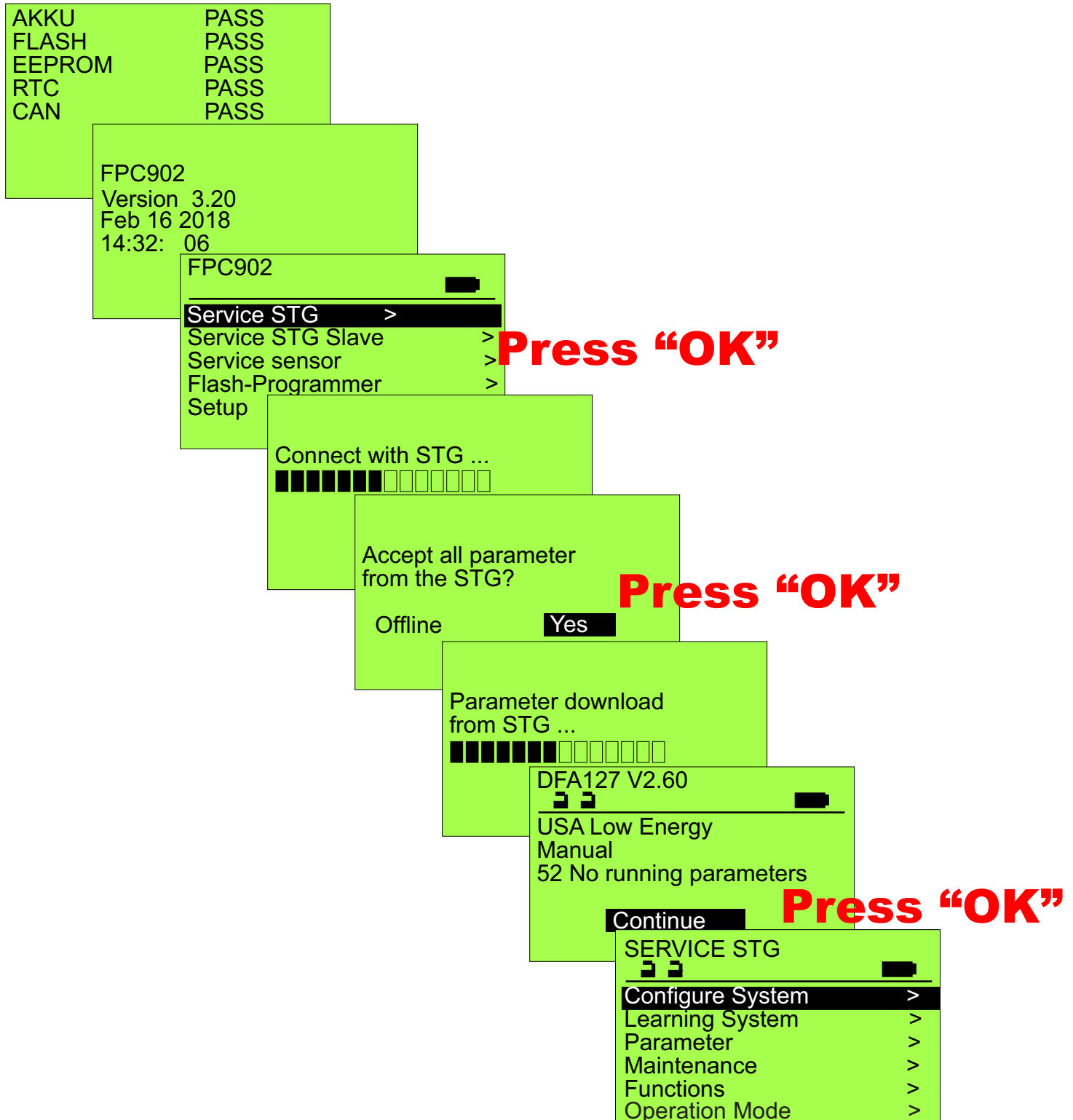


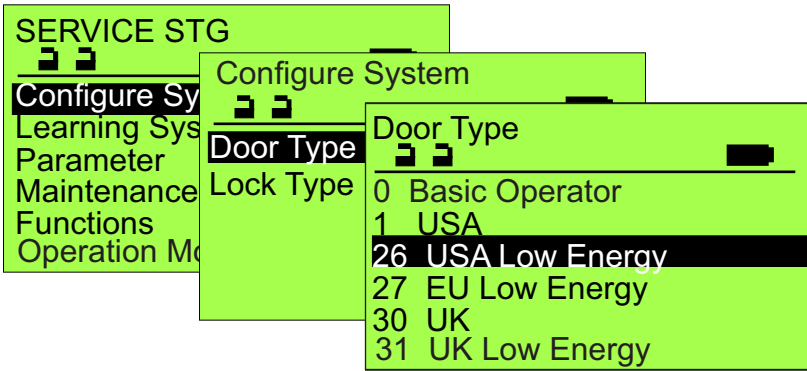
Servicing the Series 6100 & 8000 with the FPC-902 Hand Terminal



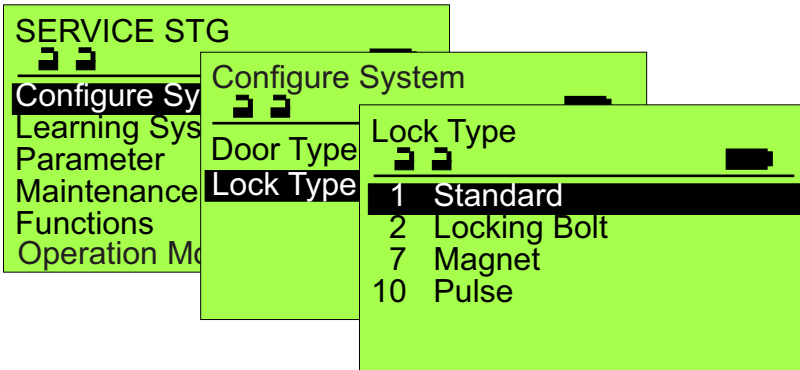
After the operator has been mechanically installed, the arms attached to the door, and 120VAC connected to the power supply, connect the FPC902 Hand Terminal to the operator control. The following sequence of screens will occur. The final screen shown below is the base point from which various settings for the operator are accessed and modified.



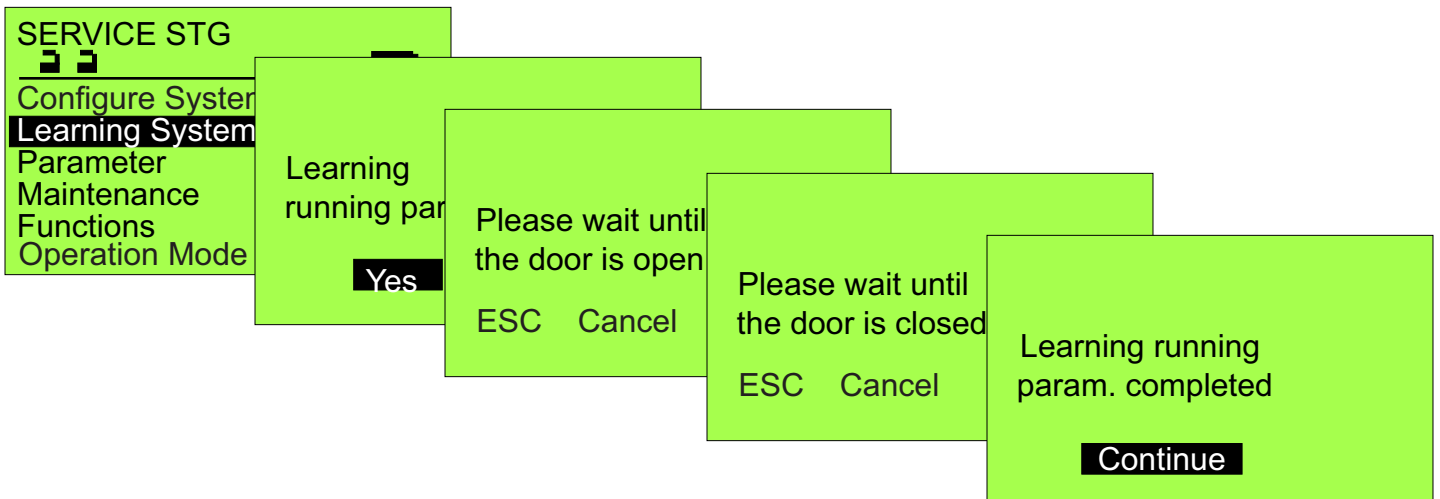
1 The screen sequences on the following pages start from this point and document the various adjustable parameters in the control. When at any of the screens shown below, the above screen can be accessed by pressing the "ESC" key one or more times.



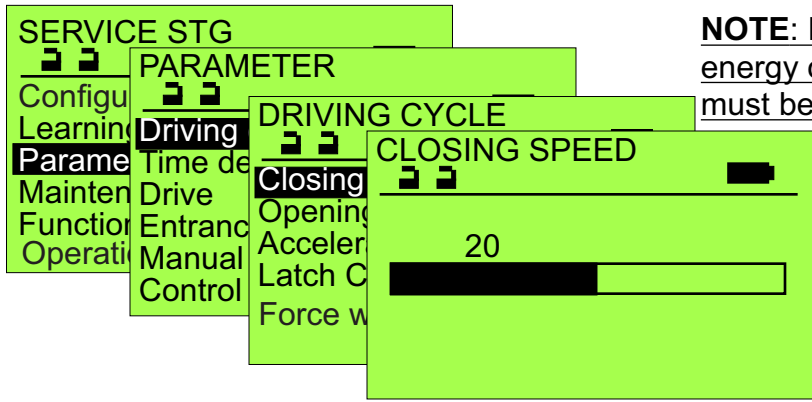
Typically set to either;
USA - for full power operation ANSI156.10
 or
USA Low Energy - for units expected to be opened manually. ANSI156.19
Note: In **USA** mode the unit will attempt full control of the door position at all times. Manually pushing of the door, even when fully closed, will be resisted with force to maintain door position.



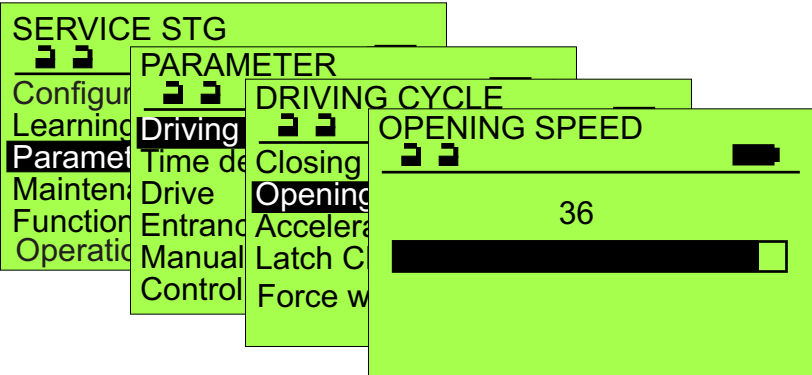
With each of the Lock Types, the lock relay (terminals 20,21,22) will switch after operator actuation (terminals 2,5, & 7), but before the operator starts opening door. Additionally, all except "Magnet" will cause the unit to drive closed before opening. Standard - relay opens @ full open. Locking Bolt & Magnet - relay opens @ full closed. Pulse - relay opens @ 10 degrees open.



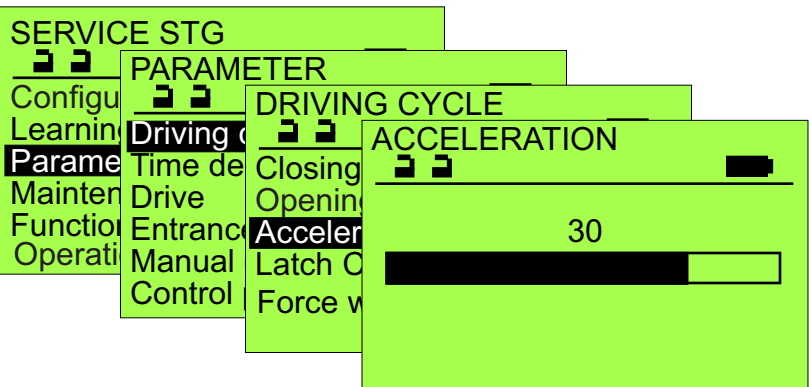
The series of screens immediately above is the sequence to occur to achieve a calibration run with the FPC902 Flashprogrammer. After selecting "Yes" when asked "Learning running parameters?", the operator will open the door, time out and close to indicate Calibration or Learning running parameters is complete. You can then depress the OK button to Continue and select Parameters for any and all adjustments required.



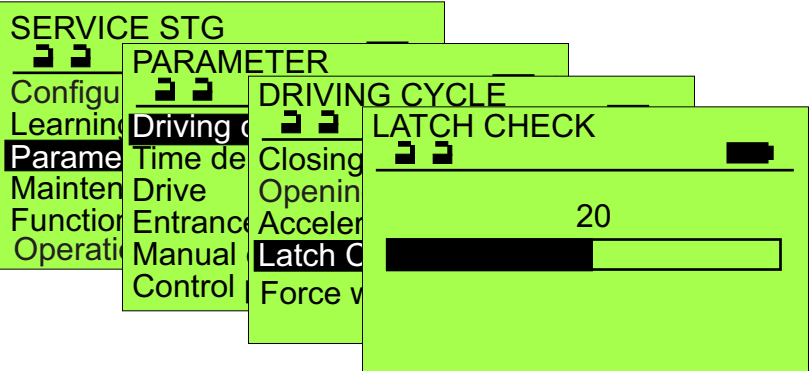
NOTE: If this operator is to be set up for low energy operation, opening and closing speeds must be adjusted to conform to the requirements of ANSI A156.19; full power installations must be adjusted per ANSI A156.10. Increasing the value will increase the closing speed. If “Manual Control” has been enabled (see page 8), this adjustment will be superceded by the Closing Speed adjustment in Manual Control (see page 9).



Increasing the Opening Speed value will increase the door open speed.

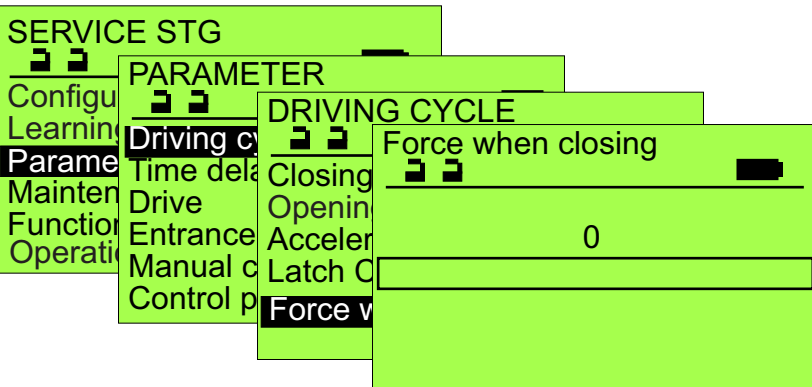


Increasing the setting increases the rate of acceleration.

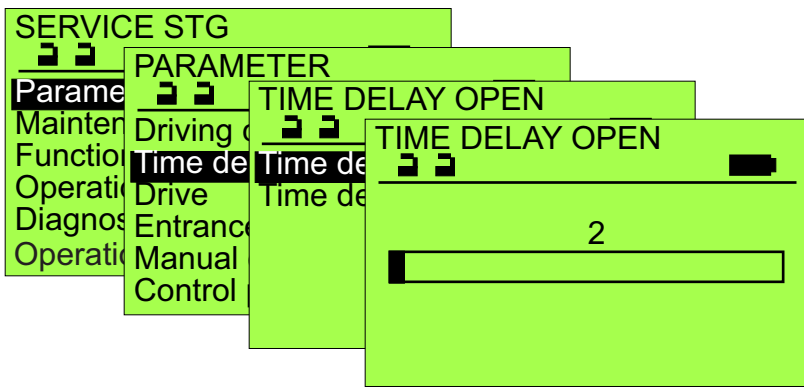


Increasing the setting increases the latch position

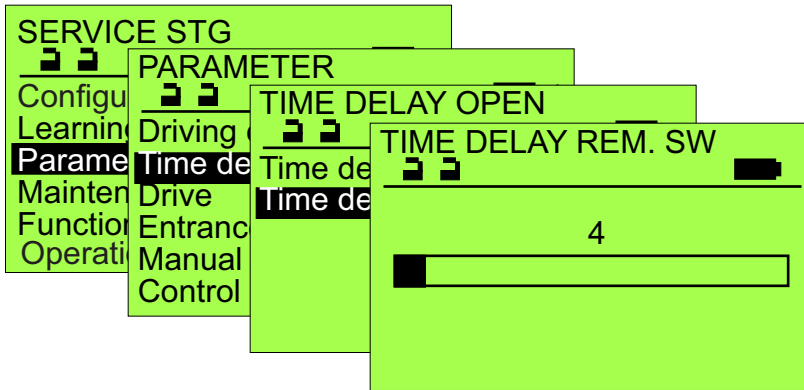
NOTE: If any of the Driving Cycle parameters are changed, a calibration cycle should be initiated.



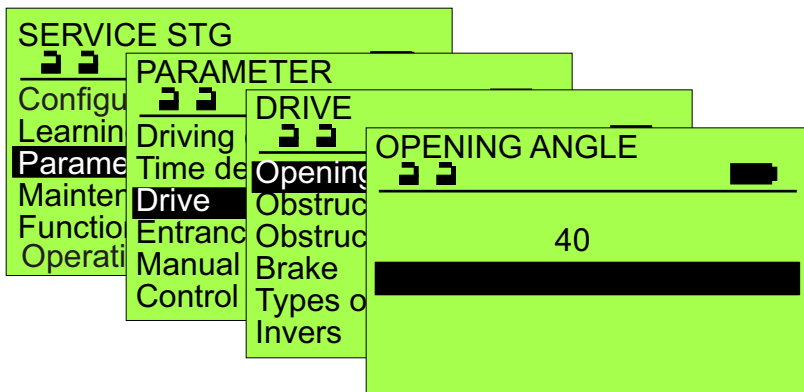
Default = 0
Increases the motorized force during closing.
Recommended setting: 0
If the value is increased from 0, a fixed safety sensor must be installed in the closing direction.



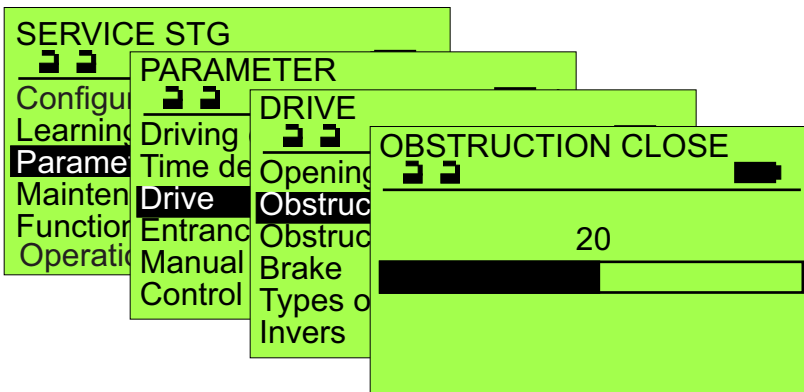
0 thru 20 are in 1 sec. intervals; 21 thru 40 are in 2 sec. intervals providing 60 sec. maximum delay. If this operator is to be set up for low energy operation, the time delay must be set to 5 seconds, minimum, to conform to ANSi A156.19.



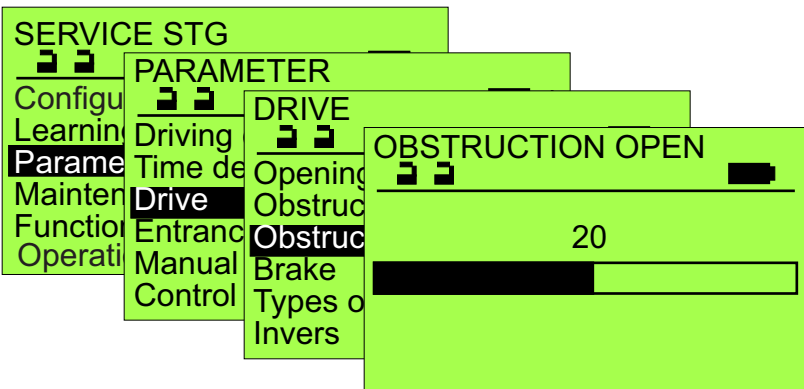
0 thru 20 are in 1 sec. intervals; 21 thru 40 are in 2 sec. intervals providing 60 sec. maximum delay.



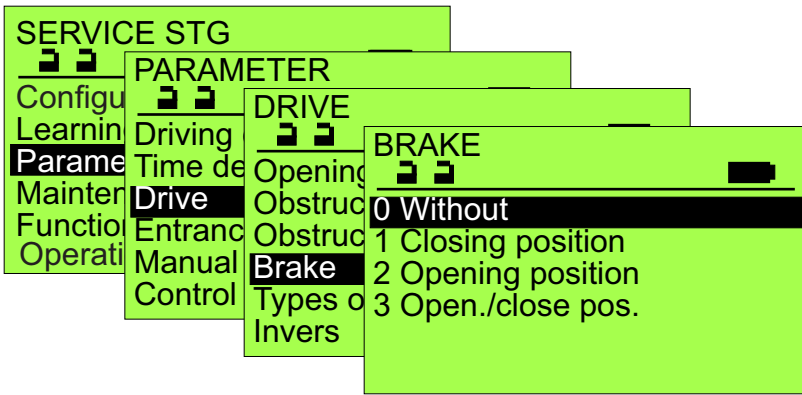
In abusive environments, it is suggested the mechanical open stop be adjusted to greater than 90° and the Open Angle adjusted to less than 40, setting a soft stop at 90°.



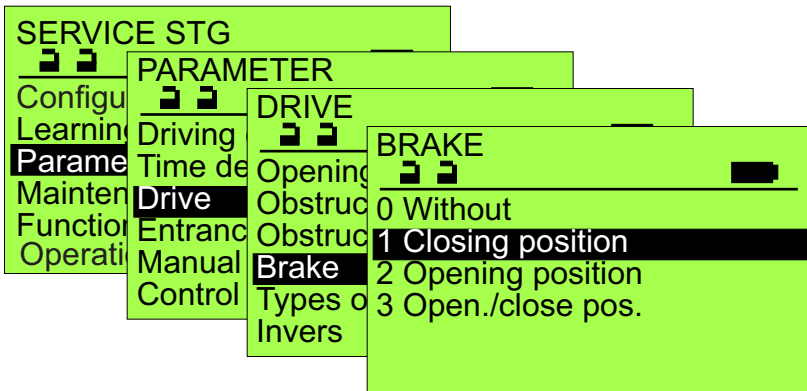
This sets the sensitivity of the unit to obstructions during the closing cycle. It is normally set automatically during the learn cycle, but can be modified as desired. (20) Decreasing the setting increases the sensitivity during closing.



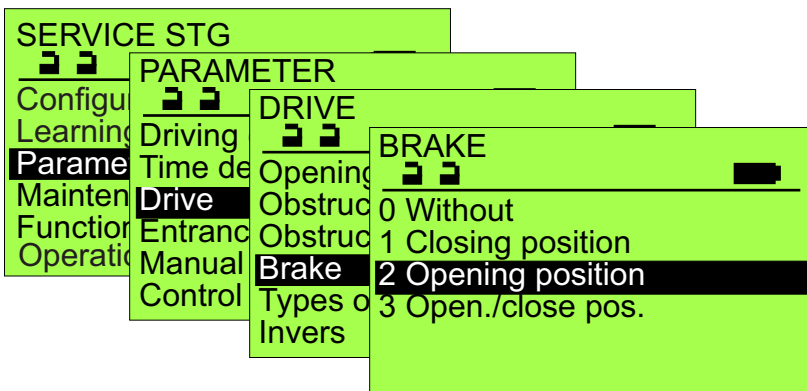
This sets the sensitivity of the unit to obstructions during the opening cycle. It is normally set automatically during the calibration cycle with a nominal value of (20), but can be modified as desired. Increasing the setting increases the force required to stop the door.



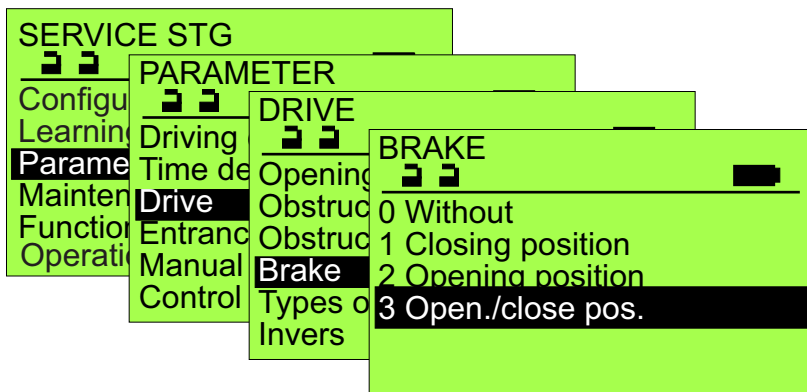
Not applicable unless the operator has been configured with the optional electric brake. If unit does not have the brake, use of any setting other than “0 Without” may cause improper door operation.



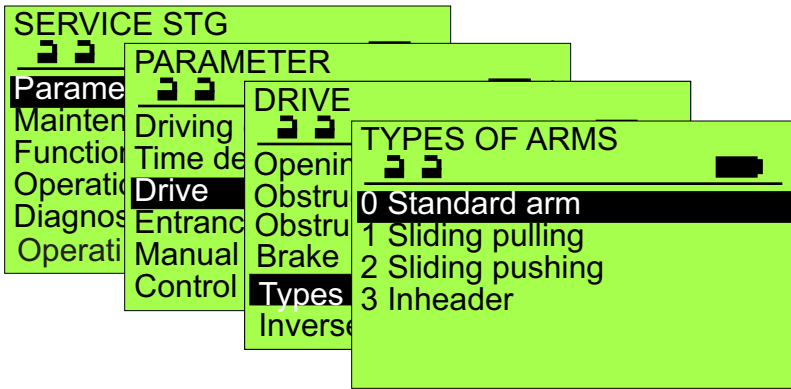
If the operator has the optional electric brake this setting will cause the brake to engage when the door is fully closed. Note the brake is not considered as an equal alternative to a security lock.



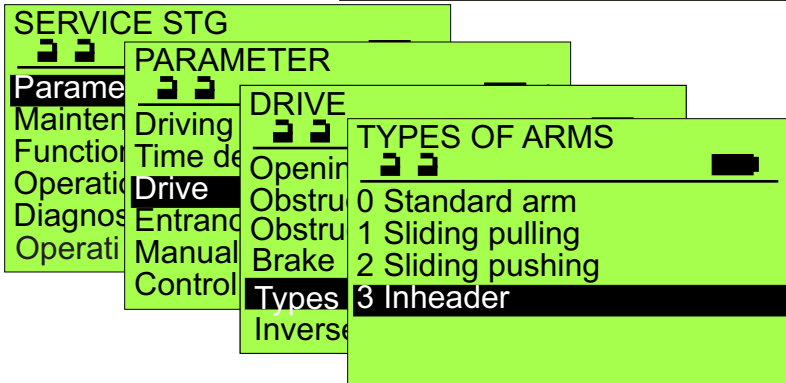
If the operator has the optional electric brake this setting will cause the brake to engage when the door is in the full open position. This will hold the door in the open position during excessive wind surges.



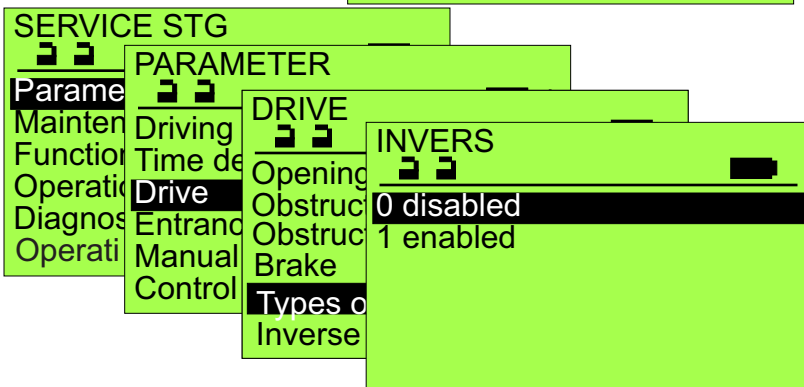
If the operator has the optional electric brake this setting will cause the brake to engage when the door is in both the full open and full closed positions.



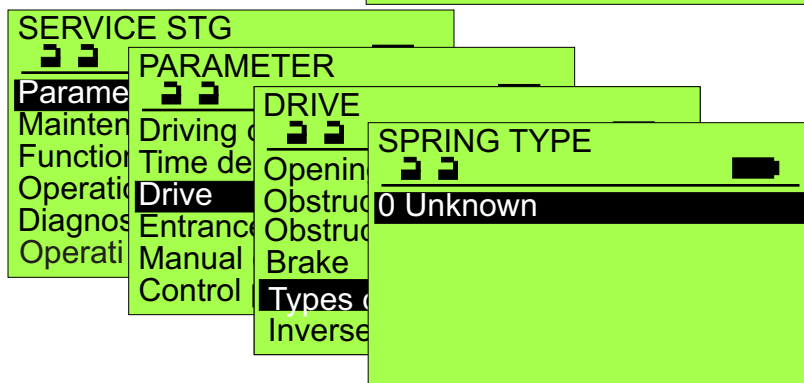
Setting the Arm Type will adjust the open and close check points based upon the arm selected.



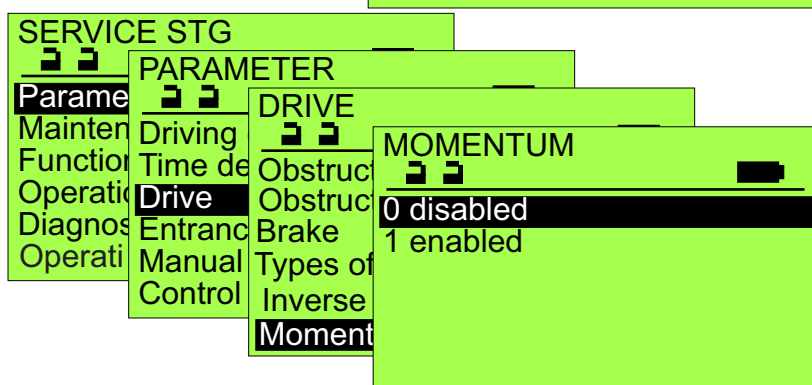
Used for Overhead Concealed, Direct Drive installations. During first run and normal operation, the operator will not push against the close stop (which may not be present on some inswing units).



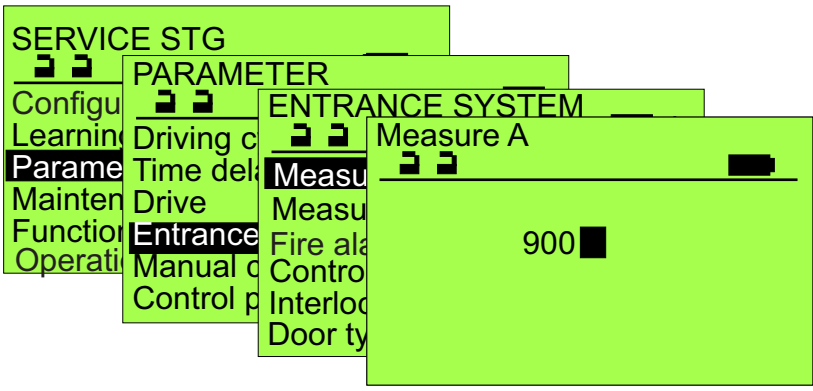
INVERS operation is when the operator is to be installed as a Power Close, Spring Open configuration - typically used in certain smoke evacuation installations. The installation must either have the optional internal electric brake or an external electric lock to hold the unit in the closed position.



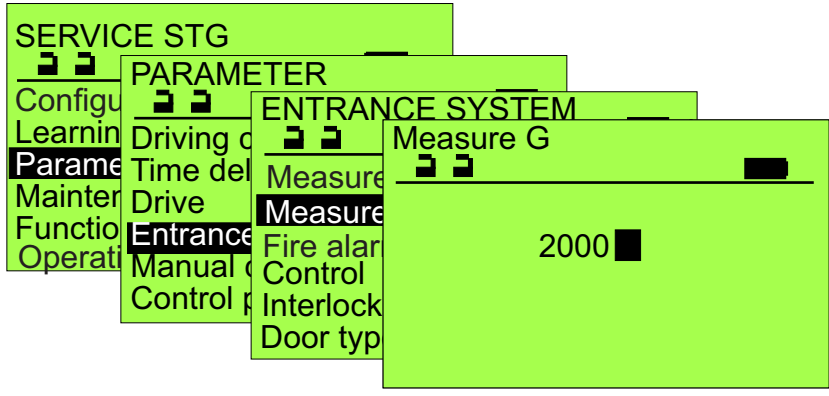
Not used in North America configurations.



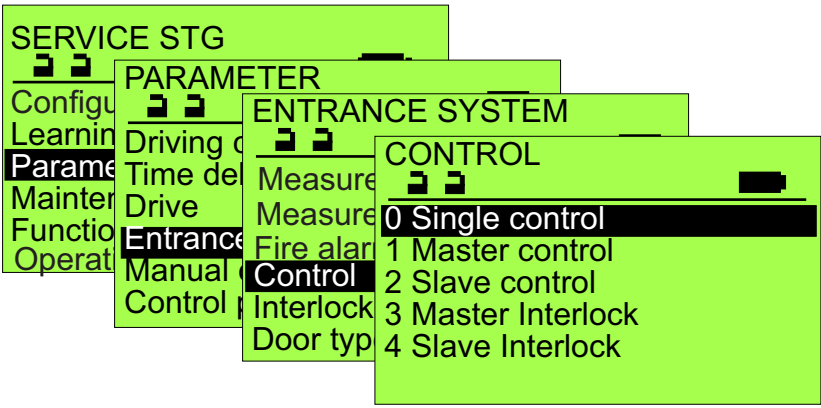
When enabled, provides a burst mode for initial power to open the door. The pulse at initial opening would provide sufficient power to overcome resistance on a Total Door or cam-lift hinges as an example when in USA Door Type.



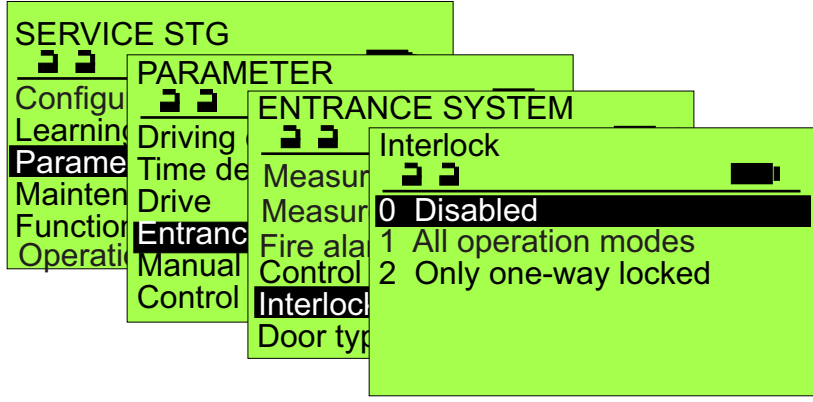
Not currently used in the North America.



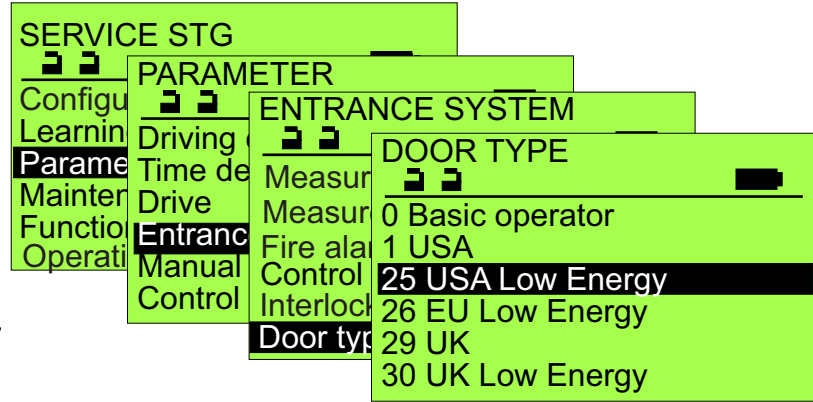
Not currently used in the North America.



Typically this parameter is automatically set during initialization. With paired operators (synchronous operation), it is necessary to change jumper J14 on the slave control from M1 to S1. When changing this jumper, it is necessary to reset the controls. Interlock configurations not currently offered in North America.

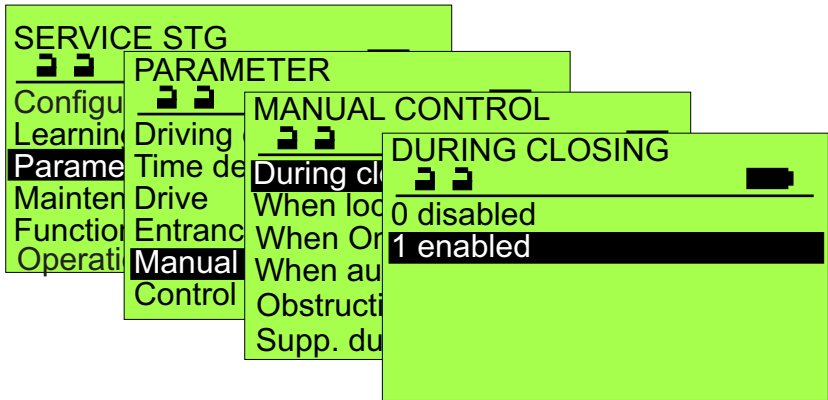


Currently not used in the North America.

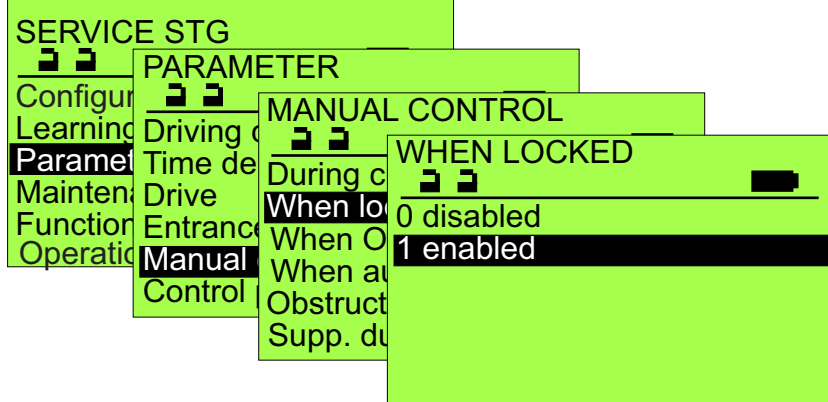


Typically set to either -
USA - for full power automatic operation or
USA Low Energy - for units that will be expected to be opened manually.

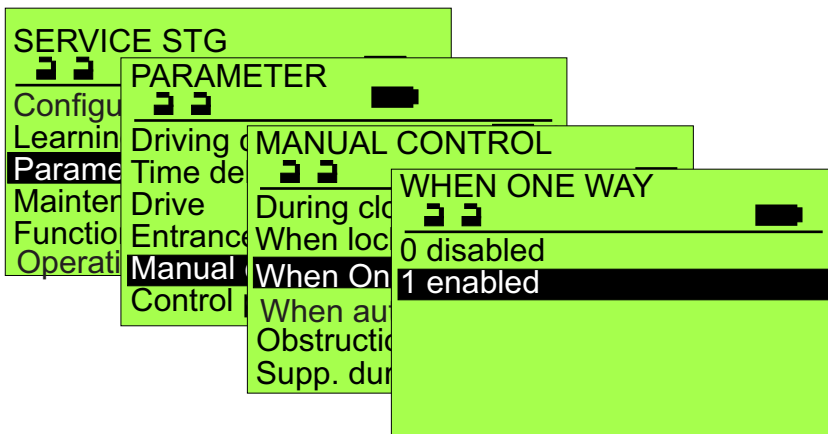
Note: In **USA** mode the unit will attempt full control of the door position at all times. Manually pushing the door, even when fully closed, will be resisted with force to maintain door position.



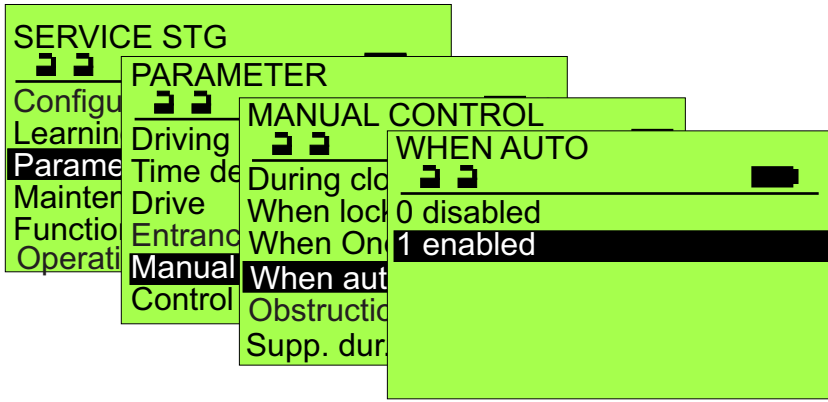
If the Mechanical Panel has been set to either “8 3 Pos. (OFF-M)” or “10 3 Pos. (LOCK-M)”, the closing cycle will utilize spring force only and the motor is used to control the closing speed. This parameter will allow the door to be pushed open manually, typical of low-energy applications.



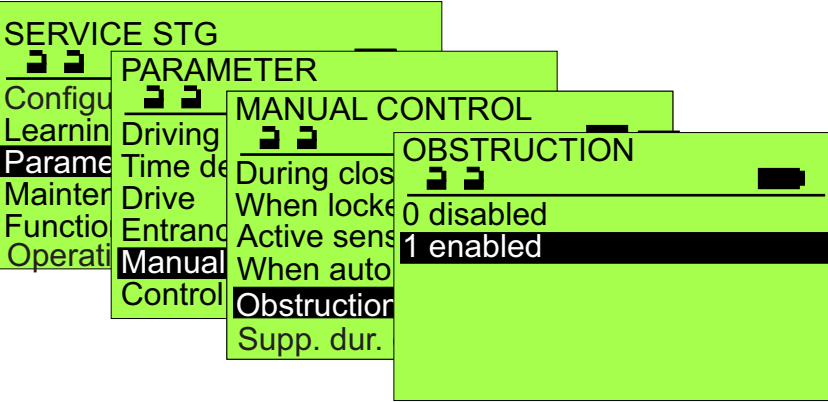
If the On/Off/Open rocker switch &/or Display Control Panel has been set for Locked mode in place of Off mode (see Control Panel parameter below), the operator will resist manual operation if this parameter is disabled. If manual operation is required, set to enabled.



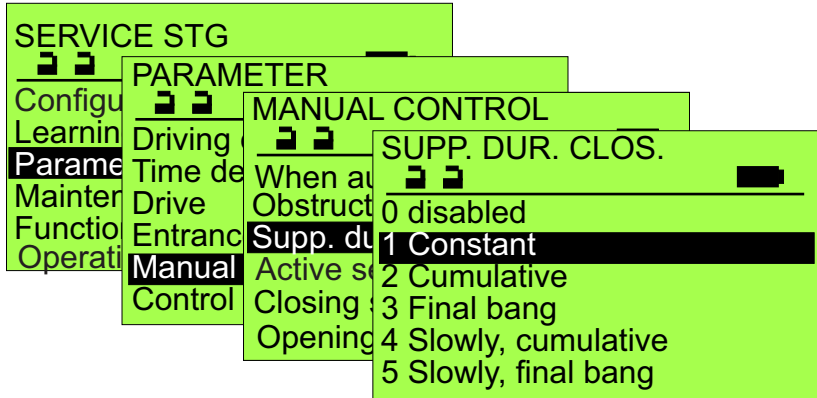
Available operation mode when a BDI-M (Keyswitch) or BDE-M (Display Module) is connected. The Parameter Control Panel > BDE-M > 4-Pos. (VDAH) supports the following operating modes: AUTO, ONE-WAY, CONT. OPEN, LOCKED. For Locking in One Way, enable 1 Way Locked in Locking. For no AKA reopening in One Way or Locked mode, the parameter Inut/Out > STG > AKA_IN_F/Inactive by 1way and locked must be selected.



Enables manual opening of the door from fully closed when the operating mode is “AUTO” (typically the unit will resist manual operation in “AUTO”). If the parameter “Door Type”(see previous page) is set “USA”, the default operating mode is “AUTO”; if it is set “USA Low Energy”, the default operating mode is “Manual”.

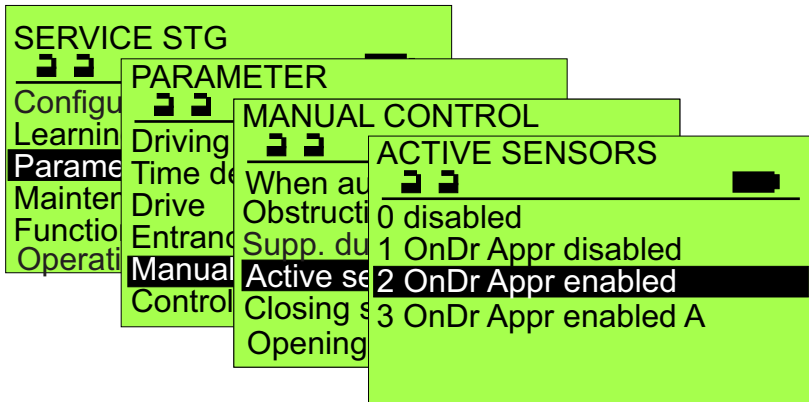


Enabling the Obstruction parameter will cause the unit to re-open if stopped during the closing cycle. The standard open time delay will be initiated before closing.



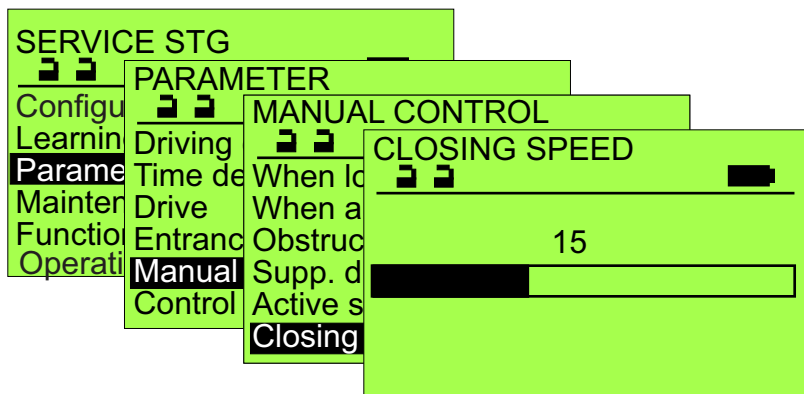
With Manual Control / During Closing enabled (above) -

- 0 disabled - provides no latch check
- 1 Constant - provides latch check & assist
- 2 Cumulative - no latch chk & ramped assist
- 3 Final bang - no latch chk & power hold
- 4 Slowly, cumulative - latch chk & ramped
- 5 Slowly, final bang - latch chk, no assist, and power hold

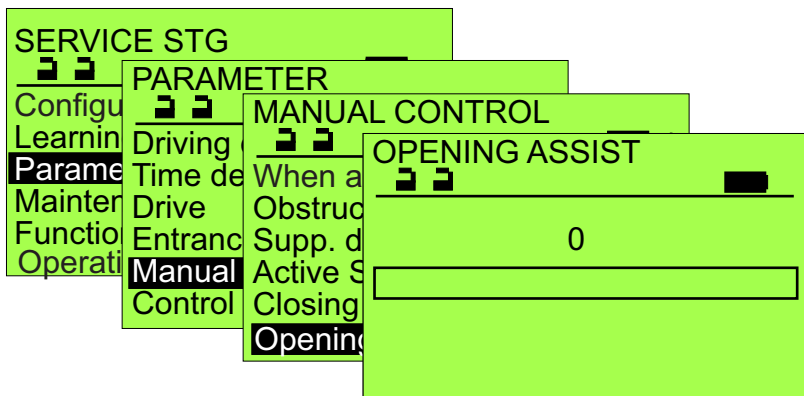


Determines the functionality of sensors and actuating devices during the close cycle when the parameter MANUAL CONTROL / DURING CLOSING is enabled.

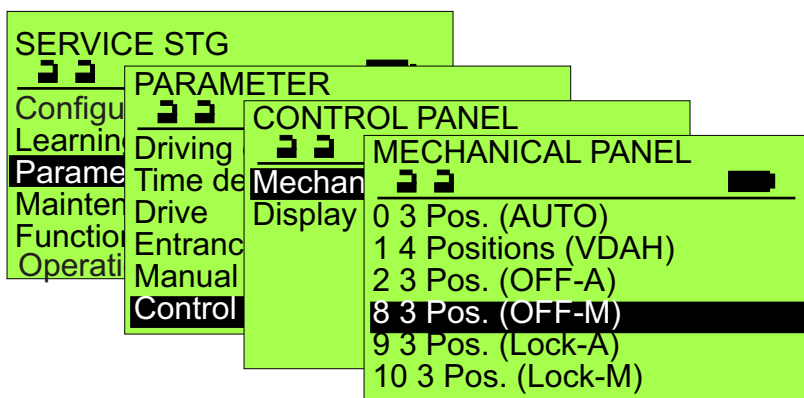
#3 OnDr Appr enabled A is sensor active when door was opened Automatically, not Manual.



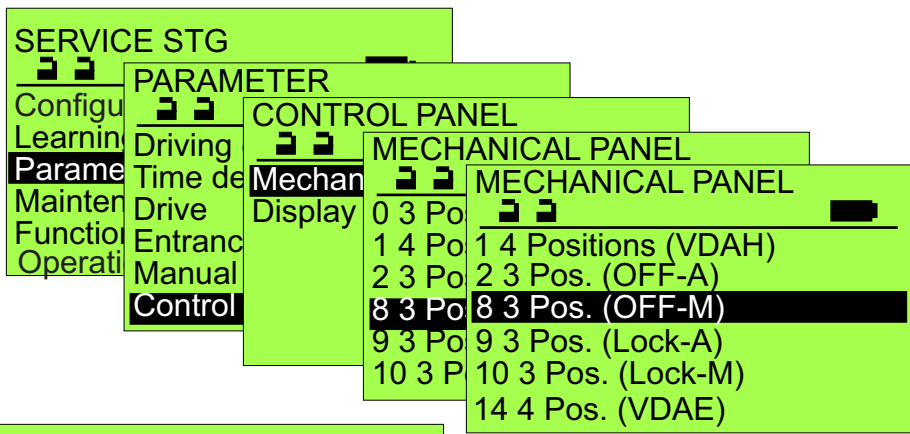
This adjustment is functional only when the Manual Control / During Closing parameter has been enabled. Otherwise, refer to the Closing Speed adjustment on page 3.



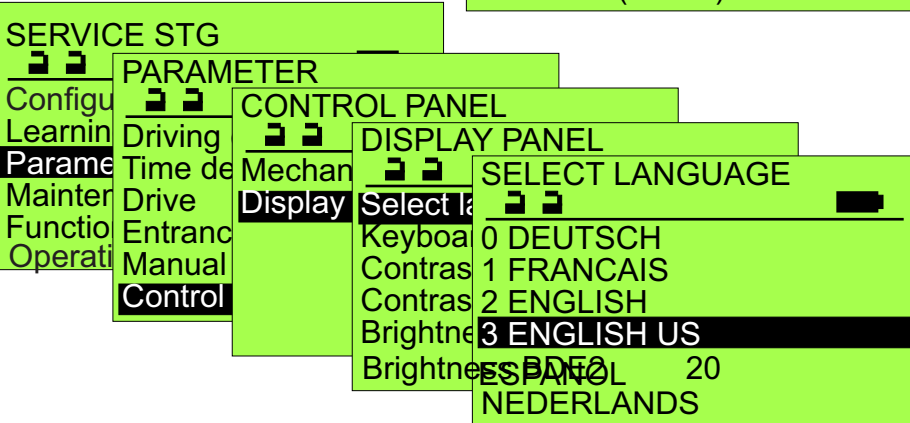
When enabled, this setting provides an assist to opening a heavy swing door. As the door opens a few degrees, the motor is actuated to assist the manual opening of the door. After full open, will time out and close normally.



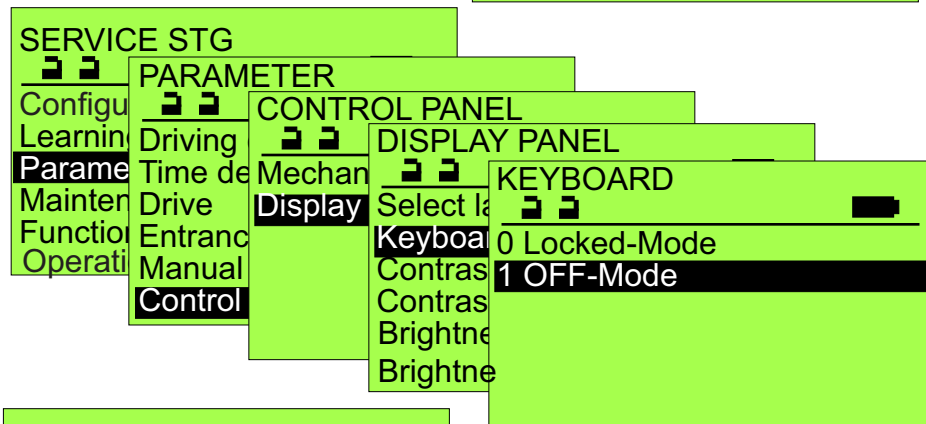
3 Pos.(AUTO) is used on units when no rocker switch is connected.
4 Pos.(VDAH) is used with a BDE-M. keyswitch or BDE-D Display module.
3 Pos.(OFF-M) is the normal setting.
3 Pos.(Lock-M) is used when a lock is present and the door is to be locked when turned OFF.
3 Pos. (OFF-A) and (Lock-A) are used when power hold closed is desired.



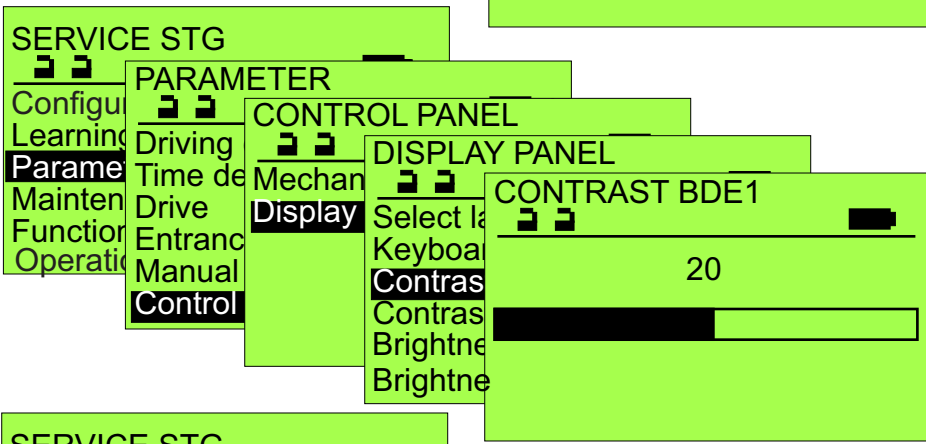
3 Pos.(AUTO) is used on units when no rocker switch is connected.
 4 Pos.(VDAH) not used in the US.
 3 Pos.(OFF-M) is the normal setting.
 3 Pos.(Lock-M) is used when a lock is present and the door is to be locked when turned OFF.
 3 Pos. (OFF-A) and (Lock-A) are used when power hold closed is desired.
 4 Pos.(VDAE) is used with a BDE-M. keyswitch or BDE-D Display module to support; AUTO, ONE-WAY, CONT. OPEN and LOCKED.



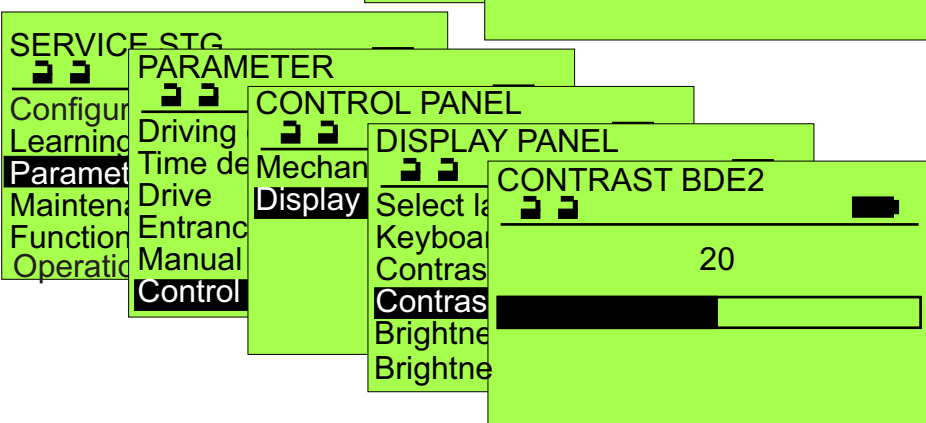
Selects the language displayed on the optional Display Control Panel.



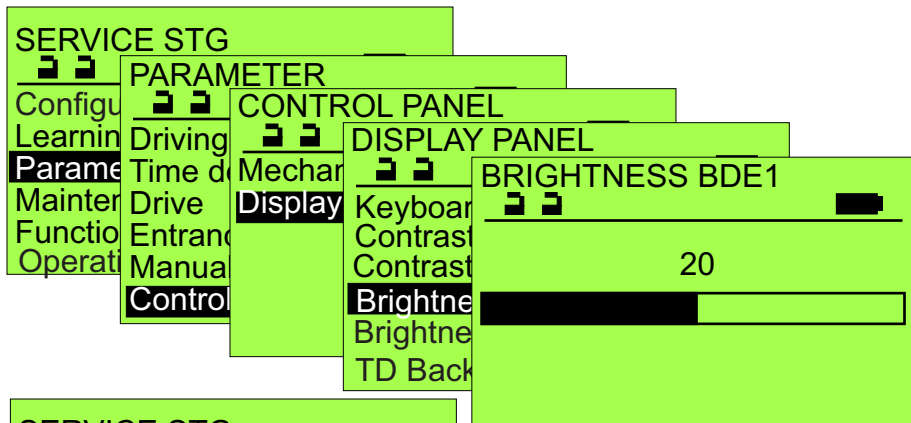
If the electric locking is to be active when the unit is turned "OFF", this should be set to "0 Locked-Mode". When the "OFF" button on the Display Control Panel is pressed, a padlock will appear on the display. If the unit is turned off with the On/Off/Open rocker switch, "OFF" will appear on the display.



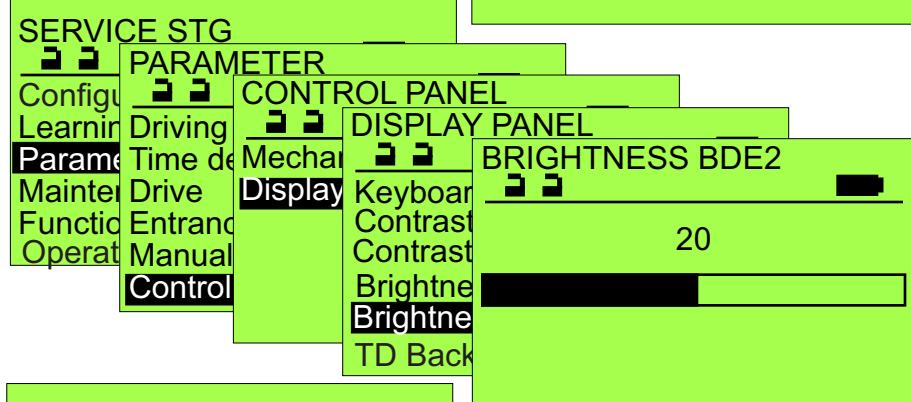
If a Display Control Panel has been connected, this will set the contrast of the LCD display.



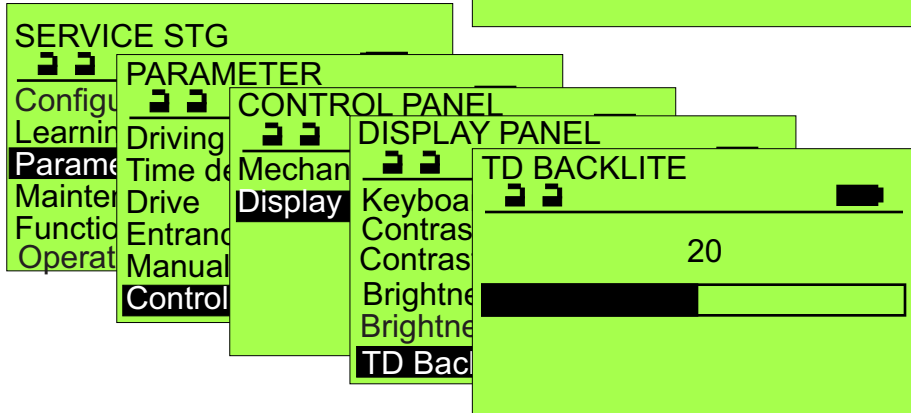
If a second Display Control Panel has been connected, this will set the contrast of the second LCD display. Note: The dip switch on the back of the second display must be set to "BDE2".



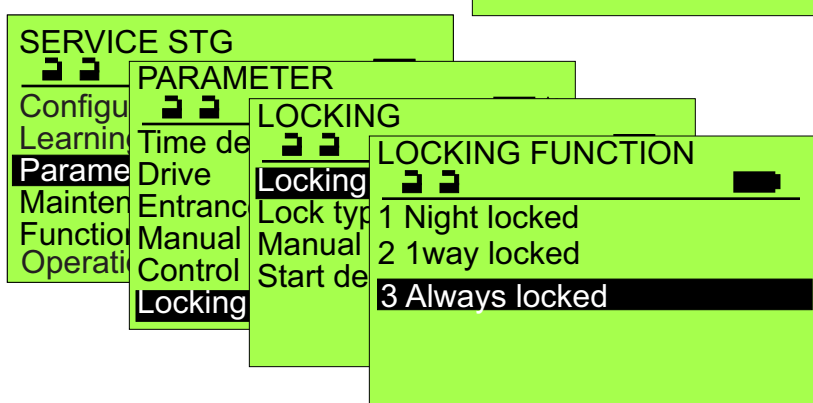
If a Display Control Panel has been connected, this will set the brightness of the LCD display.



If a second Display Control Panel has been connected, this will set the brightness of the second LCD display. Note: The dip switch on the back of the second display must be set to "BDE2".

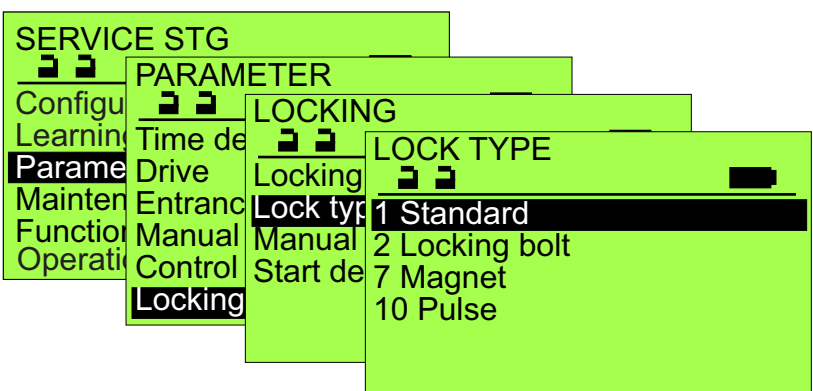


Measured in seconds; Additionally, 0 = Backlite never on 40 = Backlit continuously

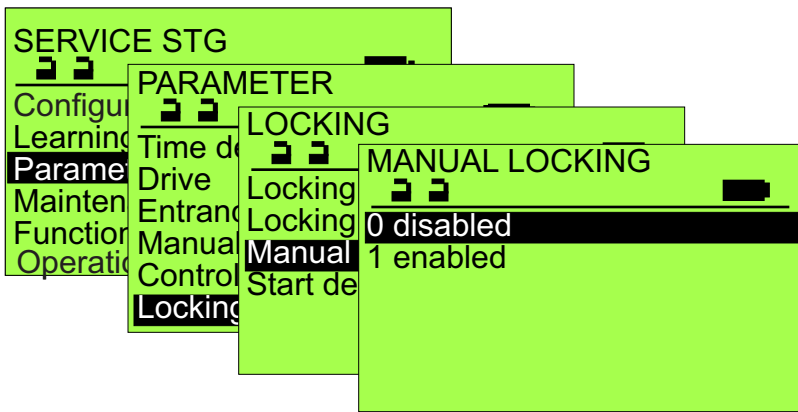


The default setting is "Always locked" and an electric lock controlled by terminals 20,21, & 22, will engage the lock when the door is fully closed. "Night locked" will engage the lock only when the unit is turned off and the Mechanical Control Panel is set to either 9 Lock-A or 10 Lock-M; or the "Display Panel / Keyboard" is set to 0 - Locked mode. If no electric lock is present, set to "1 Night locked" for quicker opening.

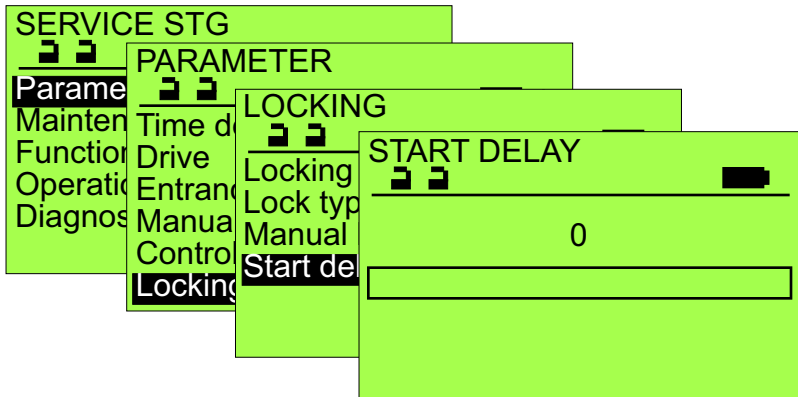
Note: For One-way mode select Input/Output> STG> AKA_IN_F> Inactive by 1 way and locked.



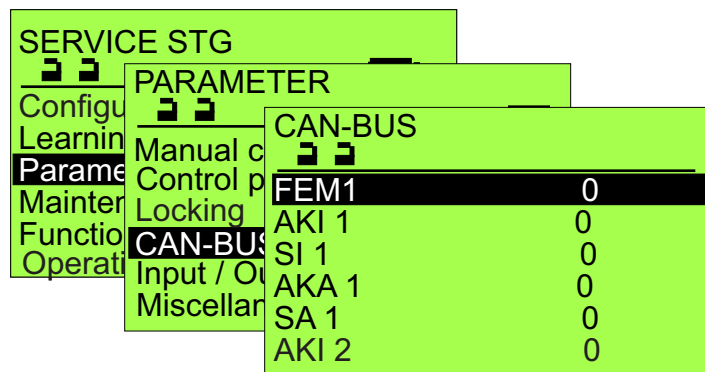
With each of the Lock Types, the lock relay (terminals 20,21,22) will switch after operator actuation (terminals 2, 5, & 7), but before the operator starts opening. Additionally, all except "Magnet" will cause the unit to drive closed slightly before opening. Standard - relay opens @ full open; Locking bolt & Magnet - relay opens @ full closed; Pulse - relay opens @ 10° open.



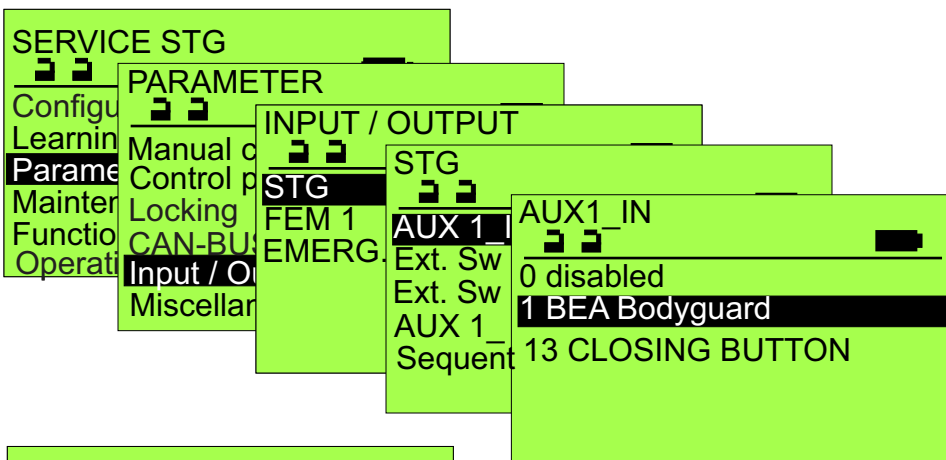
When enabled, a short between terminals 23 and 24 will prevent automatic operation. A lock monitor switch can be used to inhibit operation until the lock has unlocked. "Manual Lock" will be shown on the display control panel and the FPC-902 Terminal.



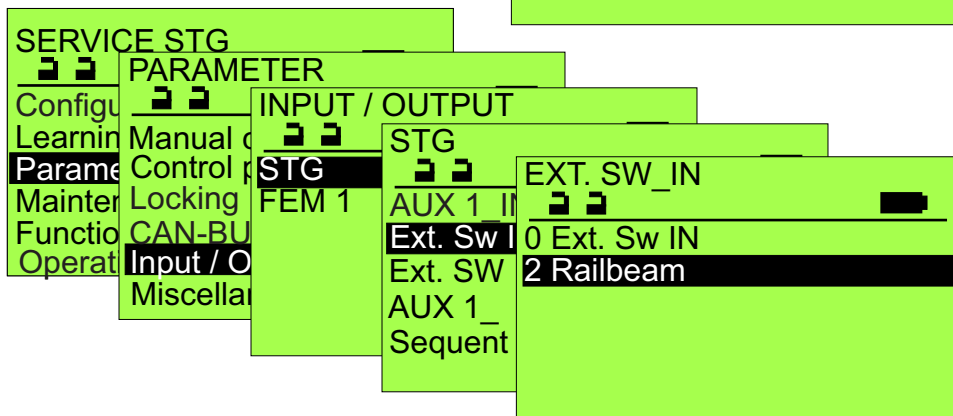
When electric locking is enabled, actuation of the control will cause the lock relay to immediately close, followed by the Start Delay, then the operator begins to open the door.
0 = 1/2 second delay
1 - 40 increases delay in 0.2 second increments (20 = 4.5 second delay)



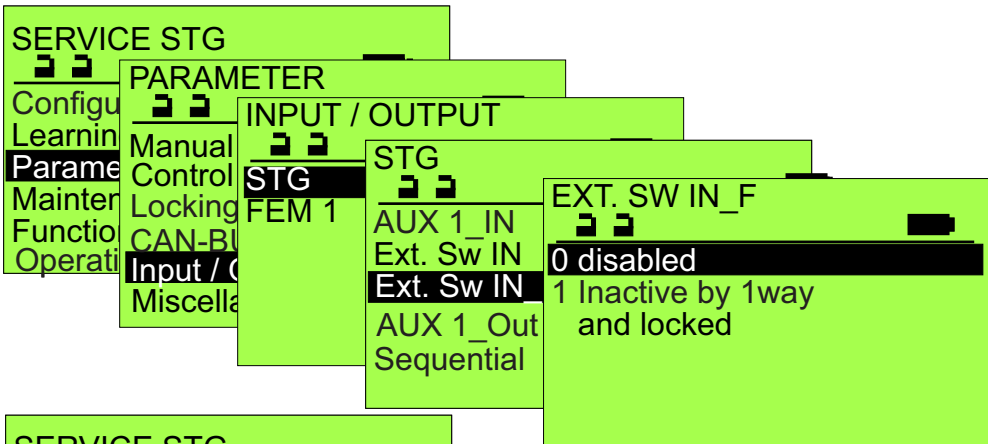
Communication to program sensors through Canbus. Currently used with FEM Modules, RIC290 Sensors and RC Swing On-Door Sensors in North America.



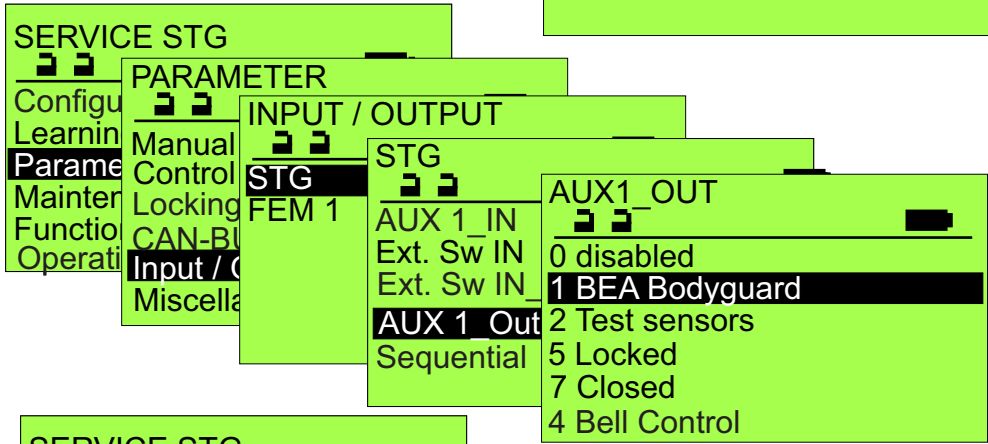
If a transom/header mounted swing-side safety sensor is used, AUX1_IN (Terminal 8) should not be disabled. This input is ignored during the closing cycle. CLOSING BUTTON is used to close door with a pulse in Input AUX1_IN to abort an active hold-open time.



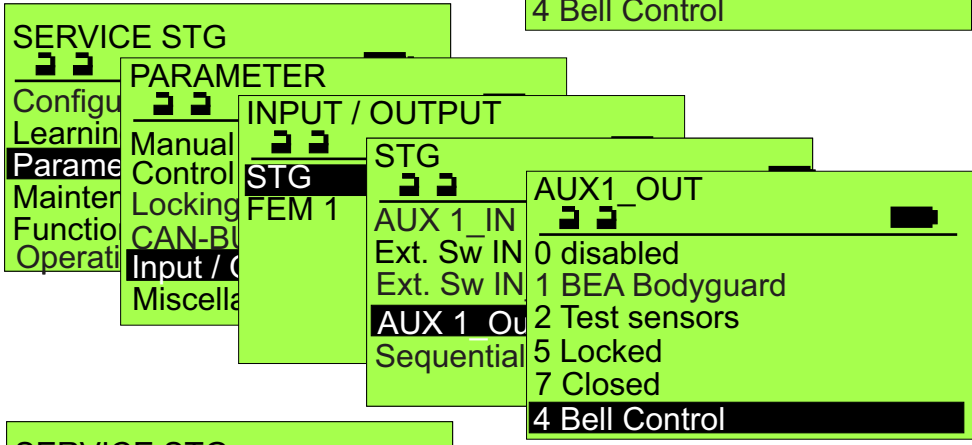
If a safety beam has been installed in the outer end of a guide rail, it's N.C. output should be connected between terminals 4 & 5, and this parameter should be set to "2 Railbeam".



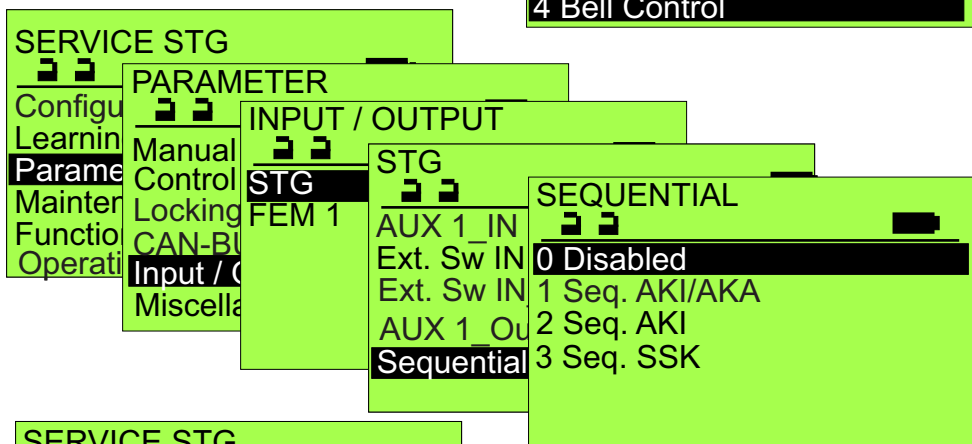
Used in conjunction with One Way or Locked mode for disabling AKA (Exterior Input)



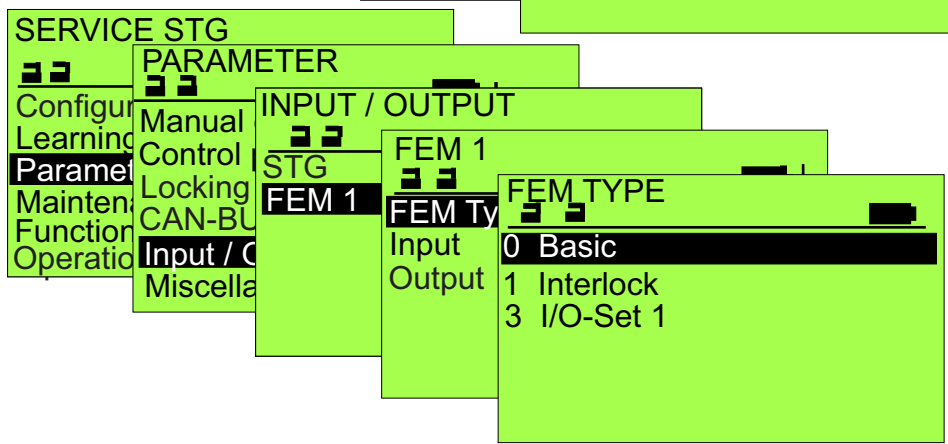
If a BEA Bodyguard is installed, this Parameter should be set to " 1 BEA Bodyguard", and terminal 9 should be connected to the Data +Input of the BEA Bodyguard. See the Series 6100&/or 8000 wiring diagram. The next 3 settings are for CANBUS programming of sensors and are not used in North America..



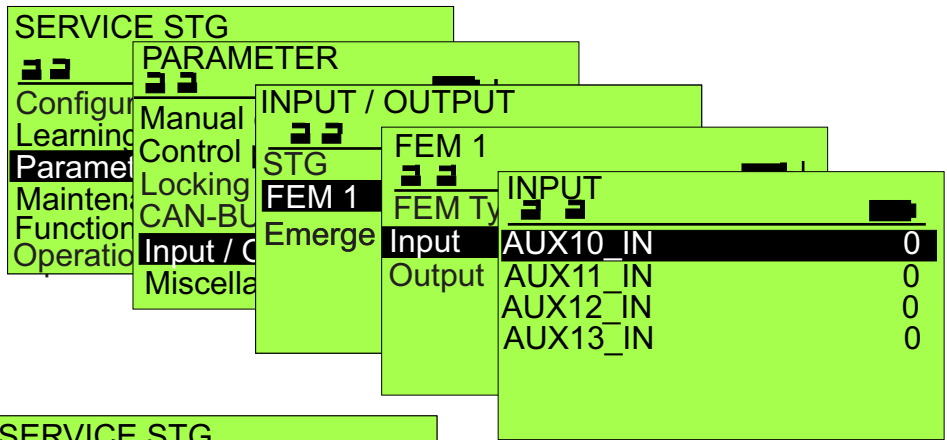
When selected and with a noise maker attached to this output, audible alarm will sound for .6 seconds every 10 seconds for those with visual or sight impairment when presence detector signal is present for a long time. Will sound during a learn cycle also.



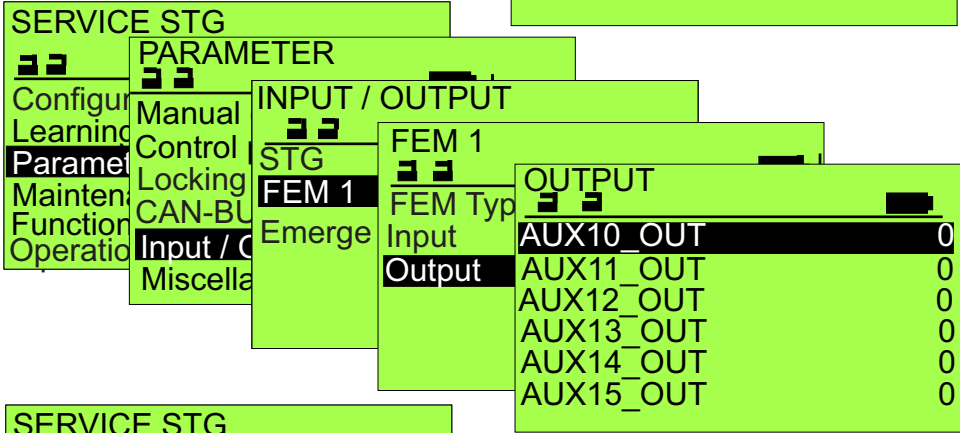
3 different input sets are available. When Time Delay is set high for disabled persons, first pulse opens the door. After door is open next pulse aborts hold open time and closes door. Third pulse re-opens door if door closes.



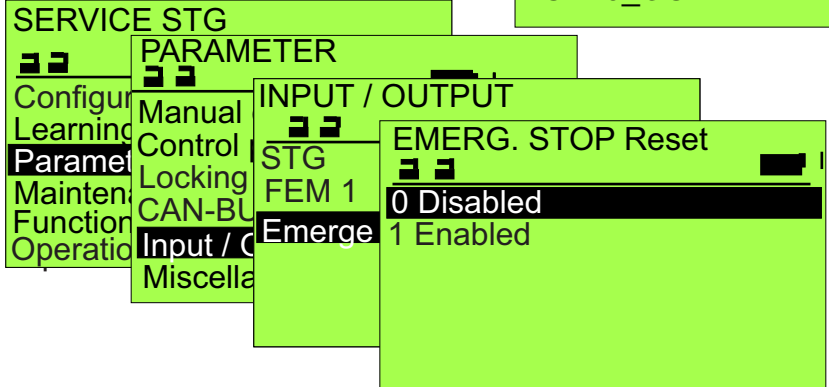
For setting an Interlock Function between 2 Operators; requires an Expansion Module. Not offered in the North America currently.



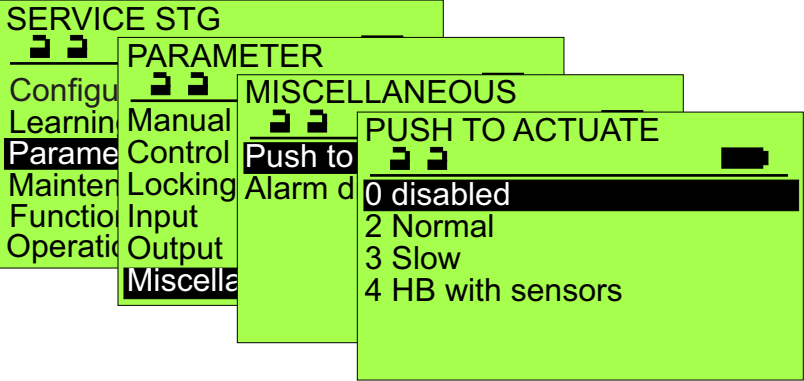
Various Input selections for using an FEM1 Module that would be enabled for added functionality.



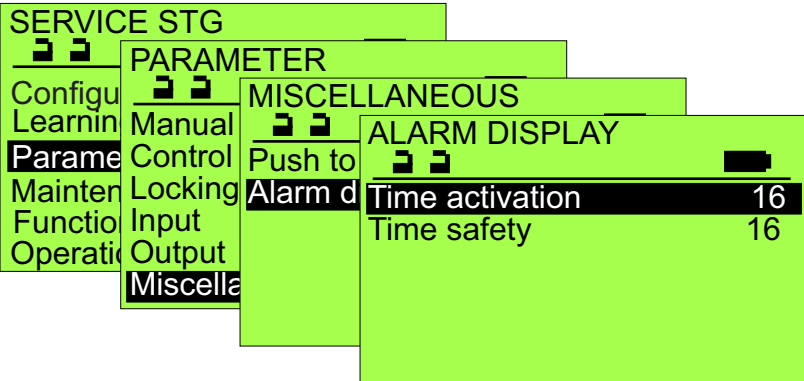
Various Output selections for using an FEM1 Module that would be enabled for added functionality.



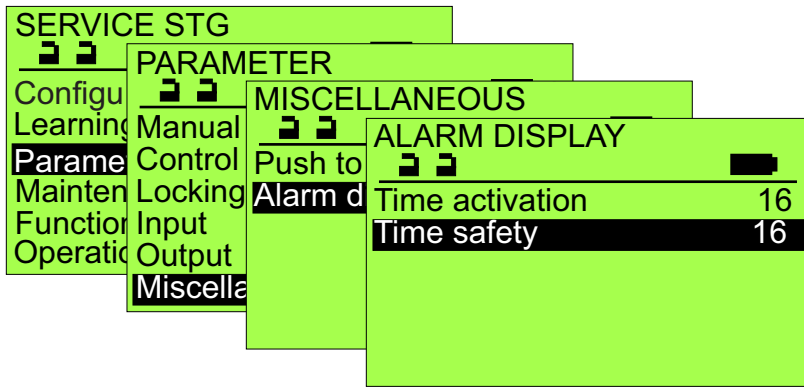
Unintentional unlocking of the door by means of an EMERGENCY STOP or an interrupted signal from a fire alarm system is prevented. A normally closed contact of the EMERGENCY STOP or fire alarm system is connected to terminals 14/15 of the STG 127. If interrupted and if enabled, the controller will be restarted and briefly unlock door. If enabled, max. opening angle must be re-taught after first operation.



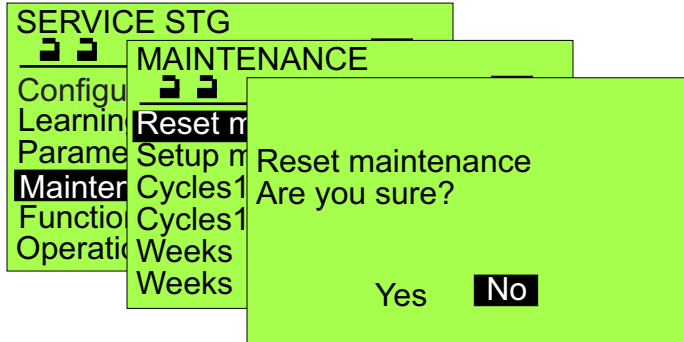
“2 Normal” will cause the operator to open at the adjusted “Open Speed” parameter. “3 Slow” will cause the operator to open in approximately 7.5 seconds. NOTE: When Push to Actuate is enabled, the operator will resist manually opening the door at a speed greater than the Open Speed the unit is adjusted to.



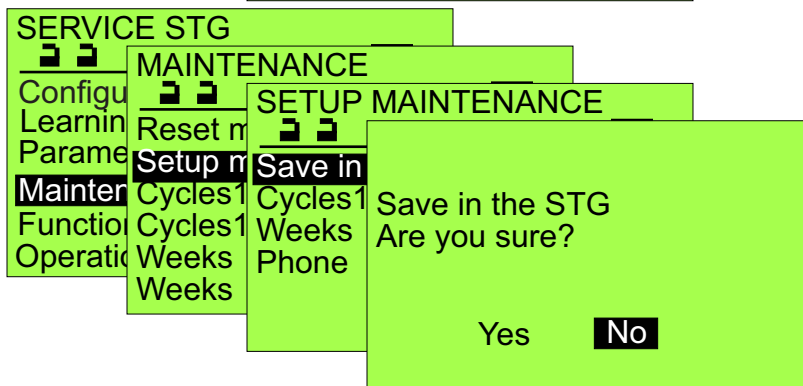
Sets the length of time a continuous actuate signal (terminal 2) will initiate an alarm status (red LED blinking on control panel or message on Display Control Panel). Adjusts in 5 second increments -
 0 = Disables alarm
 1 = 5 seconds before alarm
 12 = 60 seconds before alarm
 40 = 200 seconds before alarm



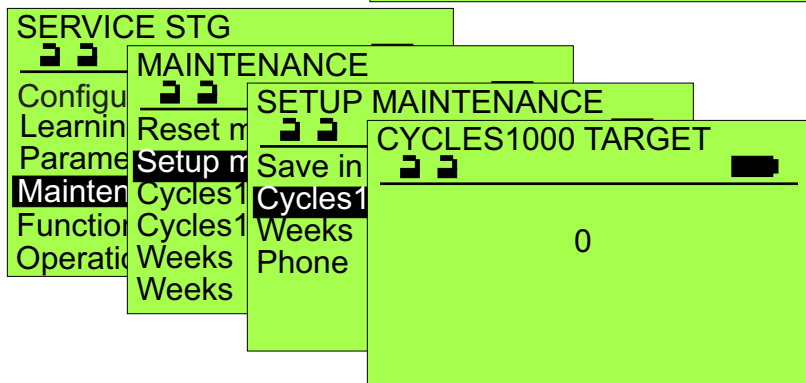
Sets the length of time a continuous safety signal (terminals 5, 8, 10 & 12) will initiate an alarm status (red LED blinking on control panel or message on Display Control Panel). Adjusts in 5 second increments -
 0 = Disables alarm
 1 = 5 seconds before alarm
 12 = 60 seconds before alarm
 40 = 200 seconds before alarm



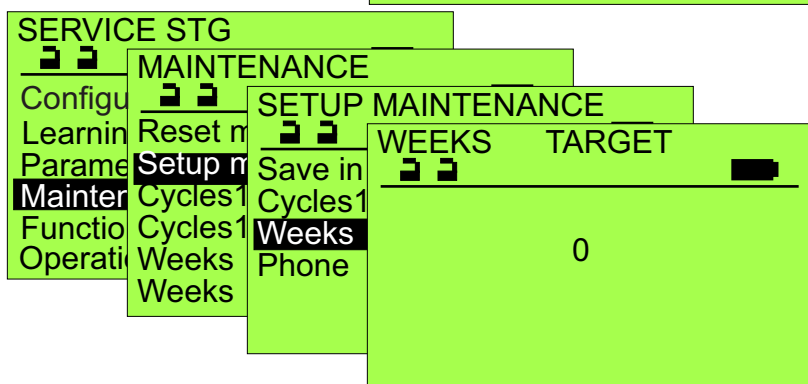
Useful in setting up a maintenance schedule.



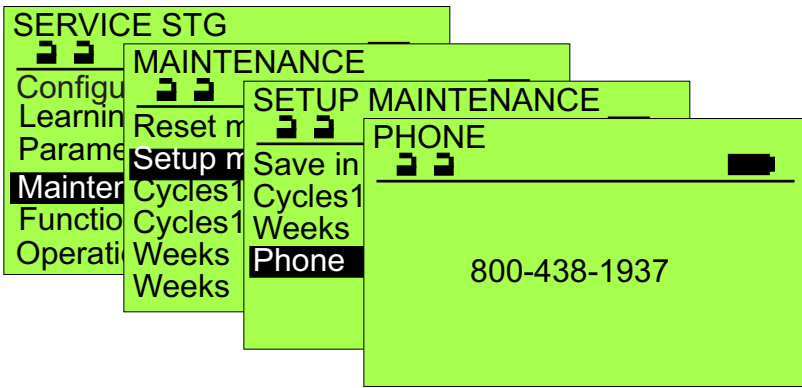
Useful in setting up a maintenance schedule.



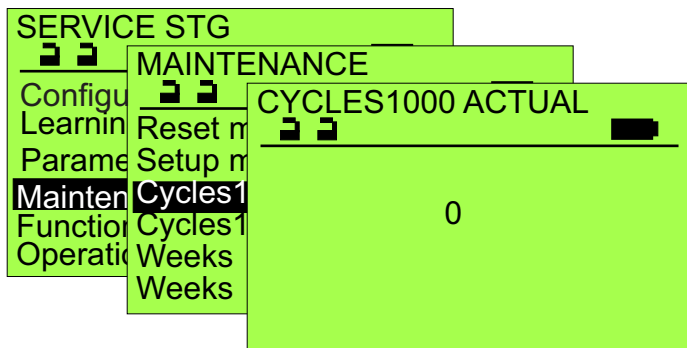
Useful in setting up a maintenance schedule.
 Set to 0 if you do not want a maintenance notification.



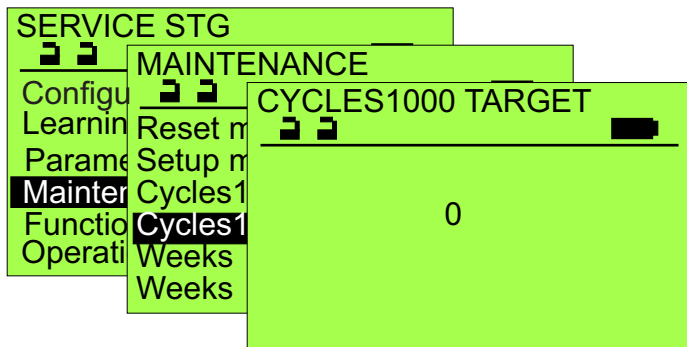
Useful in setting up a maintenance schedule.
 Set to 0 if you do not want a maintenance notification.



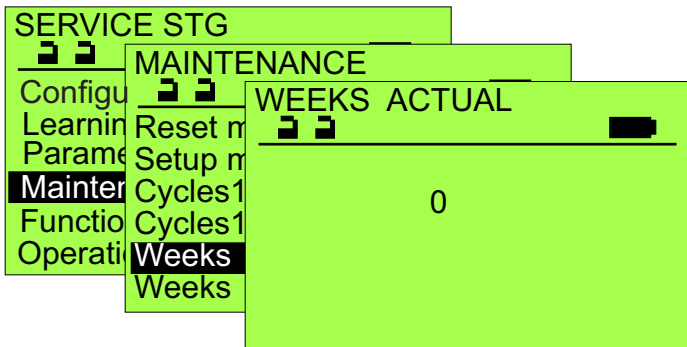
If a Display Control Panel is connected to the operator, this telephone number will momentarily display when the unit is turned on, and if an error display occurs, will alternately display with the Error Screen. If no number is entered, the unit defaults to the factory's 800 number. To store the number in the control, use "Save in the STG" at the bottom of the previous page.



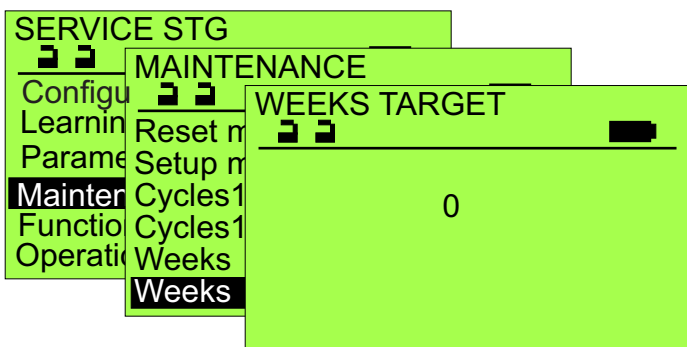
Useful in setting up a maintenance schedule.
Displays realtime cycle count



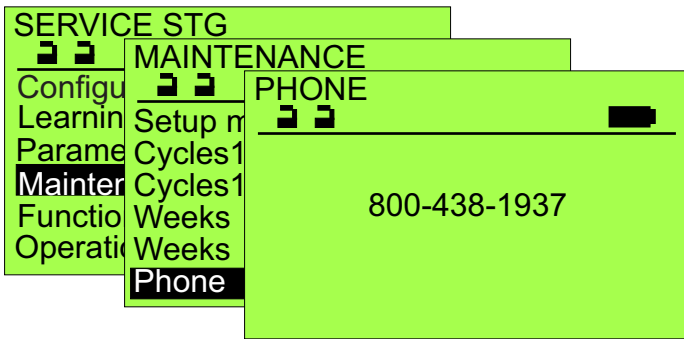
Useful in setting up a maintenance schedule.
Set to 0 if you do not want a maintenance notification



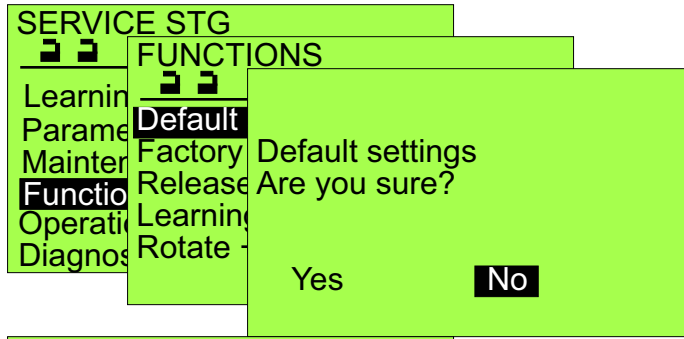
Useful in setting up a maintenance schedule.
Displays realtime week total



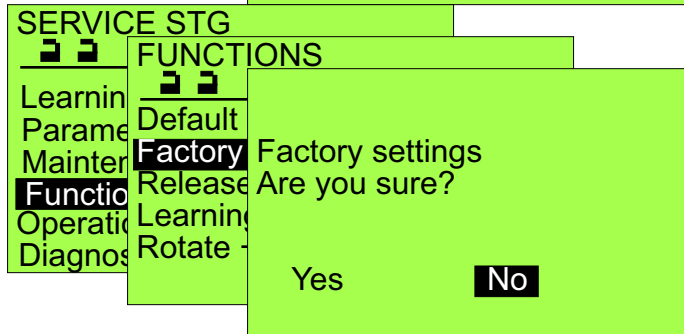
Useful in setting up a maintenance schedule.
Set to 0 if you do not want a maintenance notification.



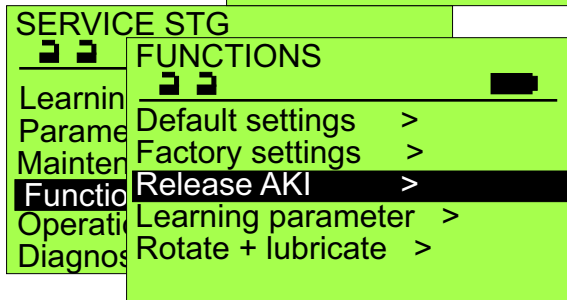
An alternate location for setting a custom telephone number. If a Display Control Panel is connected to the operator, this telephone number will momentarily display when the unit is turned on, and if an error display occurs, will alternately display with the Error Screen. If no number is entered, the unit defaults to the factory's 800 number. (It is not necessary to use "Save in the STG" from this screen.)



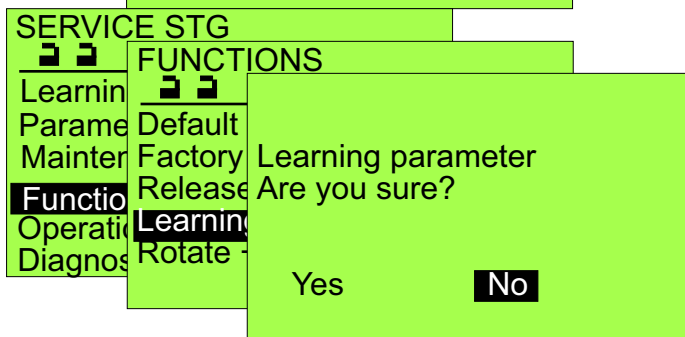
Performing this function will reset most of the adjustable parameters to their default settings. It will not reset the Entrance / Door Type.



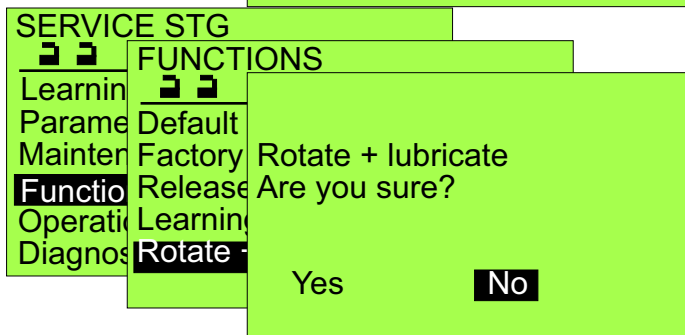
After a Factory Settings is initiated, press "OK" button to return to "Status page" to read "109 Factory Settings". Immediately (within 5 seconds or it will time out and return to Errorless on the Status page and not perform the request.) press "Reset" button on programmer and select yes for a reset to "Basic Operator". This will require a complete reconfiguring of the operator.



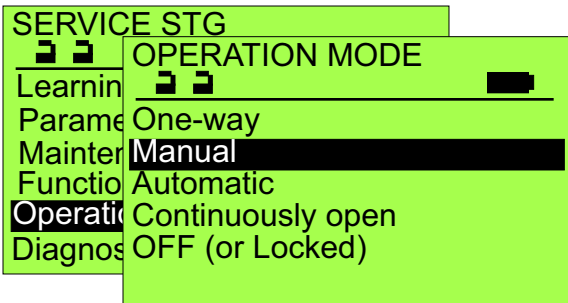
Selecting "Release AKI" will send an actuate signal to the operator, similar to a contact closure between terminals 1 and 2.



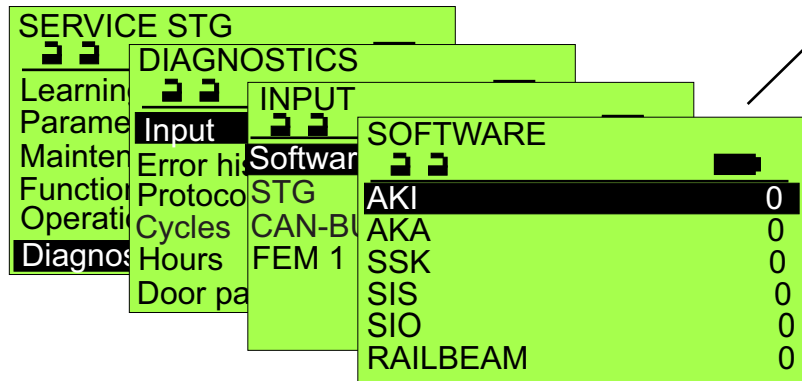
Initiates a calibration run, similar to pressing and holding the Control Button for 3 flashes of the Control LED.



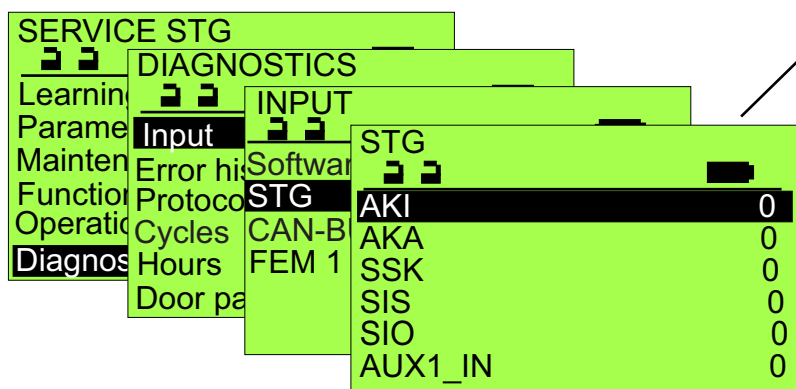
Before initiating this cycle, the drive arm must be removed from the operator output shaft and the open stop must be removed from the top of the operator. The operator output shaft will rotate 360°.



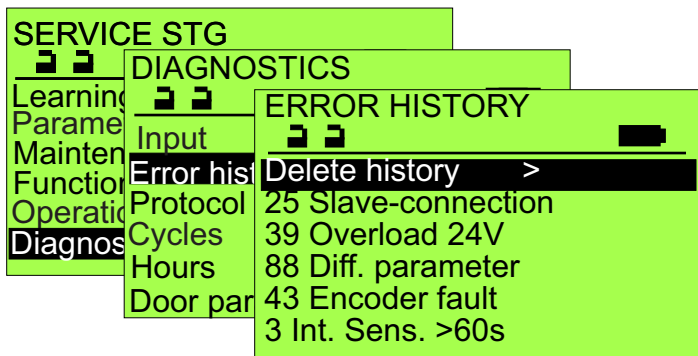
Indicates the current operational mode of the door. Note this screen does not dynamically update in response to changes to the control panel. The Status screen, accessible anytime the terminal is servicing the unit (STG), will dynamically update in response to changes to the control panel(s).



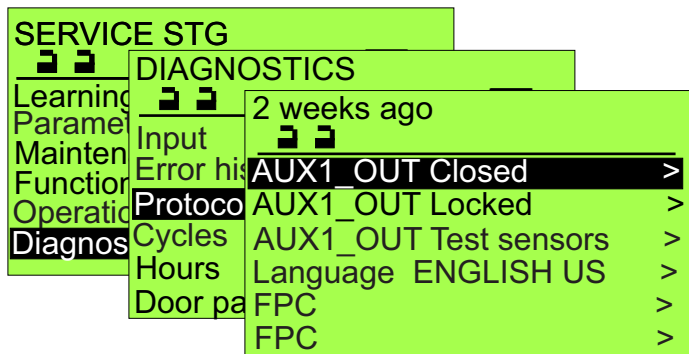
This screen provides a real time status for each of the control's inputs via CANBus. A "0" indicates the input is not actuated, a "1" indicates it is actuated.
 AKI = Approach Sensor
 AKA = Two-Way traffic 2nd Approach Sensor
 SSK = Remote Switch (active when unit is off)
 SIS = Door Mounted Approach Sensor
 SIO = Door Mounted Swing-side Safety Sensor
 RAILBEAM = Guide Rail Safety Beam
 BEA Bodyguard = Transom mounted Safety
 S_AUS
 SEA
 SFS_IN } Inputs/Outputs of the FEM1 in the Interlock mode



This screen provides a real time status for each of the control's inputs that are hardwired. A "0" indicates the input is not actuated, a "1" indicates it is actuated.
 AKI = Approach Sensor
 AKA = Two-Way traffic 2nd Approach Sensor
 SSK = Remote Switch (active when unit is off)
 SIS = Door Mounted Approach Sensor
 SIO = Door Mounted Swing-side Safety Sensor
 AUX1_IN = Auxilliary Input
 EMERGENCY STOP
 VAK= Lock status
 BDEM_1= Mechanical Panel 1 status
 BDEM_2= Mechanical Panel 2 status
 RESET
 MF_Push Button



Displays approx. 100 errors that have occurred with a time stamp indication; Minutes, days, weeks. Useful in determining what has been occurring with the operator and when, prior to servicing. Delete history will clear the memory of all previous error codes.



Displays connections and changes made to the unit and the time frame indication.

SERVICE STG	
DIAGNOSTICS	
Protocol	>
Cycle	XXXX
Hours	XXX
Door parameters	>
Software	>
S/N	0

Cycle indicates the total number of cycles the operator has performed.
Hours indicates the total number of hours the operator has been functional.

SERVICE STG	
DIAGNOSTICS	
DOOR PARAMETERS	
Springiness value	89
Spring type	Unknown
Inertia	7

For Factory reference.

SERVICE STG	
DIAGNOSTICS	
SOFTWARE	
Running cycle	XX
Status	3
Reboot	31

For Factory reference.

SERVICE STG	
DIAGNOSTICS	
Protocol	>
Cycle	XXXX
Hours	XXX
Door parameters	>
Software	>
S/N	0

Future use for listing a serial number to a unit. Not active currently.



AKKU	PASS
FLASH	PASS
EEPROM	PASS
RTC	PASS
CAN	PASS

```

FPC902
Version 2.80
Jan 1, 2015
10:04:54
  
```

This sequence of screens will access and display the files currently stored on the removable MMC card located in the top of the FPC-902 Terminal. The next page will document the transfer of the appropriate files into the operator control.

```

FPC902
-----
Service STG
Service STG Slave >
Flash-Programmer >
Setup >
  
```

```

FLASH PROGRAMMER
-----
Automatic update >
Manual update >
Indicate files >
Check files >
  
```

```

INDICATE FILES
-----
BDE-D V3.00
DFA127 V2.40
FPC902 V2.80.hex
STA20UL V1.02
RED19CP1 V1.60
RED19CP2 V1.60
  
```

The following sequence of screens are to be followed when updating door and display software.

```

FPC902
-----
Service STG
Service STG Slave >
Flash-Programmer >
Setup
  
```

```

FLASH PROGRAMMER
-----
Automatic update >
Manual update >
Indicate files >
Check files >
  
```

```

CAN nodes are
searched ...
■■■■■■■■□□□□□□
  
```

```

Updates are
searched ...
  
```

```

DFA127 VX.XX
replace by
DFA127 VX.XX

Yes      No
  
```

```

Updates are
searched ...
  
```

```

BDE-D VX.XX
replace by
BDE-D VX.XX

Yes      No
  
```

Select "Yes" to initiate a software update. Each update will require a few minutes, and a confirmation screen will display indicating the software has been replaced. When finished, press the ESC key multiple times to exit the programming mode.

AKKU PASS
FLASH PASS
EEPROM PASS
RTC PASS
CAN PASS

FPC902
Version 2.80
Jan 1 2015
10:04:54

FPC902
Service STG >
Service STG Slave >
Flash-Programmer >
Setup >

SETUP
Renew license >
Select language >

Not available in North America

RENEW LICENSE
Lapse counter: 500
ID: 3 076 305 230
KEY: █

AKKU PASS
FLASH PASS
EEPROM PASS
RTC PASS
CAN PASS

FPC902
Version 2.80
Jan 1 2015
10:04:54

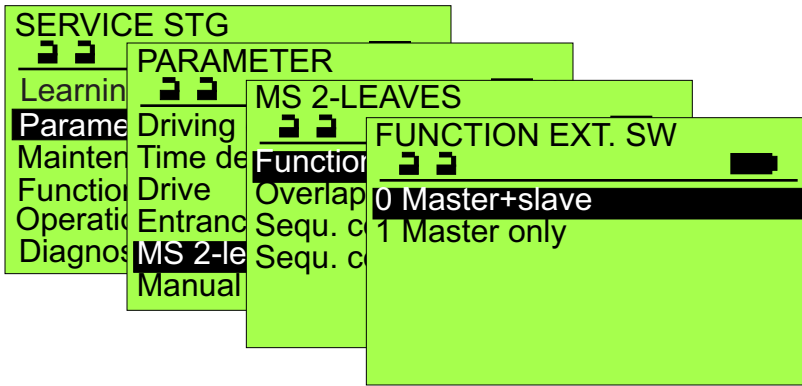
FPC902
Service STG >
Service STG Slave >
Flash-Programmer >
Setup >

SETUP
Renew license >
Select language >

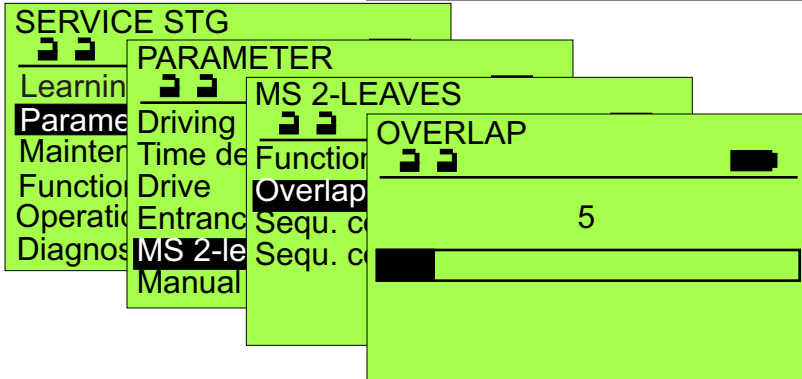
Selects the desired language used by the FPC-902

SELECT LANGUAGE
DEUTSCH
FRANCAIS
ENGLISH
ENGLISH US
ESPANOL
NEDERLANDS

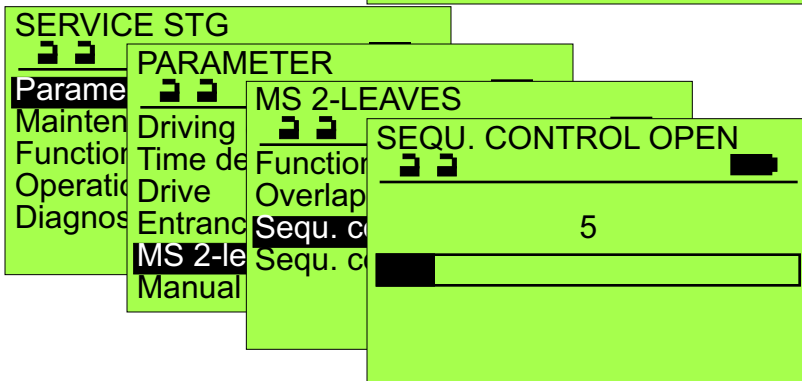
Screens Available when synchronizing two operators Both Simultaneous Pairs and Double Egress



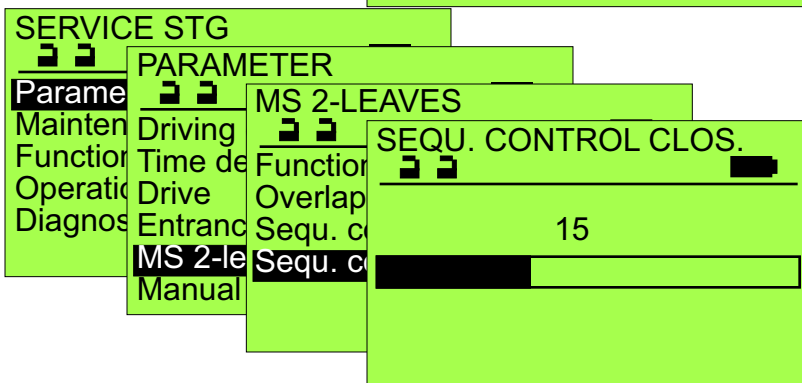
This is automatically set by the controls upon reading the Master / Slave jumper block (J13) on the controls.



This sets the lead time and lag time between operation of the master and slave operators, useful with an overlapping astragal. When set above 0, the Master begins opening before the slave and will stop 10° before fully closed, allowing the slave to close first. When set to 0, operation is simultaneous.



This adjusts a delay time between when the master operator begins opening and when the slave begins. Closing will not be affected. When set to 0, operation is simultaneous.



This adjusts a delay time between when the slave operator begins closing and when the master begins closing. Opening will not be affected. When set to 0, operation is simultaneous.

When ordered as a dual synchronized pair or a double egress, the operators are factory wired and parameters preset. If any changes are made, the following setup sequence is suggested - Insure Jumper J14 is set to M1 on the master unit and set to S1 on the slave unit. Apply power to both units, then press and hold the blue Control button on the master control for 8 flashes of the red LED (reset to factory defaults). Next press and hold the Control button for 8 flashes on the slave control. Return to the master unit and press & hold the Control button for 3 flashes of its red LED (initiate a calibration run; allow the door to open then close). Finally, press & hold the button for 3 flashes on the slave control. The master unit should open again; the slave unit should follow. The units should now be configured for synchronous operation, and with the above parameters set to 0 providing simultaneous operation. Note: If only one rocker switch is used, it is to be connected to the master control, and the slave control parameter CONTROL PANEL / MECHANICAL PANEL should be set to 0, 3 Pos. (AUTO).

ALARM CODES AND ERROR MESSAGES

No.	Display text	Type	Res	Comments and possible troubleshooting
3	AKI > 60 sec. active			Inside radar longer than 60 sec. active and door remains open. Check that no moving objects are activating
5	AKA > 60 sec. active			Outside radar longer than 60 sec. active and door remains open. Check that no moving objects are activating
6	Unlocking error		X	Unlocking error: it is impossible to unlock the door. Repeat unlocking attempt after changing the BDF operating mode.
7	No redundancy test	RED	X	When no „redundancy“ test could happen within the last 24 h or the „redundancy test“ has not correctly performed. door not locked. Reset. Control settings.
9	Battery fuse open		X	Battery fuse is disconnected or battery is not plugged in.
9	Open. unsuccessful			Door does not open or only slowly. SIO might possibly be active or motion be mechanically hindered (e.g. dirt in floor track).
10	Locking error			Locking error: door remains open, door remains closed. Door might possibly be hindered or locking device might need to be adjusted.
11	Difference AKI	RED	X	Error in the interpretation of the inside radar signal. Check inside radar.
12	Low BAT voltage		X	Battery is missing or is not plugged in. Door works if mains voltage is provided.
12	BAT capacity		X	Battery no longer meets minimum power requirements. Replace Battery.
14	VAK defective		X	Locking device hampered. Adjust door leaves and locking device.
15	EMERG. OPEN.	RED		On RED installations emergency opening switch has been actuated.
17	Timeout open. time	RED	X	80% of escape route opening not reached within 3 sec. Control with FPC, adjust opening speed. Under „Stat opening time + 400 ms.“
18	VAK closed automatic		X	Adjust locking device. Make contact (NOC) of locking device is active with Automatic. Locking is set on „wrong“ position. Change operating mode on BDE-D to Locked and again to Automatic. Actuate manual unlocking, or rather completely reset it.
29	TOS not locked	TOS with DV		TOS not locked (rotary switches) on Locked. Turn rotary switches onto Locked position (above).
30	TOS locked	TOS with DV		Automatic mode, TOS locked, but door stays in manual mode.
31	EMERGENCY STOP			Emergency stop key has been pressed or manual unlocking has been actuated.
33	Error ELS1		X	Light barrier signal is not identified. Inform after-sales service. Calibrate ELS with 2 light pulses.
36	VOK closed I.		X	Locking device does not work properly. On BDE-D change operating mode to Automatic and again to Locked. Wrong locked position or VRR faulty.
37	Motor current		X	Possibly wrong motor type parameterised or motor is overloaded.
38	Motor 1 overheat		X	Motor 1 is too warm. Door works sluggishly.
39	Overload 24V		X	24 volts supply for peripheral units is overloaded. Check wiring.
41	Temp. sensor 1		X	With motor 1: temperature sensor is faulty or motor cable is disconnected.
42	Temp. sensor 2		X	With motor 2: temperature sensor is faulty or motor cable is disconnected.
43	Encoder fault		X	Encoder or cable is faulty or not plugged in. Reset.
44 W	T. motor high			Warning message; Time Delays will be extended. Door might work sluggishly. Check for presence of mechanical hindrance.
46	STG defective		X	Control unit is defective. Reset. If no success, then replace control unit.
47	SIO > 60 sec active		X	Door does not open or slides at reduced speed. Check Safety Sensor SIO.
48	NSK or SOK activated			Remote Alarm has just received. Control safety alarm. Control external signal.
50	Watchdog fault			Replace control unit.
51	VOK op n unl.		X	Repeat locking and unlocking procedures. Connection cable might be missing or is not properly plugged in. Check locking settings.
52	No run param.		X	Door must be calibrated (perform teach-in run).
53	Interrupt. mot. 1		X	Motor is not plugged in. Motor is faulty.
54 W	Calibrating run		X	Warning message: Calibration run is performed.
55	Power failure			No mains supply. Door works in battery service provided that there is a battery and „Basic escape route“ has been configured.
57	Interrupt. mot. 2		X	2nd motor is not plugged in. Motor is faulty.
59	ELS > 60 sec. active			Light barriers interrupted or disconnected and door remains open. Check that safety barriers are not covered extremely dirty.
59	SIS > 60 sec. active		X	Door does not close. Check Safety Sensor SIS.
60	EEPROM defective		X	Load factory settings. 9 light pulses with MFT and reset within 10 seconds. Afterwards language selection has displayed on BDE-D. Attention! All programmings are reset. Reconfigure door. Replace control unit if door still fails to function.
61	SSK > 60 sec. active			Key-operated contact stays active. Door remains open. Check Remote Switch (SSK) wiring connections and switch.
62	BDE no priority			BDE is locked e.g. by a clock timer on input SURV/SURA accordingly configured.
92	STG relay defect.		X	Change control unit.
93	Overvoltage 24V		X	Wiring error. Check connections.
96	EEPROM void		X	Load factory settings. See error 60.
97 W	Maintenance time exceeded		X	Warning message: Acknowledge message. Alarm is reset for 13 days. Actual value is 105% of target value operating hours. Inform after-sales service and have installation serviced. Set Targets to 0 to avoid alert.
98 W	Maintenance due		X	Warning message: Acknowledge message. Alarm is reset for a short time. Repeats at 100% Actual value = 95% of target value of cycles or operating hours. Inform after-sales service and have installation serviced. Set Targets to 0 to avoid alert.
112	Batt. not charged complet.			Battery is not fully charged. Message disappears from display in case of full charge.
2132	FPC Can blocked ***** BDE Can blocked ***** ERROR by saving in the STG			On a locked door the CAN-Bus will be blocked for devices like the BDE-D (Display) or FPC if they were not connected BEFORE the door was locked. When reading either of the 3 messages from the left column, to unblock, the door needs to be unlocked or the emergency switch has to be activated or the multi-function switch on the control has to be pressed for 1 flash.

11 Abbreviations

A	A	Width of passage			
	AKA	Actuating contact „outside“		M	MOT Motor
	AKI	Actuating contact „inside“			MP General installation plan
	AMP	Lamp		N	NET Power supply
	APA	actuating switch for pharmacies			NSK Emergency fail close contact
	APD	Pushbutton for pharmacies			
	APR	locking bar for pharmacies		O	OUT Output
	APS	safety device for pharmacies			OVA Optical lock indicator
	AS	Connection or general schematic diagram		R	RAD-A Radar „outside“
	ATE	Drive unit			RAD-I Radar „inside“
	ATM	Drive module			RED Redundant module
B	BAT	Battery-pack		S	SAA interlock control “exit actuation blocked”
	BDE	Control unit			SAG Control unit
	BDE-E	Control unit electronic			S-AUS Interlock control
	BDE-M	Control unit mechanical			SEA Interlock control “entrance actuation blocked”
	BDE-R	Control unit redundant			SEK Transmitter head
	BS	BDE with lock			SHE Safety element, external
C	CAN-H	Serial interface			SÖK Emergency opening contact
	CAN-L	Serial interface			SPS Stored program control SPC
	CO48	special standard in France			SSA Slidebar operator
	CPU	microprocessor			SSK Key-operated contact
D	D-STA	Double sliding door drive			STA Sliding door drive
	DUO	heavy door operator			STD Socket
E	EEPROM	parameter storage			STG Control unit
	ELS	Light barrier			STM Control module
	EMK	Receiver head			STP Control p.c.b.
	EPROM	program storage			SUR-A Time switch contact “exit mode”
	ES	Electrical connection diagram			SUR-V Time switch contact “locking mode”
	E-STA	Single sliding door drive		T	THS Thermostatic switch
	E-STA-L	Single sliding door drive left			TOS Break-out system
	E-STA-R	Single sliding door drive right			TOZ Door hold-open time
F	F	Length of header			TSA Telescopic sliding door operator
	FEM	Extended functions module			TÜV Industrial inspectorate
	FIRST	redundant operator		U	UMR Guide pulley
G	G	Height of passage			µP Microprocessor
	GTR	Gearbox		V	VAK Lock indicating contact
H	HEA	Manual unlocking „from outside“			VAL Locking alarm
	HEI	Manual unlocking „from inside“			VL Wiring list
	HES	Manual unlocking switch			VRR Locking device
K	KA	Cable exit		Z	ZLP Supplementary printed circuit board
L	LED	Light-emitting diode			
	LS	Wiring diagram			