



VELUX A/S Accessories

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VELUX A/S Accessories	

History

Version	Changes	Author	Date

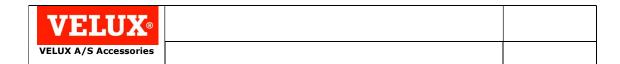


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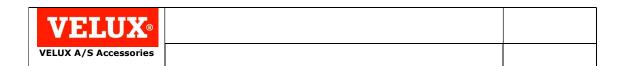
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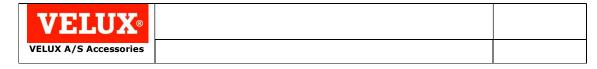
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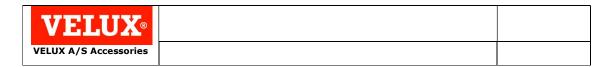
1 Welcome

2 VELUX liability



3 Introduction





4 Gateway interface

4.1 TCP/IP interface

4.2 Gateway command frame

Table 1 - Prototype of gateway command frame format.

4.2.1 Command parameter

4.2.2 Data field

4.3 Gateway command frame length

Table 2 – Length parameter added to Gateway Command frame.

4.3.1 Length parameter

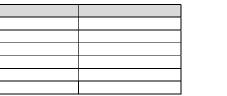


Figure 2 - Length parameter description.

4.4 Transport layer

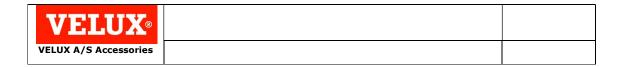


Table 3 - Transport layer frame format.

4.4.1 ProtocolID parameter

4.4.2 Checksum parameter

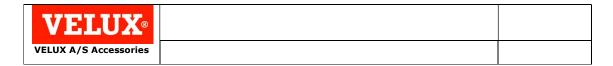
Checksum Checksum

4.5 SLIP wrapping

Table 4 - Value of SLIP markers.

END				END

Table 5 - A frame packed in Slip.



4.6 Standard communication and frame naming

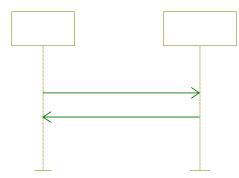


Figure 3 - Sequence diagram showing standard communication with REQ and CFM frames.

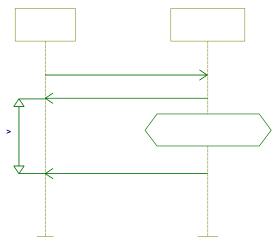
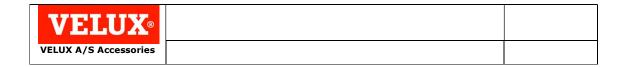


Figure 4 - Sequence diagram showing standard communication with REQ, CFM and NTF frames.

Deviations from the rules above

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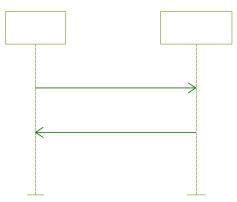
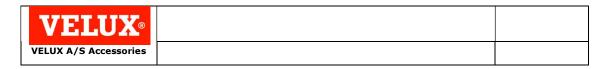
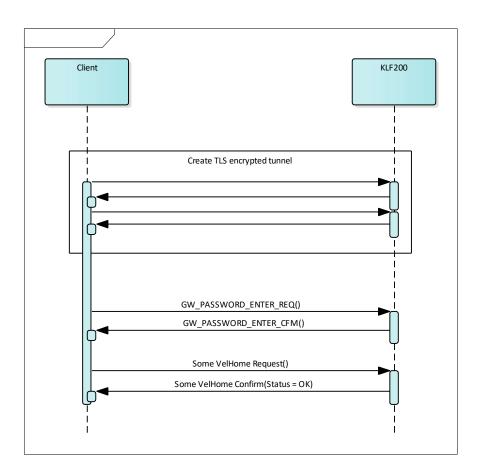


Figure 5 - Sequence diagram showing standard communication with REQ and Error frames.

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5 Authentication

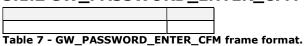


5.1.1 GW_PASSWORD_ENTER_REQ



5.1.1.1 **Password**

5.1.2 GW_PASSWORD_ENTER_CFM



General - All



5.1.2.1 **Status**

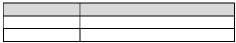


Table 8 - Status parameter

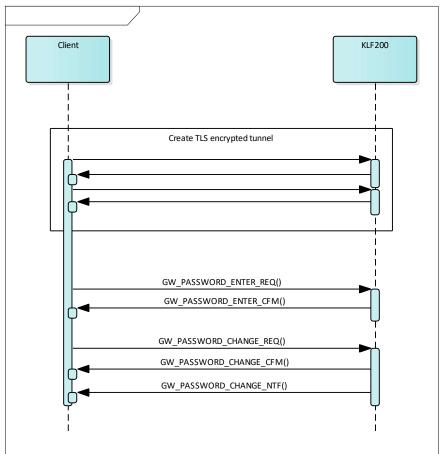
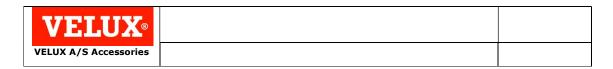


Figure 6 - Sequence diagram, change password.



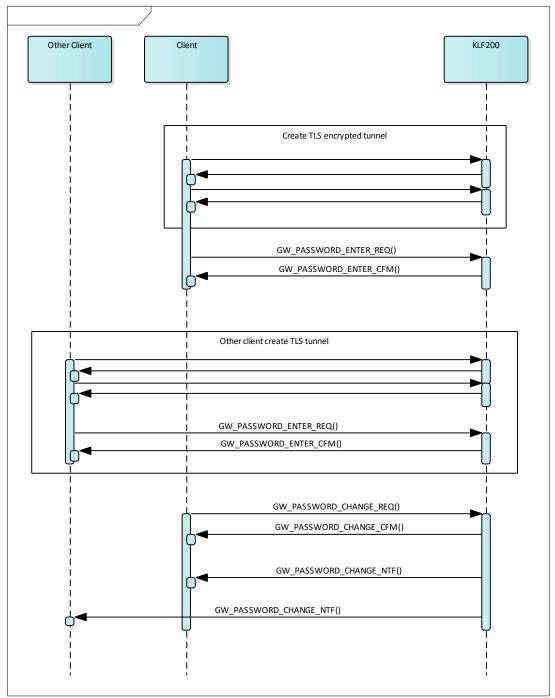


Figure 7 - Sequence diagram, change password and inform other client.

5.1.3 GW_PASSWORD_CHANGE_REQ

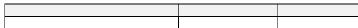


Table 9 - GW_PASSWORD_CHANGE_REQ frame format.



5.1.3.1 CurrentPassword and NewPassword

5.1.4 GW_PASSWORD_CHANGE_CFM

Table 10 - GW_PASSWORD_CHANGE_CFM frame format.

5.1.4.1 **Status**

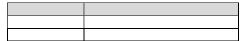


Table 11 - Status parameter

5.1.5 GW_PASSWORD_CHANGE_NTF

Table 12 - GW_PASSWORD_CHANGE_NTF frame format.

5.1.5.1 **NewPassword**



6 General device commands

6.1 Version information commands

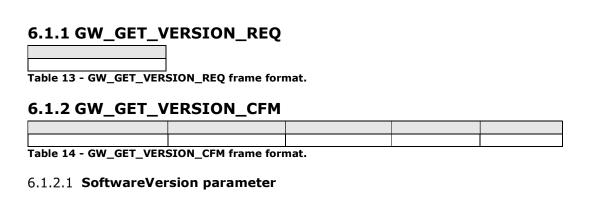


Table 15 - SoftwareVersion description

6.1.2.2 HardwareVersion parameter

6.1.2.3 **ProductGroup parameter**

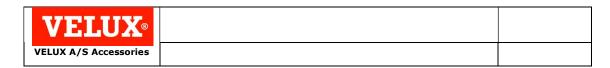
6.1.2.4 **ProductType parameter**

6.1.3 GW_GET_PROTOCOL_VERSION_REQ

Table 16 - GW_GET_PROTOCOL_VERSION_REQ frame format.

6.1.4 GW_GET_PROTOCOL_VERSION_CFM

Table 17 - GW_GET_PROTOCOL_VERSION_CFM frame format.



6.1.4.1 MajorVersion parameter

6.1.4.2 MinorVersion parameter

6.2 Gateway state

6.2.1 GW_GET_STATE_REQ								
Table 18 - GW_GET_S	Table 18 - GW_GET_STATE_REQ frame format.							
6.2.2 GW_GET	_STATE_CI	FM		1				
Table 19 - GW_GET_S	TATE CEM from	no format						
6 2 2 1 Gateways	_	ne ioimat.						

6.2.2.1 **GatewayState**

Table 20 - GatewayState value Description

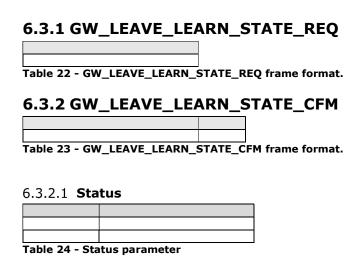
6.2.2.2 **SubState**

Table 21 - Value description for SubState, when GatewayState is 1 or 2.

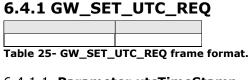
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6.2.2.3 **StateData**

6.3 Leave learn state

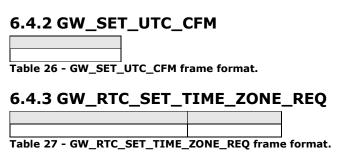


6.4 Real Time Clock



6.4.1 Parameter utcTimeStamp

unix timestamp



6.4.3.1 TimeZoneString parameter

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6.4.4 GW_RTC_SET_TIME_ZONE_CFM

Table 20. CW PTC CFT TIME 70NE CFM for

Table 28 - GW_RTC_SET_TIME_ZONE_CFM frame format.

6.4.4.1 Status parameter

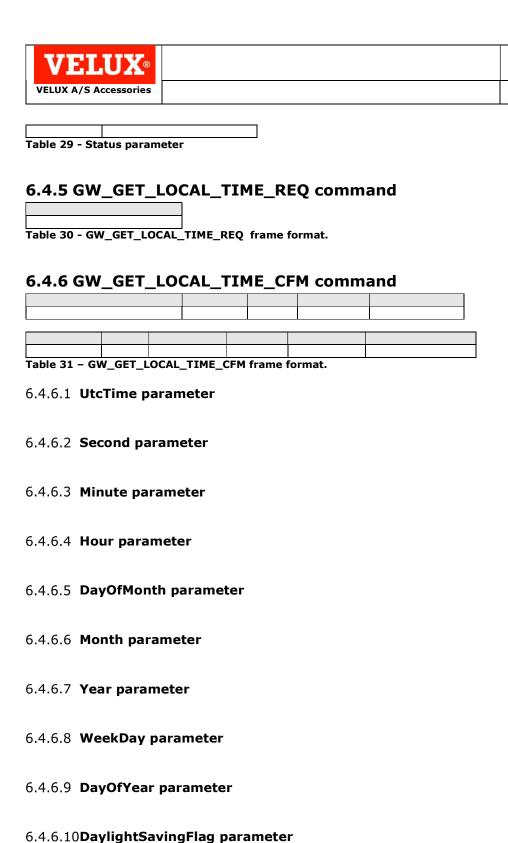
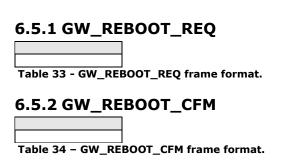


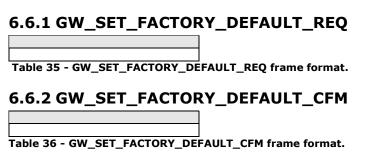
Table 32 - DaylightSavingFlag parameter description.



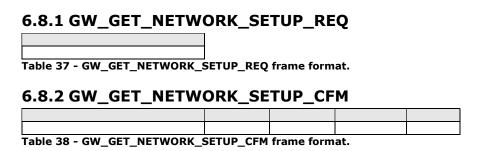
6.5 Reboot command set



6.6 Factory default command set

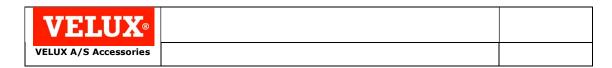


- 6.7 Network setup
- 6.8 Get network setup command set



6.8.2.1 **IpAddress parameter**

6.8.2.2 Mask parameter



6.8.2.3 **DefGW parameter**

6.8.2.4 **DHCP parameter**

Table 39 - DHCP parameter description.

6.9 Set network setup command set

6.9.1 GW_SET_NETWORK_SETUP_REQ



Table 40 - GW_SET_NETWORK_SETUP_REQ frame format.

6.9.2 GW_SET_NETWORK_SETUP_CFM

Table 41 - GW_SET_NETWORK_SETUP_CFM frame format.

6.10 GW_ERROR_NTF

Table 42 - GW_ERROR_NTF command frame format.

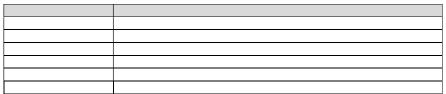
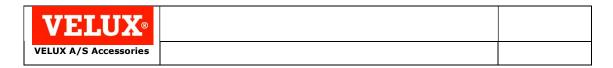


Table 43 - Error types.



7 Configuration service

7.1 System table

7.2 GW_CS_GET_SYSTEMTABLE_DATA_REQ

Table 44 - GW_CS_GET_SYSTEMTABLE_DATA_REQ frame format.

7.3 GW_CS_GET_SYSTEMTABLE_DATA_CFM

Table 45 - GW_CS_GET_SYSTEMTABLE_DATA_CFM frame format.

7.4 GW CS GET SYSTEMTABLE DATA NTF

Table 46 - GW_CS_GET_SYSTEMTABLE_DATA_NTF frame format. Note n ∈ {11; 22; ...; 110}.

7.4.1.1 **NumberOfEntry parameter**

7.4.1.2 **SystemTableObjects parameter**

Table 47 - Frame format of the parameter SystemTableObjects.

Class: General	Actuator
Byte Index	Description

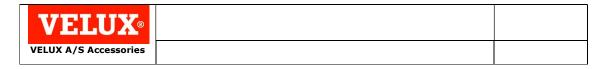


Table 48 - Format of a SystemTable object.

7.4.1.2.1 System table index parameter

7.4.1.2.2 Actuator address parameter

7.4.1.2.3 Actuator Type and Sub Type parameter

Table 49 - Actuator Type and Sub Type

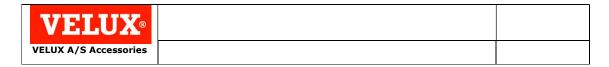


Table 50 - NodeType data parameter description.

7.4.1.2.4	Pow	erSave	Mode	par	ameter

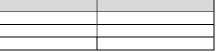


Table 51 - PowerSave Mode parameter description.

7.4.1.2.5 io-Membership parameter

7.4.1.2.6 RF support parameter

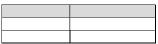


Table 52 - RF support parameter description.

7.4.1.2.7 Actuator Turnaround time parameter

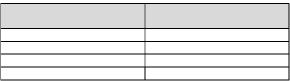


Table 53 - Actuator Turnaround time parameter description.

7.4.1.2.8 io-Manufacturer Id parameter

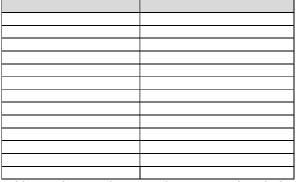


Table 54 - io-Manufacturer Id parameter description.

7.4.1.2.9 Backbone reference number



7.4.1.3 **RemainingNumberOfEntry parameter**

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7.4.2 GW_CS_GET_SYSTEMTABLE_DATA_NTF frame if system table are empty.



Table 55 - GW_CS_GET_SYSTEMTABLE_DATA_NTF frame format. Example where there are no nodes in the system table.

7.5 Discover nodes

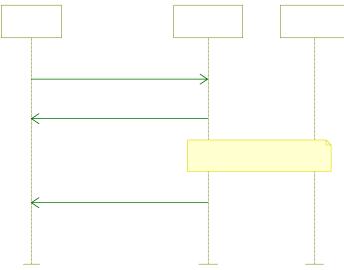


Figure 8 - Discover nodes sequence diagram.

7.5.1 GW_CS_DISCOVER_NODES_REQ

Table 56 - GW_CS_DISCOVER_NODES_REQ frame format.

7.5.1.1 **NodeType parameter**



	I I
1	1
1	1
1	1
1	
1	
1	1
1	1
1	1

Table 57 - NodeType data parameter description.

7.5.2 GW_CS_DISCOVER_NODES_CFM

Table 58 - GW_CS_DISCOVER_NODES_CFM frame format.

7.5.3 GW_CS_DISCOVER_NODES_NTF

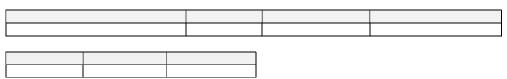
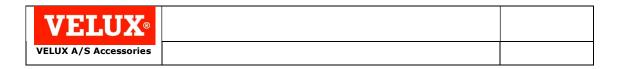


Table 59 - GW_CS_DISCOVER_NODES_NTF frame format.

7.5.3.1 AddedNodes

General - All



7.5.3.2 **RFConnectionError**

7.5.3.3 ioKeyErrorExistingNode

7.5.3.4 **Removed**

7.5.3.5 **Open**

7.5.3.6 **DiscoverStatus**

Table 60 - Parameter DiscoverStatus description.

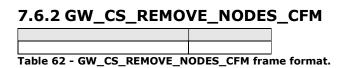
7.6 Remove Nodes command set

7.6.1 GW_CS_REMOVE_NODES_REQ

Table 61 - GW_CS_REMOVE_NODES_REQ frame format.



7.6.1.1 RemoveNodes



7.6.2.1 SceneDeleted

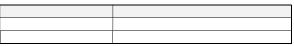


Table 63 - Parameter SceneDeleted description.

7.7 Virgin State command set

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7.7.1 GW_CS_VIRGIN_STATE_REQ

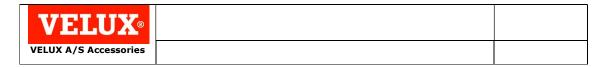
Table 64 - GW_CS_VIRGIN_STATE_REQ frame format.

7.7.2 GW_CS_VIRGIN_STATE_CFM

Table 65 - GW_CS_VIRGIN_STATE_CFM frame format.

7.8 Controller Copy command set

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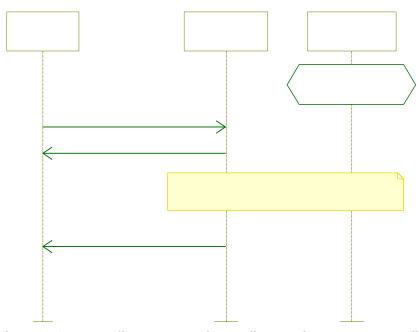


Figure 9 - Sequence diagram -Normal controller copy from remote controller to gateway (ControllerCopyMode = 0).

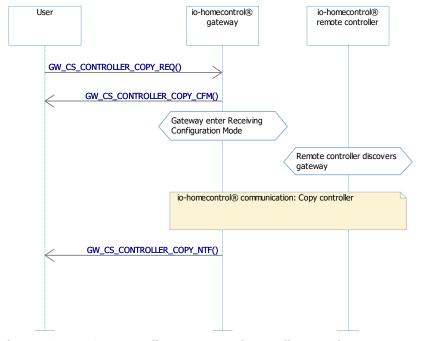


Figure 10 - Sequence diagram -Normal controller copy from gateway to remote controller (ControllerCopyMode = 1).

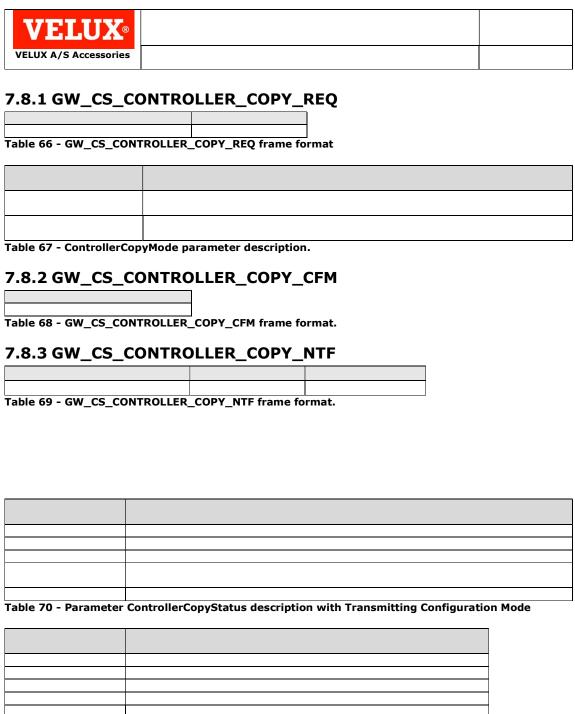


Table 71 - Parameter ControllerCopyStatus description with Receiving Configuration Mode

7.8.4 GW_CS_CONTROLLER_COPY_CANCEL_NTF

Table 72 - GW_CS_CONTROLLER_COPY_CANCEL_NTF frame format.



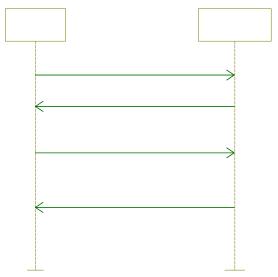
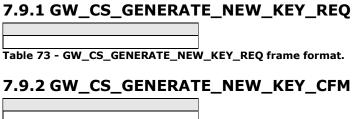


Figure 11 - Sequence diagram - Cancel controller copy.

7.9 Generate new system Key



7.9.3 GW_CS_GENERATE_NEW_KEY_NTF

Table 74 - GW_CS_GENERATE_NEW_KEY_CFM frame format.

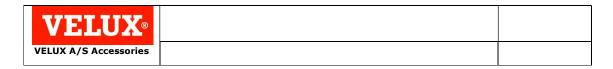
Table 75 - GW_CS_GENERATE_NEW_KEY_NTF frame format.

7.9.3.1 ChangeKeyStatus parameter

General - All

WEITI	y _		
VELU			
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Гable 76 - Parame	। ter ChangeKeyStatus d	lescription.	
7.9.3.2 KeyCha	nged parameter		
7.9.3.3 KeyNot	Changed paramet	er	
7.10 Recei	ve Key comm	and set	
7.10.1 GW_C	CS_RECEIVE_KE	EY_REQ	
Table 77 - GW_CS_	_RECEIVE_KEY_REQ fra	ame format.	
7.10.2 GW_C	CS_RECEIVE_KE	EY_CFM	
Table 78 - GW_CS_	_RECEIVE_KEY_CFM fra	ame format.	
7.10.3 GW (CS_RECEIVE_KE	EY NTF	
_		_	
Table 79 - GW_CS_	 _RECEIVE_KEY_NTF fra	ame format.	
7.10.3.1 Change	eKeyStatus parame	eter	
3			
Γable 80 - Parame	ter ChangeKeyStatus d	lescription.	
7 10 3 2 KevCha	nged parameter		

7.10.3.3 **KeyNotChanged parameter**



7.11 Update new key in actuators with old key

7.11.1 GW_CS_REPAIR_KEY_REQ

Table 81 - GW_CS_REPAIR_KEY_REQ frame format.

7.11.2 GW_CS_REPAIR_KEY_CFM

Table 82 - GW_CS_REPAIR_KEY_CFM frame format.

7.11.3 GW_CS_REPAIR_KEY_NTF

Table 83 - GW_CS_REPAIR_KEY_NTF frame format.

7.12 Product Generic Configuration (PGC)



Figure 12 - Straightened paper clip used to enable the PGC button.

7.12.1 Button presses overview

Get the 2W io-SystemKey

General - All

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	Give the 2	W io-SystemKey	
	Give the 2	w 10-3ystellikey	
	Ganarata	n new 2W io-SystemKey	
	Generate	i new 2w 10-3ystemkey	
Table 84 - Button presse	es overview		
7.12.2 PGC job d	lescriptions		
7.12.2.1 Get the 2W	io-SystemKey		
•			
•			
•			
•			
7.12.2.2 Give the 2W	io-SystemKey		
• ≤	_		
•			
•			
•			
•			
7.12.2.3 Generate a	new 2W io-Syster	mKey	
• ≤			
• 			



7.12.3 LED feedback overview

Function	Feedback Function	Feedback SUCCES	Feedback ERROR	Feedback PARTLY SUCCESS
Get the 2W io- SystemKey	••••			======================================
Give the 2W io- SystemKey	-		111 111 111	
Generate a new 2W io- SystemKey				

Table 85 - LED feedback overview

7.12.4 GW_CS_PGC_JOB_NTF



Table 86 - GW_CS_PGC_JOB_NTF frame format.

7.12.4.1 PgcJobState

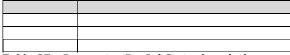


Table 87 - Parameter PgcJobState description

7.12.4.2 PgcJobStatus

Table 88 - Parameter PgcJobStatus description



7.12.4.3**PgcJobType**

Table 89 - Parameter PgcJobType description

7.13 System table change notification

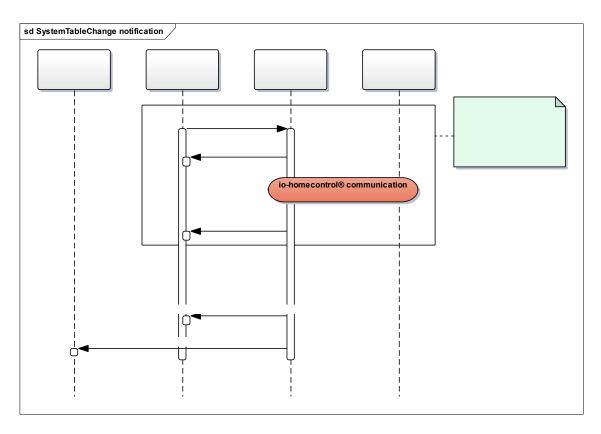
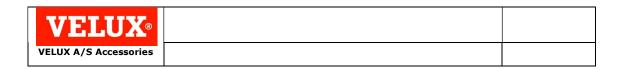


Figure 13 - GW_CS_SYSTEM_TABLE_UPDATE_NTF is sent to all clients.

7.13.1 GW_CS_SYSTEM_TABLE_UPDATE_NTF



7.13.1.1AddedNodesBitArray parameter



7.13.1.2 Removed Nodes Bit Array parameter

7.14 Open actuator for configuration



Table 90 - GW_CS_ACTIVATE_CONFIGURATION_MODE_REQ frame format.

7.14.1.1 Activate Configuration parameter

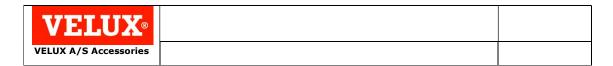
7.14.2 GW_CS_ACTIVATE_CONFIGURATION_MODE_CFM

Table 91 - GW_CS_ACTIVATE_CONFIGURATION_MODE_CFM frame format.

- 7.14.2.1 Activated parameter
- 7.14.2.2NoContact parameter
- 7.14.2.3 Other Error parameter

7.14.2.4**Status parameter**

Table 92 - Status parameter description.



8 Information Service

8.1 House Status Monitor service

Table 93 - How often information is requested from actuator, depending of its type and state.

8.2 Enable or disable House Status Monitor.

8.2.1 GW_HOUSE_STATUS_MONITOR_ENABLE_REQ

Table 94 - GW_HOUSE_STATUS_MONITOR_ENABLE_REQ frame format.

8.2.2 GW_HOUSE_STATUS_MONITOR_ENABLE_CFM

Table 95 - GW_HOUSE_STATUS_MONITOR_ENABLE_CFM frame format.

8.2.3 GW_HOUSE_STATUS_MONITOR_DISABLE_REQ

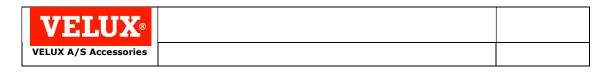


Table 96 - GW_HOUSE_STATUS_MONITOR_DISABLE_REQ frame format.

8.2.4 GW_HOUSE_STATUS_MONITOR_DISABLE_CFM

Table 97 - GW_HOUSE_STATUS_MONITOR_DISABLE_CFM frame format.

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8.3.3.1 **NodeID**

8.3.3.2 **Order**

8.3.3.3 Placement

8.3.3.4 **Name**

8.3.3.5 **Velocity**

DEFAULT	
SILENT	
FAST	
-	
VELOCITY_NOT_AVAILABLE	

Table 102 - Velocity parameter

8.3.3.6 **NodeTypeSubType**

8.3.3.7 **ProductType**

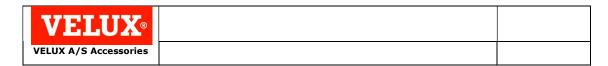
8.3.3.8 **NodeVariation**

NOT_SET	
TOPHUNG	
KIP	
FLAT_ROOF	
SKY_LIGHT	

Table 103 - NodeVariation parameter

8.3.3.9 **PowerMode**

Table 104 - State parameter



8.3.3.10 BuildNumber

8.3.3.11 SerialNumber

8.3.3.12**State**

Table 105 - State parameter

8.3.3.13 Current Position

8.3.3.14**Target**

8.3.3.15 FP1CurrentPosition

8.3.3.16FP2CurrentPosition



8.3.3.17 FP3CurrentPosition

8.3.3.18 FF	P4CurrentPosition

8.3.3.19 Remaining Time

8.3.3.20**TimeStamp**

8.3.3.21NbrOfAlias

8.3.3.22**Alias**

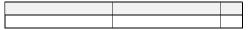


Table 106 - Frame format of the parameter Alias.



Table 107 - Alias structure.

8.3.3.22.1 Type

8.3.3.22.2 Value

8.3.4 GW_SET_NODE_VARIATION_REQ

Table 108 - GW_SET_NODE_VARIATION_REQ frame format

8.3.4.1 **NodeID**



8.3.4.2 NodeVariation

NOT_SET	
TOPHUNG	
KIP	
FLAT_ROOF	
SKY LIGHT	

Table 109 - NodeVariation parameter

8.3.5 GW_SET_NODE_VARIATION_CFM





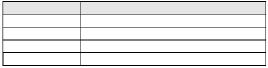


Table 111 - Status parameter

8.3.5.2 **NodeID**

8.3.6 GW_SET_NODE_NAME_REQ

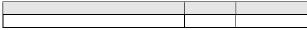
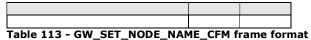


Table 112 - GW_SET_NODE_NAME_REQ frame format

8.3.6.1 **NodeID**

8.3.6.2 **Name**

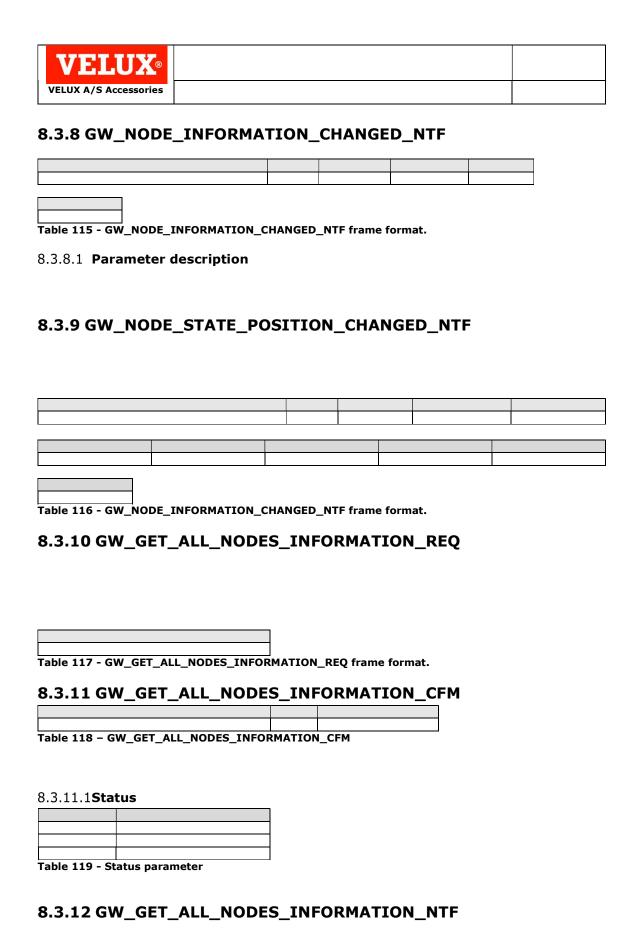
8.3.7 GW_SET_NODE_NAME_CFM



8.3.7.1 **Status**

Table 114 - Status parameter

8.3.7.2 **NodeID**



VELUX® VELUX A/S Accessories						
					1	
Table 120 - GW_GET_AL	I NODES IN	NEORMATION	NTF frame f	ormat.		
8.3.12.1Parameter	description	1				
8.3.13 GW_GET_	_ALL_NO	DES_INF	ORMATI	ON_FI	NISHED	_NTF
Table 121 - GW_GET_AI	_L_NODES_I	NFORMATION_	CFM frame f	ormat.		
8.3.14 GW_SET_	_NODE_C	ORDER_A	ND_PLAC	CEMENT	Γ_REQ	
Table 122 - GW_SET_NO	DDE_ORDER_	AND_PLACEM	ENT_REQ fra	me forma	t.	
8.3.14.1 NodeID						
8.3.14.2 Order						
8.3.14.3 Placement						
8.3.15 GW_SET_NODE_ORDER_AND_PLACEMENT_CFM						
]		
Table 123 - GW_SET_NODE_ORDER_AND_PLACEMENT_CFM frame format						
8.3.15.1 Status						

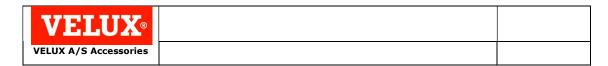
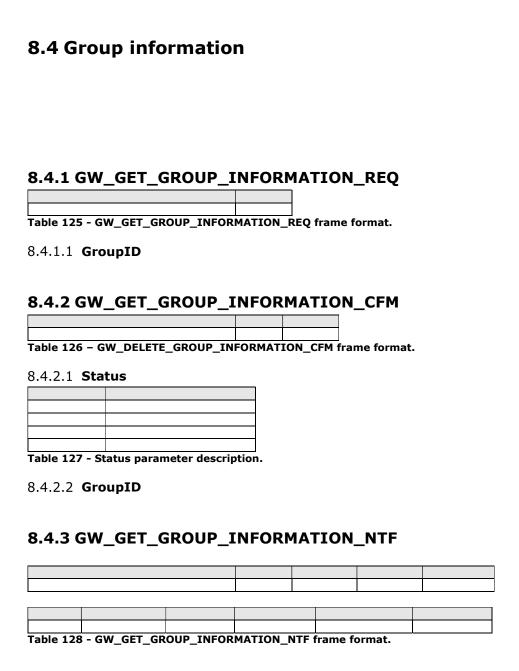


Table 124 - Status parameter

8.3.15.2**NodeID**



8.4.3.1 **GroupID**

8.4.3.2 **Order**

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8.4.3.3 **Placment**

8.4.3.4 **Name**

8.4.3.5 **Velocity**

DEFAULT	
SILENT	
FAST	
-	

Table 129 - Velocity parameter.

8.4.3.6 NodeVariation

NOT_SET	
TOPHUNG	
KIP	
FLAT_ROOF	
SKY_LIGHT	

Table 130 - NodeVariation parameter.

8.4.3.7 GroupType

USER_GROUP	
ROOM	
HOUSE	

Table 131 - GroupType parameter.

8.4.3.8 NbrOfObjects

8.4.3.9 **ActuatorBitArray**

8.4.3.10**Revision**

G□□	RE	ЕРа	И□	RE	R	И	RE

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VELUX A/S Accessories	

8.4.4 GW_NEW_GROUP_REQ

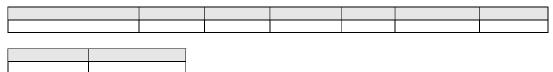


Table 132 – GW_NEW_GROUP_REQ frame format.

8.4.4.1 GroupType

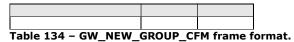
USER_GROUP	
ROOM	
HOUSE	
ALL-GROUP	

Table 133 - GroupType parameter.

Note:

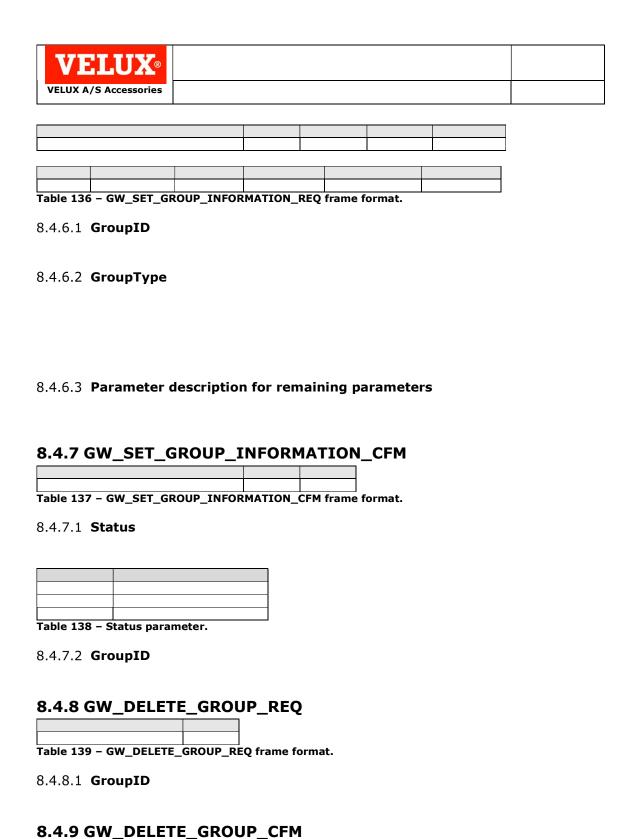
8.4.4.2 Parameter description for remaining parameters

8.4.5 GW_NEW_GROUP_CFM



8.4.5.1 Status





8.4.9.1 **GroupID**

Table 140 - GW_DELETE_GROUP_CFM frame format.



8.4.9.2 **Status**

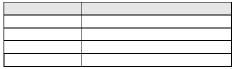
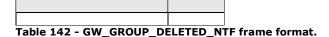


Table 141 - Status parameter.

8.4.10 GW_GROUP_DELETED_NTF



8.4.11 GW_GET_ALL_GROUPS_INFORMATION_REQ



Table 143 - GW_GET_ALL_GROUPS_INFORMATION_REQ frame format.

8.4.11.1**UseFilter**

8.4.11.2**GroupType**

USER_GROUP	
ROOM	
HOUSE	

Table 144 - GroupType parameter.

8.4.12 GW_GET_ALL_GROUPS_INFORMATION_CFM

Table 145 - GW_GET_ALL_GROUPS_INFOR	RMATION	_CFM frame format.

8.4.12.1**Status**

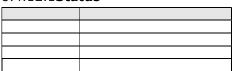
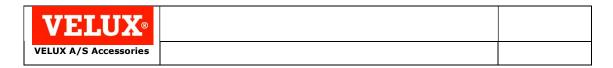


Table 146 - Status parameter description

8.4.13 GW_GET_ALL_GROUPS_INFORMATION_NTF

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Table 147 - GW_GET_ALL_GROUPS_INFORMATION_NTF frame format.

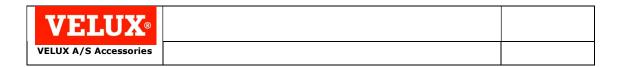


8.4.13.1 Parameter description

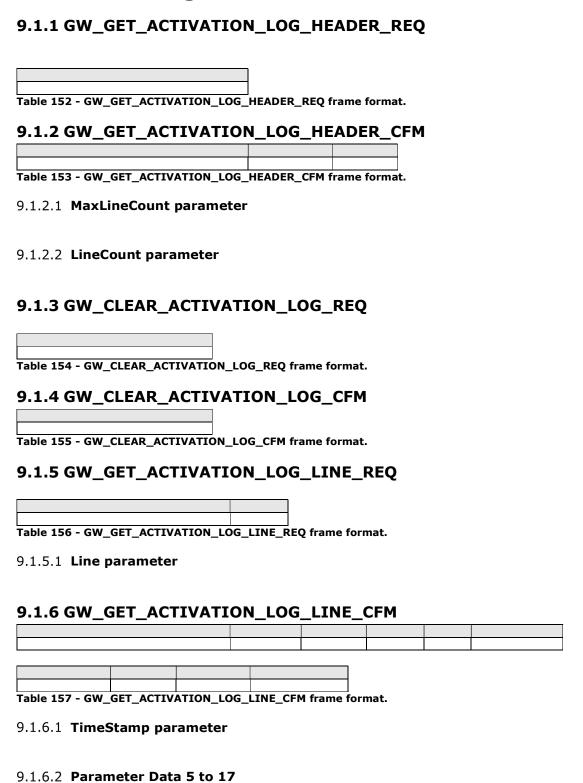
8.4.15.2Parameter description

0.4.14	3 VV _	GE I	_ALL_	GROU	P3_	TINEO	KMA	I TOIN_F	TIAT	эпер_	NIF
Table 148 -	GW_	GET_A	LL_GROU	JPS_INFO	RMA	TION_FI	NISHE	D_NTF fran	ne fori	mat.	
8.4.15	SW_	GRO	UP_II	NFORM	1AT	ION_C	IAHC	NGED_N	ITF		
Table 149 -	GW_	GROUP	_INFORI	MATION_	CHAI	NGED_NT	F fram	e format w	hen a	group is	deleted.
											_
											4
											_
Table 150 - changed.	GW_	GROUP	_INFORI	MATION_	CHAI	NGED_NT	F fram	e format w	hen g	roup infor	mation has
8.4.15.1 C	hang	јеТур	e								
Table 151 -	Chan	geTyp	e value d	lescriptio	n						

General - All



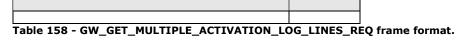
9 Activation Log



General - All

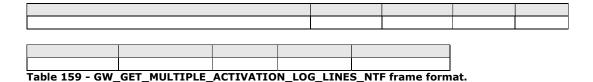


9.1.7 GW_GET_MULTIPLE_ACTIVATION_LOG_LINES_REQ



9.1.7.1 **Timestamp parameter**

9.1.8 GW_GET_MULTIPLE_ACTIVATION_LOG_LINES_NTF



9.1.8.1 **TimeStamp parameter**

Parameter Data 5 to 17

9.1.9 GW_GET_MULTIPLE_ACTIVATION_LOG_LINES_CFM



9.1.9.1 LineCount parameter

9.1.9.2 Status parameter

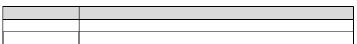
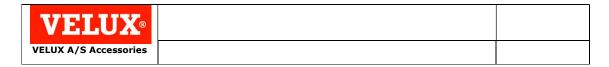


Table 161 - Status parameter description.

9.1.10 GW_ACTIVATION_LOG_UPDATED_NTF

Table 162 - GW_ACTIVATION_LOG_UPDATED_NTF frame format.



10 Command Handler

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10.1 Send activating command

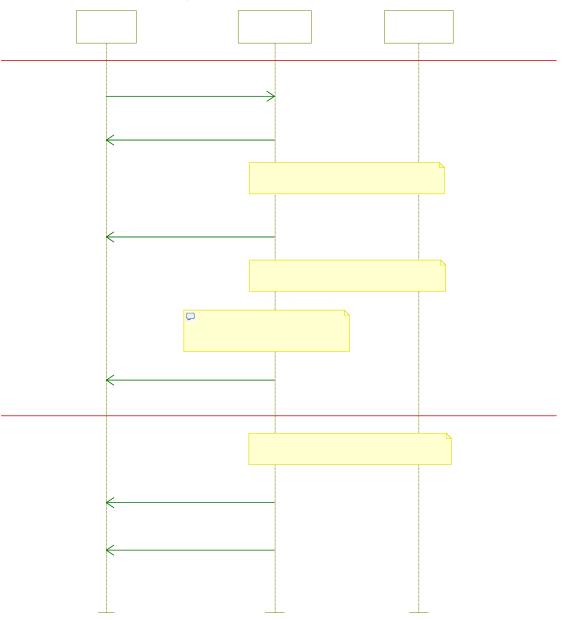


Figure 15 - Sequence diagram, Send activating command.

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10.1.1 GW_COMMAND_SEND_REQ

Table 163 - GW_COMMAND_SEND_REQ frame format.

10.1.1.1 SessionID parameter

10.1.1.2 CommandOriginator parameter

Table 164 - CommandOriginator parameter description

10.1.1.3 Priority Level parameter

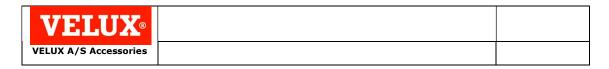
VELUX ®	
VELUX A/S Accessories	

	•
	For example, this level can be used in combination with a lock command on other levels of priority, for providing an exclusive access to actuators control. e.g Parents/Children different access rights,

Table 165 - Priority Level Groups and Class.

10.1.1.4 Parameter Active parameter

Table 166 - ParameterActive parameter description



10.1.1.5 **FPI1** and **FPI2** parameters

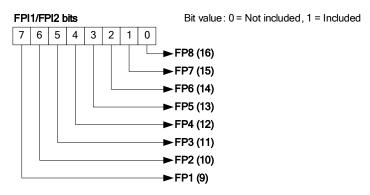


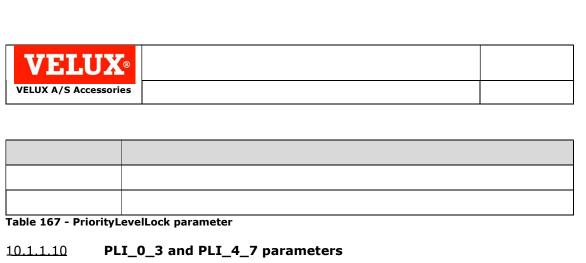
Figure 16 - FPI1/FPI2 bit description

10.1.1.6FunctionalParameterValueArray parameter

10.1.1.7 Index Array Count parameter

10.1.1.8 IndexArray parameter

10.1.1.9 PriorityLevelLock parameter



Priority level information

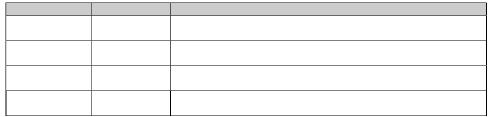


Table 168 - Priority Level Information numbers.

Priority Level Lock Information Bytes



Table 169 - Priority level lock bytes.

10.1.1.11 LockTime parameter

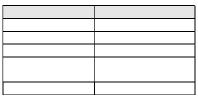


Table 170 - LockTime parameter description.

10.1.2 GW_COMMAND_SEND_CFM

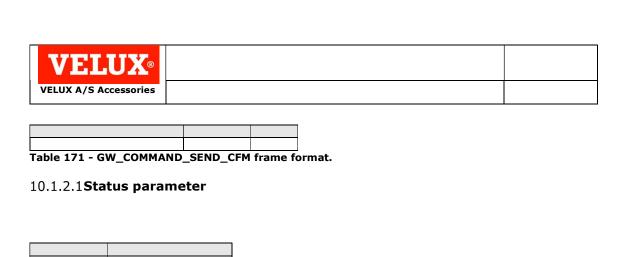


Table 172 - Status parameter description.

10.1.2.2**SessionID** parameter

10.1.3 GW_COMMAND_RUN_STATUS_NTF

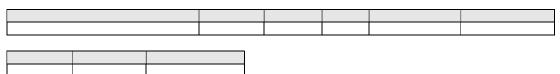


Table 173 - GW_COMMAND_RUN_STATUS_NTF frame format.

10.1.3.1 SessionID parameter

10.1.3.2**StatusID** parameter

Table 174 - StatusID parameter description.

10.1.3.3 Index parameter



10.1.3.4NodeParameter parameter

MP	
FP1	
FP2	
FP3	
FP4	
FP5	
FP6	
FP7	
FP8	
FP9	
FP10	
FP11	
FP12	
FP13	
FP14	
FP15	
FP16	
NOT_USED	

Table 175 - NodeParameter description.

10.1.3.5 ParameterValue parameter

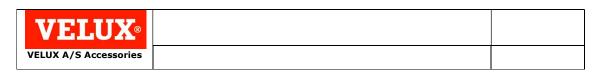
10.1.3.6 RunStatus parameter

EXECUTION_COMPLETED	
EXECUTION_FAILED	
EXECUTION_ACTIVE	

Table 176 - RunStatus parameter description.

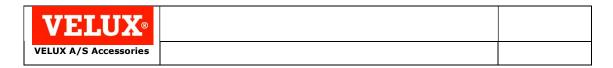
10.1.3.7**StatusReply parameter**

UNKNOWN_STATUS_REPLY	
COMMAND_COMPLETED_OK	
NO_CONTACT	
MANUALLY_OPERATED	
BLOCKED	
WRONG_SYSTEMKEY	
PRIORITY_LEVEL_LOCKED	
REACHED_WRONG_POSITION	
ERROR_DURING_EXECUTION	
NO_EXECUTION	
CALIBRATING	
POWER_CONSUMPTION_TOO_HIGH	



POWER_CONSUMPTION_TOO_LOW
LOCK_POSITION_OPEN
MOTION_TIME_TOO_LONG COMMUNICATION_ENDED
THERMAL_PROTECTION
PRODUCT_NOT_OPERATIONAL
FILTER_MAINTENANCE_NEEDED BATTERY_LEVEL
TARGET_MODIFIED
MODE_NOT_IMPLEMENTED
COMMAND_INCOMPATIBLE_TO_MOVEMENT
USER_ACTION
DEAD_BOLT_ERROR
AUTOMATIC_CYCLE_ENGAGED
WRONG_LOAD_CONNECTED
COLOUR_NOT_REACHABLE
TARGET_NOT_REACHABLE
BAD_INDEX_RECEIVED
COMMAND_OVERRULED
NODE_WAITING_FOR_POWER
INFORMATION_CODE
PARAMETER_LIMITED
LIMITATION_BY_LOCAL_USER
LIMITATION_BY_USER
LIMITATION_BY_RAIN
LIMITATION_BY_TIMER
LIMITATION_BY_UPS
LIMITATION_BY_UNKNOWN_DEVICE
LIMITATION_BY_SAAC
LIMITATION_BY_WIND
LIMITATION_BY_MYSELF
LIMITATION_BY_AUTOMATIC_CYCLE
LIMITATION_BY_EMERGENCY

Table 177 - StatusReply parameter description.

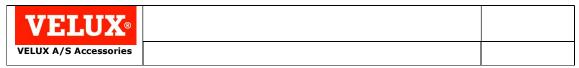


10.1.3.8 Information Code parameter

□ □□ **1.4**

${\bf 10.1.4~GW_COMMAND_REMAINING_TIME_NTF}$

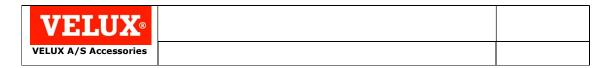
Table 178 - GW_COMMAND_REMAINI	 NG_TIME_N	TF frame	e format.				
10.1.4.1 SessionID parameter							
10.1.4.2Index parameter							
10.1.4.3NodeParameter parameter							
10.1.4.4 Seconds parameter							



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Table 180 - GW_COMMAND_SEND	DEO evample 1	
Table 100 - GW_COMMAND_SEND	_KLQ example 1.	
Table 181 - GW_COMMAND_SEND	_REQ example 2.	

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1							
Table 182 - GW_COMMAND_SEND							
Table 183 - GW_COMMAND_SEND	REQ example 4.						

Table 184 - GW_COMMAND_SEND_REQ example 5.



10.2 STOP

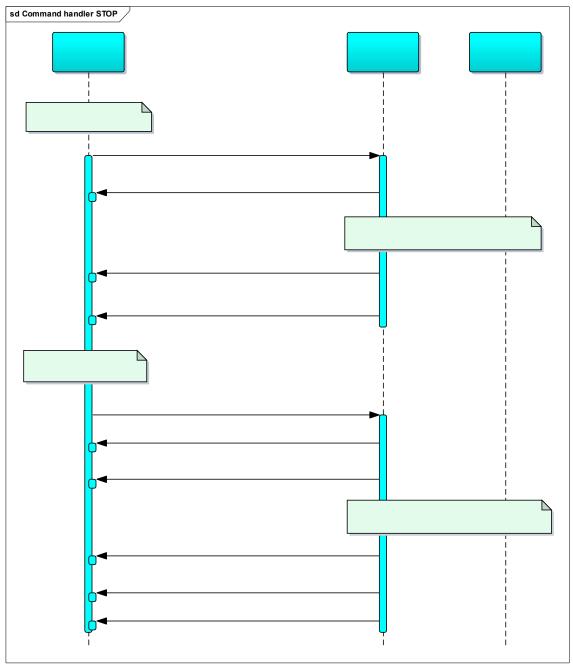


Figure 17 - Sequence diagram, Stop activated node.



10.3 Status request

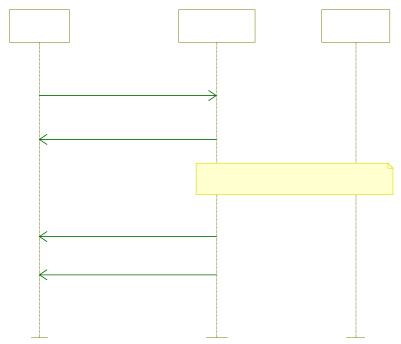


Figure 18 - Sequence diagram, Status request

10.3.1 GW_STATUS_REQUEST_REQ

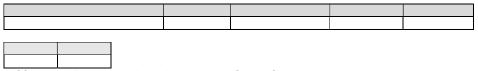


Table 185 - GW_STATUS_REQUEST_REQ frame format.

- 10.3.1.1 SessionID parameter
- 10.3.1.2IndexArrayCount parameter
- 10.3.1.3IndexArray parameter
- 10.3.1.4**StatusType parameter**

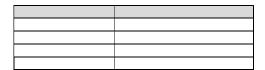




Table 186 - StatusType parameter. 10.3.1.4.1 Target position 10.3.1.4.2 Current position 10.3.1.4.3 Remaining time 10.3.1.4.4 Main info.

10.3.1.5FPI1 and FPI2 parameters

10.3.2 GW_STATUS_REQUEST_CFM

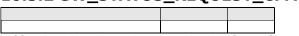


Table 187 - GW_STATUS_REQUEST_CFM frame format.

10.3.2.1**Status parameter**

10.3.2.2 Session ID parameter

10.3.3 GW_STATUS_REQUEST_NTF

Table 188 - GW_STATUS_REQUEST_NTF frame format, when StatusType = "Target Position" or "Current Position" or "Remaining Time".

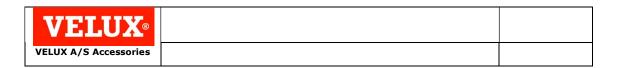
VELUX A/S ACC	_						
VELOX A/ 5 Acc	CSSOTICS						
Table 189 - GW	_STATUS_	 _request_ntf	frame for	 mat, when S	StatusType =	= "Main Info	o".
10.3.3.1 Sess	ionID na	arameter					
1010101110000	pc						
10.3.3.2 bSta	tusID pa	arameter					
Table 190 - Sta	tusID para	ameter descript	ion.				
10.3.3.3NodeIndex parameter							
10.3.3.4RunStatus parameter							
		_					
10.3.3.5 Stat	usReply	parameter					

General - All

10.3.3.6 StatusType parameter

10.3.3.7 **StatusCount parameter**

10.3-2-9 Parameter Data parameter



-	Table 191 - ParameterData entry format						
L							

10.3.3.8.1 NodeParameter parameter

10.3.3.8.2 Parameter Value parameter

10.3.3.9 Target Position parameter

- 10.3.3.10 **CurrentPosition parameter**
- **RemainingTime parameter** 10.3.3.11
- 10.3.3.12 **LastMasterExecutionAddress parameter**
- 10.3.3.13 **LastCommandOriginator parameter**

10.3.4 GW_SESSION_FINISHED_NTF



10.4 WINK

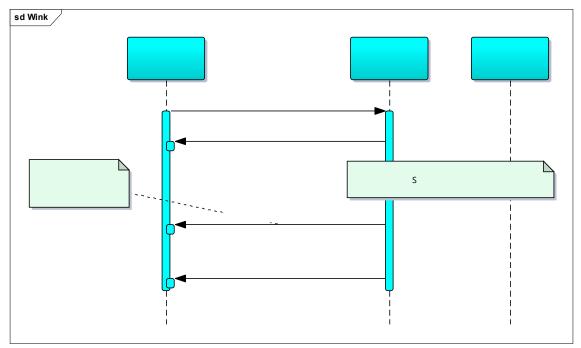


Figure 19 - Sequence diagram for send WINK command.

10.4.1 GW_WINK_SEND_REQ



10.4.1.1**SessionID** parameter

10.4.1.2CommandOriginator parameter

10.4.1.3 Priority Level parameter

10.4.1.4WinkState parameter

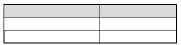
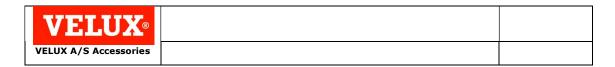


Table 193 - WinkState parameter description.



10.4.1.5 Wink Time parameter

Table 194 - bWinkTime parameter description.

10.4.1.6IndexArrayCount parameter

10.4.1.7IndexArray parameter

10.4.2 GW_WINK_SEND_CFM



10.4.2.1Status parameter

Table 196 - Status parameter description.

10.4.3 GW_COMMAND_RUN_STATUS_NTF

10.4.4 GW_WINK_SEND_NTF

Table 197 - GW_WINK_SEND_NTF frame format.

10.5 Limitation



10.5.1 Set limitation

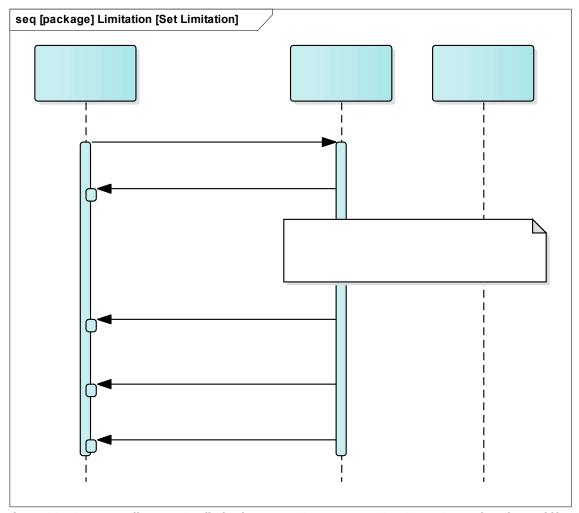
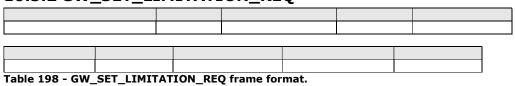


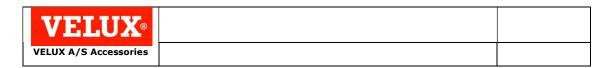
Figure 20 - Sequence diagram, Set limitation. Note: GW_LIMITATION_STATUS_NTF is only send if the limitation is set successfully.

10.5.2 GW_SET_LIMITATION_REQ



10.5.2.1 SessionID parameter

10.5.2.2 CommandOriginator parameter



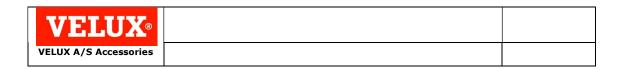
- 10.5.2.3 Priority Level parameter
- 10.5.2.4 IndexArrayCount parameter
- 10.5.2.5IndexArray parameter
- 10.5.2.6 ParameterID parameter

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Table 199 - ParameterID parameter description

10.5.2.7 LimitationValueMin parameter

 $10.5.2.8 \textbf{LimitationValueMax} \ \textbf{parameter}$

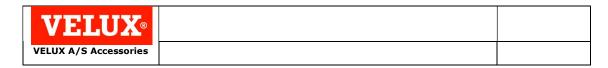


10.5.2.9 Limitation Time parameter

Table 200 - LimitationTime parameter decription.

10.5.3 GW_SET_LIMITATION_CFM





- 10.5.4.4 MinValue parameter
- 10.5.4.5 Max Value parameter
- 10.5.4.6LimitationOriginator parameter
- 10.5.4.7 LimitationTime parameter
- 10.5.5 GW_COMMAND_RUN_STATUS_NTF

10.5.6 GW_SESSION_FINISHED_NTF

10.5.7 Get limitation

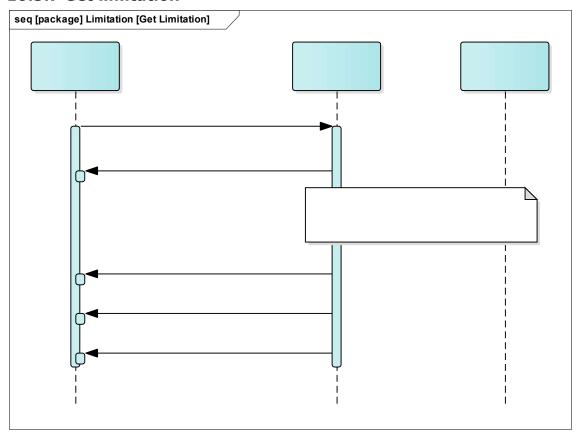
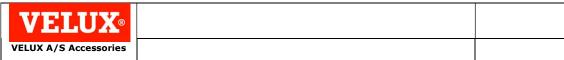


Figure 21 - Sequence diagram , Get limitation.

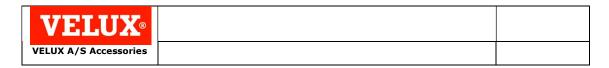


TELOX A/S A	cccssories					
10.5.8 GV	N_GET	_LIM	IITA	ATION_S	STATU	S_REQ
					<u> </u>	
 Table 204 - G	W_GET_L	TATIMI.	ION_	STATUS_R	Q frame	format.
10.5.8.1 Ses	sionID	paran	nete	r		
10.5.8.2 Ind	lexArra	yCoun	t pa	rameter		
10.5.8.3 Ind	lexArra	y para	met	er		
10.50%4Par	ameter	ID pai	rame	eter		
10.5.8.5 Lim	nitation ⁻	Туре р	araı	meter		
Table 205 - Li	mitation]	Type na	rame	ter descript	ion.	
10.5.9 GV	N_GET	_LIM	IITA	ATION_S	STATU	S_CFM
Table 206 - G	W_GET_L	TATIMI.	ION_	STATUS_CF	M frame	format.
10.5.9.1 Ses	sionID	paran	nete	r		
10.5.9.2 Sta	tus par	amete	r			_
Table 207 - S	tatus para	ameter	descr	iption.		┙

10.5.10 GW_LIMITATION_STATUS_NTF

10.5.11 GW_COMMAND_RUN_STATUS_NTF

10.5.12 GW_SESSION_FINISHED_NTF



10.6 Mode

10.6.1 GW_MODE_SEND_REQ

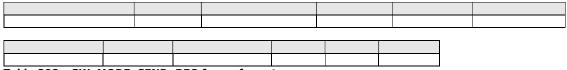


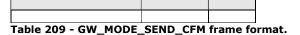
Table 208 - GW_MODE_SEND_REQ frame format.

SessionID, COmmandOriginator, PriorityLevel, IndexArrayCount, IndexArray, PriorityLevelLock, PL-0_3, PL_4_7 LockTime

10.6.1.1 ModeNumber parameter

10.6.1.2 Mode Parameter parameter

10.6.2 GW_MODE_SEND_CFM



10.6.2.1**Status parameter**

Table 210 - Status parameter description.



10.6.2.2 **SessionID** parameter

10.6.3 GW_COMMAND_RUN_STATUS_NTF

10.6.4 GW_COMMAND_REMAINING_TIME_NTF

10.6.5 GW_SESSION_FINISHED_NTF

10.7 Product Group Activation

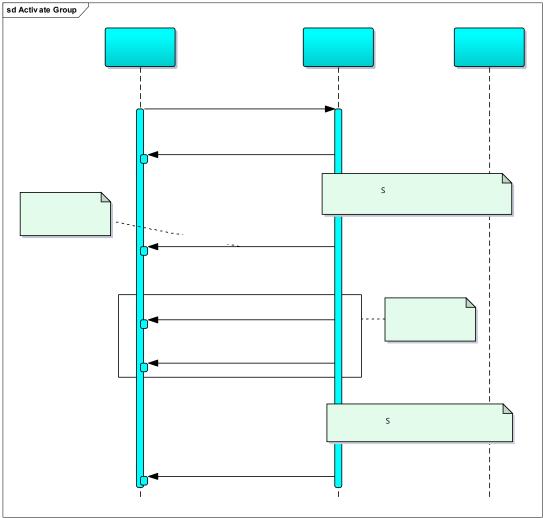


Figure 22 – Activate group sequence diagram.

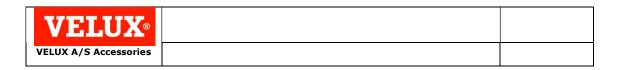


Figure	23 -	Activate	aroup	with	wrong	ID	sequence	diagram.

10.7.1 GW_ACTIVATE_PRODUCTGROUP_REQ								
			110200		<u> </u>			
								_
Table 211 - G	W ACTIVAT	F PRODUC	TGROUP RI	- -Ω fram	e form	at		<u> </u>
Table 211 G	W_ACIIVA	L_FRODUC	rakoor_ki	-Q mam	C 101111	at.		
10.7.1.1 Se s	ssionID pa	armeter						
10.7.1.2 Co i	mmandOr	iginator	paramete	r				

General - All



10.7.1.	7Vel	ocity	param	eter
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DEFAULT	
SILENT	
FAST	
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Table 212 - Velocity parameter description.

$10.7.1.8 \textbf{PriorityLevelLock} \ \textbf{parameter}$

Table 213 - PriorityLevelLock parameter

10.7.1.9**PL_0_3** and **PL_4_7** parmeters **Priority level information**

Table 214 - Priority Level Information numbers.

Priority Level Lock Information Bytes

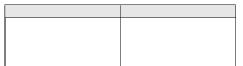


Table 215 - Priority level lock bytes.

10.7.1.10 **LockTime parmeter**



Table 216 - LockTime parameter description.

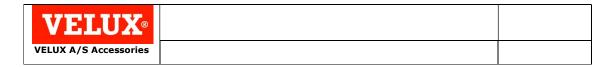
10.7.2 GW_ACTIVATE_PRODUCTGROUP_CFM

Table 217 - GW_ACTIVATE_PRODUCTGROUP_CFM frame format.

10.7.2.1 **SessionID** parmeter

10.7.2.2**Status parameter**

Table 218 - Status parameter description.



11 Scenes

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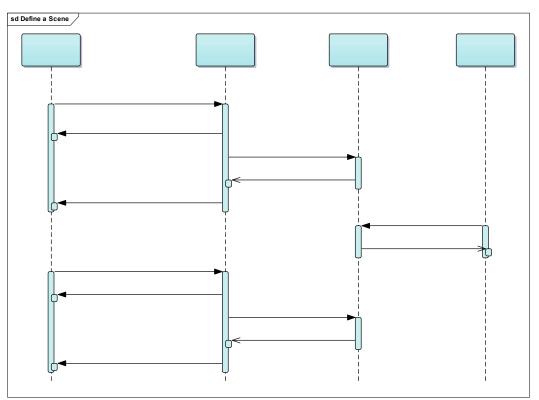
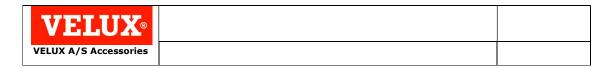


Figure 24 - Sequence diagram show how a scene is defined.



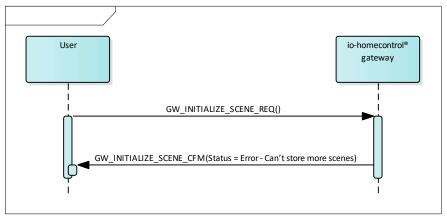


Figure 25 - Sequence diagram show when out of memory for scene slot.

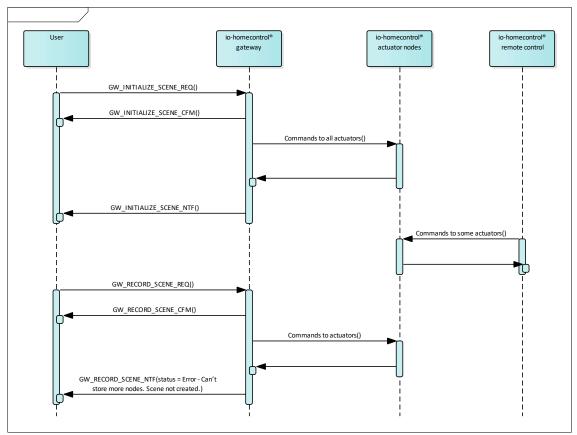


Figure 26 - Sequence diagram show when out of memory for node slot.

11.1 Define a new scene



11.1.1 Prepare Gateway and io-homecontrol® nodes

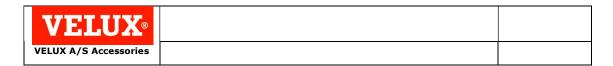
11.1.2 GV	V_INITIA	LIZE_	SCEN	E_R	EQ
Table 219 - G	W_INITIALIZE	SCENE_	_REQ fra	me fo	rmat
11.1.3 GV	V_INITIA	LIZE_	SCEN	E_C	FΜ
Table 220 - G	W_INITIALIZE	_SCENE_	_ _CFM fra	me fo	rmat
11.1.3.1 Sta	tus			Ī	
Table 221 - St	atus paramete	r descrip	otion.		
11.1.4 GV	V_INITIA	LIZE_	SCEN	E_Ņ	TF
Table 222 - G	W_INITIALIZE	_SCENE_	NTF fra	me fo	rmat.
11.1.4.1 Sta	tus				
					-
Table 223 - S	tatus paramete	r descri	ption.		_

11.1.4.2**NodeState**

11.2 Initialize scene Cancel command set



Table 224 - GW_INITIALIZE_SCENE_CANCEL_REQ frame format.



11.2.2 GW_INITIALIZE_SCENE_CANCEL_CFM

Table 225 - G	Table 225 - GW_INITIALIZE_SCENE_CANCEL_CFM frame format.							
11.2.2.1 Sta	tus							
 Table 226 - St	 tatus parameter descri	ntion						

11.3 Set io-homecontrol® nodes to desired position.

11.4 Store scene in Gateway with a text label and a scene identification number.

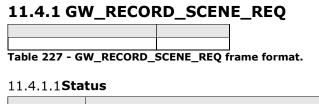


Table 228 - Status parameter description.

11.4.2 GW_RECORD_SCENE_CFM

Table 229 - GW_RECORD_SCENE_CFM frame format.

11.4.3 GW_RECORD_SCENE_NTF

Table 230 - GW_RECORD_SCENE_NTF frame format.



11.4.3.1**Status**

Table 231 – Status parameter description.

11.4.3.2**SceneID**

11.5 Delete a scene

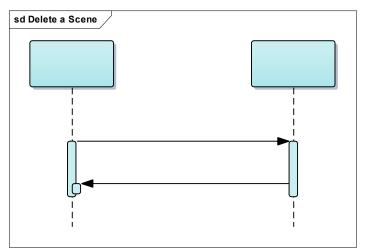


Figure 27 - Sequence diagram show how to delete a scene.

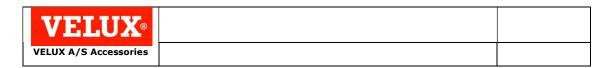
11.5.1 GW_DELETE_SCENE_REQ

Table 232 - GW_DELETE_SCENE_REQ frame format.

11.5.1.1 SceneID parameter

11.5.2 GW_DELETE_SCENE_CFM





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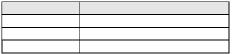


Table 234 - Status parameter description.

11.5.2.2**SceneID**

11.6 Rename a scene

11.6.1 GW_RENAME_SCENE_REQ

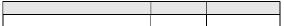


Table 235 - GW_RENAME_SCENE_REQ frame format.

11.6.1.1 **SceneID** parameter

11.6.1.2 **SceneName parameter**

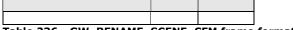


Table 236 - GW_RENAME_SCENE_CFM frame format.

11.6.1.3**Status**

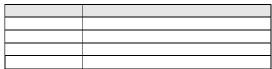
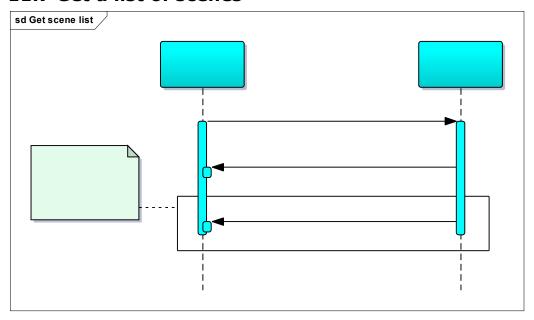


Table 237 - Status parameter description.

11.6.1.4**SceneID**



11.7 Get a list of scenes



11.7.1 GW_GET_SCENE_LIST_REQ

Table 238 - GW_GET_SCENE_LIST_REQ frame format.

11.7.2 GW_GET_SCENE_LIST_CFM

Table 239 - GW_GET_SCENE_LIST_CFM frame format.

11.7.2.1 Total Number Of Objects

11.7.3 GW_GET_SCENE_LIST_NTF

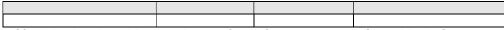


Table 240 - GW_GET_SCENE_LIST_NTF frame format. Note $n \in \{65, 130, 195\}$.

Table 241 - GW_GET_SCENE_LIST_NTF frame format for empty scene list.

11.7.3.1 Number Of Object parameter



11.7.3.2 SceneListObjects parameter

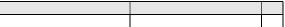


Table 242 - Frame format of the parameter SceneListObjects.

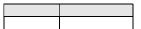


Table 243 - Scene list object structure.

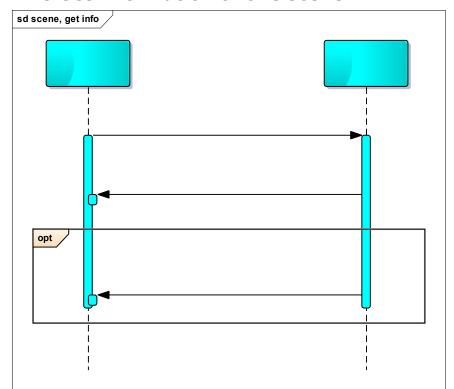
11.7.3.3 SceneID parameter

11.7.3.4 **SceneName parameter**

11.7.3.5 Remaining Number Of Object parameter

7

11.8 Get information of one scene





11.8.1 GW_GET_SCENE_INFOAMATION_REQ

Table 244 - GW_GET_SCENE_INFOAMATION_REQ frame format.

11.8.1.1 SceneID parameter

11.8.2 GW_GET_SCENE_INFORMATION_CFM

Table 245 - GW_GET_SCENE_INFOMRATION_CFM frame format.

11.8.2.1**Status**

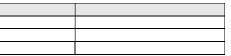


Table 246 - Status parameter description.

11.8.2.2**SceneID**

11.8.3 GW_GET_SCENE_INFORMATION_NTF

Table 247 - GW_GET_SCENE_INFORMATION_NTF frame format. Note $n \in \{70; 74; 78; ...; 246\}$.

11.8.3.1 NumberOfNodesObjects

11.8.3.2NodeObjects

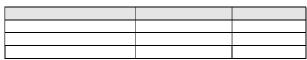


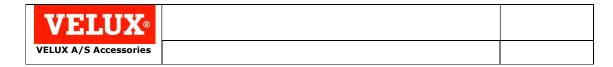
Table 248 - One NodeObject instance.

11.8.3.3 Remaning Node Objects



11.9 Scene information change notification

11.9.1 GW_SCENE_INFORMATION_CHANGED_NTF



11.10 Activate a scene

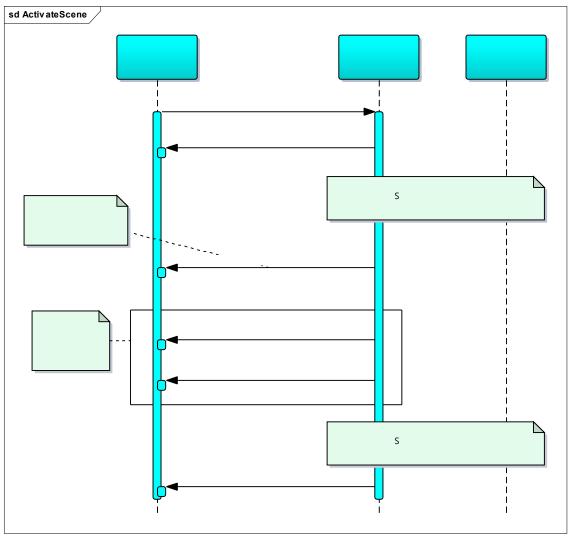


Figure 28 - Activate scene sequence diagram.

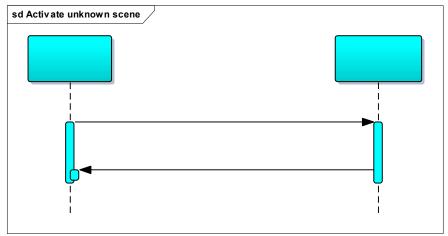
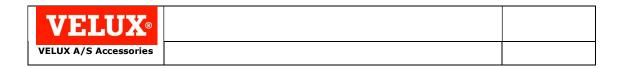


Figure 29 - Activate unknown scene sequence diagram.



11.10.1 GW_ACTIVATE_SCENE_REQ

Table 251 - GV	V ACTIVATE	SCENE REC) frame format.		
11.10.1.1	Session	D parame	eter		
11.10.1.2	Commar	ndOrigina [.]	tor parameter		

11.10.1.3 **PriorityLevel parameter**

11.10.1.4 **SceneID** parameter

11.10.1.5 **Velocity parameter**

DEFAULT	
SILENT	
FAST	
-	

Table 252 - Velocity parameter description.

11.10.2 GW_ACTIVATE_SCENE_CFM

11.10.2.1	Status

Table 254 - Status parameter description.

11.10.2.2 **SessionID**



11.10.3 GW_COMMAND_RUN_STATUS_NTF

11.10.4 GW_COMMAND_REMAINING_TIME_NTF

11.10.5 GW_SESSION_FINISHED_NTF

11.11 Stop an activated scene

11.11.1 GW_STOP_SCENE_REQ

Table 255 - GW_STOP_SCENE_REQ frame format.

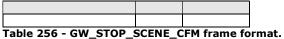
11.11.1.1**SessionID parameter**

11.11.1.2 **CommandOriginator parameter**

11.11.1.3 **PriorityLevel parameter**

11.11.1.4 SceneID parameter

11.11.2 GW_STOP_SCENE_CFM



11.11.2.1 **Status**

Table 257 - Status parameter description.

11.11.2.2 SessionID

11.11.3 GW_SESSION_FINISHED_NTF

General - All



12 Contact input interface

12.1.1 GW_	SEI_CC	MIAC	I TINE	/ I L.	TIAL	_KEQ		
able 258 - GW_	SET CONT	ACT IND	IT ITNK P	FO fran	ne fo	rmat for	emnty sc	ene li
ubic 250 GW_	,5E1_001(1)		01_L1_\\	_Qu.		i iii de i oi	chipty 30	
.2.1.1.1 Conta	ctInputI	D parar	neter					
2 1 1 200===	ctTnnt ^	cciann	ont nava	moto-				
2.1.1.2 Conta	CCInputA	ssignm	епт рага	neter				
Table 259 - Cont	actInputAs	signment	t value desc	ription	1.			
12.1.1.3 Actio 1	nID paraı	neter						
12 1 1 4 🗖 = =			.					
12.1.1.4 Paran	neter1D b	arame	ter					
		_						
l2.1.1.5 Positi	on paran	ieter						
12	itv naram	otor						

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Table 260 - Velocity parameter description.

12.1.1.7CommandOriginator parameter

Table 261 - CommandOriginator parameter description

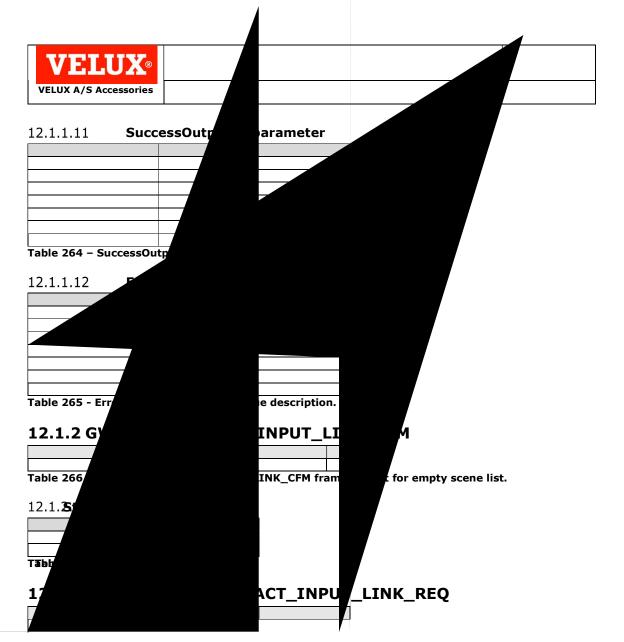
12.1.1.8 Priority Level parameter

12.1.1.9LockPriorityLevel parameter

Table 262 - LockPriorityLevel parameter description.

12.1.1.10 PLI_3, PLI_4, PLI_5, PLI_6 and PLI_7 parameters

Table 263 - PLI_3, PLI_4, PLI_5, PLI_6 and PLI_7 parameter value description.



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12.1.6 GW GET CONTACT INPUT LINK LIST	CFM
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Table 2/2 - GW_GET_CONTACT_INPOT_LINK_LIST_CFM frame format.							

Table 273 - Frame format of the parameter ContactInputObjects.

Table 274 - Format of each ContactInputObject.

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13 Appendix 1: Standard Parameter definition

Relative		
Percent+-		
Target		
Current		
Default		
Ignore		

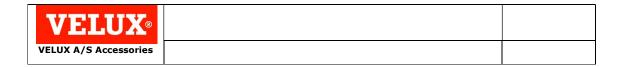
Table 275 - Access Methods.

13.1 Relative

13.2 Percent+-

13.3 Target

13.4 Current



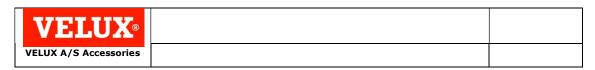
13.5 Default

13.6 Ignore

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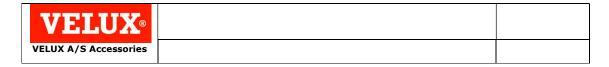
14 Appendix 2: List of actuator types and their use of Main Parameter and Functional Parameters

			Generic Function: MP Speed	Generic Function: Tilting Speed	Generic Function: Tilting
1	Interior Venetian Blind				
2	Roller Shutter				
2.1		Adjustable slats rolling shutter			
2.2		With projection			
3	Vertical Exterior Awning				
4	Window opener				
4.1		Window opener with integrated rain sensor			
5	Garage door opener				
●/○ 5.58					
6	Light				
●/○ 6.58		Light only supporting on/off			
7	Gate opener				
●/○ 7.58					
9	Door lock				
9.1	Window lock				
J.1					



	Vertical Interior			
10	Blinds			
	Dual			
	Roller			
13	Shutter			
Ø	On/Off			
15	switch			
	Horizontal			
16	awning			
	Exterior			
17	Venetian			
17	blind			
	Louver blind			
18	billia			
	Curtain track			
19				
	Ventilation point			
20	ponic			
		Air inlet		
20.1				
1_7		Air transfer		
20.2		All transfer		
		Air outlet		
20.3				
	Exterior heating			
21	neating			
21.58				
24	Swinging			
	Shutters			
		Swinging		
24.1		Shutter with independent		
24.1		handling of		
Table 27	C. Astronton lint	the leaves		

Table 276 - Actuator list.

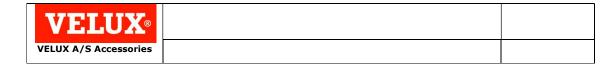


14.1 Effect off Main parameter value

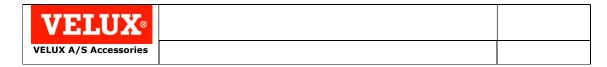
Table 277 - Effect off Main parameter value.

14.2 Alias for actuator specific parameter values

14.2.1 Window Opener Actuator Profile



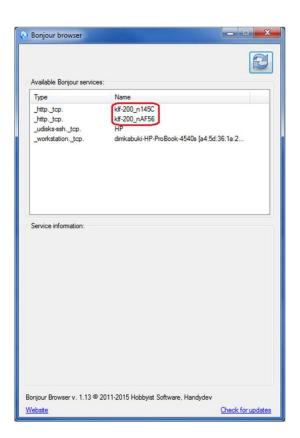
Appendix 3: Identifying IP address of a KLF200 device using mDNS protocol



- b.
- c.
- d.
- 2.

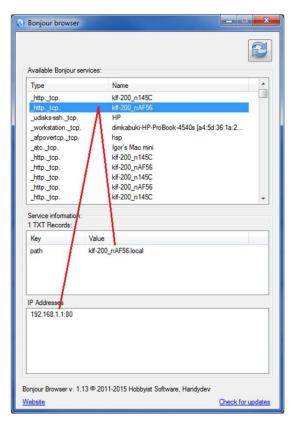
15.1.1 Instruction for Bonjour Browser for Windows

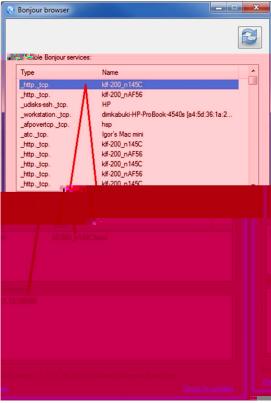
- 1.
- 2.
- 3.



4.

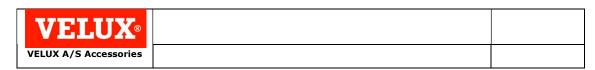


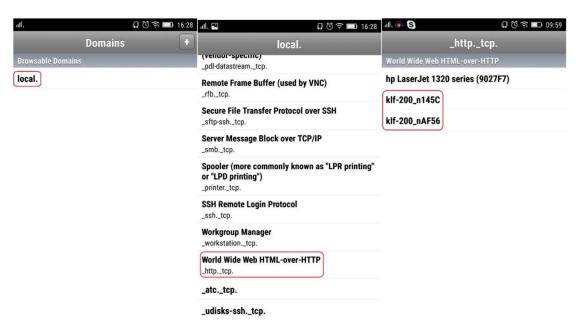




15.1.2 Instruction for Bonjour Browser for Android:

- 1.
- 2.





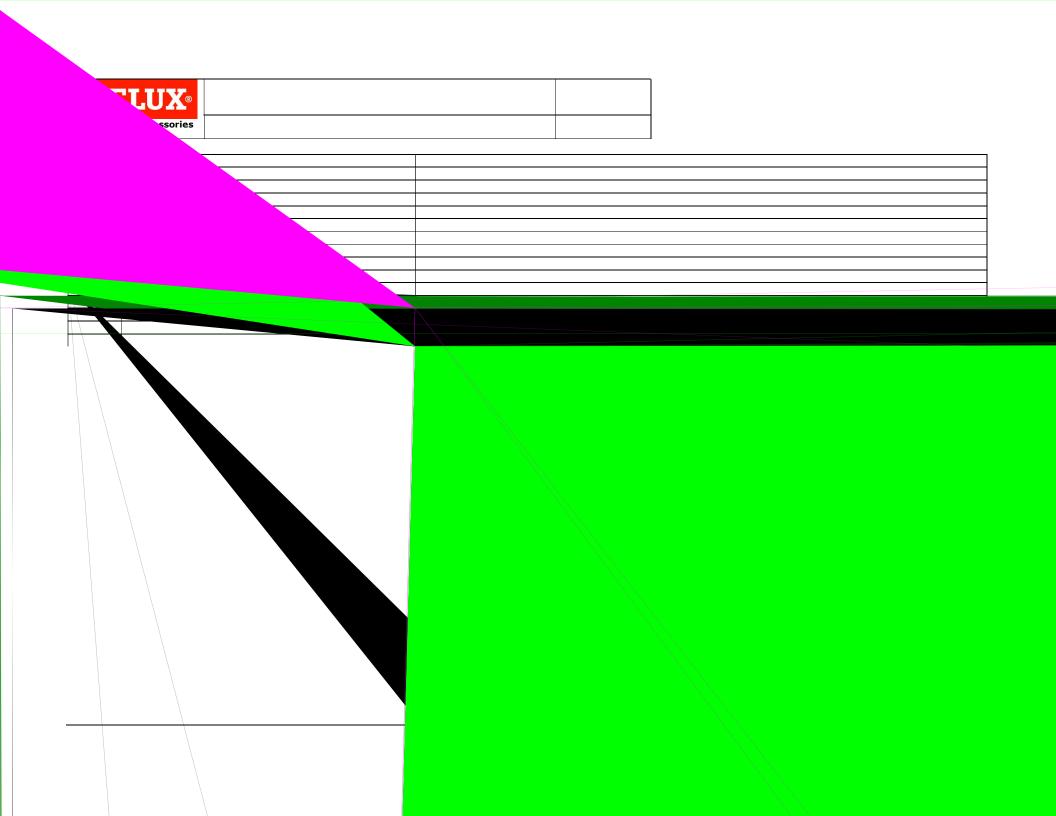
3.





16 Appendix 4: List of Gateway commands

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Table 278 - List of KLF 200 API commands.