

Instruction manual FPC 902

automatic door systems – this is record!



record.group

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1 Presentation of warning signs

Various symbols are used in this guide for easier understanding:



NOTICE

Useful advice and information to ensure correct and efficient workflow of the system.



IMPORTANT

Specific details which are essential for trouble-free operation of the system.



IMPORTANT

Important details which must be read for proper function of the system.



CAUTION

Against a potential hazardous situation that can lead to minor personal injury and property damage.



WARNING

Against a latent hazardous situation that can lead to severe injuries or death and cause substantial property damage.



DANGER

Against an imminent hazardous situation that can lead to severe injury or death.



DANGER

Against an imminent or latent hazardous situation that could lead to electric shock and cause serious injury or death.

2 General

The FPC 902 is primarily a tool for programming and configuring of agtatec automatic entrance and door systems.

In the ON-LINE- or OFF-LINE mode parameters and configurations can be adapted, parameter sets can be downloaded from the drive and copied onto other drives or replaced control units (upload). Parameters may be edited irrespective of the control unit.

Control units can be also protected from access by other service and maintenance organisations.

Another feature is the possibility for the software of the control unit to be updated with Flash-Technology.

The connection with the control units always takes place via the CAN bus.

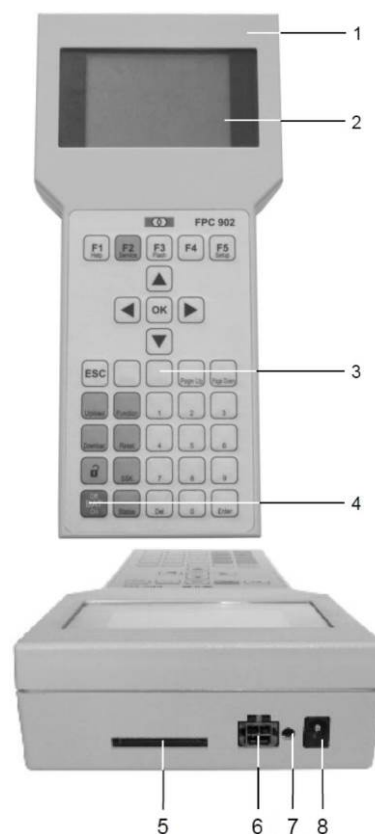


3 Technical data

Supply voltage:	24 VDC / CAN bus
Battery:	9 VDC NiMH
Connected load:	< 2.5 W
Max. fuse protection if separately supplied:	0.5 A
Temperature range:	-20...+50 °C
Display:	4 x 20 characters
Background light only by:	24 VDC / CAN bus
Wire length:	3 m

3.1 Identification

- 1 Shock resistant housing
- 2 LCD Display
- 3 Keypad
- 4 ON/OFF-switch (auto-OFF after 3 min.)



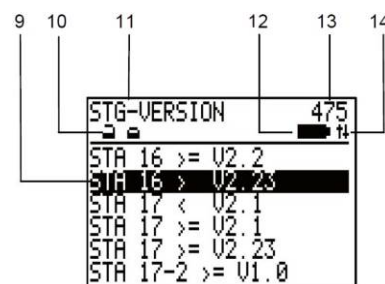
- 5 Card reader for MMC/SD memory cards
- 6 Connecting cable CAN bus
- 7 Contrast adjustment LCD Display
- 8 Input jack for external power supply

Model info



Display

- 9 Menu lines (> link to submenu)
- 10 Status report (service lock, connection)
- 11 Title of main menu
- 12 Indicator for charge state
- 13 Licence down counter
- 14 Navigation aid in the menu












Option

- 15 Wall power supply 24 VDC (optional)



3.2 Key functions

	Move up to select menu item
	Move down to select menu item
	Cursor key right to increase the value (+)
	Cursor key left to decrease the value (-)
	After selecting menu item, confirm entry
	Leave menu item, escape
	Move page up to select menu item
	Move page down to select menu item
	Direct key to read out the status of the STG
	Direct key to execute functions
	Direct key to release SSK (key-operated contact)
	Reboot the STG

	Direct key to activate/deactivate service lock
	Send program and configuration to the STG
	Read out program and configuration from the STG
	Numerical entry 0-9 of the key code to renew the license
	Select help menus
	Select service programmer
	Select Flash programmer
	Without function
	Setup

4 Set-up

4.1 Important notes

Automatic recognition of software and correct indication

Control unit / software	from version	New menu structure
16 STA	2.24	
16 STA Redundant	2.3	
17 STA	2.23	
17-2 STA	1.0	
18 STA	2.3	
19 STA	1.1	1.3
DFA 125 G	1.32	
DFA 127	1.0	1.0



NOTICE

If the software is not automatically recognized, it must be selected manually.

Read off the software version on the EEPROM and select it in the list of the FPC 902.

VERSION OF STG	
STA 16	>= V2.2
STA 16	> V2.23
STA 17	< V2.1
STA 17	>= V2.1
STA 17	>= V2.23
STA 17-2	>= V1.0

ONLINE-mode

All modifications in the parameter and configuration will be transmitted and stored directly in the STG.

OFFLINE-mode

If no connection to the STG exists or if the OFFLINE-mode is selected with an existing connection.

Modifications in the programming and configuration become operative after upload to the STG only.

4.2 Set-up

Battery operation:



Press this button to switch ON or OFF.



NOTICE

To protect the battery when non-use, please switch off (auto-OFF after 3 min.)

Background light inactive during battery operation.



IMPORTANT

Replacement of the battery:

8.4V 250mAh / NiMH (HR22, 6AM6)

USE APPROVED BATTERY TYPE ONLY!

Power supply from CAN-bus:

Plug in connecting cable on the CAN-port on the STG.

External power supply for stand-alone operation:

Plug in wall power supply 24VDC on plug socket (8) (available as option).



NOTICE

This charges the battery. The background light active only with external 24VDC aktiv!

CAN-Bus – STG



NOTICE

Use of a new battery after exchange:

Charge time is approx. 24 h with external power supply of 24VDC.



NOTICE

Dispose of used batteries in accordance with environmental regulations!

4.3 Select language

Switch on the FPC 902

Select menu **Setup**



On menu item **SETUP** to menu item **Select language**



Select the desired language on menu item **SPRACHE / LANGUAGE / LANGUE**



Return to menu **FPC 902**



4.4 Activate license counter

Switch on the FPC 902

Select menu **Setup**



On menu item **SETUP** select menu item **Renew licence**



NOTICE

Read out the ID-no., write down and forward to an authority.

Phone: _____

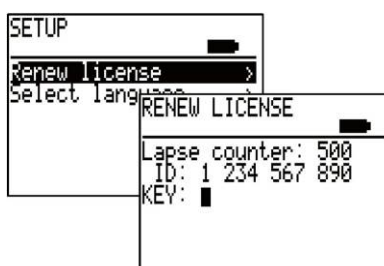
Select **KEY** and enter the keycode you have got from the authority
(⇒ numbers on the keys)



Confirm entry

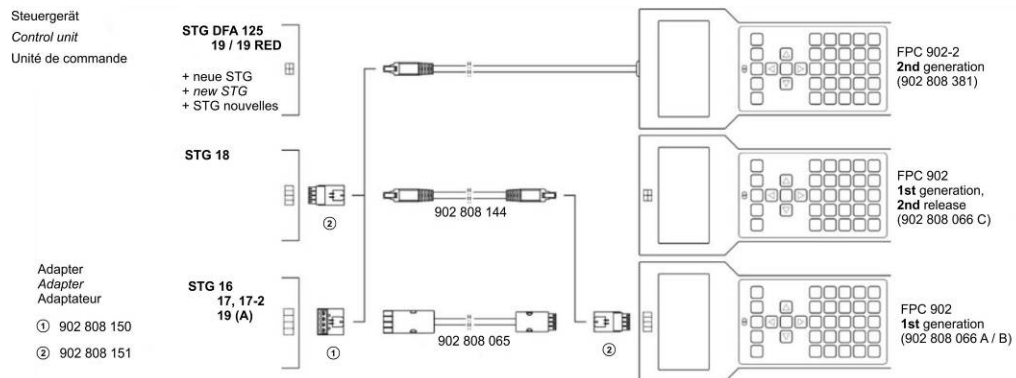


Return to menu **FPC 902**



4.5 Connection to control unit

Connect with the control unit



OK

On menu **FPC 902** to menu item **Service STG** and confirm

Connect with STG ...

OK

Accept all parameter from the STG? Select **Yes** and confirm

Parameter download from STG...

4.6 Programming parameters (new menu structure)

F2
Service

Select the service programmer

OK

On menu **SERVICE STG** select menu item **Parameter** and confirm

OK

Select menu item **DRIVING CYCLE**

▼

▲

On menu item **DRIVING CYCLE** select **Closing speed** (for example)

OK

Select menu item **Closing speed**

▶

◀

Program the closing speed. The maximum value is equivalent to the number 40 (equal BDE-E)

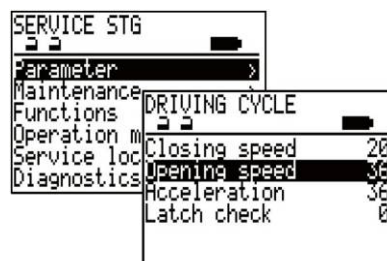
OK

Confirm entry

ESC

(2x)

Return to menu **SERVICE STG**



4.7 Programming parameters (previous menu structure)



Select the service programmer



On menu **SERVICE STG** select menu item **Parameter** and confirm



Select menu item **Programming**



On menu item **PROGRAMMING** select **Closing speed** (for example)



Select menu item **Closing speed**



Program the closing speed. The maximum value is equivalent to the number 40 (equal BDE-E)



Confirm entry














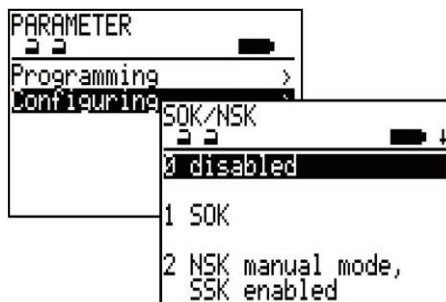
(2x)

Return to menu **SERVICE STG**










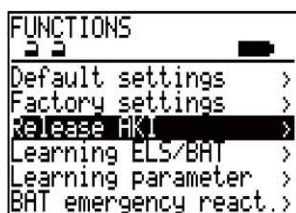
4.8 Configuring parameters (previous menu structure)

- | | |
|---|--|
|  | Select the service programmer |
|  | On menu SERVICE STG select menu item Parameter and confirm |
|   | Select menu item Configuring and confirm |
|   | On menu item CONFIGURING select SOEK/NSK (for example) |
|  | Select menu item SOEK/NSK |
|   | Select one of the possible functions |
|  | Confirm entry |
|  (2x) | Return to menu SERVICE STG |



4.9 Proceed functions

- | | |
|---|--|
|  | Connect with the control unit |
|   | On menu SERVICE STG select menu item Functions and confirm |
|   | On menu item FUNCTIONS select Release AKI (for example) |
|  | Proceed to function Release AKI |
| | Function is executed ... |
|  | Return to menu SERVICE STG |



4.10 Select mode of operation



Connect with the control unit



On menu **SERVICE STG** select menu item **Operation mode** and confirm

Settings are read out ...



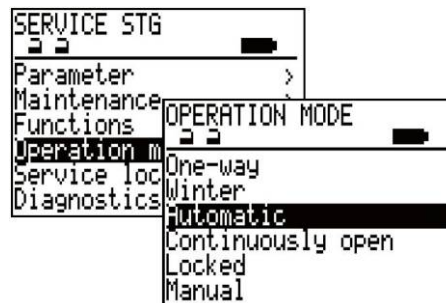
If necessary select other mode of operation



Confirm entry



Return to menu **SERVICE STG**



4.11 Menu maintenance

Parameters in this menu allow the editing of messages, which remind that maintenance on the door system is due.

With the specification of time intervals, relying on the target values for the number of cycles (1 cycle = 1x opening + closing) and the activity weeks, a message will appear on the screen of the control unit BDE-D.

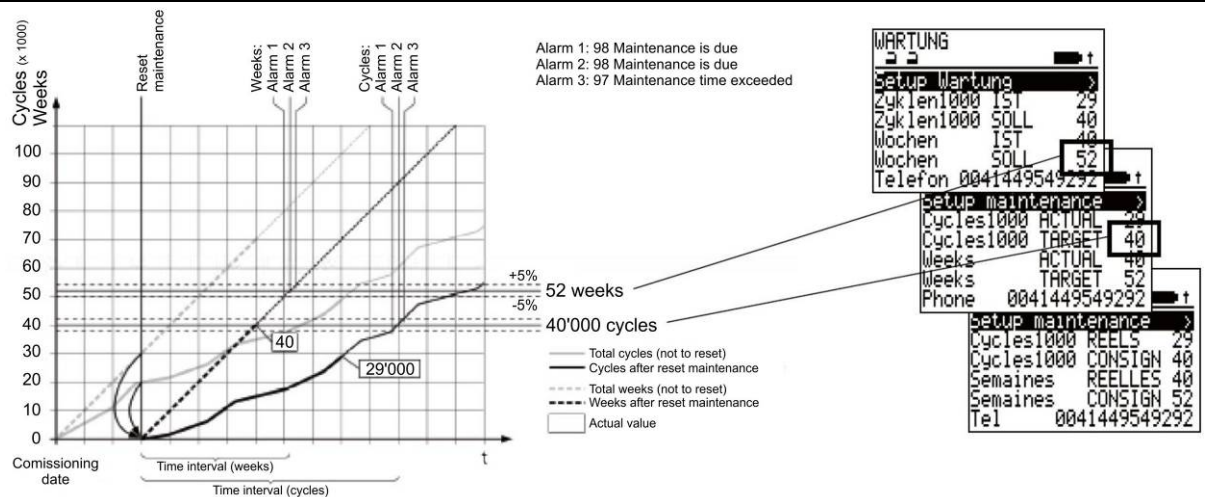
The messages differ from one another according to the share of actual value in the target value.

Actual value 95%: **98 Maintenance is due**

Actual value 100%: **98 Maintenance is due**

Actual value 105%: **97 Maintenance time exceeded**

All messages on the BDE-D can be reset. However, **97 Maintenance time exceeded** will be displayed again every 13 days.



Connect with the control unit

On menu *Setup Maintenance* often used target values for cycles and weeks, as well as for instance the telephone number of the next service-point, can be saved. With the function Save on STG the values are transmitted to the control unit and saved.



On menu **SERVICE STG** select menu item **Maintenance** and confirm

On menu **MAINTENANCE** select menu item **Setup maintenance** and confirm

On menu item **SETUP MAINTENANCE** select **Cycles** (for example) and confirm

Enter the target value of cycles (⇒ numbers on the keys)

Confirm entry



4.11.1 Enter the phone number

Maintenance/Phone: Implements the ability to enter the phone number of the nearest service-point.



NOTICE

If the telephone number of the nearest service-point is required to be shown on the error display, this information can be saved in the control unit, even if no target values for cycles or operating weeks are entered.



On menu item **SETUP MAINTENANCE** select menu item **Phone** (for example)



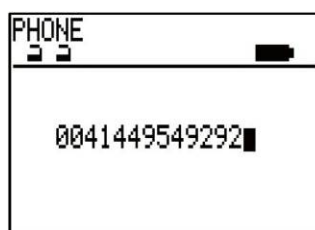
Enter the phone number of the next service-point
(→ numbers on the keys)



Confirm entry



Return to menu **SETUP MAINTENANCE**



4.11.2 Save parameters

For repeated use the preset parameters of both target values (cycles and weeks) and the telephone number can be saved.



On menu **SETUP MAINTENANCE** to menu item **Save in the STG** and confirm

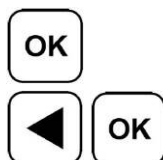


Confirm to save in the STG



4.11.3 Reset actual values

With this function the actual values for cycles and weeks can be reset for instance after the completion of a maintenance work.



On menu **MAINTENANCE** to menu item **Reset maintenance** and confirm

Confirm to reset maintenance

```

MAINTENANCE
  2 2
Reset maintenance >
Setup maintenance >
Cycles1000 ACTUAL 39
Cycles1000 TARGET 90
  
```

4.11.4 Individual actual values

The actual values for cycles and weeks can be if necessary individually adapted. This would be suitable when it exists deviation from the preset parameters (Setup maintenance).



NOTICE

If this is still possible, we recommend when exchanging a control unit the transfer of the actual values from the replaced unit.



On menu **MAINTENANCE** select line **Cycles1000 ACTUAL** or **Weeks ACTUAL** and confirm



Enter the actual value of cycles (→ numbers on the keys)



Confirm entry

```

MAINTENANCE
  2 2
Reset maintenance >
Setup maintenance >
Cycles1000 CYCLES1000 ACTUAL
Cycles1000 2 2
Weeks
Weeks
  
```

26

4.12 Service lock



Connect with the control unit



On menu **SERVICE STG** select menu item **Service lock** and confirm

Settings are read out ...



Menu items:

- Not locked
- Technical level locked
- Technical and user level locked



Confirm entry



Return to menu **SERVICE STG**



Direct key on menu **SERVICE STG** to activate/deactivate service lock



4.13 Deactivate service lock



Connect with control unit



NOTICE





With a protected unit one have direct access to blocked installations without previous unblocking!

Technical and user level
not locked
Technical level locked



On menu **SERVICE STG** select menu item **Service lock** and confirm









Settings are read out ...

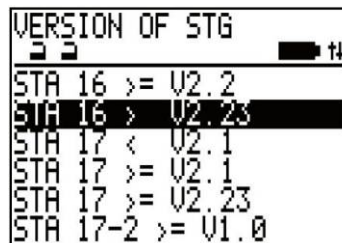
		Select menu item Not locked and confirm
		Return to menu SERVICE STG
		Direct key on menu SERVICE STG to deactivate service lock

4.14 Select version of STG

4.14.1 OFFLINE-mode

OFF-LINE-mode; WITHOUT connection to STG

		Switch on the FPC 902
		On menu FPC 902 to menu item Service STG and confirm
		Connect with STG ...
		No connection to STG. Continue offline? Select Yes and confirm
		If necessary, select other software
		Confirm the entry. Settings are stored ...
		Confirm to initialize the FPC 902 with factory settings
		Settings are stored ...



4.14.2 ONLINE-mode

ONLINE-mode; WITH connection to STG

1. Select version (read off the software version on the EEPROM), confirm the entry
2. Settings are stored ...
3. Accept all parameter from the STG? [Yes]
4. Parameter download from STG ...
5. Continue [OK]

4.15 Diagnostics on the drive



Connect with the control unit

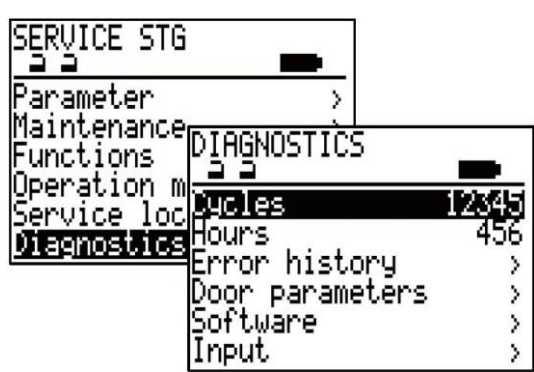


On menu **SERVICE STG** to menu item **Diagnostics** and confirm

Cycle counter is read out



Return to menu **SERVICE STG**



OR...



If necessary, select other menu



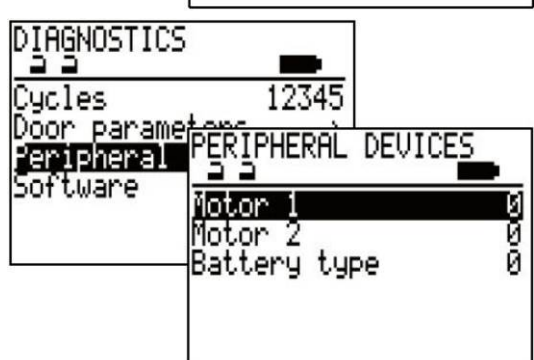
Confirm entry

Diagnostic values are read out



(2x)

Return to menu **SERVICE STG**



5 Software-/License-Update

5.1 Renewing the license

The service on record control units is for reasons of safety limited to 500 access operations.

Every access to the CAN bus longer than 5 seconds triggers a down counter one step.



Reload the down counter early



The CD-ROM with the required software and the fitting dongle are in the possession of authorities. Please contact one of them as necessary.

Switch on the FPC 902 and note the displayed number top right in the start-display → the current amount

Select menu **Setup**



On menu item **SETUP** select menu item **Renew licence**



NOTICE

Read out the ID-no., write down and forward to an authority.



Select **KEY** and enter the keycode you have got from the authority (→ numbers on the keys)



Confirm entry



Return to menu **FPC 902**

5.2 Upload / Download



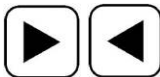
Connect with the control unit



On menu **FPC 902** to menu item **Service STG** and confirm



Send program and configuration to STG



Confirm to send parameters to STG



IMPORTANT

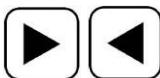
ATTENTION! All values will be overwritten irrevocably.



Confirm entry



Read out program and configuration from STG



Confirm to overwrite parameters in the FPC 902



Confirm entry



Return to menu **FPC 902**

5.3 Software update for FPC 902

For software updates for the FPC 902, a special data file (*.HEX) is required. The updates will get published if necessary.

Update procedure:

A widely available standard memory card (MultiMediaCard MMC or Secure Digital SD) is used for the storage of software updates.

1. If a new memory card is used, this must be first formatted. To do that, the file manager of the PC operating system can be used. If different formats are available, choose categorical **FAT**.
2. Copy the HEX-file with compatible drive from PC to memory card.
3. Separate the FPC 902 from CAN bus and switch off.
4. Insert the memory card



IMPORTANT

Please be sure that the memory card is in the card reader (5) before the Service- and Flash-Programmer is selected!

5. Switch on the FPC 902 and monitor the installation process (duration ~ 1 Min.)

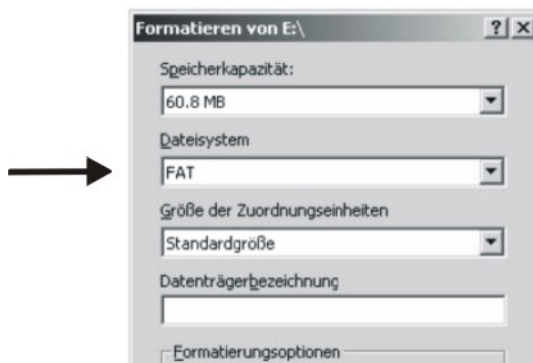
Card drive



Memory Card



Formatting



5.4 Flash programmer

The modern Flash technology with microprocessors now permits direct overwriting of the program memory using an external Flash programmer, without requiring any changes to the hardware.

A widely available standard memory card (MultiMediaCard MMC) is used for the storage of the software updates.



IMPORTANT

Please be sure that the memory card is in the card reader (5) before the Flash Programmer is selected!



Select the Flash programmer

AUTOMATIC UPDATE

In normal cases an update should be executed in this way. The most up-to-date software version is suggested for all devices found on the CAN bus.



On menu item **Flash-Programmer** to menu item **Automatic update**

CAN nodes are searched ...



Select the suggestion for the found device, then accept or reject.



After the acceptance the programming procedure is started. Afterwards on the CAN bus are CAN nodes searched again and the updating is indicated.

Restart CAN node, please wait ...

MANUAL UPDATE

This is the user-defined variant. After devices on the CAN bus were found, **all** available software versions are indicated.



On menu item **Flash-Programmer** to menu item **Manual update**

CAN nodes are searched ...

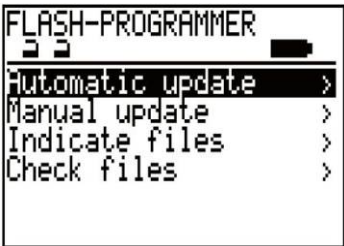


Select a definite software version from the suggestions.



After the acceptance the programming procedure is started. Afterwards on the CAN bus are CAN nodes searched again and the updating is indicated.

Restart CAN node, please wait ...



6 Error elimination

Symptom / error	Possible causes	Remedy
Battery fail while set up	Low battery	Charge battery approx. 24 h with external power supply of 24 VDC or STG
No display after connection to the STG	Wrong cable connector, incorrect plug socket	Check connections to the CAN bus
Flash-Programmer: File cannot be opened	Memory card not inserted or wrong type	Insert memory card (MMC)
Flash-Programmer: File cannot be opened	The file is not readable	In menu Flash-Programmer: Check files
Failure 252: No programming voltage on CAN node	Update of Flash-EEPROM is impossible	Replace STG
Failure 254: CAN node not found	Control unit without Flash-EEPROM; (e.g. STG 16)	Flash not allowed, change EEPROM
Failure: STG unknown	Software version of STG is newer than firmware of FPC	Update firmware of FPC to the current version

Contact

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