涌现集团
YONGXIAN GROUP

5500/5500S/5400-Rel.02

Commissioning Manual

SCH-CM-K 40700039_12_20160220-2025-0039

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1 General Information

1.1 Safety Advice

[42730; 20.11.2012]

Safety Instructions

- Exclusively for competent professionals.
- Current version of the safety manual and any local safety requirements must be consulted and followed before initiating works.
- Personal Protective Equipment:
  - Always use and maintain the listed personal protective equipment.
  - Immediately replace damaged or lost personal protective equipment.

Safety Warnings Used in this Manual

DANGER

The safety warning with the signal word “Danger” is used to indicate a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

The safety warning with the signal word “Warning” is used to indicate a hazardous situation which, if not avoided, **could** result in death or serious injury.

NOTICE

The safety warning with the signal word “Notice” is used to address practices that could result in property damage but not in injury.

Auxiliary Equipment

Auxiliary equipment that does not fulfill the manufacturers requirements can affect safety and cause accidents.

▶ Use material that is approved by Schindler.

DANGER

Hazardous Voltage

Contact with live parts will result in electric shock causing serious injury or death.

- Do not touch live parts.
- Switch off the main switch and de-energize the installation completely before starting to work on the installation.

WARNING

Bypassing of Safety Devices and Safety Contacts

Bypassing of safety-relevant devices can result in damage to the installation or in serious injury or death.

- Do not bypass the safety circuit without explicit instruction.
- If bypassing is premeditated for specific work: Take appropriate safety measures.
- Do not bypass safety devices if prohibited by local code.
- If safety devices are bypassed: Disable the installation.

NOTICE

Plugging/Unplugging Connectors on Energized Devices

Hot plugging can result in the destruction of devices.

- Switch off the devices before plugging in or unplugging connectors.

NOTICE

Components Sensitive to Electrostatic Discharge (ESD)

ESD-sensitive components will be destroyed if exposed to electrostatic discharge.

- If handling ESD-sensitive components: Adhere to ESD-safe procedures.

2 Standard Procedures

2.1 Reset Procedures

Reset ACVF	• Switch off JH • Wait for 3 seconds • Switch on JH.
Single Reset	• Press the reset button on the GCIOCF PCBA once • Wait until the elevator control has booted.
Double Reset	• Press the reset button on the GCIOCF PCBA once • Wait until the red LED is no more lit and press the button once more • Wait until the elevator control has booted and re-initialized.
Reset Travel Control	With recall control station: • Set JRH to position “RECALL” • Press the DRH-D and DREC-U buttons simultaneously. With inspection control station: • Set JREC to position “INSPECTION” • Press the DREC-D and DREC-U buttons simultaneously.

ESE Panel Plugging and Unplugging

Due to the SW consistency control of inputs of JRH, a control error is generated every time when the ESE panel or its replacement bridge are unplugged. "SwtcCon" message is displayed on the SMLCD.

- A single reset is required to restore the elevator into normal service.

Main Switches Activation

In elevators equipped with SW version 10.09.00 or later:

- The activation of a stop (JHM/JHC) or recall (JRH) or inspection (JREC) switches will start the service visit operation, preventing errors to be reported via tele-monitoring.
- The normal tele-monitoring procedure is restored after the last of the mentioned switches is de-activated.

3 Preparation for Installation Travel

3.1 Prerequisites

▶ Check that the installation of the following components is completed according to the instructions:
- Light
- Pit set, brackets and guides
- Bed frame
- Machine and ACVF
- Controller cabinet
- Temporary control and wiring, special connectors for installation travel.

- Switch off JH, SIL and SIS, see the wiring diagram.
- AS.ASIXB: Check that the connector BATT is unplugged.
- If MRL: Check that the switch JH1 is set to ON.
- If S.PEBO: Check that the BATT1 and BATT2 plugs are unplugged.
- AS.ASIXB: Set the rotary switch elevator ID according to the installation.

Position	Description
1	Elevator 1 or simplex
2	Elevator 2
3	–

- AS.ASIXB: Set switch JMOF to position 1.
- Check that the installation chip card is plugged into the user interface.

- AS.ASIXB: Check that the following connectors are unplugged:

Connector	Description
NGL	DC power supply
X15	Connection with ACVF
DRIVE_ RS422	Connection with ACVF
KB	Brake feedback

Connector	Description
HK	Traveling cable
GNT	Intercom device
LOP	Landing supply and bus

- AS.GCIOCF: Check that the connector ETHERNET is unplugged.
- AS.CLSD: Check that the following connectors are unplugged:

Position	Description
TT	PSTN input telephone line
TT*	PSTN input alarm line

- AS: Check that the traveling cable connector POWC is not connected to the X1 terminal bar (X1-1-1 terminal).

▶ If transformer TA: Check that the transformer is connected according to the wiring diagram.
▶ If transformer TAS: Check that the transformer is connected to the X1 terminal bar, see the S 274901 *Wiring Diagram - Mains Power Supply*.
▶ If no TAS: Check that bridges are present between X1-4-1: Pins 1-5 and 3-6, see the S 274901 *Wiring Diagram - Mains Power Supply*.
▶ AS: Plug in the following connectors:

Connector	Description
PEBO.KBV	Overspeed governor contact
KBVG	Counterweight overspeed governor
EM	If MRL: Evacuation interface
PEBO	If MRL: Evacuation interface

▶ AS.ASIXB: Plug in the following connectors, see the wiring diagram:

Connector	Description
ESE	Recall control station
KSS/KSS1	Slack rope device
KV	Permanent bridge

Some connectors have temporary or permanent bridges.
- If options are not needed during commissioning: The related connectors are bridged temporarily.
- If options are not needed in normal operation: The related connectors are bridged permanently.

▶ AS.ASIXB:
- If present: Plug in the following connectors:
- If not: Replace the following connectors by bridges:

Connector	Description
ARD	Phase control relay
PEBO_SK	Manual electric rescue device
SKS	Hoistway safety circuit Jumper plug, plug kit ID no. 59325720
HK	Traveling cable Jumper plug, plug kit ID no. 59325720
KBV	Overspeed governor contact
KTHS	Hoistway temperature sensor
LDBCS	If Hong Kong: Landing door bypass control Bridges between pins 1-2 and 5-6

- ▶ AS.BCM: Check that the connectors POWIN and MGB are not plugged in.
- ▶ Check that the machine and the ACVF are installed according to the installation documents.
- ▶ Check the mains supply from the building site on the switches JH and SIL line side.
- ▶ Switch on JH, SIL and SIS.
- ▶ Switch on SIBS and JLBS.
- ▶ Check that the hoistway lighting is on.

SIBS and JLBS remain switched on during the whole commissioning procedure.

- ▶ FC: Check the following LED status:

Color	Name	Status
Red	ERROR	OFF
Green	OK	OFF
Yellow	PARAMETER	ON

Status is valid for the first commissioning.

- ▶ Check that the correct voltage is present at the following components, see the wiring diagram:
  - NGL input and output terminals
  - BCM.POWIN connector.
- ▶ Switch off JH, SIL and SIS.
- ▶ AS.ASIXB: Plug in NGL.
- ▶ AS.ESE: Set the following switches to position:

Switch	Position
JRH	RECALL
JHM	STOP
If Korea: JUEKTS	NORMAL

- ▶ If Korea: Insert NORMAL bypass connector.
- ▶ Switch on JH, SIL and SIS.
  - The system boots. Booting takes a few minutes.
  - If no chip card expansion has been performed: The LED CCS blinks.

- AS.GCIOCF: Check the following LED status:

Color	Name	Status
Green	STATUS	OFF
Green	CPU	FAST BLINKING
Green	WDOG	BLINKING
Red	ERROR	OFF

- Switch off JH, SIL and SIS.
- AS.ASIXB: Plug in connector RS422.
- Switch on JH and SIS.
- Wait until the boot sequence is completed.
- AS.GCIOCF: Perform a double reset.
  - The control SW sends the drive settings and parameters to the frequency converter.

- Check the following LED status:

Color	Name	Status
Red	ERROR	OFF
Green	OK	ON
Yellow	PARAMETER	OFF

- SMLCD: Check the software versions:
  Login → Status → Versions → GC-Software and Drive-Software.
- Switch off JH and SIS.
- AS.ASIXB: Plug in the connector BATT.

4 Brake Tests
4.1 Brake Tests

DANGER

Elevator Operation with Defective Machine Brake

Operating an elevator with defective brakes will result in damage to the installation or in serious injury or death.
If the brakes are defective:

- Stop commissioning actions.
- Put the elevator out of service immediately.
- Inform your supervisor.

The mechanical brake is factory adjusted.
If a test fails:

- Do **not** readjust the mechanical brake.
- Refer to the maintenance instructions of the hoisting machine to solve the problem.

▶ AS: Set the following switches to position:

Switch	Position
JH	OFF
SIS	OFF
JRH	RECALL
JHM	STOP

▶ AS.BCM:
Check that the cables POWIN and MGB are **not** connected.

▶ AS.BCM:
Check that **no** plug is inserted in connector MGB_TEST.

▶ AS.ASIXB:
Check that cable KB is **not** connected.

▶ AS.BCM:
Check the resistance on the MGB cable:

Machine Type	Pins	Coil	Resistance
FML/PML 160/200	1-6	MGB	190 ... 1700 Ω
	2-5	MGB1	
	3-6	MGB2	
	4-5	MGB3	
	1-2-3-4-5 to ground	-	High resistance MΩ
FMR/PMR 160/200 and PMB 140	1-6	MGB	80 ... 120 Ω
	2-5	MGB1	
	1-2-3-4-5-6 to ground	-	High resistance MΩ
PMB 130	1-5	MGB	60 ... 80 Ω
	2-6	MGB1	
	1-2-3-4-5-6 to ground	-	High resistance MΩ

4 Brake Tests

4.1 Brake Tests

▶ AS.ASIXB: Check the resistance on the KB cable:

Machine Type	Pins	Contact	Resistance
FML/PML 160/200	1-2	KB closed	Approximately 0 Ω
	1-3	KB1 open	High resistance MΩ
	1-4	KB2 closed	Approximately 0 Ω
	1-5	KB3 open	High resistance MΩ
	1-2-3-4-5 to ground	-	High resistance MΩ
FMR/PMR 160/200 and PMB 130/140	1-2 and 1-4	KB closed	Approximately 0 Ω
	1-3 and 1-5	KB1 open	High resistance MΩ
	1-2-3-4-5 to ground	-	High resistance MΩ

▶ AS.BCM: Plug in connectors POWIN and MGB.

▶ AS.ASIXB: Connect the cable KB.

▶ Switch on JH and SIS.

▶ AS, ASIXB(K): Check the following LED status:

Color	Name	Status
Green	ZSB	OFF
Green	SB1	ON
Green	SB	ON
Green	KB3	OFF
Green	KB2	ON
Green	KB1	OFF
Green	KB	ON

▶ Switch off JH and SIS.

5 Motor Control Tests

5.1 Preparation

▶ AS: Set the following switches to position:

Switch	Position
JRH	RECALL
JHM	STOP

▶ AS.ASIXB: Plug in the connector X15.

▶ Check the status of the following connectors:

Connector	Description
ARD	Plugged or temporary bridge
ESE	Plugged
KSS	Plugged
PEBO_SK	Plugged or temporary bridge
SKS	Plugged or temporary bridge
KBV	Plugged or temporary bridge
HK	Plugged or temporary bridge
KV	Permanent bridge
LDBCS	If Hong Kong: Plugged or temporary bridge

▶ AS.ASIXB:
Check the switch JMOF is on position 1.

Parameter Change Record:
A label is provided in control cabinet door to record relevant parameters that are changed/set during commissioning procedure. The correctness of the entries on this label shall be assured at the end of any commissioning or re-commissioning process.

- ▶ Switch on JH and SIS.
- ▶ SMLCD: Check that the following parameters correspond to the installation:
  Login → Parameter → Drive settings. See the layout drawing.

Name	Value	Unit	Description
Tacho Factor	8000	[inc/m]	Standard for AC GSI
Rated Load	xxxx	[kg]	Depending on the installation
Reeving Factor	2 (2:1)	-	-
TachFactMotor	2048	[inc/rev]	-
Gear Ratio	1 (1:)	-	-
TractnDiam (FML/PML/FMR/PMR 160)	0.125	[m]	-
TractnDiam (FML/PML/FMR/PMR 200)	0.150	[m]	-
TractnDiam (PMB 130/140)	0.087	[m]	-
Inertias	xxxxx.xxx	[kg/m^2]	Depending on the installation
Code Type	EN81	-	Default
ETSL Type	NONE	-	If rated speed ≤ 2.5 m/s^2
ETSL Type	SALSIS_ETSL	-	If rated speed > 2.5 m/s^2
ETSL Type	SALSIS_ETSL_NTSD (*)	-	If rated speed > 2.5 m/s^2 and NTSD function is required
Encoder Type	SINCOS_ENDAT	-	-

Name	Value	Unit	Description
Gear Type	GEARLESS	-	-
InvInput Voltage	xxx	[V]	If used: Rated secondary voltage of TA transformer
Rated Speed	xx.xxx	[m/s]	Depending on the installation
Inverter Setting	VFxxBR or VFxxPF1	-	Depending on the installation
ID Motor	xxxx	-	Depending on the installation
ShaftInfoType	SALSIS	-	-
Brake	SB_Einsch_100	-	-
PhaseDir	0, 1, 2 or 3	-	The value will be corrected after performing the zero position test (t3).

* NTSD function (Normal Terminal SlowDown) required for Singapore and India codes.

▶ Check that the following settings correspond to the installation:
Login → Parameters → SpeedAccel:

Name	Value	Unit	Description
V4	xxxx	[mm/s]	Rated speed

- If during the commissioning process, before carrying out the "Load Measurement Commissioning", appears in SMLCD the LMS status "CAL" or "CALF", the LMS must be disabled:
  SMLCD: Login → Commands → LM Disable → Deshab. → OK (Success)
  - The LMS will be disabled during a defined period of time.
- Store changes. End commissioning on SMLCD:
  Login → Commands → Drv End Commiss → OK.
- Check that the safety circuit is closed:
  - Check that connector X-1-1-1 is plugged (power supply of car doors, car lighting etc.)
  - The LEDs T1 - T6 are ON.
- AS.GCIOCF:
  Perform a single reset.

5 Motor Control Tests
5.3 Fan Test ACVF and Motor

Valid for: FML 160, FML 200 or PML 200:
The fan test turns on the cooling fan of the inverter and the machine temporarily to help check the function and air flow direction.

- ▶ If MRL: Park the car at the top floor and leave enough room to safely access the car roof.
- ▶ SMLCD: Execute "Fan test".
  Login → Tests → VF test → Fan test → OK.
- ▶ If MMR: Check that the inverter fan operates correctly and blows in in the correct direction:
  - The air is sucked in at the bottom of the inverter casing and blown out at the top.
- ▶ If MMR: Check that the fan of the machine operates correctly.
- ▶ If MRL: Check that the fans operate correctly.
- ▶ If the air flow direction is not correct or the fan does not operate correctly: See the diagnostics documentation of the inverter and the machine.

The SMLCD displays "FC Fan Test - Success", regardless of whether the air flow direction is correct or not.

DC Link Test

The DC link test checks the voltage supply and function of the following components:

- SGRW
- SH
- Input rectifier
- Braking chopper
- Braking resistor
- Capacitor bank.

Precondition

The safety circuit is closed.

▶ SMLCD: Execute "DC link test".
Login → Tests → VF test → DC link test → OK.

If required, the software reforms the capacitors of the DC link. This operation can take up to 5 minutes.
At the end of the test, the SMLCD displays: "DC Link Test - Success".

Current Loop Test

The current loop test checks the following:

- Motor circuit IGBTs
- Wiring from FC to MH
- Inductivity
- Load symmetry.

Precondition

The safety circuit is closed.

▶ SMLCD: Execute "Current loop test".
Login → Tests → VF test → CurrentLoopTst → OK.
- At the end of the test, the SMLCD displays: "CurrentLoopTst - Success".

5 Motor Control Tests
5.5 Zero Position Test (PML 160/200)

The zero position test detects any deviation between the rotor position and the motor encoder position. It determines at which degree of the motor encoder sine wave the motor poles are aligned. If the counterweight is loaded with the full load: The zero position test changes the phase direction to (0 or 1) or (2 or 3). The duration of the zero position test can be different at every attempt, even if performed at the same hoistway position.

Preconditions

- The safety circuit is closed.
- MH is of synchronous type.
- The motor ID parameter recognizes the MH.
- MH is equipped with a sine wave encoder.
- The motor encoder type parameter recognizes the MH.
- The DC link and current loop test have been performed successfully.
- The car is positioned > 3 m below headroom or machine room level. During the zero position test, the car can travel > 2 m in the up direction.

NOTICE

Incorrect Test Procedure

Aborting the test procedure or performing the test procedure in a different sequence will result in incorrect values. Incorrect values can affect the normal operation of the elevator.

- Do not deviate the step sequence.
- Do not abort the test procedure.

▶ SMLCD: Execute the zero position test.
Login → Tests → VF test → ZeroPositionTest → OK.

▶ Wait until the SMLCD displays "ZeroPositionTest - OK?":
- The system is ready for test travels.

▶ Press the button OK on the SMLCD.

▶ Wait until the message "Begin Test" appears.

▶ Press and hold the button DRH-D or DRH-U until the car has stopped.

▶ If emergency: Release the button DRH-D or DRH-U.

▶ Release the button DRH-D or DRH-U and wait for 3 to 5 seconds.

▶ Repeat the last three steps until the SMLDC displays "ZeroPositionTest - Success".

Several trips are required. If the test does not perform correctly:

- Refer to the ACVF diagnostics documentation.

5 Motor Control Tests

5.5 Zero Position Test (PML 160/200)

▶ FC: Check the following LEDs:

Color	Name	Status
Red	ERROR	OFF
Green	OK	ON
Yellow	PARAMETER	OFF

– If LED OK has status ON: All required parameters are available.

▶ Save the motor control parameters:
Login → Commands → Drv End Commis → OK.

▶ Wait until the SMLCD displays "Drv End Commis - Success".
This saves the drive parameters on the non-volatile memory of GCIOCF PCBA.

▶ SMLCD: Check that TR (ZeroPos) ≠ 0.

▶ If value = 0: Repeat the zero position test or see the ACVF diagnostics documentation.

▶ Switch off JH and SIS.

6 Installation Travel with ESE Control Panel

6.1 Installation Travel with ESE Control Panel

Increasing or Decreasing Recall Travel Speed

- ▶ Press the button JHM.
- ▶ Set the switch JRH to RECALL.
- ▶ To decrease: Press the button DRH-D for maximum 10 seconds.
- ▶ To increase: Press the button DRH-U for maximum 10 seconds.
- ▶ Release the switch JHM.

Pressing DRH-D or DRH-U for more than 10 seconds sets the recall travel speed to the minimum or maximum value.

Setting the Recall Travel Speed to Default

- ▶ Press the button JHM.
- ▶ Set the switch JRH to NORMAL.
- ▶ Set the switch JRH to RECALL.
- ▶ Release the switch JHM.

Increasing or Decreasing Inspection Travel Speed

- ▶ Press the button JHC.
- ▶ Set the switch JREC to INSPECTION.
- ▶ To decrease: Press the button DREC-D for maximum 10 seconds.
- ▶ To increase: Press the button DREC-U for maximum 10 seconds.
- ▶ Release the switch JHC.

6 Installation Travel with ESE Control Panel

6.1 Installation Travel with ESE Control Panel

▶ AS: Set the switch JMOF to position 1.
▶ Set the switch JRH to RECALL.
▶ Press the button JHM.
▶ Switch on JH, SIL and SIS.
▶ Wait until the boot sequence is completed.
▶ AS: Release the switch JHM.
▶ Move the car some centimeters to check if the car travels in the correct direction.
- Press DRH-D: The car travels downward.
- Press DRH-U: The car travels upward.

▶ If the car travels in the wrong direction, change the value on SMLCD menu and try again, according to the following rule:
Parameters → Drive settings → Phase Dir:
- to 1 if the present value is 0
- to 0 if the present value is 1
- to 2 if the present value is 3
- to 3 if the present value is 2.

▶ Execute a recall travel.
▶ Record the value of phase direction parameter on the control label (parameter change record).
▶ Press the button JHM.
▶ Check if the elevator stops.
▶ Switch off JH, SIL and SIS.

Installation Travel Without Car Node

To complete the hoistway installation without car node, the ESE control panel is moved to the car roof. This allows the car to be moved from the car roof.

Support Equipment

- Plug kit: ID no. 59325720

Procedure

▶ Move the ESE control panel to the car roof:
- Use the traveling cable and the adaptation plugs supplied with the plug kit as a cable extension.
- See the installation diagram.

▶ Use the IMOF adapter tool to operate the machine with the ESE control panel connected to HK in the hoistway (Z 41322869).

7 Installation Travel with REC Panel

7.1 Prerequisites

- The installation of components must be completed.
- Counterweight balancing is adjusted to 50 %.
- Buffers are installed according to the manufacturer’s specification.

▶ If MRL: Position the car 1 m below the controller cabinet floor.

▶ If not MRL: Position the car 1 m below uppermost floor:

- Car doors and landing doors are closed.
- The door clutch is blocked in closed position.
- The overspeed governor and the safety gear are mounted and operate correctly.
- The hoistway safety contacts and car safety contacts are installed and wired to the controller cabinet or OKR.
- The hoistway safety contacts and car safety contacts are **not** plugged in.

Print Versions CANIC and CANICK
Two similar print versions CANIC and CANICK are used. CANICK is used in Korea.
If instructions are identical for both print versions: This document uses the expression "CANIC(K)".

- ▶ Switch off JH, SIL and SIS, see the installation wiring diagram.
- ▶ If S.PEBO: Check that the connector BATT is unplugged.
- ▶ OKR.CANIC(K): Check that the following connectors are unplugged:

Connector	Description
POWC	Power supply car
HK	Traveling cable
SI	Hoistway information
SISK	Hoistway information
DOOR	Door drive
2DOOR	Door drive
XCOP	Car operating panel
GNT	Car operating panel
LNC	Car operating panel
ACS	Car operating panel
JNFF	Car operating panel
LC	Car lighting
MVEC	Car fan
SOA	Alarm horn on car

DANGER

Hazardous Voltage

Contact with live parts will result in electric shock.
Do not unplug the connector CANIC.POWT from the CANIC(K) board of the OKR, because this will not assure complete isolation of the door drive from the AC power.

- ▶ OKR.Cable to the door drive: Unplug the male connector POWT only on the XPOWT/x2POWT.
- ▶ OKR: Check that the connector XTT is unplugged.
- ▶ OKR.CANIC(K): Plug in the following connectors, see installation wiring diagram:

Connector	Description
UCC	Safety gear, first load measurement sensor and alarm button below car
CLC2	Second load measurement sensor
KCBS	Car blocking device
REC	Car inspection panel
PC	Car socket outlet

- ▶ OKR.CANIC(K), see the installation wiring diagram:
- • If present: Plug in the following connectors:
- • If not: Replace the following connectors by bridges:

Connector	Description
KTC	Car door safety contacts
2KTC	Car door safety contacts
JHC1	Stop switch in car operating panel
JHC2	Additional door drive stop switch
KNA	Emergency exit safety contact

- ▶ CANIC(K).SISK: Insert bridges between the pins 1-2, 3-4 and 5-6.
- ▶ CANIC.HK: Test the electrical continuity between pins 1-2 and 1-4.
  - If no electrical continuity: The REC panel operates correctly.
- ▶ CANIC.HK: Check the electrical continuity between pins 1-3.
- • Release the switch JHC.
- • Test the electrical continuity with the following settings:

Switch	Position	Electrical Continuity
JREC	NORMAL	Present
JREC	INSPECTION	Not present

▶ If PCBA CANGIO: Check if the configuration switches are set correctly.
- The node ID switch is set to a unique number in the elevator.
- The switch BAUD is set according to the bus to which the PCB is connected: 125 kbits/s for the nodes on the car and 50 kbits/s on the landing bus.
- All boards: The switch TERM is set to OFF. If board at the end of the landing bus: The switch TERM of this board is set to ON.

▶ CANIC.HK: Check the electrical continuity between pins 1-5.
- Release the switch JHC.
- Test the electrical continuity with the following settings:

JREC	DREC-E		DREC-U/ DREC-D	Electrical Continuity
	Present	Not Present		
Normal	x 1)	x 1)	x 1)	Yes
Inspection	Released	-	Pressed	Yes
			Released	No
	Pressed	-	x 1)	Yes
	-	Not present	Pressed	Yes
			Released	No

1) Independent of the status

▶ Set the switch JREC to NORMAL.

▶ CANIC(K): Plug in the traveling cable connector HK.

▶ AS.ASIXB: Remove the jumper plugs on the following connectors:
- PEBO_SK
- SKS
- HK.

▶ AS.ASIXB: Insert the plugs of the following components:
- Manual evacuation system
- Hoistway wiring
- Traveling cable.

▶ AS.ASIXB: Insert the ASIX.PEBO plug.

If the batteries of the manual evacuation system are loaded below minimum level:
The elevator will not start.
- Wait until the batteries are charged to continue installation travel.

▶ Replace all temporary bridges by final connectors.

▶ AS.ASIXB: Plug in the following connectors:
- HK
- SKS
- PEBO_SK.

▶ AS.X1: Plug in the connector POWC to the position X1-1-1.

▶ Switch on JH, SIL and SIS.

▶ Set the switch JREC to INSPECTION.

▶ Press the button JHC.

▶ OKR: Check the voltage on the traveling cable connector POWC, see the installation diagrams.

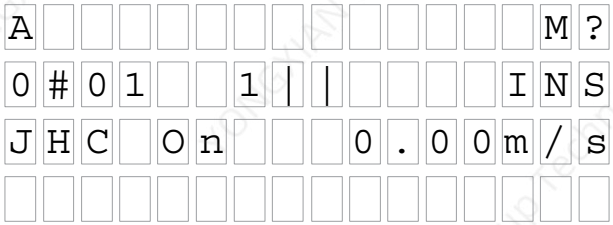
▶ Switch off JH, SIL and SIS.

▶ OKR.CANIC(K): Plug in the following connectors:

Connector	Description
POWC	Power supply
LC	Car light

▶ Switch on JH, SIL and SIS.

▶ Wait until the boot sequence is completed and SMLCD shows:



▶ OKR.CANIC: Check the following LED status:

Color	Name	Status	Description
Green	+ 24 V	ON	DC supply
Red	CAN_ERR	OFF	CAN bus error
Green	CAN_RUN	BLINKING	CAN bus activity

▶ REC: Release the switch JHC.

▶ Move the car some centimeters to check if the car travels in the correct direction.

- Press DREC-D: The car travels downward.
- Press DREC-U: The car travels upward.

▶ If the car travels in the wrong direction: Check the internal wiring of REC panel, if the PhaseDir (0, 1, 2 or 3) was already tested during the test of ESE panel.

▶ Move the car in one direction.

▶ Press the button JHC.

▶ Check if the elevator stops with the safety circuit open.

▶ Execute a recall travel.

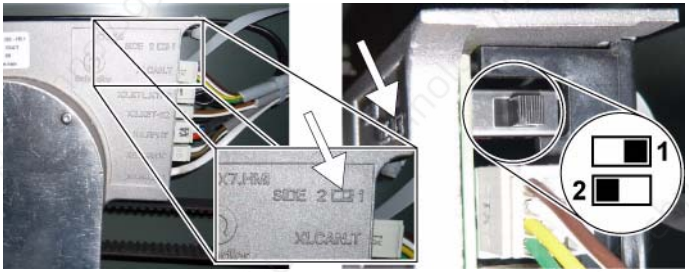
▶ Press the button JHC.

▶ Check if the elevator stops.

▶ Switch off JH, SIL and SIS.

- ▶ Remove any mechanical stops of the door operation.
- ▶ OKR.CANIC(K): Plug in the following connectors:
  DD V15/35: The entrance side switch is above the plug X1-CAN-T.

Connector	Description
DOOR	DC supply and CAN bus for front door drive, check the entrance side switch: **1** Side 1 = front door
2DOOR	DC supply and CAN bus for rear door drive, check the entrance side switch: **2** Side 2 = rear door



DD V15/35: Entrance side switch

- ▶ OKR.Cable to the door drive: Plug the male connector POWT on the XPOWT/x2POWT.
- ▶ REC: Set the switch JREC to INSPECTION.
- ▶ Switch on JH, SIL and SIS.
- ▶ Wait until the boot sequence is completed and the SMLCD displays:

```
A                          M?
0#01  1||  2||  INS
Install  0.00m/s
```

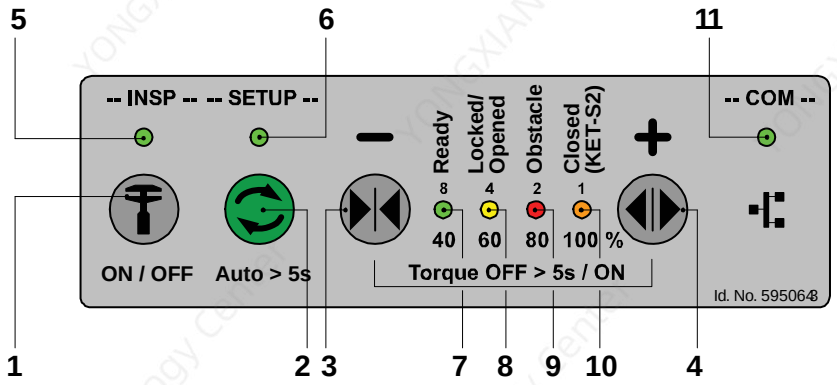
Example: Configuration of a double entrance elevator.

“2 I I” indicates that a rear door is configured. Door parameters are configured on the chip card and cannot be changed.

- ▶ Check the LED COM on the door drive HMI.
  - If CAN communication with the door control is OK: LED COM is ON.
  - If CAN communication is **not** OK: See the door drive diagnosis documents.
- ▶ If JHT: Switch on JHT.
- ▶ If JHCT: Switch on JHCT.
  - The HMI keypad is enabled.
- ▶ Enable inspection door. HMI: Press INSP key.
  - LED “INSP” is ON.

7 Installation Travel with REC Panel

7.4 Door Drive Connection and AutoSetup (V15/35 without landing door coupled)



[33147; 04.08.2011]

1 Key INSP (inspection door)
2 Key Setup / AutoSetup
3 Key (DRET-S) (-)
4 Key (DRET-O) (+)
5 LED INSP (inspection)
6 LED SETUP
7 LED Ready
8 LED Locked / Opened
9 LED Obstacle
10 LED Closed (KET-S2)
11 LED COM (CAN communication)

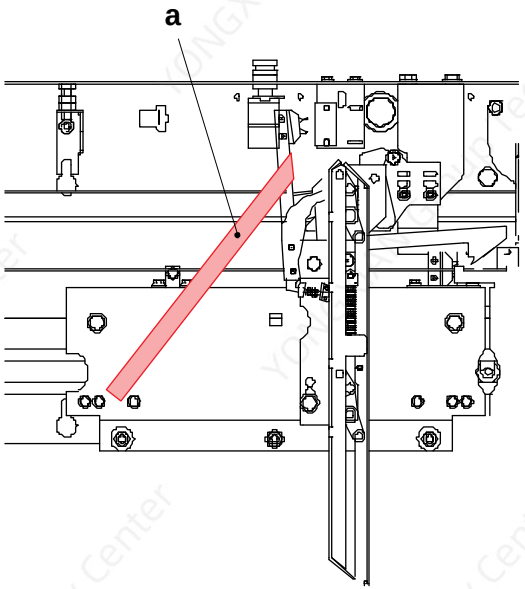
▶ Check the following LED status:

Color	Name	Status	Description
Green	INSP	ON	-
Green	Setup	OFF	-
Green	Ready	ON	-
Yellow	Locked/Opened	BLINKING SLOWLY	-
Red	Obstacle	OFF	-
Orange	Closed (KET-S2)	ON	If panels closed
Green	COM	ON	-

▶ Shortly press the keys DRET-S (-) and DRET-O (+) to check the door movement direction.

- If the movement direction is correct:
  Continue with chapter *Door Drive Auto-Setup (V15/35 with landing door).*
- If the movement direction is **not** correct:
  Continue with the following steps.

▶ Fix the KTC contact arm on the door carrier with a tape (a) to keep the lock hook in unlocked position.
- The door can move automatically.



▶ If JHT: Switch off JHT.
▶ If JHCT: Switch off JHCT.
▶ Close the door panels manually.
▶ If JHT: Switch on JHT.
▶ If JHCT: Switch on JHCT.
- The HMI keypad is enabled.
- The LED INSP is ON.

▶ Press the key Setup / AutoSetup for more than 5 seconds to start AutoSetup.

- LED SETUP is BLINKING SLOWLY: AutoSetup is in progress.oor opens and closes the third time with final normal speed.
  - The door opens a small distance.
  - The door locks.
  - The door opens and closes the first time with reference speed.
  - The door opens and closes the second time with reduced normal speed.
  - The door opens and closes the third time with final normal speed.
- If LED SETUP is OFF: AutoSetup is completed successfully.
- If LEDs SETUP, Closed (KET-S2), Obstacle, Locked / Opened and Ready are FAST BLINKING: AutoSetup failed.

▶ If AutoSetup failed:

- Refer to diagnostics for V15 in EJ 41354325 and for V35 in EJ 41350884.
- Press the key Setup to clear the error and repeat the process.

During AutoSetup, all car door safety devices are enabled. The activation of a safety device interrupts the setup procedure.

▶ If AutoSetup fails:
- Check if an obstacle was triggering a safety device.
- If yes: HMI: Press Setup for > 5 s to restart AutoSetup.
- If no: Check the mechanical door settings.

▶ Set the switch JREC to INSPECTION CAR.
- If JHT: Switch on JHT.
- If JHCT: Switch on JHCT.

▶ Check the following LED status:

Color	Name	Status	Description
Green	INSP	ON	-
Green	Setup	OFF	-
Green	Ready	ON	-
Yellow	Locked / Opened	BLINKING SLOWLY	Auto-Setup pending
		OFF	Auto-Setup OK
Red	Obstacle	OFF	-
Orange	Closed (KET-S2)	ON	If panels closed
Green	COM	ON	-

▶ Lock the car door.

▶ Press the key DRET-S (-) until the LED Locked/Opened is ON.

▶ Close the landing doors manually.

▶ Disable inspection door: Press the key INSP
- The LED INSP is OFF.

▶ Inspection control station: Press the button DREC-U or DREC-D until the car is at floor level.

▶ Enable inspection door: Press the key INSP
- The LED INSP is ON.

▶ Press the key Setup / AutoSetup for more than 5 seconds to start AutoSetup.
- LED SETUP is SLOW BLINKING: AutoSetup is in progress.
  - The door opens a small distance.
  - The door locks.
  - The door opens and closes the first time with reference speed.
  - The door opens and closes the second time with reduced normal speed.
  - The door opens and closes the third time with final normal speed.
- If LED SETUP is OFF: AutoSetup is completed successfully.
- If LEDs SETUP, Closed (KET-S2), Obstacle, Locked/Opened and Ready are FAST BLINKING: AutoSetup failed.
  - To clear the error: Press the key Setup.

▶ Check the door movement and performance:
- Check the movement while fully opening and closing 2–3 times.
- Check the stopping while opening at full speed.
- Check the stopping while closing at full speed.

Key	Description
DRET-O (+)	Opens doors, stops closing movement
DRET-S (-)	Closes doors, stops opening movement

▶ Define the door open position:
- Press the key DRET-O (+) to fully open the door.
- Press the key Setup to set the OpenPosition.
  - The LED SETUP is ON.
- Use the keys DRET-S (-) and DRET-O (+) to position the door panels flush to the frame.
  - Every pressing of the keys moves the door panels by 1 mm in opening or closing direction.
- Press the key Setup to store the actual door position.
  - The LED SETUP is OFF.

If no action is performed on the HMI for 30 seconds, the actual door position is not stored and the LED Setup will go off.

▶ Check the car door to landing door alignment and the clutch movement.
- Press the key DRET-S (-) until the LED Locked/Opened is ON.
- Press the key DRET-O (+) for < 0.2 seconds to open the clutch.
- Check if the landing door panels and car door panels are moving.
  - If no door movement is visible: The car doors and the landing doors are aligned correctly.
- Repeat the check 2–3 times.

▶ Define the door opening and closing speed.
- Press the key DRET-S (-) until the LED Locked/Opened is ON.
- Press the key Setup to setup the speed.
- Use the keys DRET-S (-) and DRET-O (+) to select the closing and the opening speed value.
  - HMI: Values: 100 %, 80 %, 60 %, 40 %.
- Press the key Setup to store the defined opening and closing speed.
  - The LED SETUP switches OFF.

If no action is performed on the HMI for 30 seconds, the actual door position is not stored and the LED Setup will go off.

▶ Disable inspection door. HMI: Press INSP key.
  - The LED “INSP” is OFF.

▶ REC: Set the switch REC to NORMAL.

▶ AS: Switch off JH, SIL and SIS.

7 Installation Travel with REC Panel

7.6 Special Setting for Heavy Doors

If the following conditions are fulfilled, follow the steps below:

- Door type: C2
- Glass door panels or a similar weight material (mass > 240 kg)
- All landing doors are the same type and weight.

Follow:

▶ Set the switch JRH to INSPECTION CAR.

▶ Switch on JH, SIL and SIS.

▶ Login → Parameters → VD35Param → VD35 Param ID = 25 → VD35. Param = 1 → OK.

7 Installation Travel with REC Panel

7.7 Special Setting for Landing Doors with Different Weight

If the weight of the landing doors is not same on all floors, follow the steps below:

– There are only two different door masses supported by a single DO VAR 35.
– Assure that nobody is inside the car before starting the commissioning (safety barrier).

▶ Activate the setting for different landing doors:
- Set the switch JREC to INSPECTION CAR.
- Switch on JH, SIL and SIS.
- Login → Parameters → VD35Param → VD35 Param ID = 25 → VD35. Param = 0 → OK.

▶ Define the “Floor Map Table” for landing doors: Normal/Heavy
- Login → Parameters → Door → LanDoorWeight.

▶ For each floor level set door weight:
- Floor = 1 → OK → Normal Door/Heavy Door.

▶ For each second entrance: Define the “Floor Map Table” for landing doors Normal/Heavy:
- Login → Parameters → 2 Door → DoorWeight.

▶ Repeat the above two steps for every floor.

▶ Setting for a floor with normal door weights:
- Follow the steps defined in section “7.5 Door Drive AutoSetup (V35 with landing door)”
- Travel to the top floor
- Set the switch JREC to NORMAL.

▶ Setting for a floor with heavy weight landing doors.
- Set special trip KFM:
  Login → Commands → Special Trips → KFM → KFM State = ON → OK.
- Move the car to a floor with heavy landing doors:
  Login → Commands → Car Call → Floor 1 →
  OK Entry Side = 1 or 2 → OK.
- Set the switch JRH to INSPECTION:
- Login → Test → VD35 Tests → VD35 Param ID = 2 → OK.
  The AutoSetup for the heavy door is now in progress. Wait until the result “Success” or “Failed” is shown.
- Set the switch JRH to NORMAL.
- Disable special trip KFM:
  Login → Commands → Special Trips → KFM → KFM State = OFF → OK.

8 Manual Evacuation

8.1 PEBO - Pulsed Electric Brake Opening

Preconditions

- No NGL supply.
- LUET signal is inactive.
- Two battery packs are installed.

Procedure

▶ Switch off JH, SIL and SIS.

▶ AS: Plug in the connectors NGL_PEBO and PEBO_KBV.

▶ ASIXB: plug in ASIXB.PEBO.

▶ MH: Check that the PEBO cable is connected to the machine terminal box.

▶ PEBO: Plug in the following connectors:

- BATT1
- BATT2
- NGL
- AS1
- AS2.

▶ PEBO: Connect the MGBC cable.

▶ Switch on JH, SIL and SIS.

▶ PEBO: Check the following LED status:

Color	Name	Status	Description
Red	BAT-WARN1	OFF	Supervision of battery pack 1
Red	BAT-WARN2	OFF	Supervision of battery pack 2
Red	OUT_ERR1	OFF	Error on output 1
Red	OUT_ERR2	OFF	Error on output 2
Green	VBAT1	ON	Voltage from battery pack 1
Green	VBAT2	ON	Voltage from battery pack 2

▶ If any LED BAT_WARN is ON: Switch on JH and SIS.

▶ Wait until the battery packs are fully charged.
- The LEDs BAT_WARN are OFF.

▶ Close the PEBO box.

▶ Use the recall control to place the empty car approximately 300 mm below any door zone.

8 Manual Evacuation

8.1 PEBO - Pulsed Electric Brake Opening

▶ Switch off JH.

▶ Switch on JEM and press the button DEM.
- The hoisting machine brakes open for a short time.
- The car moves upward, dragged by the load unbalance.

▶ Press the button DEM until the car reaches the door zone.

- ASIXB.PCBA: The LED LUET is ON.
- The brake opening is inactive.
- SMLCD: Line four displays the distance to the nearest floor.

▶ Switch off JEM.

▶ Switch on JH.

- The manual evacuation is performed by BCM 2002/03 and supplied by the Short Interruption Power Supply (SIPS) device. It is used for the manual evacuation of a trapped passenger in case of power failure.
- The supply device is powered by two batteries, whose capacity depends on the requirements of the hoisting machine brake and the maximum distance between the floors of the building.

Preconditions

- No NGL supply
- LUET signal is inactive
- Two battery packs are installed.

Procedure

▶ Configure the function KMEBATOK on the input 2 (pin 4) of ASIXB PCBA.
- Procedure described on the chapter "Configuration of ASIXB I/Os".

▶ SMLCD: Access the KMEBATOK:
Login → Status → Board I/O → LOCAL → KMEBATOK.

▶ ASIXB: With I/O connector plugged, check if the input status is active (1a).

▶ AS: Switch off JH.

▶ Plug the battery units inside the SIPS box.

▶ Switch on JH.

▶ AS.BCM: Check the following LED Status:

Color	Name	Status	Description
Green	WDG1	Blinking	Normal Operation (only BCM 2002)
Green	WDG2	Blinking	Normal Operation (only BCM 2002)
Red	OVLT	OFF	Normal status. AC input voltage ≤ 264 V.
Red	ERR	OFF	Normal status
Yellow	EM	OFF	JEM switch deactivated. Manual evacuation is blocked, brake opening by control enabled.

- ASIXB: Check the voltage on ASIXB.IO: 4.
  Battery charge level:
  - 24 V reading indicates that the manual evacuation is feasible
  - 0 V reading indicates that the batteries must be recharged.
- Check the correct operation of the brake control module in inspection and normal trips.
- Note down the distance from the nearest floor informed on the SMLCD fourth line.
- BCM 2003 only:
  - Set PEBO PULSE LENGTH rotary switch to position 0 (150 ms pulse)
- Set the switch JREC to inspection.
- REC: Release the switch JHC.
- Use the recall control to place the empty car approximately 300 mm above the bottom floor.
- Switch off JH.
- Switch on JEM.
  - BCM 2002/03: The LED EM starts to blink, indicating the manual evacuation mode.
- Press the DEM Button.
  - The hoisting machine brakes open for a short time
  - The car moves upwards, dragged by the load unbalance
  - Compare the distance to the nearest floor with the one noted down previously. The system defines a maximum displacement per pulse.
- BCM 2003 only:
  - Adjust PEBO PULSE LENGTH rotary switch to increase the distance per pulse until the biggest value below the maximum from the system commissioning is reached.

Adjustment criteria: The rotary switch is correctly adjusted when the travelled distance per each pulse is between 300 and 350 mm.

- Continue pressing the DEM button until the car reaches the door zone.
  - ASIXB.PCBA: The LED LUET is ON.
    From this moment on, the brake opening is inactive.
  - SMLCD: Line four displays the distance to the nearest floor.
    The evacuation progress can be observed by the distance to the nearest floor.
- Switch off JEM.
- Switch on JH.
- BCM 2003 only:
  - Mark on the provided label the rotary position that was defined during the procedure.
- The elevator return to normal operation mode.

9 Measuring Travel

9.1 AC GSI (SALSIS) Connection

Car unbalance for drive torque adjustment:
From the control SW version 10.07.00 and newer, the values of the car unbalance on the top and bottom are acquired during the measurement travel. The values resulting from this process can be inspected with the SMLCD:
Parameters → Unbalance → Unbalance top and Unbalance bottom

Preconditions

- The door drive is commissioned.
- SALSIS is installed according to the installation instructions.
- AS.ASIXB: JMOF is in position “1”.

Procedure

▶ AS: Switch off JH, SIL and SIS.

▶ OKR.CANIC(K): Remove the temporary bridges 1-2, 3-4 and 5-6 on the connector SISK.

▶ OKR.CANIC(K): Plug in the connectors SISK and SI.
SALSIS.SISK: The SALSIS connector includes two bridges between 3-4 (RETSL) and 5-6 (RETSL1).

▶ CAR.SALSIS: Connect the floor sensor for the entry side 1.

▶ If entry side 2: Connect the floor sensor for the entry side 2.

▶ AS: Switch on JH, SIL and SIS.

▶ Wait until the boot sequence is completed and the SMLCD displays the elevator status. Negative feedback is given in case the load measurement system has failed or has not been commissioned.

▶ Check that there are no bridges in the safety circuit.

▶ Check that the safety circuit functions correctly.
- The LEDs T1 - T6 are ON.

▶ AC GSI: Check that the LEDs POWER and KNE are ON.
- Power is applied and the KNE contact is open

▶ AC GSI: If a LED other than LED POWER or LED KNE is ON:
Reset SALSIS as follows:

- Switch off JH, SIL and SIS.
- Disconnect the connector HK and wait for 5 seconds.
- Connect the connector HK.
- Switch on JH, SIL and SIS.

▶ AC GSI: Press the buttons A and B simultaneously for more than 2 seconds to activate the teach-in-mode.

▶ Check that the signaling pattern of LED KNE changes from mode pre-commissioning to teach-in.

Signaling Pattern of Pre-Commissioning Mode (LED KNE long ON short OFF)

Signaling Pattern of Teach-in Mode (LED KNE short ON long OFF)

Teach-in mode is terminated automatically 20 minutes after activation.

- Complete teach-in within 20 minutes.

▶ Use the recall control to move the car along the hoistway.

▶ Check the signaling of the LED LUET on ASIXB when the car passes through the door zones.

▶ If LUET does not turn on when passing the floor magnet: Press the buttons A and B simultaneously for more than 2 seconds to activate the teach-in-mode.

▶ Use the recall control on the controller ESE control panel:

- Move the car to the top floor and check that the LED LUET switches ON.
- Move the car upward until the counterweight hits the buffer.
- Move the car to the bottom floor.
- Check if the number of LUET corresponds with the number of floors.
- Move the car downward until the car hits the buffer.
- Move the car approximately 2 meters in upward direction.

▶ The learning of floors is completed.

Starting of the Measuring Travel

Preconditions

- The installer stays in front of the controller cabinet.
- The car is positioned at any point within the normal travel range.

Procedure

▶ Activate the measuring travel on the SMLCD:
Login → Commands → Special Trips → JLF → OK.
- Measuring travel terminates the teach-in-mode automatically.

▶ Follow the instructions on the SMLCD.

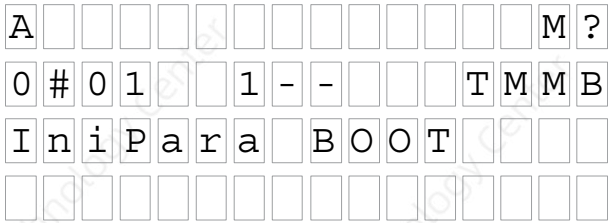
▶ Set the switch JMOF to position “0”.

▶ Set the switch JRH to NORMAL.

▶ If the traction media monitoring and the brake component operation limit setup are set: Continue with the section “9.4 Final Check”.

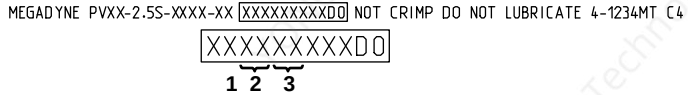
The traction media monitoring setup starts automatically after the measuring travel and the boot sequence have been completed.

– The SMLCD displays "TMMB", if the system misses the parameters for the traction media monitoring.
– The SMLCD displays "SCAN IO" in the fourth line, if the connectors BIOBUS and HK are not connected.



During the setup procedure, you are prompted to enter the manufacturing date of the traction media.

The manufacturing date is printed on the back side of the traction media as follows:



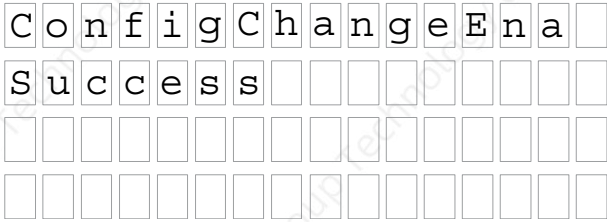
1 Monday–Sunday (1–7)
2 Week (01–52)
3 Year (04–99)

Procedure

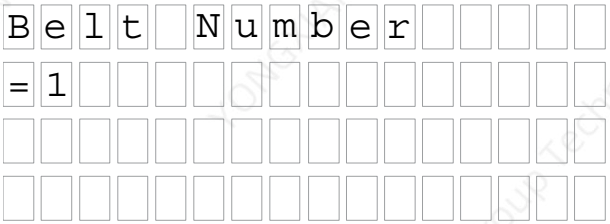
▶ Wait until the boot sequence is completed and the SMLCD displays:
- "TMMB", if the system misses the parameters for the traction media monitoring.
- "SCAN IO" in the fourth line, if the connectors BIOBUS and HK are not connected.

- ▶ SMLCD: Check that the control date is correct:
  Status → Date & Time.
- ▶ If not correct: Correct the control date:
  Parameter → System → Date.
- ▶ SMLCD: Activate the parameter configuration of the traction media monitoring:
  Login → Commands → TracMediaMon → ConfigChangeEna → OK.

The parameter configuration of the traction media monitoring is terminated automatically 1 minute after activation.

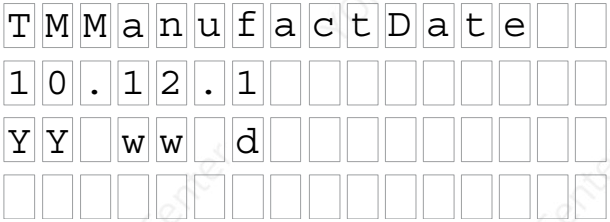


- ▶ SMLCD: Start the parameter configuration of the traction media monitoring:
  Parameters → TractionMediaMon → STMInstallData.
  - The system asks for the confirmation of the commission number.
- ▶ Confirm with OK.
  - The SMLCD displays the first STM.



- ▶ Confirm with OK.

The SMLCD asks for the TM manufacturing date:



▶ Edit the TM manufacturing date and confirm with OK.
- The SMLCD returns to the STM number screen.

The number of STMs is a chip card parameter.

- If the indicated number of STMs does not match with the number of the STMs on site: Request the correct chipcard according to the installation.

▶ Change the STM number to the next STM and insert the STM manufacturing date.

▶ Repeat the process for all STMs in the system.

The SMLCD displays the present control clock date.

```
STMInstallDate
10.06.23
YY mm dd
```

▶ If different from present control clock date: Enter the installation date of the traction media. The installation date is valid for all traction media.

▶ Confirm with OK.
- The display shows:

```
A     DIS     M?
0#01  1--  BESC
IniPara  BOOT
```

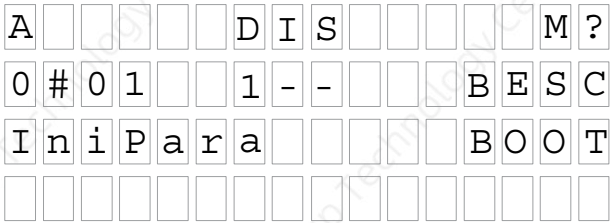
▶ If the display shows: "BESC": Proceed with section "Brake Component Operation Limit Setup". The system misses the parameters for the brake emergency stop monitoring.

Operational Limit of Brake Pads

The function within CO MX SW counts the number of emergency stops to provide a warning if the brake pad is close to the end of its operational limit.

- If the limit number of emergency stops is reached: CO MX SW issues a warning via telemonitoring.
- If the shut down number is reached: CO MX SW issues a controlled blocking of the elevator.

The setup of the brake component operation limit initializes the function within CO MX SW.



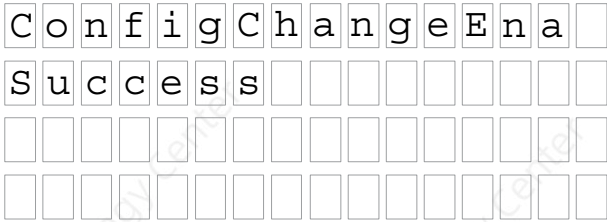
▶ Collect the brakes production serial numbers of the machine.

▶ The brake ID numbers are entered in the control during the setup procedure.

- The brake production serial numbers are composed by 6 digits (numbers or letters).
- The brakes ID numbers to be entered through SMLCD consist of the last four digits of the brake production serial numbers, as follows:

Wagner:	0799128-001-BM07 → ID no.: 9128 The numbers “-001-BM07” are linked to the production date
Kendrion:	P17552/136 → ID no.: 7552 The numbers “/136” are linked to the production date.
Leroy Somer:	I2HL0941-002 → ID no.: 0941

- SMLCD: Activate the parameter configuration of the brake emergency stop monitoring:
  Login → Commands → BrakeMonEmgStp → ConfigChangeEna → OK.

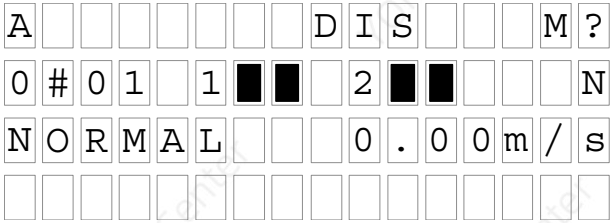


- SMLCD: Parameter → BrakeMonEmgStp → BrakeID1.
- Adjust the value of the brake ID1 and press OK.
- SMLCD: Activate the parameter configuration of the brake emergency stop monitoring:
  Login → Commands → BrakeMonEmgStp → ConfigChangeEna → OK.
- SMLCD: Parameters → BrakeMonEmgStp → BrakeID2.
- Adjust the value of the brake ID2 and press OK.
- Exit the parameter configuration of the brake emergency stop monitoring.
- Store changes. End Commissioning on SMLCD:
  Login → Commands → Drv End Commiss → OK.

9 Measuring Travel
9.4 Final Check

The measurement travel is finished.

The display shows:



- ▶ SMLCD: Send the car to each floor and access side.
- ▶ Perform one door cycle (open - close) at each floor:
  Login → Commands → Car call → Floor → Entry side → OK.

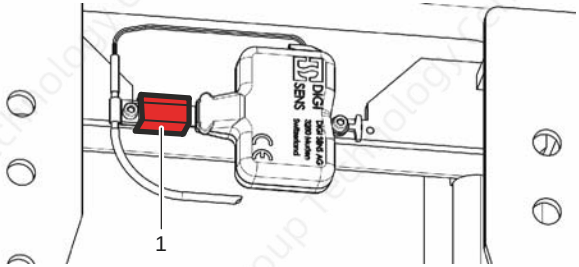
10 Load Measurement Commissioning

10.1 Load Measurement Commissioning

Floor-depending zero load calibration: To compensate the effects of the guide rail alignment on the detection of small loads, an automatic calibration procedure is required. It must be performed after the completion of the guide rail adjustment.

Preconditions

- The sensor is fixed according to the J 41384063 Digisens KL-66 Installation Instruction CAPK33. Before commissioning the tape shall be removed and the screw tightened with recommended: 1.28 Nm



[40700039_006; 19.12.2014]

1 Adhesive tape

- The counterweight has been loaded as required
- Completion of the guide rail adjustment
- The sliding or roller guides shoes are properly adjusted within the correct tolerances and they are according to the layout drawing and installation method.

Procedure

- ▶ Switch on JH, SIL and SIS.
- ▶ Move the car to the floor where the calibration weights are located.
- ▶ Check that the car is empty.
- ▶ SMLCD: Open the car:
  Login → Command → Door → Side 1 or 2 → Open → OK.
- ▶ Switch on JRH to keep the door open during calibration.
- ▶ Status: LM Load and Freq.
  - Check that Freq 1 and Freq 2 are within 14.000 Hz ... 18.000 Hz.
- ▶ SMLCD: Acquire the zero load reference point:
  Commands → LM Commiss CLC → Zero Load Cal → OK.
  - The control reads the load sensor output and associates it with the empty car.
- ▶ Wait until the SMLCD displays "Success".
- ▶ Place the calibration weight in the car (25–100 % of GQ).
- ▶ SMLCD: Initiate the known load reference point:
  Commands → LM Commiss CLC → Ref Load Cal.
  - The SMLCD displays the entry screen for the known load value.
- ▶ Set a new reference load value.
- ▶ Press OK.
  - The control reads the load sensor output and associates it with the new load value.

- ▶ Wait until the SMLCD displays "Success".
- ▶ Remove the load from the car.
- ▶ Check that the car is empty.
- ▶ Switch off JRH.
  - The door closes.
- ▶ SMLCD: Active KFM. Not allow landing calls:
  Command → Special Trips → KFM → ON → OK.
- ▶ SMLCD: Initiate the acquisition of the floor-dependent zero load calibration values, dependent of the Compensation Chain:
  Command → LM Commiss CLC → FloorAdjTravel → Compensation chain → Yes/No → OK.
  - The elevator starts the calibration travel to each floor to acquire the zero load value at each floor
  - SMLCD shows: FloorAdjTravel = Success and Maximum deviation values (Floor with maximum deviation).
- ▶ SMLCD: Not Active KFM. Allow landing calls:
  Command → Special Trips → KFM → OFF → OK.
- ▶ Press the button ESC to exit the CLC.
- ▶ On SMLCD menu, read the load measurement parameter values and record them in the control label (parameter change record):
  - Zero load frequency 1 (Hz)
  - Zero load frequency 2 (Hz)
  - Reference load (kg)
  - Reference load frequency 1 (Hz)
  - Reference load frequency 2 (Hz).

Minimal Load Adjustment:

Non-linearity and lack of resolution of the load measurement system can make the detection of small loads uncertain, resulting in car call cancellation or wrong operation of the standby power management. The next steps will adjust the detection threshold of the control to 50 kg, discarding the above mentioned limitations.

- ▶ SMLCD: Set the elevator into reservation service JRV:
  Commands → Services → JRV → ON → OK.
- ▶ Place a 50 kg load at the center of the car.
- ▶ SMLCD: Status → LM. Load and Freq.
- ▶ Travel to every floor using car calls (ESC + UP together, select floor and side, OK) and write down the value shown as “Load” when the elevator is at standstill on the floor.
- ▶ Return to the floor where the load can be removed.
- ▶ Remove the load.
- ▶ SMLCD: Parameter → Car → Minimal Load.
- ▶ Modify the value with UP and DOWN buttons to 1 kg less than the smallest retrieved load value written down in previous step.
- ▶ Confirm with OK.
- ▶ Check the operation of the load measurement system.

11 Final Drive Adjustment

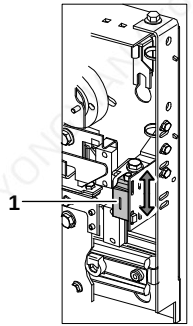
11.1 Floor Level Adjustment

Preconditions

- The car is empty.

Procedure

- ▶ Switch on JH, SIL and SIS.
- ▶ Move the car upwards and downwards to check the ride quality.
- ▶ If strong vibrations: Investigate and eliminate the source of the vibrations before adjusting the leveling accuracy.
- ▶ Prepare a table on paper to record the leveling accuracy on all floors.
- ▶ Measure the leveling accuracy on each landing and record the values in the table.
- ▶ SMLCD: Enter the floor level adjustment table:
  Login → Commands → Adj. Floor Lev → OK.
- ▶ If the level accuracy corrections are more than 5 mm in any floor, follow the next steps:
  - Readjust the car magnet reader position (1) and check the right position according to the type of door defined in EMBD K 43402040.
  - Activate again the Teach-in mode and restart the measuring travel, as defined in chapter "AC GSI (SALSIS) Connection".
  - Restart the procedure defined in chapter "Floor Level Adjustment".



[40700039_005; 01.08.2014]

1 Car magnet reader position

- ▶ Select the floor subject to the leveling accuracy adjustment using the up or down keys.
- ▶ Press OK.
  "+" means that the car must stop at a higher position.
- ▶ Adjust the value in mm.
- ▶ Press OK.
- ▶ Repeat the last three steps for floors that require adjustment.
- ▶ Press ESC and UP simultaneously to exit the floor level adjustment.
- ▶ Measure the leveling accuracy again.
- ▶ If necessary: Repeat the corrections.
- ▶ SMLCD: Perform a drive end commission operation:
  Login → Commands → Drv End Commiss → OK.

11 Final Drive Adjustment

11.2 Verification of Floor Approach

The floor approach is considered correct if there is:

- No creeping to the floor level
- No overtravel.

▶ Enter several car calls.

▶ SMLCD: Note down the calculated Tractn Diameter value after each travel:
Status → Regulation. → TrcDia

▶ SMLCD: Enter the average value of the four last calculated Tractn Diameter values:
Parameter → Drive Setting → Tractn Diameter.

▶ SMLCD: Perform a drive end commission operation:
Login → Commands → Drv End Commiss → OK.

From the control SW version 10.07.00 and newer, the values of the car unbalance on the top and bottom are acquired during the measurement travel.

The acquiring of values of the car unbalance on top and bottom can be initiated from SMLCD:

- ▶ SMLCD: Set special trip KFM. Not allow landing calls:
  Login → Commands → Special Trips → KFM → ON → OK
- ▶ SMLCD: Initiate the acquisition of car unbalance on top and bottom
  Command → Special Trips → LearnCarUnbalance → OK
- The elevator travel to the top floor and bottom floor to acquire the unbalance values
- Wait until "LearnCarUnbalance" → "Done".
- The values on top and bottom as showed (example):
  – Bottom = 7 [kg]
  – Top = 9 [kg].
- ▶ Store changes. End commissioning on SMLCD:
  Commands → Drv End Commiss → OK
- ▶ SMLCD: Disable special trip KFM
  Command → Special Trips → KFM → OFF → OK

The values resulting from the acquiring process of the car unbalance at top and bottom can be inspected with the SMLCD:

- ▶ Parameters → Unbalance → Unbalance top and Unbalance bottom
  - Top → Unbalance bottom = +7 [kg]
  - Bottom → Unbalance top = +9 [kg].

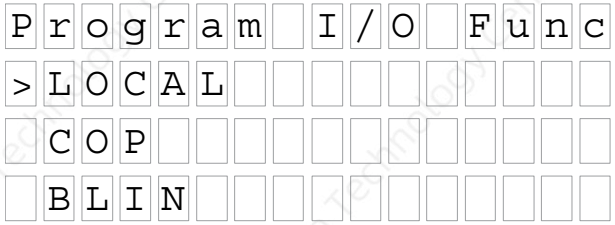
12 Configuration of ASIXB I/Os

12.1 Configuration of ASIXB I/Os

Only to be performed if there are ASIXB I/Os to be configured.

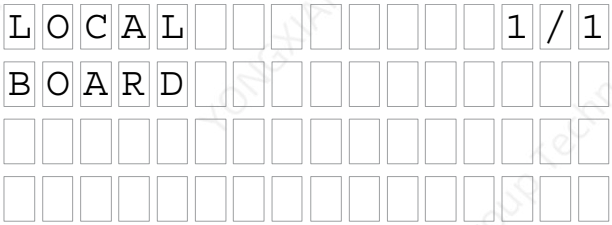
▶ Activate the "Service Visit" to disable the monitoring of critical I/Os
SMLCD: Login → Commands → Service Visit → ON → OK
- A blinking "*" on the SMLCD and an acoustic signal indicate the "Service Visit" mode.

▶ Activate the I/O configuration process.
SMLCD: Login → Commands → Program I/O function
- A scrolling list of all PCBA types with configurable I/Os appears.
- The ASIXB PCBA is identified by the word "LOCAL".



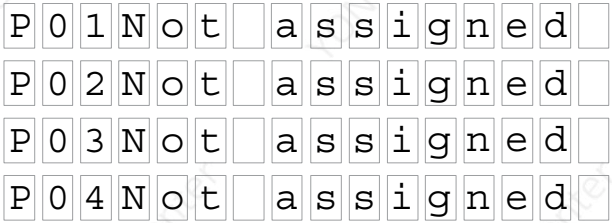
[37437; 29.10.2010]

▶ Scroll down the list until the PCBA type to be programmed appears and press OK.



[37438; 29.10.2010]

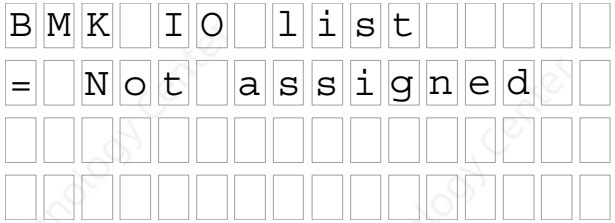
▶ A list of the available I/Os of the selected PCBA is shown, indicating their present status.



[37439; 29.10.2010]

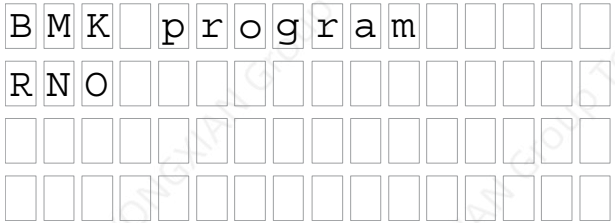
12 Configuration of ASIXB I/Os
12.1 Configuration of ASIXB I/Os

- ▶ Scroll down the list until the I/O to be programmed appears and press OK.
- ▶ Using the up and down arrows, change the I/O function and press OK.
  - The selected value is shown
  - The order is alphabetic by I/O function acronym.



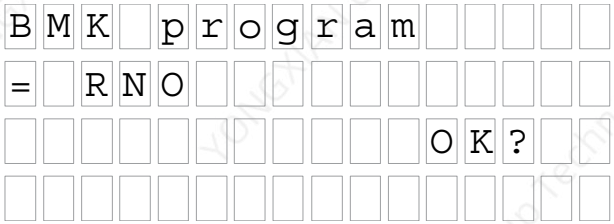
[37440; 29.10.2010]

- ▶ The selected I/O is shown associated with the chosen BMK. "RNO" is an example.



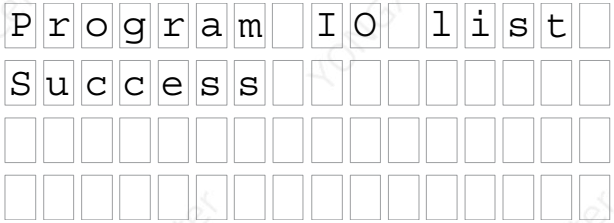
[37441; 29.10.2010]

- ▶ Press OK.



[37442; 29.10.2010]

- ▶ Press OK again to confirm.
  - The system stores the function on the PCBA.



[37443; 29.10.2010]

12 Configuration of ASIXB I/Os

12.1 Configuration of ASIXB I/Os

- Press ESC to return to the list of the available I/Os.
- Configure all other I/Os required, repeating the preceding steps as many times as required.
- Store the configuration in the elevator non-volatile memory.
  SMCLD: Login → Commands → Freeze Node Tr. → OK.
- Check the result of the process on the uppermost left corner of the SMLCD:
  - "?" - Freeze not completed yet
  - "?" (blinking) - Executing freeze command
  - "!"- Freeze completed, configuration contains changes since last freeze
  - "!" (blinking) - Freeze command not successful
  - (no display) - Freeze completed, configuration does not contain any changes since last freeze.

13 COP Setup and Configuration I/O

13.1 Connection of COPs

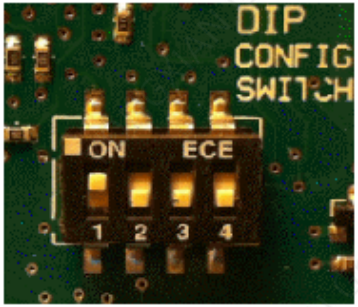
- If COP display shows "Er" during the commissioning process: Exit and re-enter the commissioning process again.
- Switch off JH, SIL and SIS.
- OKR.CANIC(K):
  Plug in the connectors XCOP, ACS, JNFF, LNC and GNT.
- COP: If COP2 available:
  Connect the cable from COP2 to the XCOP2 connector.
- COP2: If COP3 available:
  Connect the cable from COP3 to the XCOP2 connector.
- COP3: If COP4 available:
  Connect the cable from COP4 to the XCOP2 connector.

PCBAs of COPs: CANCP for FI GS COP and CANCPI for third party COP.

- For COP, COP2, COP3, COP4 on CANCP PCBA or on CANCPI PCBA inside OKR (if present):
  Check the setting of the DIP switches:

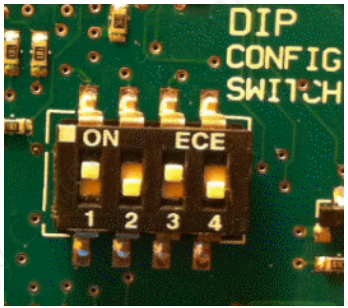
	Access Side	DIP1	DIP2	DIP3	DIP4
COP	Side 1: Position 1	ON	OFF	OFF	OFF
COP2	Side 2: Position 1	ON	OFF	ON	OFF
COP3	Side 1: Position 2	ON	ON	OFF	OFF
COP4	Side 2: Position 2	ON	ON	ON	OFF

COP (Side 1, Position 1)



[40700039_001; 02.05.2014]

COP2 (Side 2, Position 1)

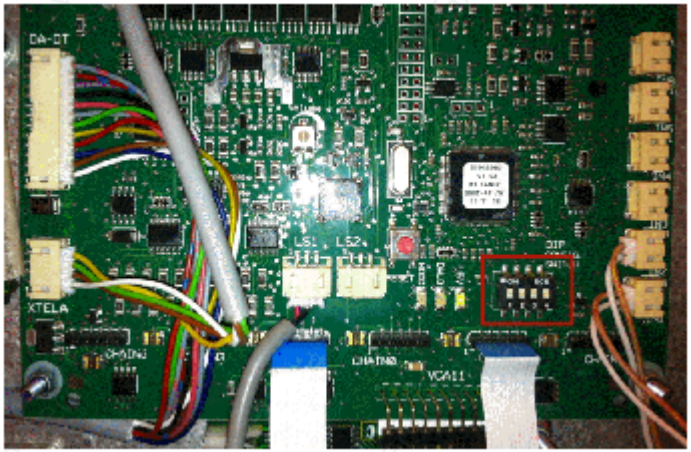


[40700039_002; 02.05.2014]

13 COP Setup and Configuration I/O

13.1 Connection of COPs

CANCP PCBA



[40700039_003; 02.05.2014]

- ▶ Switch JHM to Stop.
- ▶ Switch on JH, SIL and SIS.
  - A buzzer sounds.
  - All COPs: Bus communication is established.

- ▶ For FI GS COP (CANCP PCBA) or for third party COP (CANCPI PCBA), check the following LEDs status:

Color	Name	Status	Description
Green	DC supply	ON	+24 V
Red	CAN_ERR	OFF	CAN bus error
Green	CAN_RUN	Blinking	CAN bus activity

- ▶ For FI GL COP, SCOPx PCBA, check the following LEDs status:

Color	Name	Status	Description
Yellow	SWDLD	OFF	SW download
Green	WDG	Blinking	Processor activity

- ▶ Check each COP shows the current car position on its position indicator.

If JHM not pressed: The SMLCD displays the error message "Teach-in COP failed not enabled" when attempting a COP teach-in.

If capacitive COP buttons are installed, continue with the checking of the COP configurable inputs and outputs.

- ▶ If FI GL COP or third party COP interface CANCPI is installed, skip to "Verification of the COP configurable inputs and outputs".
- ▶ SMLCD: Start the COP button configuration:
  Login → Commands → Teach-in COP.
- ▶ Select the COP for the teach-in:
  Commands → Teach-in COP → Entry Side: Side 1/2 → COP.
  Position: Position 1/2 → ON/OFF
- ▶ Select the main entry side, associated with the DIP3 of the COP board:
  - Side 1 = OFF
  - Side 2 = ON
- ▶ Select the position of the COP, associated with the DIP2 of the COP board:
  - Position 1 = OFF
  - Position 2 = ON
- ▶ Select the option ON to start the teach-in process.
  - The selected COP beeps and shows CP on its position indicator.
- ▶ COP: Press the door open button DT-O or 2.DT-O that corresponds to the side to be taught-in.
  - The position indicator shows the lowest floor available on this access side.

It is possible that the side to teach-in does not correspond to the main access side selected by DIP3.

- ▶ If there is a car call button that corresponds to the indicated floor:
  - Press the call button.
  - Press the button DT-O.
    - The COP beeps and shows "AC" on the display.
- ▶ If there is **no** car call button corresponding to the indicated floor on the COP: Press the button DT-O.
- ▶ Press the button DT-O.
  - The COP beeps and shows the next floor number available for this access side.
- ▶ Repeat the last three steps until the topmost floor on this access side is configured.
  - The position indicator shows "CP".
- ▶ If there are car calls for the opposite access side:
  Press the buttons DT-O or 2.DT-O.
- ▶ Repeat the previous three steps for the opposite access side, until the position display shows "CP".
- ▶ Exit the COP button configuration mode:
  Commands → Teach-in COP → COP Teach-in → Select COP → OFF → OK.
  - The SMLCD shows "Success".

Checking of the COP configurable inputs and outputs

▶ Check the configuration of the COP configurable inputs and outputs:
- FI GL COP has four configurable inputs.
- FI GS COP and third party COP interface CANCPI have six configurable lamps and six configurable inputs

These are supplied with a label that shows the function of each configurable I/O.

▶ Start the I/O configuration in the SMLCD. If the COP I/Os configuration is required, perform as follows:
Login → Commands → Program_IOFunct → COP.

▶ SMLCD: Store the configuration on the fixture PCBA:
Login → Commands → Freeze Node Tr. → OK.

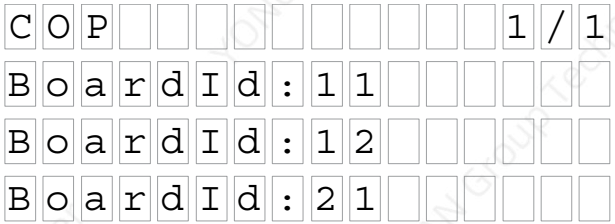
Valid for:
- FI GL COP
- FI GS COP.

Overview

COP	Description
FI GL COP	4 configurable inputs
FI GS COP	6 configurable lamps 6 configurable inputs A label shows the function of each configurable I/O.

▶ Check the configuration of the configurable inputs and outputs.

▶ If a COP I/O has to be configured: SMLCD:
Login → Commands → Program_IOfUNCT → COP.
- SMLCD displays the taught in COPs.



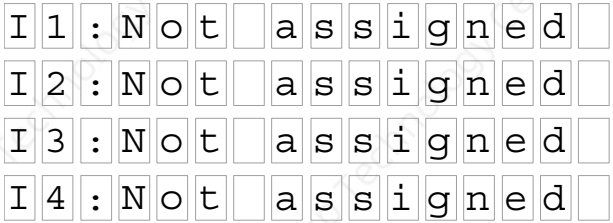
FI GL: COP Positions

COPs	Position
COP	End of the chain
COP2	Between CANIC and COP

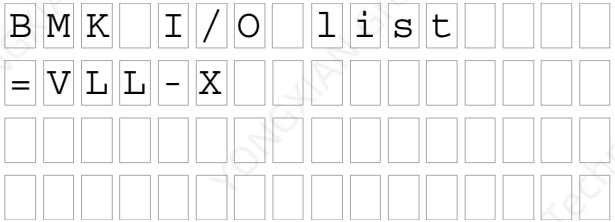
FI GS: Board IDs According to DIP Switch Setting

COPs	DIP2	DIP3	Board ID
COP	OFF	OFF	11
COP2	OFF	ON	12
COP3	ON	OFF	21
COP4	ON	ON	22

▶ Select the COP to be programmed and press OK.
- The SMLCD displays the available I/Os with the present status.



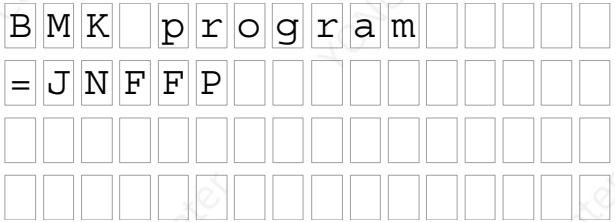
▶ Scroll to the I/O to be programmed and press OK.
- The SMLCD displays the selected I/O.



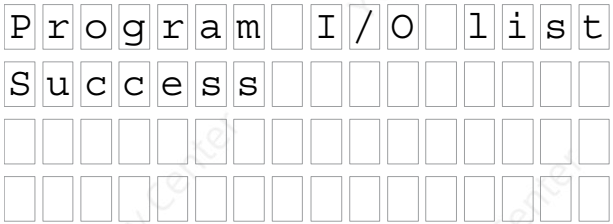
Output names are preceded by the character "V".

Example: VLL-X for overload lamp.

▶ Use the up or down arrows to change the I/O function and press OK.



▶ Press OK to confirm.
- The system stores the function.
- The SMLCD displays:



▶ Press ESC to return to the list of available I/Os.

▶ Repeat the procedures described in chapter C*onfiguration of COP Buttons* and in chapter *Configuration of COP I/Os* for all required COPs and I/Os.

▶ Check for all COPs:

- The car calls are acknowledged and answered.
- The door open and close buttons operate correctly.
- The car position indicator and indicating arrows operate correctly.
- The key switches and additional lamp elements operate correctly.

14 Elevator I/Os

14.1 Preparation

- ▶ Switch off JH, SIL and SIS.
- ▶ AS.ASIXB: Plug in the connector LOP.
- ▶ Switch on JH, SIL and SIS.

Two landing bus systems are available:

- If BIO2 bus: Used in elevators with PI/KA/KS control. Commissioning procedures are described in chapter *Commissioning BIO2 Landing Bus Fixtures* and in chapter *Additional Settings for BIO2 I/O Interfaces*.
- If CAN bus is used in elevators with M10 control: The commissioning procedures are described in the document "*K 604085 Z-Line 2 and Z-Line 3 Commissioning" and in the section "Additional Settings for CAN I/O Interfaces"*.

Two possible architectures for the floor calls shared by two elevators are available:

- If fixtures FI GS and one elevator powered off: The architecture "landing call button switching" transfers calls from one elevator to the other with relays inside the PCBA LOP.
- If fixtures FI GL and one elevator powered off: The architecture called "landing bus switching" transfers the LOP nodes from one elevator to the other with a device called PCBA SBBD.

Not valid for elevators with central risers.

The teach-in process stores the floor and access side of the BIO2 bus landing fixtures on the fixture PCBA.
The scanning process of the elevator recalls the stored information at every reset of the power cycle.

Teach-in after Power On, Single or Double Reset

▶ Wait until the SMLCD scan messages are erased before starting the teach-in of fixtures.

Clear BIO Nodes

The function Clear BIO nodes can be used to start the teach-in from virgin nodes.

This function erases the configuration of all nodes connected to the biobus.

SMLCD: Login → Commands → Clear BIO nodes.

Node to be taught-in a second time:
For example to be installed in another floor.
Set the node input to "not configured" before performing the teach-in process.

Grouped elevators:
Elevators with only LIP and no LOP, the teach-in process of LIP is done following the instructions of section 12.3 “Teach-in LIP nodes in elevators with no LOP”. These LIP can not be taught-in by the normal process, given the absence of a landing call button.

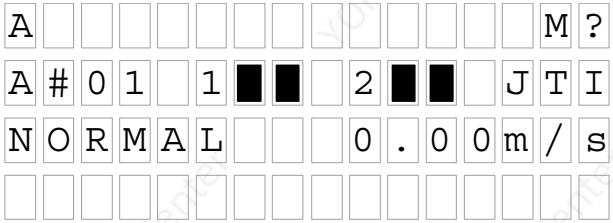
Procedure

▶ Release all floor access restrictions before starting the teach-in. Floors with restricted access are not served during teach-in.

▶ Call the elevator to the floor where the controller cabinet is installed for MRL or to the top floor for MMR:
Login → Commands → Car call → Floor → OK.

▶ PCBA GCIOCF: Carry out a single reset.
- Once the scan process is complete, the scan process disappears from the SMLCD.

▶ SMLCD: Activate the teach-in process:
Login → Commands → Teach-in LOP → ON → OK.
- The doors are open and remain open. The position of the car is indicated on the SMLCD.
- If LIPs present on the system: LIPs indicate "Out of Service".



- During the teach-in, only once car call per trip is accepted
- If the elevator is not from access on the floor where the call is made, the first call will result in the elevator arriving to the floor but not opening the door. To open the rear door and teach the LOP on rear access side, a new car call to the same floor has to be made.

▶ Enter the car.

▶ Enter a car call to the floor where the fixture to be taught-in is installed (start with the bottom floor).

▶ The car travels to the bottom floor.

▶ The door opens and remains open.

▶ If car with 2 selectively operated doors:

- Enter a car call to the floor.
- Access the car on the side where the fixture to be taught-in is installed.

▶ If car with 2 parallel operated doors:

- Enter a car call to the floor.
  - The front door opens.
- Teach-in the front door fixtures.
- Enter another car call to the same floor.
  - The front door closes and the rear door opens.
- Teach-in the rear door fixtures.

▶ Exit the car within 12 seconds after the doors have fully opened.

▶ Press the button until the acknowledge lamps of all buttons and the arrows of the LIP (if present) light up for approximately 3 seconds.

- If LOP with 2 buttons: Press the floor call up button.
  - The COP does a long beep.
  - If SLCUX interface: The COP beeps two more times.
  - Enter the car to enter a car call to the next floor.
  - If selective control: Access the car on the side where the fixture to be taught-in is installed.

▶ Repeat the procedure until all fixtures are taught-in.

▶ Travel to the floor closest to the controller cabinet.

▶ Exit the teach-in mode:
Login → Commands → Teach-in → OFF → OK.

- ▶ Perform a single reset.
- ▶ Wait until the SMLCD messages concerning the scanning are erased.
- ▶ SMLCD: Store the configuration on the fixture PCBA: Login → Commands → Freeze Node Tr. → OK.
- ▶ SMLCD: Check the storing status on the topmost right corner.

Symbol	Status	Description
?	ON	Freeze not yet completed.
?	BLINKING	Executing freeze command.
!	ON	Freeze completed with changes from last time.
!	BLINKING	Freeze command not successful.
No display	-	Freeze completed with no changes from last time.

- ▶ Travel to all floors.
- Check that all floor calls operate correctly.
- Check that all position indicators and direction arrows operate correctly.

The teach-in of the LIP nodes is performed in the machine room or near the MRL cabinet. The nodes are connected one by one to the bus using a “LIP teach-in cable” (ID no. 59710736), which is available as an option. The cable connects the LIP to the ASIXB.LOP plug.

Procedure

- ▶ Disconnect the ASIXB.LOP plug.
- ▶ Release all floor access restrictions before starting the teach-in.
- ▶ PCBA GCIOCF: Carry out a single reset.
  - Once the scan process is complete, the scan process disappears from the SMLCD.
- ▶ SMLCD: Activate the teach-in process:
  Login → Commands → Teach-in LOP → ON → OK
  - The doors are open and remain open. The position of the car is indicated on the SMLCD
  - If LIPs are present on the system: LIPs indicate "Out of Service".
- ▶ Connect a button to the LIP.DE-U plug and the LIP node to ASIXB using the cables of the LIP teach-in kit.
- ▶ SLMCD: Perform a car call to the floor where the LIP has to be taught-in:
  Login → Commands → Car Call → Floor → OK.
  - The car travel to the floor and open its doors.
- ▶ Within 12 seconds after the doors have fully opened, press and hold the button connected to the LIP, until the LIP acknowledges the teach-in by switching its arrows on.
- ▶ Mark on the LIP the corresponding floor taught-in.
- ▶ Unplug the LIP from the bus and button and connect the next one.
- ▶ Repeat the procedure until all fixtures are taught-in.
- ▶ Exit the teach-in mode:
  Login → Commands → Teach-in → OFF → OK.
- ▶ Install the LIP on each floor, connecting it to the landing bus.
- ▶ Return to the control cabinet and reconnect ASIB.LOP plug
- ▶ Perform a single reset.
- ▶ Wait until the SMLCD scanning messages are erased.
- ▶ SMLCD: Store the configuration on the fixture PCBA:
  Login → Commands → Freeze Node Tr. → OK.
- ▶ SMLCD: Check the storing status on the topmost right corner, see symbols in section “12.2 Commissioning of BIO2 Landing Bus Fixtures”.
- ▶ Travel to all floors:
  - Check if the position indicators operate correctly
  - Direction arrows are only verified further when the elevator is connected in a group and floor calls can be entered.

An elevator shall have floor call buttons to have its node teached-in. Some elevators share the floor calls, for such arrangement, the buttons are connected to one of the elevators, depending on the state of the power supply to the transfer relay embedded on the FI GS LOP (see schema S 274906 page 3) or on the third party interface transfer switch PCBA (BS1.Q, see S 274906 page 8). The overall principle to teach-in landing node of those elevators is:

- Switch “elevator A” power ON and “elevator B” power OFF. Perform teach-in for all LOPs or LIPs of “elevator A”.
- Switch “elevator A” power OFF and “elevator B” power ON. Perform teach-in for all LOPs or LIPs of “elevator B”.

▶ Identify which elevator has its nodes connected on DE1 plug of LOPBG PCBA (FI GS) or A_XDE_D/U plug on BS 1.Q PCBA (third party fixtures).
- This elevator is “elevator A”
- The other elevator to share the calls is “elevator B”.

▶ Elevator A → JH ON.

▶ Elevator B → JH OFF.
- If the main switch cannot be disconnected, unplug ASIXB.LOP plug on elevator B.

▶ Perform the teach-in process as described in section “12.2 Commissioning of BIO2 Landing Bus Fixtures” for elevator A.

▶ Check that the “elevator A” is serving landing calls.

▶ Elevator A → JH OFF.

▶ Elevator B → JH ON.
- If the main switch cannot be disconnected, unplug ASIXB.LOP plug on elevator A and plug ASIXB.LOP plug on elevator B.

▶ Perform the teach-in process as described in section “12.2 Commissioning of BIO2 Landing Bus Fixtures” for elevator B.

▶ Check that the “elevator B” is serving landing calls.

▶ Elevator A → JH ON or plug ASIXB.LOP plug on “elevator A”.

BIO2 Devices with Configurable I/Os

- LIP
- LOP
- SLCUX PCBA
- BIOGIO PCBA.

▶ If PCBA BIOGIO:
- Check if the configuration switches are set correctly
- Power on BIOGIO.

Possible combinations are:

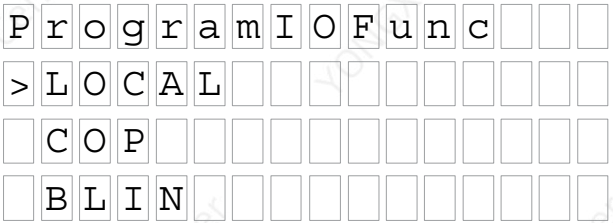
PCBA	CFG1	CFG2	Remarks
BIOGIOx	OFF	OFF	Teach-in required
BIOGIO1	ON	OFF	Fixed address
BIOGIO2	OFF	ON	
BIOGIO3	ON	ON	

▶ SMLCD: Activate "Service Visit" to disable the monitoring of critical I/Os:
Login → Commands → Service Visit → ON → OK.
- A blinking "*" on the SMLCD and an acoustic signal indicate that the elevator is in "Service Visit" mode.

▶ In case of CFG1 = OFF and CFG2 = OFF, the Teach-in LOP is required:
- Login → Command → Teach-in LOP → ON → OK (JTI ON)
- Send the elevator on floor down (if BIOGIO is mounted in the shaft)
- Press the “TEACH-IN” button and hold > 5 seconds
- Login → Command → Teach-in LOP → OFF → OK (JTI OFF)
- Perform a double reset.

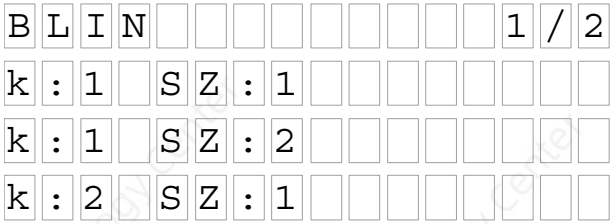
BIOGIO is visible in program I/O function.

▶ SMLCD: Activate the I/O configuration process.
Login → Commands → Program IO function.
- A list of all PCBA types with configurable I/Os appears:

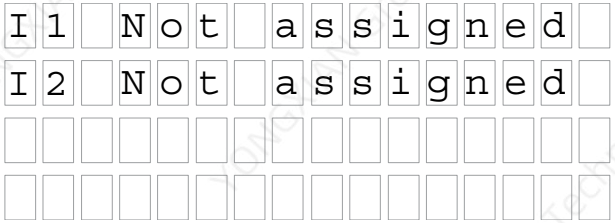


The PCBA ASIXB is identified by the word "LOCAL".

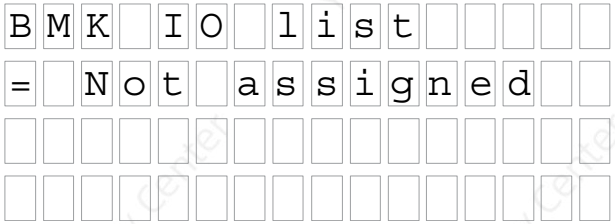
- ▶ Select the PCBA type to be programmed.
- ▶ Press OK.
  - A list of instances related to the selected PCBA is displayed:



- ▶ Select the PCBA type to be programmed.
- ▶ Press OK.
  - A list of available I/Os of the selected PCBA is displayed, indicating their present status:

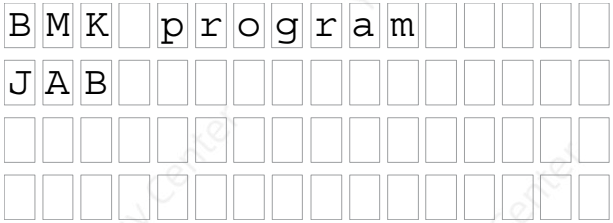


- ▶ Select the I/O type to be programmed.
- ▶ Press OK.
- ▶ Use the up or down arrows to change the I/O function.
  - The selected value is displayed.
  - The values are in alphabetical order sorted by I/O function acronym.

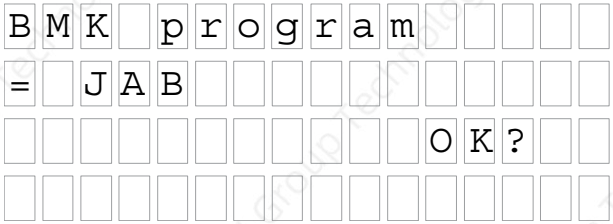


▶ Press OK.
- The selected I/O is displayed associated with the chosen BMK.

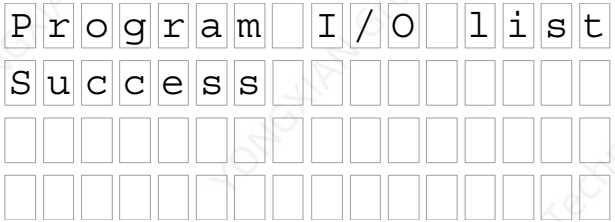
▶ Confirm with OK.



▶ Press OK.



▶ Press OK to confirm.
- The system stores the function on the PCBA.



▶ Press ESC to return.

▶ Repeat the procedure to configure all other required I/Os.

▶ Perform a single reset.

▶ Wait until the SMLCD messages concerning the scanning disappear.

▶ SMLCD: Store the configuration on the fixture PCBA:
Login → Commands → Freeze Node Tr. → OK.

▶ SMLCD: Check the storing status on the topmost right corner.

Symbol	Status	Description
?	ON	Freeze not yet completed.
?	BLINKING	Executing freeze command.
!	ON	Freeze completed with changes from last time.
!	BLINKING	Freeze command not successful.
No display	-	Freeze completed with no changes from last time.

- ▶ Perform a double reset.
- ▶ Wait until the SMLCD messages concerning the scanning disappear.
- ▶ Deactivate "Service Visit":
  Login → Command → Service Visit → OFF → OK.
- ▶ Check that all configured I/Os operate correctly.

CAN Devices with Configurable I/Os

- CANGIOs in the car
- CANGIOs on the landing bus
- ZRTL + IODB or IOX PCBA, inside the ZL3 terminals.

The maximum number of PCBAs CANGIO is sixteen.

▶ If PCBA CANGIO: Check if the configuration switches are set correctly.

- The node ID switch is set to a unique number in the elevator.
- The switch BAUD is set according to the bus to which the PCB is connected: 125 kbits/s for the nodes on the car and 50 kbits/s on the landing bus.
- All boards: The switch TERM is set to OFF. If board at the end of the landing bus: The switch TERM of this board is set to ON.

▶ SMLCD: Activate "Service Visit" to disable the monitoring of critical I/Os:
Login → Commands → Service Visit → ON → OK.
- A blinking "*" on the SMLCD and an acoustic signal indicate that the elevator is in "Service Visit" mode.

▶ SMLCD: Activate the I/O configuration process.
Login → Commands → Program IO function.
- A scroll-down list of all PCBA types with configurable I/Os is displayed:

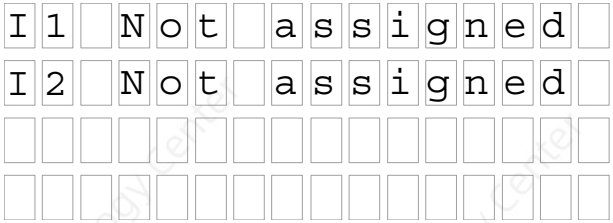
```
ProgramIOFunc
LOCAL
BIOGIO
CANGIO
```

▶ Select the PCBA type to be programmed.

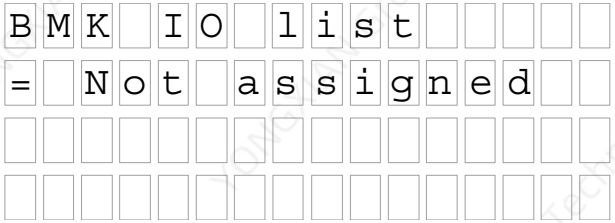
▶ Press OK.
- A list of instances related to the selected PCBA is displayed:

```
CANGIO      1/1
BoardID: 01
BoardID: 02
BoardID: 03
```

▶ Select the I/O type to be programmed.
▶ Press OK.
- A list of available I/Os of the selected PCBA is displayed, indicating their present status:

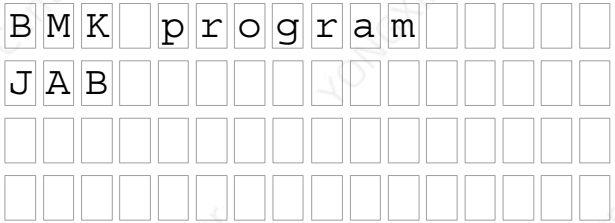


▶ Select the PCBA to be programmed.
▶ Press OK.
▶ Use the up or down arrows to change the I/O function.

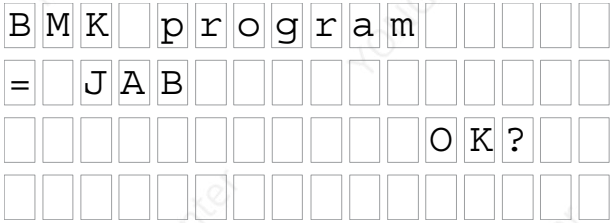


▶ Press OK.
- The selected I/O is displayed associated with the chosen BMK.

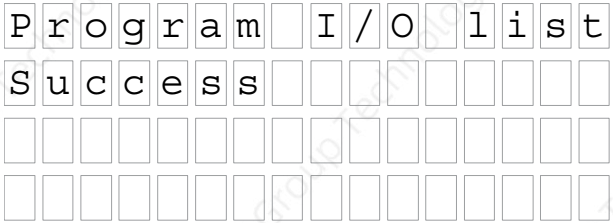
▶ Confirm with OK.



▶ Press OK.



▶ Press OK to confirm.
- The system stores the function on the PCBA.



▶ Press ESC to return.

▶ Repeat the procedure to configure all other required I/Os.

▶ Perform a single reset.

▶ Wait until the SMLCD messages concerning the scanning disappear.

▶ SMLCD: Store the configuration on the fixture PCBA:
Login → Commands → Freeze Node Tr. → OK.

▶ SMLCD: Check the storing status on the topmost right corner.

Symbol	Status	Description
?	ON	Freeze not yet completed
?	BLINKING	Executing freeze command
!	ON	Freeze completed with changes from last time
!	BLINKING	Freeze command not successful
No display	-	Freeze completed with no changes from last time.

▶ Perform a double reset.

▶ Wait until the SMLCD messages concerning the scanning disappear.

▶ Deactivate "Service Visit":
Login → Command → Service Visit → OFF → OK.

▶ Check that all configured I/Os operate correctly.

14 Elevator I/Os
14.7 Fixture Z-Line 2 and Z-Line 3

The complete commissioning procedures of the fixture elements are described in the document K 604085 Z-Line 2 and Z-Line 3 Commissioning.

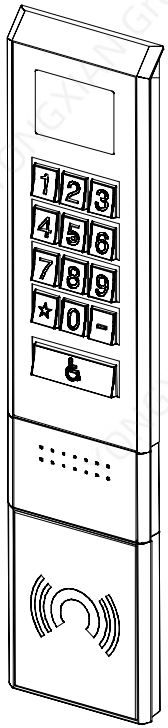
Landing Elements

- Connect all terminals risers to the elevator control and check it is operational.
- Commission the terminals individually one by one, starting from the top floor and working downwards.
- Check operation of the terminals according to the commissioning procedure for the control after all terminals are commissioned.

Car Elements

- Commission the terminal as part of the COP.
- Set the terminal parameters on the Z-Line terminals for system test.

On the Z-Line terminals, the configuration modes for parameters settings are available. For details, refer Appendix A of the document K 604085.



[40700039_007; 10.04.2015]

14 Elevator I/Os
14.8 Car Damping Device

The option "Car Damping Device" is only present in some elevators. The requirement is defined by system parameters such as travel height, rated load and car weight.

Preconditions

- The device is installed and wired as described on the commission schematics.
- At least one interface CANGIO is installed on the OKR and connected to the CAN bus.
- Check operation of the terminals according to the commissioning procedure for the control after all terminals have been commissioned.

Procedure

▶ SMLCD: Perform car calls.
- The device is activated and clamps to the guide rails when the trip is completed.
- The device is deactivated before the trip starts.

▶ SMLCD: Check the correct turning of ICDD IO:
Login → Status → Board I/Os → CANGIO → <select boards> → <select IO>.

15 Completion Work Simplex Installation

15.1 Connection and Testing of Further Components

- ▶ Switch off the SIL main light switch.
  - If COP emergency lamp or in-car emergency lamp: The lamp turns on.
- ▶ Switch off JH and SIS.
- ▶ OKR.CANIC: Plug in the following connectors:

Connector	Description
SOA	Alarm horn
MVEC	Can fan supply
GNT	Telealarm or intercom device

- ▶ Close the OKR cover.
- ▶ COP, telealarm or intercom device: Connect the communication line to the traveling cable.
- ▶ Check that the alarm and telealarm or intercom system operate correctly.

16 Group Control

16.1 Procedure

Two possible group bus architectures are available in the CO MX control:

- If duplex elevators: An Ethernet cable runs directly between the GCIOCF PCBAs of both elevators.
- If groups of more than two elevators or if gateway to LobbyVision in duplex installation: The cables run from each elevator processor PCBA or gateway to a hub, usually located on the first elevator cabinet.

▶ Switch off JH, SIL and SIS.

▶ AS.GCIOCF:
Check that the ETHERNET connectors are plugged in.

Group Architecture	Connector Color
Duplex	Blue
Triplex	Green
More than three elevators	Green

▶ If triplex:

- L1.AS: Check that the Ethernet cables of all elevators to be grouped are connected to the Ethernet switch.
- Check that the switch Ethernet is powered.

▶ Switch on JH, SIL and SIS.

▶ SMLCD: Wait until the boot sequence is completed.
- The SMLCD displays the elevator status.
- If elevator control recognizes another elevator for the first time: A reset occurs.

▶ Travel to all floors.

▶ Check that:

- All floor calls are acknowledged and answered.
- The position indicators and direction arrows operate correctly.
- Group functions are carried out (if present).

▶ Switch off JH, SIL and SIS.
- The elevator group is ready for acceptance tests SAIS.

17 ETMA Tele-Alarm

17.1 ETMA Tele-Alarm

- Commissioning steps of telealarm system AC TMA1 (ETMA PSTN)
- The COP lamps LAGC and LARC will blink while the ETMA is still not configured.

Preconditions

▶ The RMCC database contains an entry for the elevator to be commissioned.

▶ The elevator is identified by the third to twelfth character of the commission number. The number is included in the legend of commission schematics.

▶ COP. Check connection inside COP: ETMA-CAR.X1-1-6 to CANCP.XTELA

▶ COP-OKR. Check the following Connections:
- ETMA-CAR.X1-1-1 to CANIC.GNT
- ETMA-CAR.X1-1-2 to XTT
- XTT to Traveling cable.

▶ If triphonie present:
- Check from each device of the devices and one of the ETMA-CAR-TRI plugs.

▶ AS. Check the following connections:
- Traveling cable XTT to ETMA-MR-PSTN.X1-1-1
- ETMA-MR-PSTN.COM to GSMI.ETMA
- ETMA-MR-PSTN to the Phone line.

▶ SMLCD: Check the unconfigured state of the installation, restoring if necessary.
Login → Parameters EmbeddedTM → ModemType = No Modem
Parameter → EmbeddedTM → ServitelID = 0000000000
Parameter → EmbeddedTM → ModuleNumber = 00.

▶ Perform a single reset.

▶ Wait until the SMLCD scanning messages are erased.

▶ SMLCD: Start ETM modem detection.
Login → Commads → ETMDetectModem
- If successful, SMLCD shows "Success" and ETMA will perform the initial configuration call.
- If unsuccessful, configure the parameters manually following the next steps.

Contact call center to know the Servitel ID and Shaft ID linked to the elevator been commissioned. Servitel ID has a relationship to the phone number of the installation.

▶ SMLCD: Enter the installation Servitel ID
Login → Parameters → EmbeddedTM → Servitel ID

▶ In case of multiple elevators connected to the same phone line:
SMLCD: Check and modify the Shaft ID, if required
Login → Parameters → EmbeddedTM → Shaft ID

17 ETMA Tele-Alarm

17.1 ETMA Tele-Alarm

▶ SMLCD: Check the Phone Prefix as follows:
Login → Parameters → EmbeddedTM → PhonePrefix
- It shall be empty in case the elevator have a direct phone line
- It shall contain the prefix to dial an outside line if the elevator is connected to a PABX line.

▶ SMLCD: Enter the alarm phones numbers 1 ... 4
Login → Parameters → EmbeddedTA → PhoneNoAlarm1
Repeat for the 4 numbers: PhoneNoAlarm1, PhoneNoAlarm2, etc.)

▶ SMLCD: Enter the phone number for notification calls, used to notify defects (for example, a permanent active DA button)
Login → Parameters → EmbeddedTA → PhoneNoMonitor

The line test call is mandatory for the configuration process.

▶ SMLCD: Enter the phone number for the line test calls.
Login → Parameters → EmbeddedTA → PhoneNoLineTst.
- ETMA will automatically perform a line test call to the number entered in PhoneNoLineTst
- If the line test is successful, ETMA got the acknowledge from the call center and the LAMPS on the COP will be:

Name	Status	Description
LAGC	OFF	Lamp Alarm Memory Car
LARC	Blinking	Lamp Alarm Acknowledgement Car

▶ SMLCD: Disable the Alarm filtering
Login → Parameters → Car → Alarm Filter → Disable → OK
- This step allows an alarm call to be initiated with the elevator at the floor with door open, otherwise will be filtered by the control.

▶ Press the COP DA button more than 3 seconds.
- ETMA-CAR will emit a beep and dial PhoneNoAlarm1 as a first attempt.
- Call Center operator will open the speaker and talk to the technician.

▶ Check with the call center operator if the commissioning number reported by the ETMA corresponds to the one of the elevator been commissioned and correct it if necessary.

▶ SMLCD: Enable the Alarm filtering, when commissioning number be verified.
Login → Parameters → Car → Alarm Filter → Enable → OK

▶ SMLCD: Final check of the ETMA parameters
- Login → Parameters → EmbeddedTM → Servitel ID
(It is different from "0000000000")
- Login → Parameters → EmbeddedTM → Module ID
(It is different from "00" (normally 10))
- Login → Parameters → EmbeddedTM → Shaft ID
(It is different from the ones on the other elevators that share the same phone line).

18 Embedded Telemonitoring

18.1 Embedded Telemonitoring

Commissioning steps of the Embedded Telemonitoring (ETM), when:

- It is combined with telealarm function with AC TM2 (TAM2)
- It is not combined with telealarm function - rescue call done by an intercom system.

When telemonitoring is combined with AC TMA1 (ETMA PSTN), the device commission on the previous chapter "ETMA Tele-Alarm" also covers the telemonitoring part.

There are two ways to connect the controller to RMCC for telemonitoring when AC TMA1 is not present:

- Through a public switch telephone network (PSTN) using the PCBA called CLSD in the control cabinet
- Through a wireless GSM connection, using a communication gateway (CGW) and an interface PCBA (GSMI) in the control cabinet.

Preconditions:

▶ If Schindler PABX: A connection to the external phone line exists.

▶ The RMCC database contains an entry for the elevator to be commissioned.
The elevator is identified by the third to twelfth character of the commission number. The number is included in the legend of commission schematics.

▶ If telemonitoring is via GSM, CGW is installed and pre-commissioned according to EJ 604795 and powered.

Auto configuration:

Correct operation of embedded telemonitoring requires setting of parameters which is automatically performed during the ETM auto configuration process. Refer to the document J 41323447 (configuration of components used in TA and TM functions).

Procedure:

▶ AS: Prevent the traveling of the elevator.
- Press the button JHM in ESE control panel.

▶ If AS.CLSD present: Check the rotary switch position
- If CLSD PCBA is directly connected to the phone line: Position "0".
- If CLSD PCBA is connected to Schindler PABX: Position "F".

▶ If AS.GSMI present: Check if PCBA is correctly installed and electrically connected to ASIXB PCBA.

▶ Connection:

- If PSTN:
  - Connect the phone of the PABX line to the CLSD.PSTN plug
  - Connect the traveling cable plug XTT to the CLSD.ALARM plug.
- If GSM:
  - Connect CGW to the GSMI PCBA with the RS 232 cable
  - Connect the traveling cable plug XTT to the CGW.FXS plug.

▶ If CGW present, check the followings LEDs status:

Color	Status	Description
Green	ON	Power is present and CGW is connected to Schindler.
Blue	ON or BLINKING every 2 seconds	GSM connection is present.

▶ SMLCD: Check the unconfigured state of the installation, restore if necessary.
Login → Parameters → EmbeddedTM → ModemType = No Modem
Parameter → EmbeddedTM → ServiteIID = 0000000000
Parameter → EmbeddedTM → ModuleNumber = 00

▶ Perform a single reset.

▶ Wait until the SMLCD scanning messages are erased.

▶ SMLCD: Start ETM modem detection.
Login → Commads → ETMDetectModem
- If successful SMLCD shows "Success" and ETMA will perform the initial configuration call
- If unsuccessful, repeat the ETM modem detection.

▶ Check the status "Communication" and "Configuration"
- SMLCD: Status → Embedded TM → Communication
- Wait for the status "RMCC connected"
- SMLCD: Status → Embedded TM → Configuration
- Wait for the status "Configured"

Communication	Configuration	Result
"RMCC connected"	"Configured"	Configuration is successful. A test trip will be performed.
"RMCC connected"	"Not configured"	Configuration failed. The installation data might not be present in the RMCC database.

The ETM test trip is a trip to a nearest possible floor, in up or down direction, but taken into account the shaft extremes and potentially blocked floors.

▶ If configuration failed: Check the RMCC phone number.
- SMLCD: Parameter → Embedded TM → TelNrRMCC.
- Correct the RMCC phone number if necessary.
  – If phone number is changed: Initial configuration is performed within seconds.

▶ SMLCD: Perform a car call.
- The ETM considers the elevator in normal operation if a complete trip including door opening is performed.

18 Embedded Telemonitoring
18.1 Embedded Telemonitoring

▶ SMLCD: Check the status:
Status → Embedded TM → MonitLiftx, x for elevator number.

▶ If telealarm device AC TM2 (TAM2) is present:

- SMLCD: Disable the Alarm filtering
  Login → Parameters → Car → Alarm Filter → Disable → OK
  - This step allows an alarm call to be initiated with the elevator at the floor with door open, otherwise will be filtered by the control.
- Press the COP DA button more than 3 seconds.
  - TAM2 will dial PhoneNoAlaram1 as a first attempt.
  - Call Center operator will open the speaker and talk to the technician.
- Check with the call center operator if the commissioning number reported by the ETMA corresponds to the one of the elevator been commissioned. Correct it if necessary.
- SMLCD: Enable the Alarm filtering, when commissioning number be verified.
  - Login → Parameters → Car → Alarm Filter → Enable → OK

▶ SMLCD: Final check of the ETMA parameters

- Login → Parameters → EmbeddedTM → Servitel ID
  (It is different from "0000000000")
- Login → Parameters → EmbeddedTM → Module ID
  (It is different from "00" (normally 10))
- Login → Parameters → EmbeddedTM → Shaft ID
  (It is different from the ones on the other elevators that share the same phone line).

19 Checking of Automatic Evacuation (AES)

19.1 Checking of Automatic Evacuation (AES)

Preconditions

- AESD is installed in the hoistway or machine room.
- AESD is wired to the control interface plug AES.
- AESD is powered for ≥ 12 hours.
- AES is activated by a chipcard option.
- REFE relay and associated wiring are installed on the cabinet. (AESD = A battery backed-up three-phase automatic evacuation supply device).

Checking of AES contains 2 different scenarios:

- Car is on floor level
- Car is traveling

Procedure - Car on Floor Level

▶ Place the car at a floor in normal operation.

▶ Allow the doors to close.

▶ Switch off JH.

▶ Temporarily bridge the JH auxiliary contact. See the commission schematics.
- After approximately 30 seconds, the AESD supplies the elevator with stored energy from the inverter.
- If control is supplied from AESD again: The AES starts.
- The elevator doors open.
- SMLCD: The service activation is indicated on the right side by "AES" on the third line.
- When the timer for passenger release is expired, the doors close and the control switches off the AESD supply.

Procedure - Car is Traveling

▶ Check that the bridge on the JH auxiliary contact operates correctly.

▶ Switch on JH.

▶ Wait until the elevator returns to normal operation.

▶ SMLCD: Enter a car call.

▶ Switch off JH when the car has moved out of the floor level zone.
- After 30 seconds, the AESD supplies the elevator again.
- The AES service starts.
- The elevator control locks the doors.
- The car moves to the nearest floor at reduced speed.
- The elevator control opens the doors.
- If timer for passenger release is expired: The doors close.
- The control switches off the AESD supply.

▶ Remove the bridge from the JH auxiliary contact.

▶ Switch on JH.

▶ Wait until the elevator returns to normal operation.

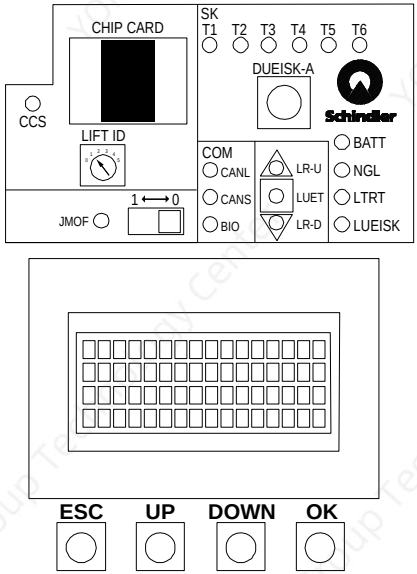
20 User Interface SMLCD

20.1 Overview

SMLCD is the user interface of the CO MX control, designed to be used for commissioning, parameter adjustment, test execution and diagnostics. SMLCD is embedded in the ASIXB PCBA.

20 User Interface SMLCD

20.2 Switches and Indicators



SMLCD

Buttons

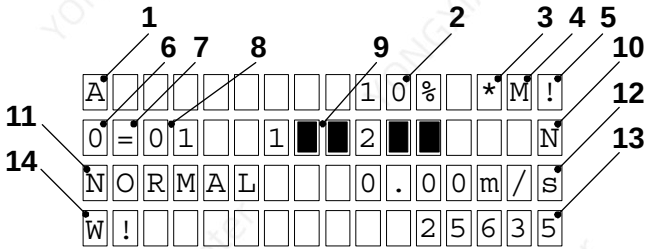
Button	Description
DUEISK-A	Safety circuit protection reset button
JMOF	Installation travel mode switch

LED Signalizations

LED	Status	Description
CCS	Blinking	Chip card being read by the control
	Lit	There is a valid chip card in the chip card slot
	Not lit	No or not valid chip card in the chip card slot
T1-T6	Lit	Safety circuit voltage present at this point
	Not lit	Safety circuit voltage absent at this point
IMOF	Lit	Installation travel active
CANL	Blinking	Elevator CAN bus active
CANS	Blinking	Landing CAN bus active
BIO	Blinking	Landing BIO bus active
LR-U	Lit	Car is traveling up
LUET	Lit	Car is at door zone
LR-D	Lit	Car is traveling down
BATT	Not lit	Emergency supply battery OK
	Lit	Emergency supply battery not OK
NGL	Lit	Elevator DC power supply present
	Not lit	Elevator DC power supply not present
LTRT	Lit	Car speed is below door overbridging limit speed
LUEISK	Lit	Safety circuit protection active
	Not lit	Safety circuit protection not active

20 User Interface SMLCD

20.3 Main Menu SMLCD



Display on SMLCD showing Elevator Status

Pos.	Description
1	Elevator designation within group
2	LMS status: • CAL = LMS requires calibration • CALF = LMS requires floor dependant zero load calibration • UNV = LMS is unavailable • DIS = LMS is disabled • xx% = Car load in % of rated load
3	Status service visit (blinking "*" when service visit is active, blank if not)
4	Status master ("M" = this elevator is group master, blank if not)

Pos.	Description		
5	Status node tree:		
	Blinking	"%"	Node SW download in progress
		"?"	Node tree freeze required
	Blinking	"?"	Executing node tree freeze
	Blinking	"!"	Freeze not successful
		"!"	Missing or new nodes found after freeze
	Blank		Freeze done and no changes on node tree
6	Status drive:		
		0	Drive is at standstill
		+	Drive is accelerating
		=	Drive is traveling at constant speed
		-	Drive is decelerating
		F	Drive not available
		?	Unknown drive status
7	Status car:		
		=	Car is at standstill within the door zone
		#	Car is at standstill outside the door zone
		↑	Car is traveling up
		↓	Car is traveling down
		?	Unknown car status
8	Current group selector value (1 to n)		

Pos.	Description
9	Status door:  1 2 3 4 5 6 7 8 **1** Door side **2** Door open **3** Door closing **4** Door opening **5** Door closed **6** Door locked **7** Door stopped **8** Status unknown
10	Control status
11	Status travel control When in error condition, the error code is shown alternating with the status, see table “Selection of Possible SMLCD Messages”.
12	Traveling speed When in error condition, the motor control status is shown alternating with the error code.

Pos.	Description
13	• During normal operation: Value of the traction media trip counter • During power failure: Indication of the distance between the car and the closest floor during power failure. Positive indication means that the car is above a floor. During the booting process: Indication on the progress of IO scanning.
14	• W! blinking: Traction media monitoring has reached the warning limit. • E! blinking: Traction media monitoring has reached the blocking limit.

Selection of Possible SMLCD Messages

Status Indication	Explanation
IniPara	Control is initializing the motor control parameters
Precomm	Control needs a learning trip
Install	Control is in installation trip status (IMOF Travel)
Learn	Control is performing a learning trip
Synch	Control is performing a synchronization trip
Insp	Control is in inspection trip mode
Recall	Control is in recall trip mode
Relevel	Control is performing a releveling trip
BlkTemp	Control is temporarily blocked by an error
BlKPerm	Control is permanently blocked by a fatal error
Control	Control is performing a trip triggered by DFM-D/U
T1Open	Safety circuit is open at T1
T2Open	Safety circuit is open at T2
T3AOpen	Safety circuit is open at T3A
T3BOpen	Safety circuit is open on elevator car
T4T5Open	Safety circuit is open at T4 and/or T5
JHM On	Control stopped by JHM
JHC On	Control stopped by JHC
JHC1 On	Control stopped by JHC1
SwtcCon	Switch consistency. Control detected the two inputs that read the state of JRH switch (N_JRH and JRHCHK) in an inconsistent state (either both 0 or 1). The elevator is prevented to run in normal.
FC_NRdy	Frequency control not ready for travel
DoorByp	Landing door bypass active
KTHMH	Hoisting motor over temperature
VFOvTmp	Frequency converter over temperature
Elevator 24V	Lack of 24 VDC supply
SB Fault	Control stopped by a failure on brake contactor
LMSnRdy	Load measurement system is not ready
Correct	Elevator is performing a correction trip
PEBOFlt	A fault has occurred on PEBO device
Creep	Control is finishing a trip with the speed encoder
BatFlt	A fault occurred on the emergency supply battery
Ovrload	Elevator is in overload
AccTBlk	Elevator is blocked after acceptance test

Selection of Possible SMLCD Messages

Status Indication	Explanation
RdvBVR	Ready for speed governor reset. Control has detected the situation that occurs when the GBP_RESET plugged in (safety circuit closed, but logic state of KBV input open) and will allow only inspection and recall travel, in order to go till the governor and reset it manually.
BMIni	Brake emergency stop monitor waits initialization
BMErr	Brake emergency stop monitor triggered
PeboBat	Manual evacuation battery exhausted

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