevent spontaneous FST Resets that have been seen to occur when the Emergency Status Monitor is being displayed.

FST-2XT V0104 02.10.2010

FST-2XT V0103 11.09.2014

1) BACnet: event notification mechanism for BACnet objects added.

FST-2XT V0102 19.08.2014

1) DRM-DRIVE FAILURE for Hydraulic lifts: will no longer attempt to home back to bottom floor until error condition subsides.

2) DRV-MOTOR FAILURE for Hydraulic lifts: at the start of an overheat condition, the bottom floor homing will no longer be executed immediately, but when the regular homing time expires. Under normal circumstances, this should allow enough time for the oil temperature to cool before the next drive is required.

3) UCM-A3 Test Drive: Prevent occasional reluctance of test drive to start.

4) UCM-A3 Test Drive: The UCM speed detector is now automatically disabled during the test drive, the UCM detection trigger will occur when the car drives beyond the door zone. This should prevent unwanted discussions with safety inspectors!

5) DCP03: Extended status flags for Drive and Motor overheating are now observed (required for CT-Drives).

Also corrected for DCP03, an effect in conjunction with Ziehl Abegg drives, if an overheat condition existed before the FST was started, the FST would report a DRM-BRAKE failure instead.

Also added for DCP03: the drive's collective fault status is now collected over the DCP bus, preventing the need for a wired fault signal input on the FST X1.21

FST-2XT V0101 06.08.2014

1) new I/O Output Port: ADM-Acknowledgment. This port mirrors the landing acknowledgement status for 1 specified landing call button. Note. ON, OFF only, this port does not blink during landing.

Menu: Port RAW = 0000 00DD ddFF FFFF 0110 1110 1000 010x

FFFFFF = call-floor 0..63

dd = call-door 0=A 1=B 2=C

DD = call-direction 0=Down 1=Up

2) Recording Export: to help when exporting from multiple FSTs onto one stick or card. Separate folders are now generated on the stick or card automatically with names to uniquely describe each of the parent FSTs.

3) Inspection Drive Locking-Position assistant added: allows the car to be stopped automatically and accurately during an upwards inspection drive into the top floor. After stopping, the inspection drive can be continued upwards until the top inspection limit is reached.

Menu: \Positioning\Global\Lock Position (0..5000mm 0=no function)

4) Hydraulic lifts: handling for over-heat condition (DRM-MOTOR). Currently, as standard, all Hydraulic lifts will be stopped immediately during a DRM-MOTOR detection (Rope lifts are allowed to continue the drive into the next floor). This can cause problems with Rope/Hydro lifts which can experience harsh stops leading to blocking "Slack Rope" failures (Emergency Stop). A new Supervisor option is now available to allow the hydraulic lift to continue onto the next floor, after which the DRM-MOTOR condition will block further driving.

Menu: MISCEL-14 = 00000001 (Hydraulic lift continues to next floor during LSU-MOTOR)

FST-2XT V0100 31.07.2014

1) Correction to configuration file sent automatically to Elevison. Prevents occasional difficulties when downloading this file.

2) CT drive parallel I/F: alternate customer-specific speed look-up-table added. Offers 4 main driving speeds.

Menu : \Antrieb\Sonder-Parameter\Schalter-2 = EIN

new binary code/Speed table:

B2	B1	B0	
0	0	0	off
0	0	1	Vn (relevelling,Auxillary)
0	1	0	Ve
0	1	1	Vi (slow-inspection)
1	0	0	V2 (slow-intermediate)
1	0	1	V3 (intermediate + fast-inspection)
1	1	0	V4 (fast-intermediate)
1	1	1	Vmax

3) Secure Landing Priority Calls: modifications made for handling the time between the activation of the secure-prio switch and waiting for the car to become "empty".

a) new option added to allow new car-calls to be entered during this time. Normally new car calls cannot be entered during this time.

Menu: MISCEL-13 = 10000000 (Secure-Prio, wait for car-empty conditions: car calls allowed)

b) for the case where the car is in, or arrives in the home floor, but doesn't yet conform to the empty conditions (door closed, direction, call-status, optionally-loading), the car will now assume the Landing-Prio condition without having to observe these conditions.

4) Guide text added to Keypad-over-IP function

5) Fire recall I/O Ports. maximum number increased from 16 to 32 .

6) Recording facility: improved filtering to help prevent clogging with unwanted background events.

7) Drive direction service counter: prevent double counting due to sometimes inevitable rollback when crash-stopping at end of inspection or Auxillary drives.

8) Simulated Drive Type (**Drive-Type=Simulated**): new option for 8 main drive speeds (V1..V8). User specifies V1 and V8, V2..V7 are interpolated evenly between these 2 values automatically.

Menu: Drive\Special Parameter\Switch-1=EIN (8-Speed Simulation)

Menu: Drive\Special Parameter\Time-1=Ve speed (crawl speed mm/s)

Menu: Drive\Special Parameter\Time-2=V1 speed (slowest main speed mm/s)

Menu: Drive\Special Parameter\Time-3=V8 speed (fastest main speed mm/s)

Menu: Drive\Special Parameter\Time-4=Acceleration (mm/s²)

Menu: Drive\Special Parameter\Time-4=Deceleration (mm/s²)

FST-2XT V0099 13.06.2014

1) Fire-Recall ("CERN") (V0096 Mod 9) corrected

2) EAZ-TFT "Scrolling-arrows" (V0069 Mod 7) further optimisations

3) Evacuation: problem with selective door control (the choice of door is made using bits within the Evac. I/O Port) now corrected; only the chosen door will now open

4) Loading Function "Countdown" indicator: (V0095 Mod 6): corrections for times>99min

5) Evacuation Brake-Stutter mode: prevent DRM-Drive Error from blocking the Brake-Stutter Mode

6) Adjustable baud rate now available for X9 Serial Port

Menu : \System\Factory-Menu\Settings\Ser. X9 Baud=4800/9600/19200/38400/57600/115200

Note: this is for special interfaces only, if the standard value of 38400 is not used, the FST PC programs (Editor, EleVision, LonModuleCenter etc. may not function correctly)

7) Releveling Monitor: new option allows a maximum of 10 Releveling operations inside the allocated time. If this is exceeded, the lift is driven to the top floor and put out of operation with the error: **DRM RELEVEL.MONITOR** (#70)

Menu : \Drive\Releveling Mon. (0..255 min 0=no function)

8) Hydraulic-Clamping: I/P Port to disable the clamping operation added: uses the same Port Program as Pawl-Inhibit (RAW=000026F2)

9) Power-Fail call-status restore facility added. Using this new menu parameter, which describes the maximum time between power loss and complete controller restart, all previously set car and landing calls (including acknowledgement lamps) will be automatically restored.

Menu : \Calls\Power Fail Restore (0..255 sec 0=no function)

10) Missed-Target Error: now considers both Real and Software door zone status.

11) Emergency Status Monitor option for FST Guide LCD area added.

Menu : \System\Guide Settings\NBM Display (YES/NO)

FST-2XT V0098 06.08.2014

1) BAC-Net: Device ID made configurable. Default Device ID is 1000

2) Menu recording file export: date-year now shown in full (ie "2014" instead of "14")

FST-2XT V0097 08.05.2014

1) Re-levelling: prevent problem caused by extremely short Emergency-Stop Safety-circuit opening occurring during re-levelling.

FST-2XT V0096 30.04.2014

1) Folding Skirt (KSS): Prevent use of recovery-drive activation via FST-Menu calls, which will cause mal-functioning. After the skirt has dropped, the recovery drive can only be activated using either a car or a landing call.

2) Inspection end-switch Monitoring: New function added for Shaft-Top or Bottom switches. The function is set to operate by using one or two of the new input I/O Port:

Menu: Port RAW = 0000 0000 0000 000T 0100 0010 1111 001x

T=0 tests input for activation in Bottom floor

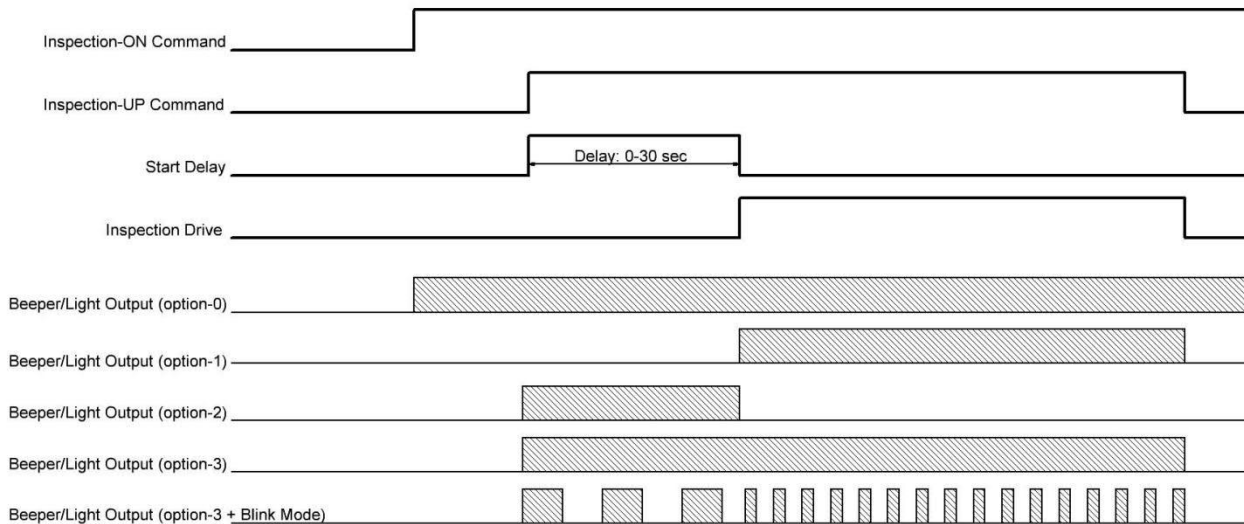
T=1 tests input for activation in Top floor

eg. for Top endswitch: I/O Port = 000142F2
for Bottom endswitch: I/O Port = 000042F2

Menu: ERROR: "DRM INSP.ENDSCHALTER" (#69)

3) Inspection Start-Delay Option: new feature allows a programmable time to expire between the user activating a inspection drive and the actual drive. This facility is available separately for Up and DOWN

direction. A new Output Port is available for optical/acoustic signalling.



Menu: \ Configuration \ Inspection \ Start Delay Up = 0..30 (sec)

Menu: \ Configuration \ Inspection \ Start Delay Dn = 0..30 (sec)

The output port for lamp or beeper usage, reacts to both UP or DOWN delay periods.

Menu: Port RAW 0000 0000 000B 00nn 0110 1101 1000 010x

nn = 00 : Option-0, output if Inspection Mode is turned ON

nn = 01 : Option-1, output during DRIVE period

nn = 10 : Option-2, output during DELAY period

nn = 11 : Option-3, output during DELAY and DRIVE periods

B = 1 : Blink mode DELAY and /or DRIVE periods pulsed (see sketch)

eg. Output Port, Option-3 + Blinking = 00136D84

4) Menu: new language added - PORTUGUESE

Menu: \ System \ Language = Português

NB: Guide and Help texts are in English, as currently with all non-German languages

5) Pre-Close control for Door: menu option added to allow the pre-close timer to be cancelled by pressing the Door-Close button

Menu: \ Doors \ Doors-Basic \ PreClose Delay = x.x (sec) (unchanged)

Menu: \ Doors \ Doors-Basic \ PreClose O/P = YES/NO (menu text change)

Menu: \ Doors \ Doors-Basic \ PreClos.DC=OFF= YES/NO (new menu option)

Note: This requires a FSM software update:

FSM-2 (Ver-1 Hardware, 3120 Neuron) V30 Prog-ID=FSM02130

FSM-2 (Ver-2 Hardware, 5000 Neuron) V31 Prog-ID=FSM02231

5) Regler: ZA+ASV

- now works correctly with ASV-Inhibit I/O Port (before, with ASV-Inhibit activated, the FST will always make a short raise and sink drive after arriving in the floor, and remain in ASV mode.

- Relevelling is now allowed

6) End-Shaft Floor-Blocking (V0575 mod 2) now changed to allow 2 independent signals for the same floor-block to be used:

Menu item added : Port RAW = 0000 0000 dcba DCBA 0100 0001 1111 001x

A=block bottom floor #1(00)

B=block second floor #1(01)

C=block top-1 floor #1(KO-1)

D=block top floor #1(KO)

a=block bottom floor #2(00)

b=block second floor #2(01)

c=block top-1 floor #2(KO-1)

d=block top floor #2(KO)

7) Scrolling Arrow option for TFT: improved "dynamics" effect to ensure arrows always stop scrolling in the floor just before landing,

8) "Busy" output for ADM3. Now shows correct status for both Non-Collective and Single-Call Modes

9) Fire-Recall ("CERN"): (refer to V0090 mod2). Selective EAZ text (fixed, for latched & non-latched modes) now output in place of standard Fire-Recall text.

10) Info-Menu: Info. Menu (SHIFT+ENTER) does not display GST information if GST is disconnected or disabled over I/O ports.

11) LON Database: fixed problem where the LON-Database ("Show-LON-Modules") would show "NO-MODULES" sometimes following a FST reset.

12) FST crash with active Guide Event list: Problem fixed of FST crashing when Event list is active.

13) GST Menu access: GST menu is now accessible even if "GST-Enable" parameter is configured as NO.

FST-2XT V0095 14.04.2014

1) Direction Change Counter for plastic sheathed ropes: operation and menu controls changed:

Menu:

\ Service \ Service-Counters \ Change in dirs \ DC.Total = nnnnnnn

\ Service \ Service-Counters \ Change in dirs \ DC.Rope = nnnnnnn

\ Service \ Service-Counters \ Change in dirs \ Remaining = nnnnnnn

\ Service \ Service-Counters \ Change in dirs \ Interval = nnnnnnn

\ System \ Factory-Menu \ Hidden-Menus \ DCC. Allow Clr/Set

2) new End-Shaft Floor-Locking feature triggered from I/O Port to prevent drives to top or bottom 2-floors under any circumstances. Designed to be used with car safety rails, pit-safety devices etc.

Menu: Port RAW = 0000 0000 0000 TtbB 0100 0001 1111 001x (Hex 000n41F2)

for each of the following bits, a '1' marks the floor to be locked:

B=floor-0 (bottom floor)

b=floor-1 (first floor)

t=KO-1 (penultimate floor)

T=KO (top floor)

3) SWM mode: new Lift-Off option added. Allows latched Lift-Off from Remote or Local stations. A new SIGNAL output is available to give the remote station feedback status of its remote Lift-Off command.

Menu: Port RAW = (Hex) 00006C84

4) ADM-3: new Soft-Output to signal Non-Collective control, "Car-Busy"

Menu: \ Config \ Hall Stations \ Special Display-0 = 10

5) Loading Function: changed to prevent DO button activation re-starting the Loading-Function Timer.

6) Loading Function: new countdown display added for use with NEW EAZ displays. After the Loading Function has been activated, the EAZ floor text is replaced with:

"2h", "1h" to show hours left,

"59", "58".. "9m", "8m"..to show minutes left,

"59", "58".. "9s", "8s"..to show seconds left.

In the status bar (or lower display half for dot-matrix EAZ-256 modules), "Car Being Loaded" is displayed.

Menu: \ Config \ Special Functions \ Loading Function \ Load Sw. Disp=13

7) ESM (Energy Saving Mode): ensure correct immediate wakeup in case of Inspection or Auxillary activation.

8) ESM : I/O Port program for forced ESM control extended with ESM-Inhibit function:

Menu: Port RAW = 0000 0000 0000 000P 0010 1110 1111 001x (Hex 000n2EF2)

Force ESM-Sleep (override sleep timer) **P=0** (Port RAW Hex=00002EF2)

Inhibit ESM-Sleep (suppress sleep timer) **P=1** (Port RAW Hex=00012EF2)

9) Pseudo-Floor Parking: new "Random" Pseudo-floor option.

Uses all 8 Pseudo Floors which are randomly selected each time a park drive is activated. The floor positions are designed to ensure that in each of the 8 inter-floor positions, the guide rollers will be in a different position, so helping to prevent flat spots forming on the wheels.

Menu: MISCEL-13 = 01000000 (Random floor Pseudo-Floor Parking)

To use:

-must define all 8 pseudo floors

-any 2 pseudo-floors must be >50mm from each other (51 is ok!).

-all 8 pseudo-floors should be sited >50mm from all regular floors

- set **MISC-3 to 00000100** (Pseudo-Floor Parking)
- set **MISC-13 to 01000000** ("Random" Pseudo-Floor Parking)

FST-2XT V0094 13.03.2014

- 1) Super-Prio: correction made to prevent hanging Innen-Prio status after Super-Prio is invoked externally (via ADM) when not using pre-opening doors.
- 2) Priority Calls "Infinite wait time" mod. FST V0090 now accessible using a MISCEL switch instead of "Landing Prio. Time = "999".

Menu: System \ Factory-Menu \ Settings \ Miscel-13 = 00100000

(Landing Wait time = infinite)

- 3) Destino Group: Landing-Calls-Off mode now enables the COP automatically (along with Fireman-Service and Car-Priority)
- 4) LON-Byte Editor: support for EAZ TFT-110 added

FST-2XT V0093 27.02.2014

- 1) Changes to meet BACnet conformance test to std. BACnet 135-2012

FST-2XT V0092 21.02.2014

- 1) French Language correction for EAZ "Loading-Mode" output

FST-2XT V0091 31.01.2014

- 1) Quickstart (DCP03): prevent crash-stop 2 seconds after start if a short-floor target is entered immediately before the final drive command for a long-floor target is issued.
- 2) UCM-A3: option to allow Inspection/Rückholung drives after a UCM-A3 / A3-Antrieb detection: (drives prevented since FST V0090)

Menu: System \ Factory-Menu \ Settings \ Miscel-13 = 00001000

(allow Inspection/Rückholung in DRM-UCM-A3 status)

3) EAZ-TFT Door Status:

- prevent Stopped-Door Status being shown in the Open/Opening display.
- provide menu option to limit display to show door-blocked state only

Menu: System \ Factory-Menu \ Settings \ Miscel-13 = 00010000

(only show doors status if doors are blocked)

4) BACnet conformity changes

5) LON Edit Menu: RIO133xx modules now also included

FST-2XT V0090 28.01.2014

1) USB Stick: problem caused by FST not recognising USB-Stick when re-inserting for second time solved.

2) Fire-recall service: special SIA mode for "Cern" added. This mode now differentiates between I/O Port signal (pulsed and latching Fire condition) and ADM signal (non-latching Fire condition).

Menu: System \ Factory-Menu \ Settings \ Miscel-13 = 00000010

3) Priority-calls: new option for the waiting time when a car arrives in the floor in response to a Landing or Super Priority call. Entering the special value of **Landing Prio. Time = "999"**, will result in the wait being extended to infinity!

4) Automatic Evacuation "Brake-Stutter" mode added- allows for gravity assisted roll into the nearest floor. Details for the usage and required hardware are available from NEW LIFT.

5) I/O Port: SIGNAL Port "Target Floor" (FST-2XT V0078) corrected

6) UCM-A3 Errors: the reaction following a UCM-A3 failure has now been changed. There will now be no homing drive to the bottom floor for hydraulic lifts, unless the following switch is set:

Menu: System \ Factory-Menu \ Settings \ Miscel-13 = 00000100

7) UCM-A3 Errors: now diring using Inspection or Auxillary following a UCM-A3 failure is disabled.

8) correction to French text for EAZ "loading mode"

9) new VIP-4 mode added. Allows the lift to be driven exclusively from LMS-Elevision

10) LON Byte Editor: now extended to allow the on-board configuration of all the newer FST LON Modules (eg ADM-3) and many often-used CUS modules.

11) Evacuation for drives with ASV (Pawls). Evacuation to specified floor is only allowed if the

pawls have completely retracted.

12) Drive Type: 4-Valve + ASV using the Giehl-AZFR. An evacuation drive using the K10 relay (downwards drive without inverter operation) can be set using:

Menu: Drive \ Special-Params \ Switch-5 = ON

(note when using the AZFR without ASV control, the K10 evacuation option is enabled with **Switch-2**, unchanged from before this version)

FST-2XT V0089 17.12.2013

1) new I/O Port: SIGNAL Output Port "Car Radar" added. Intended for use with Non-Collective landing call control, in conjunction with a car radar device used for "empty-car" detection. The signal will activate for as long as the car is not empty, and has no calls or direction set. This output would normally be used to drive another Door-Open input port, thereby ensuring the doors remain open for as long as the car remains not-empty.

Menu: Port RAW = 0000 0000 0000 0000 0110 1001 1000 010x (Hex 00006984)

2) new display option added for the NEW TFT displays – intended for display installed on the landings to show the current door activity status – opening/open, closing or blocked

Menu: System \ Factory-Menu \ Settings \ Miscel-12 = 10000000

3) Fire-recall I/O Port definition now includes the door-side.

Menu: Port RAW = 0000 0000 0000 0DRs dfff ffff 0001 001x

D: use door bits <dd>, otherwise standard menu parameter value used instead
dd: 0=door A, 1=door B, 2=door C, 3=All doors

4) Fire-Service SIA (Switzerland): Correction made to prevent driving to the top floor.

5) Drive Type: 4-Valve+ ASV. Filter included to prevent noise-induced occasional false-reporting of Pawl-Extended status during driving (resulting in ASV Error #137)

6) Correction for Remote FST Keypad over IP

7) the FST recording facility inadvertently currently wipes all data recorded between 00:00 and 03:00 each morning. Now corrected.

8) Fire-Service mode: now reacts to an Overload condition, and will hold the doors open for the duration.

9) Car-Priority mode: an effect whereby when using the "Hard" option, a wrong target floor could be issued is corrected. Also, the ON-OFF-ON call car-prio keyswitch action for clearing any set calls was wrongly clearing any calls set within 0.5s from initial activation.

FST-2XT V0088 04.12.2013

- 1) Folding skirt operation corrected

FST-2XT V0087 14.11.2013

- 1) Remote FST Keypad over IP option added (for IOS app)
 - 2) BACnet/IP Interface added – allows direct connection to BACnet network using the FST's Ethernet Port.
IP Menu added.

FST-2XT V0086 11.11.2013

- 1) Prevent lockup occurring when an over-enthusiastic re-levelling drive results in a position outside of the door-zone.
 - 2) Restore homing drive for hydraulic lifts following DRM errors
 - 3) Cobianchi Hydraulic Clamping control: fixed inspection speed change from slow->fast

FST-2XT V0085 04.11.2013

- 1) I/O "EAZ" Ports RAW=(xxxxxx34) changed.
Now 16 EAZ-Ports available (was 6). All 16 can now be freely used, the hex/gray "bit" ports can be duplicated as needed. When using "block" mode, the "bit" fields need no longer be used:
eg. 03023xx34 (port activated for positions between shaft-markers[2] and [3]), "xx" is now ignored.

FST-2XT V0084 30.10.2013

- 1) Interface for Cobianchi Hydraulic Clamping PCHLS-II/K added

Menu: Drive \ Hydraulic Clamping = YES/NO

FST-2XT V0083 21.10.2013

1) Hysteresis (3mm) for Re-levelling-start added to prevent problems with position-measurement jitter

FST-2XT V0082 01.10.2013

1) Skytec Monitoring Interface, now also for grouped lifts

FST-2XT V0081 01.10.2013

1) Restore A3-Test operation disabled through update to V0080

FST-2XT V0080 27.09.2013

1) Prevent situation in which a Group park target is accepted by the FST although it already has a valid drive target. This situation can happen under certain exceptional circumstances, and results in a stop with a perpetual door-open command condition.

2) Ramp-Drive "**soft-stop**" added. For (eg) CUS-applications which perform a automatic controlled stop, the immediate-stop, normally enacted when the dead-man drive control is released, can be too aggressive. This option will perform a normal regulated-stop for all ramp drives, unless the dead-man button is released, breaking the safety circuit.

Menu: \ Special Functions \ Ramp-Drive \ Control = 10000000

when this bit is set, a "soft-stop" will be performed at the end of all ramp drives

3) Inter-processor communication issues addressed, responsible for very occasional spontaneous endswitch test-drive, and simulated emergency-stop events.

FST-2XT V0079 16.09.2013

1) Fixed problem in menu: **\ Calls \ Calls-Floor**.

If, as first menu action following a FST restart, in the Calls-Floor menu, the door-B values (/ >B< / X) are changed, it is possible that the Zone-Auf value for the same floor will be cleared to 0mm.

2) Fixed problem of ambiguous Door-configuration. When using the setting **\ Doors \ Doors-Basic \ Apply-All = YES**, if the FSM Module is replaced with one from another lift, it is possible that the Door-B or Door-C parameters will not all be automatically synchronized with those from Door-A.

3) Further stability improvements made.

FST-2XT V0078 22.08.2013

- 1) **Remote-Entry** Control: lock-up possibility after FST-Reset now resolved.
- 2) **Remote-Entry** Control: using the **2xCall=Clear** can cause lock-up. Fixed.
- 3) new option: Automatic FST error/event reporting to LMS now also for simplex lifts

Menu: System \ Factory-Menu \ Settings \ Miscel-7 = 00100000

- 4) **Remote-Entry** Control: "Targ.Locking" now allows both Collect and Target floors to be locked
- 5) Car-Priority: Still problems with "Car-Prio-Call-Max", (V0073 mod-1). Now corrected
- 6) Fireman Service AS1735: After Australian Fire service has been activated, the Door Close button no longer operates correctly. Fixed
- 7) new I/O Port: SIGNAL Output Port "Target-Floor" added. The port will activate when the entered floor number is the current target floor.

Menu: Port RAW = 0000 0000 00tt tttt 0101 0111 1000 010x
ttttt=specified floor is the current target floor

- 8) new I/O Port : "Landing-Distance-Extension". This will provide an extra crawl-distance on all landings as long as the port input remains active. range=10-2550mm.

Menu: Port RAW = 0000 0000 dddd dddd 0011 1110 1111 001x
ddddddd=landing distance extension in cm

- 9) Lobby-Stop: new option to use Pseudo-Floor #0 as the "lobby". Can be used to force a mid-shaft stop to change drive speeds.

Menu: \ Special Functions \ Lobby-Stop \ Control = 00000100
when this bit is set, Pseudo-Floor-0 is used as the Lobby-Floor

- 10) Departure Arrows: used in "open with open doors" mode.
Doesn't operate correctly when the doors do not open following the arrival due a park drive. Corrected.

FST-2XT V0077 15.07.2013

- 1) Car-Light Off: Option added for doors which relax in the closed position, and no longer activate the closed-endswitch, which would otherwise prevent when car light from turning off. With this new supervisor setting, for purposes of car-light control only, the door is considered closed as long as the open-endswitch is not activated.

Menu: System \ Factory-Menu \ Settings \ Miscel-12 = 00100000

2) "Show LON Modules": Lon nodes sorting algorithm made faster by sorting only found nodes instead of all entire Lon database(255 nodes).

3) Mods for use with GST-Destino.

- 500mm Pre-emptive-Landing status output to GST.

- Automatic IDR and IDR-Acknowledge disablement in normal-mode if GST-Destino detected. Enables in Fire or Car-Prio becomes activated.

(needs GST-XTD V0027)

FST-2XT V0076 11.07.2013

1) 4-speed option for Fuji-Drive in Parallel-mode added:

4th main drive speed V4 now available using a 4-bit digital control code.

D3 is output on FST K9 VST relay.

V4 = D3-on D2-off D1-off D0-off.

Previously used speeds unchanged.

Menu: Drive \ Special-Params \ Switch-3: OFF = 3-speed, Switch-3: ON = 4-speed

2) Selective-Cam operation: problem with Manual-Doors, and Selective-call floor. Car has arrived in the floor and opened the called door. When later an opposite side call is entered the Cam for this side is not released, preventing opening of the manual door. Corrected

3) Quick Start error "SCHNELLSTART TUER-SW" wrongly output also when QS not enabled. Corrected

4) Mod 2) Update V0075: debounce iteration counter value now doubled to enhance effect

5) Recording File handling changes

-Recording files now made on a daily basis, stored on the MicroSD in \recording\YYYYMMDD.rec

-The Copy to USB option now allows a date selection and copies one entire day each time.

-each copied recording, contains the 3KB syscfg.lfs and 2KB drvcfg.lfs files, and so are also Elevison "conform"

Menu handling changes here!!

FST-2XT V0075 27.06.2013

1) LON module's software update via Elevison is working.

2) Drive-Type: 4 Valve Hydr + ASV:

-Continuous Pawl-monitoring during drive, now subject to debouncing. This done to prevent spurious RIO-read errors, causing ASV Err-137:

>>> Pawl-control error: pawl-retraction operation not completed. Please check menu parameter:

"DRIVE~PAWL~PAWL-TIME-MAX"

3) Drive-Type: ASV – Thyssen MFC, 4 Valve Hydr + ASV:

-Prevent door-locking due to non-supported car, if either ASV-Inhibit switch or inspection mode activated.

FST-2XT V0074 18.06.2013

1) Failure Homing in UCM A3 for Hydraulic Lifts: Noticeable during the UCM-A3 test drive, the lift will occasionally not return to the ground floor. Now fixed.

2) Occasional false "Emergency-Stop OFF" error reporting – often at night when the lift is not being used. Was corrected in V0040, but has reappeared since V0070. Now fixed.

dprx-> should not be used directly changed all acceses to Macro dprxWrite.. and dprxRead... also renamed drpx to dprx_coldf to prevent future problems in converting from FST2 typically problem is a undefined NOTHALT aus in FST.

FST-2XT V0073 27.05.2013

1) Car-Prio: use of "Car-Prio-Call-Max" corrected. The previous implementation allowed the call count to be constantly "topped-up" instead of using a one-time "free-call" count.

2) DCP03: Option to use the K11 VST output to mirror the DCP brake status. Required by Emerson (CT) drive.

Menu: Drive \Special-Params \ Switch-1 = EIN

FST-2XT V0072 16.05.2013

Changeset 1423-1427 Fix for very short power fail (200 milisec) which don't reboots

FST but Linux sends a power fail signal. This signal calls

HSG enabling, HSG shutdown and makes screen black.

DRIVE: Curves control added.

FST-2XT V0071 16.05.2013

Changeset 1419-1422 New Menu added to copy config from Micro SD card to FST.

Micro SD card may have configuration files of different

FSTs. Using this menu we can select to copy the configuration of specific FST with serial number.

DRIVE: correction to Beringer –ELRV+ASV+Feinab.

FST-2XT V0070 06.05.2013

Changeset 1412-1418 Complete Liftboy Mod from V0069.

Bug fixed of "config corrupt" and "System Stop" error

generated when we update FST with version 0069.

NOTE: Now if we update FST from version 0069 to a higher version then after updation once "config currrupt" and "System Stop" errors occur. To clear these error please once reset FST.

Updation of FST from version 0069 to a higher version also clears all counter value under Main Menu Service
Service Counters Change in dirs.. Menu.

FST-2XT V0069 30.04.2013

Changeset 1393-1411 Change in dirs counter für Aramid ropes added
Lift Boy Mode No GSAuf added
Changeset Tag Branch User Date Summary
MISCEL 7 Bit 5 added LMS error report also when not in group

FST-2XT V0068 29.04.2013

Changeset 1393-1395 RTK library changed to avoid message loss during reading or writing messages in Mail-boxes. This message loss was creating some problems like "Landing Calls OFF".

FST-2XT V0067 24.04.2013

Changeset 1380-1386 In language french Loading message fixed now
„Loading/Chargement“

FST-2XT V0066 23.04.2013

Changeset 1377-1379 Daimler Type-"C" Fireman option changes.
Fireman mode, power-OFF/ON characteristics improved for I/O sourced Fire-Recall signal.
Brake monitoring, Continuous mode, error "swamping" prevented.
MISCEL-12 0x10 added (IPrio-Car-calls Clear option).

FST-2XT V0065 10.04.2013

Changeset 1375-1376 Car Prio: multiple car calls (no. set by "IPrio-Ruf-Max") now execute contiguously within key-less IPrio condition.
Daimler-Typ-C Fireman service: 120s timeout in case no car

Keys-witch activated, and correction to Fire ON-OFF-ON scenario.

FST-2XT V0064 04.04.2013

Changeset 1370-1374 Daimler Typ-C (final).

Italian language option disabled from FST Menu.

FST-2XT V0063 03.04.2013

Changeset 1367-1369 Final SWM changes.

All special EAZ-Text strings now read from Lang_xx.txt files.

FST-2XT V0062 29.03.2013

Changeset 1364-1366 SWM LUF017,018 Mod.

Changeset 1363 Guide text added for "DRM A3-DRIVE ERROR" message.

Changeset 1354-1362 Fire Selective-curve control correction.

Car Prio, adjustable Car-Call command correction.

New Parameter: \System\Factory-Menu\Settings\Photocell-Max time to Cabin-blocked status set.

In debug version getNumericVersion() calculates correct version number for software internal use. Now it ignores 'X' or 'A' character in FST version number.

Changeset 1353 LINE-2 messages display in multiple colors. Info messages are displayed with Light Green color and warning/Error messages with Yellow color. Some failure messages are displayed in Red color.

FST-2XT V0061 21.03.2013

Changeset 1350-1352 pTime() function changed to make sure it returns correct 100 millisecond counter.

[LCDMENU] New param:Max-IDR-lprio.

FST-2XT V0060 18.03.2013

Changeset 1346-1348 Selected error and warning messages displayed in yellow color on LINE B.

Changeset 1344-1345 UK-Fast-Close feature added now possible with Pseudo-calls as well as LON-IDR commands

Changeset 1342-1343 A3 Brake monitoring change for Poland

Changeset 1340-1341 Option i/O Port Insp Control : Inspection Drive with V1 added

- Changset 1339 ESM Mode keep sleep timer primed as long as sleep-exemption persist not complete finished
- Changset 1338 group derhtuer blockage effect from Haushahn Wien correction
- Changset 1336-1337 Problem RIO ASV Bolt pump on Group FSTB also works if pump for FSTA is active.
- Changset 1328-1335 Problem in fireman service and door decoupling doesn't try to couple fixed. DCP Arrow keys and help for Thyssen MFC50 corrected

FST-2XT V0059 05.03.2013

05.03.13 Software 2.000-0059

- Changset 1327 Bug fixed of serial communication for SWM .

FST-2XT V0058 27.03.2013

- Changset 1318-1326 Error driving to endswitch without a matter patched
Reset at night now possible with MISCEL12 bit 4
News German and English updated

FST-2XT V0057 27.02.2013

- Changset 1317 New menu added to copy error list on USB as error_list.txt file. This menu "Error List - > USB" is added under "System - > Copy To".
- Changset 1316 Synchronized with FST2 up to V560:
Feuerwehr: new "Daimler-Type-C" Standard added.

Parking @ Pseudo-Flr: Now changed to observe Park-Disable I/O Port.

Tdr-AUF I/O Port: when using more than 1 of these port types- the auto repeat function in the FST will only keep the last activated door side continuously fed with TDR-AUF commands – any previously activated doors will timeout and may close.
- Changset 1315 Synchronized with FST2 up to V557:
Simulated door mode – correct LS lockup when used with GST-simulator.

Lademode scroll text for EAZs now read from lang_x.lfs.

DESTINO-LMS changes.

FST-2XT V0056 13.02.2013

Changeset 1312

Free memory and Cache memory info added under FST INFORMATION page visible by clicking SHIFT_ENTER key.

Free memory and memory fragmentation info is recorded at start of each hour as test Event(id= 0x57) and Event(id=0x58).

FST-2XT V0055 08.02.2013

Changeset 1310

Cache and buffers created by recording are cleared daily at 3:00 A.M.

If ARM Software is not updated then a warning message "ARM SW UPDATE FEHLER" blinks on Line B.

If recording is stopped by user then it will not restart at the start of new hour.

FST-2XT V0054 08.01.2013

Changeset 1303

UK-fast-close door feature added.

Changeset 1302

Some changes in Eco Mode for Müller Leuthold.

Changeset 1300

Bug fixed of automatic blinking of "F" on Line D due to serial buffer overflow.

Bug fixed of serial connection not working if CTS is low and FST resets.

FST-2XT V0053 13.12.2012

Changeset 1296-1299

Test programs for production test changed

Changeset 1292-1295

Homing time changed to maximal 4 hours = 240 minutes
TC122019

Changeset 1291-1292

Fix for system stop error due to config Cofig Corrupt.

Changeset 1289-1290

ELRV nachholung now with half x slow speed

FST-2XT V0051 22.11.2012

Changeset 1284-1287

Problem FST and hydraulik system with ELGO encoder sometimes releveling doesnt work and no cabine calls are accepted fixed.

Problem after closing doors and a prio cabin is set by IO Port and cabin call is set synchron the FST drives onlay after 4 minutes pause fixed.

FST-2XT V0050 30.10.2012

Changeset 1282

Problem fixed of automatic unwanted door lock only in H8. This door lock only occurs in H8 not in Coldfire side.

FST-2XT V0049 23.10.2012

Changeset 1278

Bug fixed of serial connection not working with FST editor or Elevision. (from version 0047).

FST-2XT V0048 16.10.2012

Changeset 1269-1275 Liftboy mode all calls cleared when leaving mode
Pawl-control for Giehl AZFR added

FST-2XT V0047 16.10.2012

Changeset 1268 Bug fixed of automatic fax mode activation.

Bug fixed of automatic blinking of 'F' on line D of FST.

Changeset 1267 If recording has stopped due to some reason it will be automatically restarted at new hour.

FST-2XT V0046 04.10.2012

Changeset 1264 Synchronized with FST2 from V554 to V555:

Inter-drive gap between park and normal drive (originally solved in FSTG V0549) corrected here.

Prevent blinking of ESM direction arrows during slow hand motor winding.

Destino specific messages and their IDs are added.

Prevent the door Offenthaltzeit from being shortened by the DC button.

Changeset 1261 LSU Kabine Kommunikation problem and slow menu problem due to LON failure is now fixed. Now if LON fails due to heavy LON traffic then FST reinitializes the LON interface. If re-initialization of LON fails then FST restarts.

Changeset 1260 FST crash problem fixed, during copy recording to USB when recorder is already stopped.

Changeset 1259 FST crash problem fixed, during RIGHT_KEY press in "Show LON Module" menu when BUS value is bigger than one digit.

Changeset 1258 FST Update process made 20 second faster.
Long black screen stay at FST startup is decreased.

Changeset 1256 Error on door nudging SAM repeats message corrected.

Changeset 1253 Changed shutdown of HSG.

FST-2XT V00545 10.09.2012

Changeset 1246-1250 Synchronized with FST2 from V551 up to V554:

UCM-A3 Tests desensitized.

Fix for number of lockup scenarios where Nachholung is cancelled due to moving out of the zone area.

PROG_BERGMANN_KLINIK changed.

Mailbox size increased. To prevent overflow when tests done with multiple simultaneous smoke signals.

Nachholung diag text corrected.

CONDS_NO_ESM extended to include PRIOs, VIP.

SuperSoft-Prio now allows all IDR stops to be driven to including if a stop in the current floor.

FUNCT_APRIO: aprio-program parameter added.

ECO_OPEN_DOORS option added.

New ESM menu option added

Changeset 1242-1245 Reedcontact monitoring in AZFR and AZRS reworked.

A short is now detected.

TRANSFER IN PROG. % message is displayed on LINE B during recording copy to external device.

FST-2XT V0044 04.09.2012

Changeset 1240-1241 Diagnosis code and recording events are added to find reason of automatic Fax mode activation.

Changeset 1239 Car light control message send twice to help chances of it getting through.

FST-2XT V0043 23.08.2012

Changeset 1237-1238 Problem Fixed: Brandfall drive hang-up with lichtgitter.

Changeset 1236 Bug Fixed: LSU-ZWANGSHALT message displays with warm start but does not display with complete reboot of FST with Port EXIO=. . . . 2 . . setting.

Changeset 1232 With SelectiveKurve option, prevent the kurve being released on the closed side.

Changeset 1231 BUG Fixed: In EMERGENCY MODE, FST does not reset after 2 to 4 minutes.

Changeset 1230 Expert test added for "UCM-A3 Zone" and "LSU UCM-A3 Error".

Changeset 1229 Now it is possible to do software update without powering of FST even FST has a long runtime.

Changeset 1228 Software update event in Error list displays correct date and time.

FST-2XT V004 19.07.2012

Changeset 1221-1225 File not found Error in lon modul update corrected.

Changeset 1220 During software update only changed files are copied to FST

Changeset 1219 synchronizing with FST2 up to V551:

GC_EAZ_DIMMING: "T" option added (xxxxTBEI) which blanks the EAZ-text
(as "B") but keeps the WF-Arrows ON Changed drv_mgr.CPP V0220).

GC_EAZ_DIMMING: "T" option added (xxxxTBEI) which blanks the EAZ-text
(as "B") but keeps the WF-Arrows ON
(door_mgr.c V3008)

Car-Light Monitoring: after coldstart, is only first active following a wait equal

to the set car-light monitoring time. This logic was changed back in V0421, but now causes the above problem, and is therefore reversed to the original!
(door_mgr.c V0309)

EXIO2 line-3 info display: doesn't show inverted outputs correctly – they remain shown "active". Now corrected

(sps_mgr.c V0228)

(rtmenu.c V0084)

Park-Drive: when cancelled, the inter-drive delay can be far too short (seen to be a problem with parallel controlled Loher L06 which requires a min. 1 sec pause)(call_mgr V0285)

SAM-going-up/going-down sent twice: if a no-directional landing (eg last IDR drive) is interrupted by a reverse-direction call this happens. Now corrected. (call_mgr.c V0286)

TFT display reset (worst in FST-2XT, but occasionally FST2), up to 30 sec start delay with FST-2XT, caused by dprx->dpd_fltarg returning NO_TARGET (0xFF). Corrected.(drv_dpr.c V0028)

GEN-CMD: GC_CLR_ALL_CALLS (id=43) added (needed for CUS projects)
(fst_msg.h V0484, sps_mgr.c V0229, pol_mgr.c V0115)

Group members with durchlader doors: can experience drives to this floor where only one door opens. Scenario: group call given to a 2B (durchlader floor). The lift is due to drive through this floor underway to a further target. Underway the group removes the call from this lift and assigns it to another lift. The FST given the call originally had generated a parallel 2A call internally, but upon being the call-removal message, only clears the 2B call. Result: a stop in 2, but opens the A doors only

(call_mgr.c V287)

Recording Filter: correct initialisation, which had been changed to prevent Sleep mode (cfg_mgr.c V0206)

Driver: "4-Ventil Hydr. + ASV" : K11 (Absperrventil) output largely missing, now corrected.

(reg_lasv.c V0060)

Changeset 1216-1218 recording header version set to FST2XT wich begins with 2

Changeset 1214-1215 problem up to 30 seconds start delay corrected

Changeset 1211-1213 Problem temporarily the menus softwaversion , lon modules
and error menu can not opened corrected.
,Anzeige Lon Module und Fehlereinträge möglich beseitigt.

FST-2XT V0040 03.07.2012

Changeset 1206-1211 sporadic error EMERGENCY STOP ON or OFF problem
eliminated

FST-2XT V0039 03.07.2012

Changeset 1201-1205 All recording problems are fixed. Recording file is always 100% playable.

FST-2XT V0038 21.06.2012

Changeset 1198-1201 Recording's auto sleep function is working. Recording file is always in correct hour
directory. A small change made to avoid FST crash during modem connection
establishment.