HOST MODE PROGRAMMING



> SC6000

DATALOGIC

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SC6000 Host Mode Programming

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1 HOST MODE PROGRAMMING

An alternative method of programming the SC6000 Controller is by sending programming strings.

These strings must be transmitted from the Host system to the device either on the auxiliary RS232 serial interface, on the modem RS232 serial interface or on the main RS232/RS485 serial interface, or, if available, on the Ethernet System Socket. This is called Host Mode Programming.

In order to send the programming strings, it is necessary to switch the reader into **Host Mode**.



CAUTION

Genius™ must not be connected to the reader through the selected interface before entering in Host Control Mode.

Serial Interfaces

The programming commands and strings must be sent to the controller at the programmed baud rate of the selected interface (e.g. if the baud rate of the Auxiliary interface is programmed at 9600 bps the command must be sent at 9600 bps).

The selected communication channel must be programmed as follows:

- Data Bits: 8 Bits
- Parity: None
- Stop Bits: 1

Once the programming session has started on one of the interfaces, the others are disabled until programming is over.

Ethernet System Socket (Server only)

The programming commands and strings must be sent only to the dedicated System socket of the controller.

- Ethernet System Socket Port Number: 51235 (default value)

2 PROGRAMMING COMMANDS

2.1 CONNECTION TO DEVICE

	DESCRIPTION	HOST COMMAND	REPLY MESSAGE
1	**Enter Host Mode**	**<ESC> [C**	**<ESC> H <CR><LF>**
	After entering this command, the device responds with the first reply message and then waits for the following command. From now on the device is in the **CONNECTED** state. Normal data flow is inhibited until it comes back to the **IDLE** state.		
2	**Enter Terminal Mode**	**<ESC>] B**	**<ESC> R <CR><LF>**
	After entering this command, the device responds with the second reply message and then waits for the following command in Terminal mode.		
3	**Enter Programming Mode**	**<ESC> c M <B0$_H$> ADDR**	**<ESC> c <CR><LF>**
	ADDR is a character indicating the address of the device in a LONWORKS Master/Slave reading system layout **ADDR = <30$_H$> + <Device Address>** where: • **Device Address = 0**: Master LONWORKS device (SC6000) • **Device Address = 1 to 31**: Slave LONWORKS device (reader) This means: • **ADDR = <30$_H$>**: Master LONWORKS device (SC6000) • **ADDR = <31$_H$> to <4F$_H$>**: Slave LONWORKS device (reader) After entering this command, the device responds with the third reply message and then waits for one or more programming strings as shown in Chapter 3 and 4.		



NOTE

If sending programming strings to slave readers, make sure you use the device specific commands (i.e. 6K-8KA Family commands). The commands in this manual are only valid for the SC6000 LONWORKS Master.

2.2 DISCONNECTION FROM DEVICE

	DESCRIPTION	HOST COMMAND	REPLY MESSAGE
1	**Exit Programming Mode**	**<ESC> d M <B0$_H$> ADDR**	**<ESC> d <CR><LF>**
	Where **ADDR** is the address of the device in a LONWORKS Master/Slave layout. This message must always be transmitted to exit from programming mode.		
2	**Exit Terminal Mode**	**<ESC> I A <space>**	**<ESC> K <CR><LF>**
	This message must always be transmitted to exit from Terminal mode.		
3	**Exit Host Mode**	**<ESC> [A**	**<ESC> X <CR><LF>**
	This message must always be transmitted to end the programming session. From now on the device is in **IDLE** state. Communication channel may be used for normal data flow.		

2.3 SELF DISCONNECTION

Specific situations exist where the device is automatically disconnected from the Host and is restored to the **IDLE** state. Once connected, the following message could be sent:

	DESCRIPTION	**HOST REPLY**	**DEVICE MESSAGE**
	Self Disconnection	**-**	**<ESC> [A**
	This message notifies a forced disconnection from the Host. This message must always be managed by the Host program to check when the device has gone back to the **IDLE** state.		

Normally programming sequences do not involve this message except for the occasions listed below:

1. **Inactivity Timeout Expiration**
   After connection, no programming commands or programming strings are sent to the device (approximately 2 minutes as default).

2. **Application Software Restart**
   Particular commands may force a restart of the device like Data Storage commands (refer to paragraph 3.5). The Self Disconnection message is sent to notify these cases.

3. **General Error Condition**
   After connection to the device, unexpected errors are notified by means of the Self Disconnection message.

4. **Protocol Error**
   When Host sends wrong messages like unexpected escape sequences.

	DESCRIPTION	**HOST REPLY**	**DEVICE MESSAGE**
	Self Disconnection	**<ESC> X <CR><LF>**	**-**
	Host must confirm the disconnection event sending this reply message. If not sent, after a timeout (about 300 ms as default) device goes back to the **IDLE** state.		

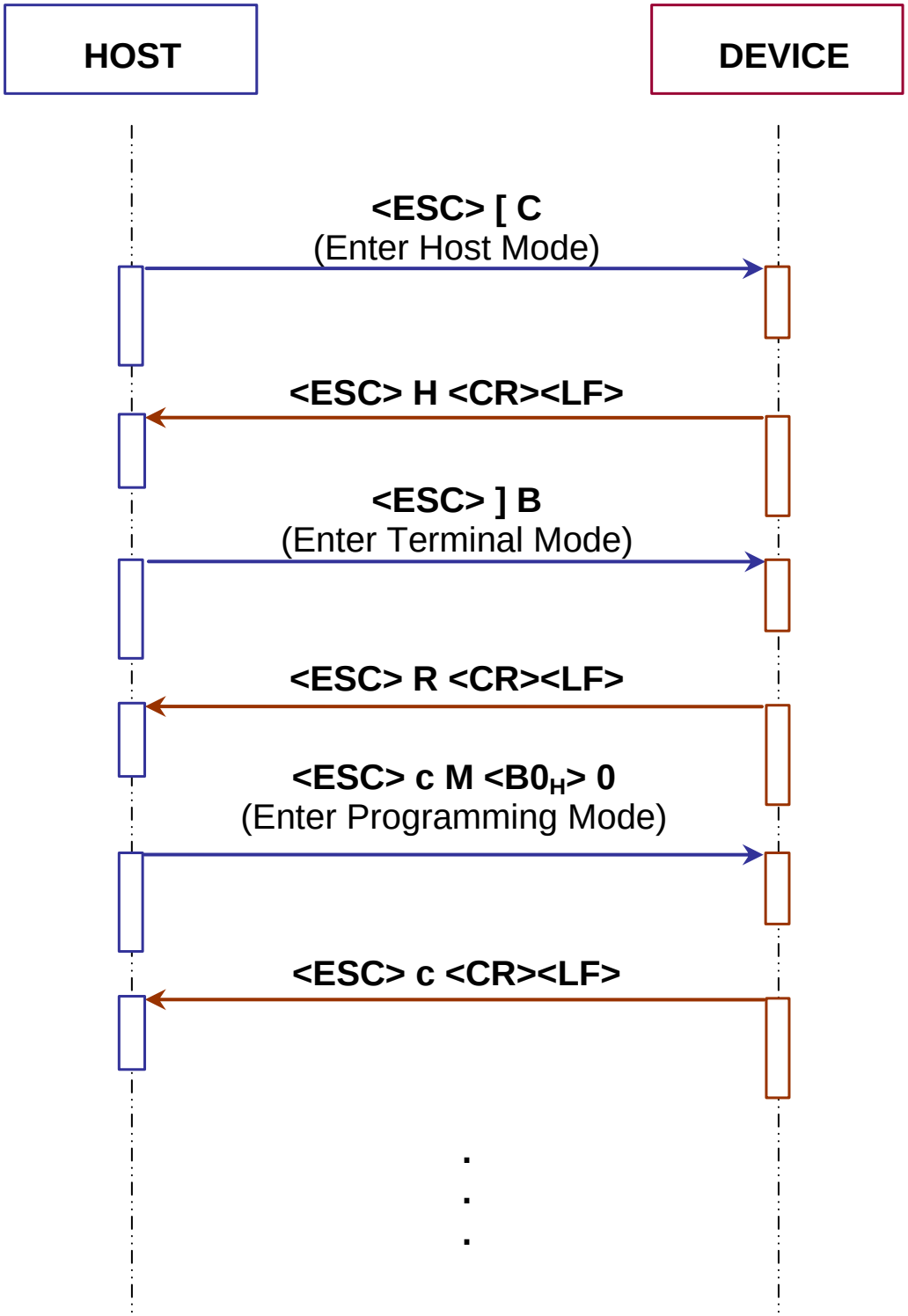


Figure 1 - Connection to SC6000

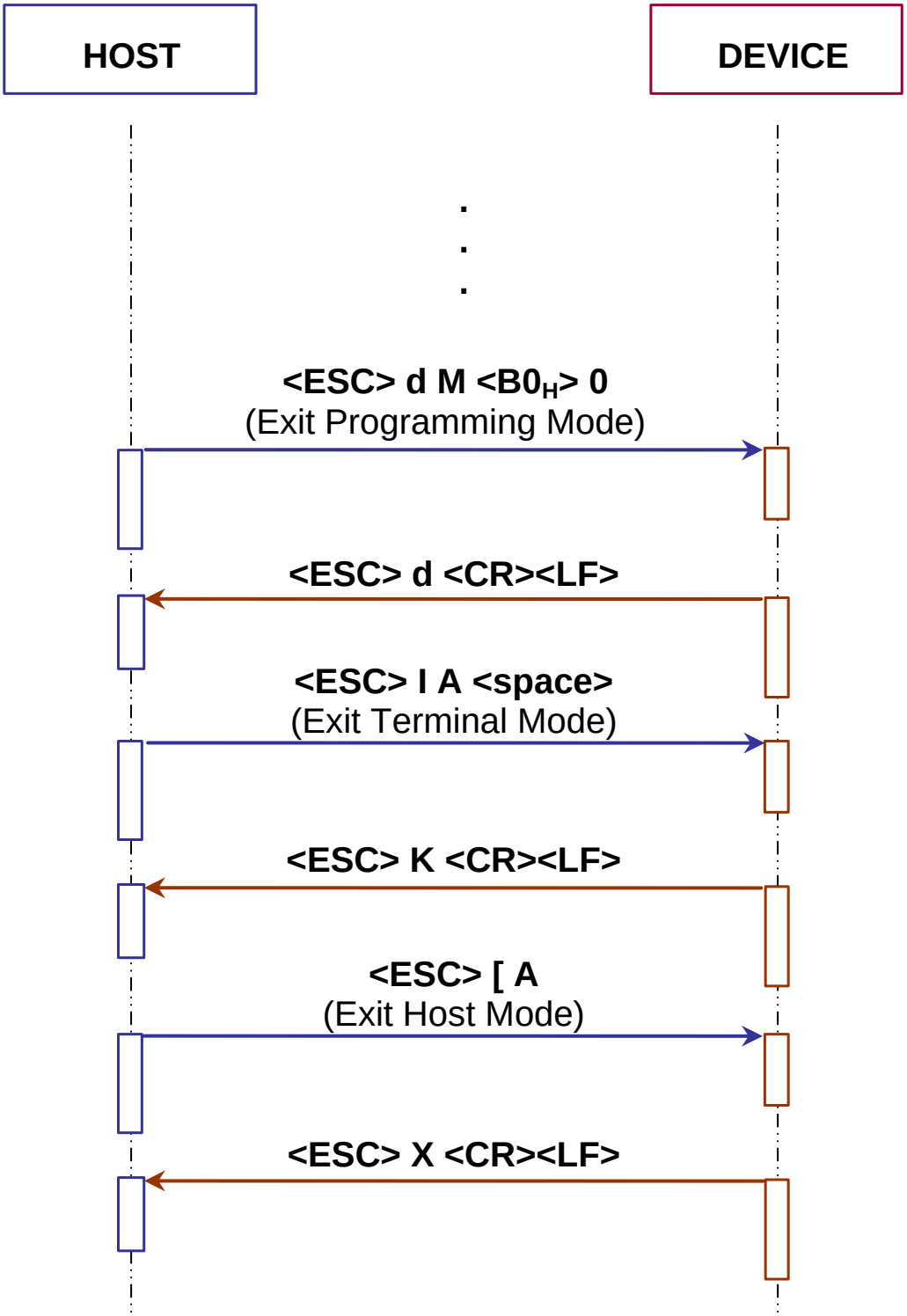


Figure 2 - Disconnection from SC6000

3 PROGRAMMING STRINGS

3.1 DEFINITIONS

Common definitions for each parameter are:

Path
The complete parameter path must have the following format:

/Folder1[#**Depth1**]/**Folder2**[#**Depth2**]/ … /**FolderN**[#**DepthN**]/**Param**[#**DepthM**]

Where:

- **FolderX**: Folder Name
- [**#DepthX**]: Folder or Parameter Depth (not necessary if equal to 1)
- **Param**: Parameter Name

Shortcut (SHC)
The short description replacing the complete parameter path (that allows implementation of shorter programming strings) must have the following format:

Shortcut [#**Depth**]

Where:

- **Shortcut**: Short Parameter Description
- [**#Depth**]: Folder or Parameter Depth (not necessary if equal to 1)

Depth (Parameter Depth)
Depth of the parameter indicates if it is made up of a vector of values or a single value (e.g. *Code Symbology* parameter has depth > 1 since we have one *Code Symbology* value for each Code slot allowed; *Code Combination* parameter has depth =1).

Example:

Label: Code Symbology
Path: /Codes/Code#3/Type
Shortcut: 2#3

Allows selecting the code symbology requested for Code slot 3.

Type (Parameter Type)
Parameter type is essential in order to decide the parameter **VALUE** format used in the programming strings. Types are:

Type 0: Integer (Numeric)
Type 1: Enumeration
Type 2: String
Type 3: Binary String
Type 4: Floating Point

The other definitions change according to the parameter type.

Integer (Type = 0)

Range
Minimum and maximum values allowed for the parameter.

Example: Reading Phase *Timeout* parameter (OPERATING MODES folder).

Path: /Operating/ONLTimeOut
Shortcut: 79
Type: 0
Label: Timeout (ms)
Range: 40 to 15.000
Default: 500

The sign can be omitted if the parameter value is not negative.

Enumeration (Type = 1)

Item List
List of the values allowed for the parameter (i.e. 0 = first entry of the list, 1 = second entry of the list).

Example: *Operating Mode* parameter (OPERATING MODES folder).

Path: /Operating/Selection
Shortcut: 31
Type: 1
Label: Operating Mode Selection
Item List: 0 = On Line
4 = Continuous
5 = PackTrack
Default: 0 (Entry 0 → On Line)

String (Type = 2)

Length
Minimum and maximum number of characters allowed for this parameter.

Example: *Device Name* parameter (USER INFORMATION SECTION folder).

Path:	/UserInfo/Name
Shortcut:	522
Type:	2
Label:	Device Name (max. 128 chars)
Length:	0 to 128
Default:	Empty string

Binary String (Type = 3)

The value of a Binary String parameter must have the following format:

NumChar<space>[**Char1**][**Char2**] … [**CharK**] … [**CharN**]

Where:

- **NumChar**: Number of Characters (DEC value)
- [**CharK**]: Character K (HEX value)



NOTE

A special case occurs If a character of the parameter value is equal to:
<DLE> (10_H), <ESC> ($1B_H$), <CR> ($0D_H$) or <LF> ($0A_H$)
In order to be recognized the character must be transmitted as <DLE> (10_H) followed by its complementary character:
<~DLE> (EF_H), <~ESC> ($E4_H$), <~CR> ($F2_H$) or <~LF> ($F5_H$)
Example: <ESC> ($1B_H$) must be transmitted as <DLE><~ESC> (10_H $E4_H$).

Length
List of the allowed values of the parameter

Example: *Header String* parameter (DATA FORMAT folder).

Path:	/Comms/OutForm/Standard/Header
Shortcut:	6
Type:	3
Label:	Header String
Length:	0 to 128
Default:	<STX>

Floating Point (Type = 4)

The Floating Point parameter value has the following format:

XXX.YYY

Range
Minimum and maximum values allowed for the parameter.

Example: *Max Angle* parameter (Not available on this product).

Path: /Reading/Oscillating/ContMaxAngle
Shortcut: 257
Type: 4
Label: Max Angle
Range: -2.5 to 37.5
Default: 25

The sign can be omitted if the parameter value is not negative.

3.2 HOW TO SEND SINGLE PARAMETER TO THE READER



NOTE

To guarantee the complete compatibility with future software releases, It is strongly suggested to use the shortcuts programming strings.

Using Complete Parameter Path

The '**Set Parameter**' programming string must have the following format:

SP<space>**PATH**:**VALUE**<CR><LF>

Where:

- **SP**: 'Set Parameter' command
- **PATH**: Complete Parameter Path
- **VALUE**: Parameter Value

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**VALUE**<CR><LF>

Where:

- **VALUE**: Parameter Value

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message and programming data will not be updated in this case:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.

Using Short Parameter Description (Shortcut)

The '**Set Shortcut**' programming string (based on the short parameter description) must have the following format:

SS<space>**SHORTCUT**:**VALUE**<CR><LF>

Where:

- **SS**: 'Set Shortcut' command
- **SHORTCUT**: Short Parameter Description (SHC)
- **VALUE**: Parameter Value

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**VALUE**<CR><LF>

Where:

- **VALUE**: Parameter Value

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message and programming data will not be updated in this case:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.

3.3 HOW TO GET SINGLE PARAMETER FROM THE READER



NOTE

To guarantee the complete compatibility with future software releases, It is strongly suggested to use the shortcuts programming strings.

Using Complete Parameter Path

The '**Get Parameter**' programming string must have the following format:

GP<space>**PATH**<CR><LF>

Where:

- **GP**: 'Get Parameter' command.
- **PATH**: Complete Parameter Path.

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**VALUE**<CR><LF>

Where:

- **VALUE**: Parameter Value.

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.

Using Short Parameter Description (Shortcut)

The '**Get Shortcut**' programming string (based on the short parameter description) must have the following format:

GS<space>**SHORTCUT**<CR><LF>

Where:

- **GS**: 'Get Shortcut' command.
- **SHORTCUT**: Short Parameter Description (SHC).

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**VALUE**<CR><LF>

Where:

- **VALUE**: Parameter Value.

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.

3.4 HOW TO ACCESS INSTALLER PARAMETERS

Set Right Parameter Description

The '**Set Right**' programming string allows the user to access some particular parameters not available as standard user:

SR<space>**L**<space>**PASSWORD**<CR><LF>

Where:

- **SR**: 'Set Right' command
- **L**: Access Level Description
- **PASSWORD**: Password for the Level accessing

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**L**<CR><LF>

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message and programming data will not be updated in this case:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.



NOTE

*To set the **INSTALLER** level (the only one available outside the Datalogic Company) use:*

SR<space>1<space>STHD<CR><LF>

3.5 SAVE AND RESTORE COMMANDS

The '**Data Storage**' programming command must have the following format:

E<space>**MODE**<CR><LF>

Where:

- **E**: Data Storage command.
- **MODE**: Data Storage mode. The possible values are:

  V = Storage in temporary (volatile) memory only.
  P = Storage in temporary and permanent memory.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**MODE**<CR><LF>

Where:

- **MODE**: Data Storage mode.



CAUTION

Restart of the device is now forced. If no disconnection commands are sent within a minimum timeout of 300 ms, the device will transmit the Self Disconnection message (refer to the Paragraph 2.3).

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message and programming data will not be updated in this case:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value).

For information on Error Codes see the "Error Codes Table" in the Appendix.

The '**Restore Default Configuration**' programming command must have the following format:

SD<space>**DEFNUM**<CR><LF>

Where:

- **SD**: Restore Default configuration command
- **DEFNUM**: Default configuration number. The only possible value is currently:

  0 = Factory Default

After entering this command, the device responds with the proper reply message and then waits for one or more programming strings.

If the programming is correct, the device updates the configuration and confirms with the following message:

Y<space>**DEFNUM**<CR><LF>

Where:

- **DEFNUM**: Default

If programming contents are wrong (i.e. a typing error in the file) or due to a transmission error, the device replies with the following message:

N<space>**ERRCODE**<CR><LF>

Where:

- **ERRCODE**: Error Code (signed DEC value)

For information on Error Codes see the "Error Codes Table" in the Appendix.



CAUTION

*This programming command will be applied to all **Configuration** and **Environmental** parameters. Refer to the Genius™ Help On Line of the selected device for further details.*

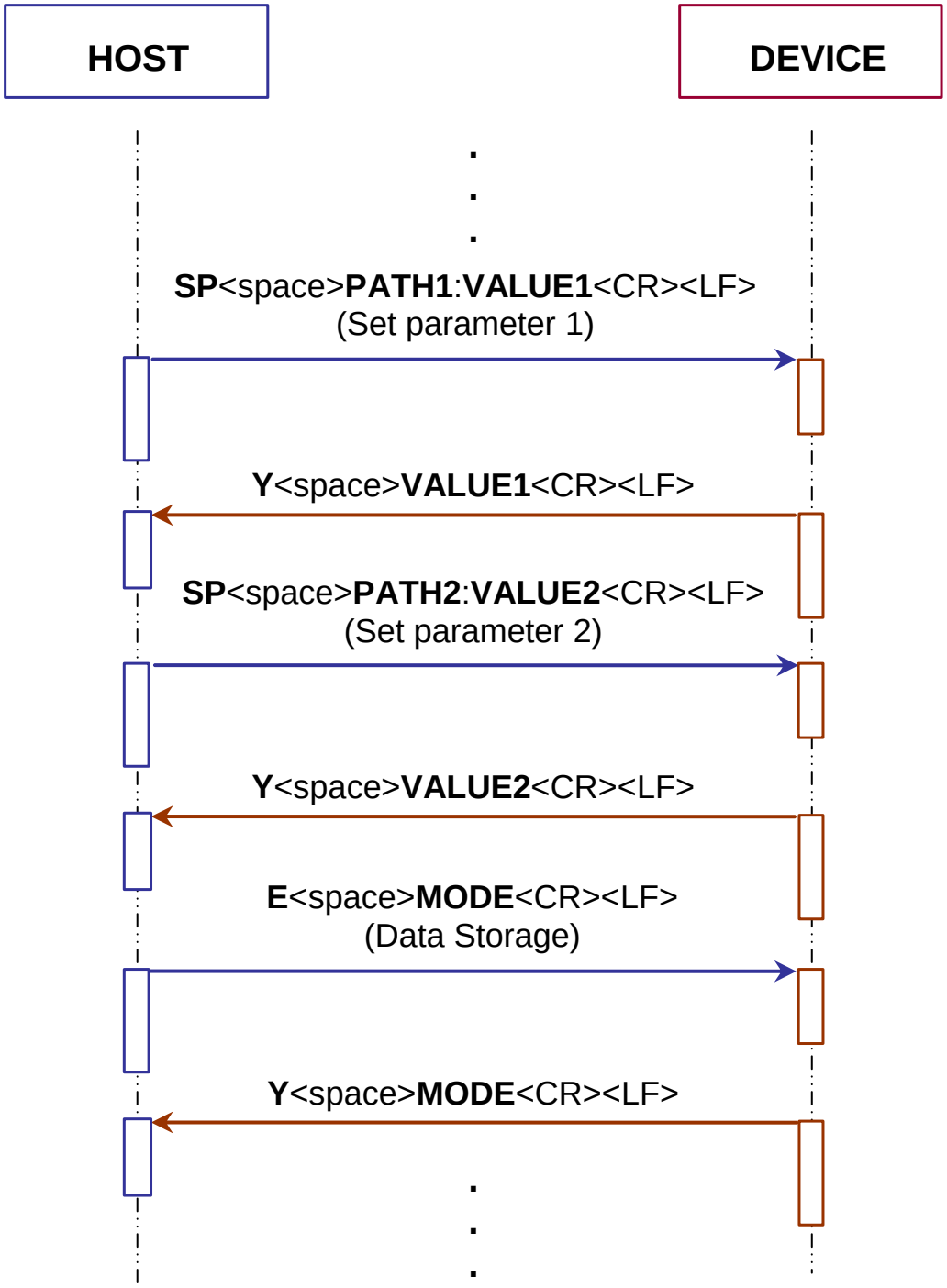


Figure 3 - Two Parameters Programming Session With Data Storage

3.6 EXAMPLES

- 1 -
Set *Minimum Label Length* parameter in CODE LABEL SETTING #2 folder:

Path: /Codes/Code#2/MinLength
Shortcut: 3
Type: 0 (Integer)
Range: 1 to 60
Value: 4

The 'Set Parameter' programming string is:

SP<space>/Codes/Code#2/MinLength:4<CR><LF>

The 'Set Shortcut' programming string is:

SS<space>3#2:4<CR><LF>

After entering the programming string, the reader responds with the message:

Y<space>4<CR><LF>

- 2 -
Set *Operating Mode Selection* parameter in OPERATING MODES folder:

Path: /Operating/Selection
Shortcut: 31
Type: 1 (Enumeration)
Item List: 0 = On Line
4 = Continuous
5 = PackTrack
Value: 5 (Entry 5 → PackTrack)

The 'Set Parameter' programming string is:

SP<space>/Operating/Selection:5<CR><LF>

The 'Set Shortcut' programming string is:

SS<space>31:5<CR><LF>

After entering the programming string, the reader responds with the message:

Y<space>5<CR><LF>

- 3 -
Set *Device Name* parameter in USER INFORMATION SECTION folder:

Path: /UserInfo/Name
Shortcut: 522
Type: 2 (String)
Length: 0 to 128
Value: SC6000

The 'Set Parameter' programming string is:

SP<space>/UserInfo/Name:SC6000<CR><LF>

The 'Set Shortcut' programming string is:

SS<space>522:SC6000<CR><LF>

After entering the programming string the reader responds with the message:

Y<space>SC6000<CR><LF>

- 4 -
Set *Header String* parameter in DATA FORMAT folder:

Path: /Comms/OutForm/Standard/Header
Shortcut: 6
Type: 3 (Binary String)
Length 0 to 128
Value: HEADER (HEX value: 48H 45H 41H 44H 45H 52H)

The 'Set Parameter' programming string is:

SP<space>/Comms/OutForm/Standard/Header:6<space>484541444552<CR><LF>

The 'Set Shortcut' programming string is:

SS<space>6:6<space>484541444552<CR><LF>

After enter the programming string, the reader responds with the message:

Y<space>6<space>484541444552<CR><LF>

- 5 -
Get value of Digital Output 3 *Activation Event* parameter in DIGITAL OUTPUT LINES folder:

Path: /IO/Out/Out2/Active
Shortcut: 28
Type: 1 (Enumeration)
Current Value: 2 (Entry 2 → Partial Read)

The 'Get Parameter' programming string is:

GP<space>/IO/Out/Out2/Active<CR><LF>

The 'Get Shortcut' programming string is:

GS<space>28<CR><LF>

After entering the programming string, the reader responds with the message:

Y<space>2<CR><LF>

- 6 -
Get value of *No Read String* parameter in CODE DEFINITION folder:

Path: /Codes/NoReadStr
Shortcut: 9
Type: 3 (Binary String)
Current Value: Empty string

The 'Get Parameter' programming string is:

GP<space>/Codes/NoReadStr<CR><LF>

The 'Get Shortcut' programming string is:

GS<space>9<CR><LF>

After entering the programming string, the reader responds with the message:

Y<space>0<CR><LF>

4 PARAMETERS LIST

4.1 CODE DEFINITION

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
CODE DEFINITION				
Code Combination	/Codes /MultiLabel	72	1	0 = Single Label 1 = Standard Multi Label 2 = Logical Combination 3 = Code Collection
Logical Combination Rule	/Codes /LogicalComb	191	2	Length: 0 to 64
No Read Message	/Codes /NoRead	14	1	0 = Disable No Read Message 1 = Global No Read Message 2 = Local No Read(s) Message
No Read String	/Codes /NoReadStr	9	3	Length: 0 to 128
Multiple Read Message	/Codes /Mulread	15	1	0 = Disable 1 = Enable
Multiple Read String	/Codes /MulReadMsg	16	3	Length: 1 to 128
Send All Multiple Read Labels	/Codes /SendAllMultipleLabels	3026	1	0 = Disable 1 = Enable
Partial Read Is Treated As	/Codes /PartialReadAs	-	1	0 = No Read 1 = Good Read 3 = Partial Read
Multi Filters	/Codes /Multifilter	-	1	0 = Disable 1 = Enable
Associate Same Codes When Read By Different Scanners	/Codes /NetCodeAssociate	534	1	0 = Disable 1 = Enable
LOCAL NO READ STRINGS #N (DEPTH: N = 1 to 15)				
Group Label Local No Read String	/Codes /LocNoReadComb /LocalNoRead#N	17	3	Length: 0 to 48
LOCAL MULTIPLE READ STRINGS #N (DEPTH: N = 1 to 15)				
Group Label Local Multiple Read String	/Codes /LocMultReadComb /LocalMulRead#N	327	3	Length: 0 to 48
MULTIPLE READ FILTER SETTINGS				
Contained Filter	/Codes/Filters /FirstLevelFilter Contained	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Max Number of Different Characters	/Codes/Filters /ContainedFilter NumberOfChar	-	0	Range: 0 to 5
Voting Filter	/Codes/Filters /SecondLevelFilter Voting	-	1	0 = Disable 1 = Enable
Max Number of Different Characters	/Codes/Filters /VotingFilterNumber OfChar	-	0	Range: 1 to 5
Filter Out Low Height Codes	/Codes/Filters /SecondLevelFilterNEL	-	1	0 = Disable 1 = Enable
Strip Filter	/Codes/Filters /SecondLevelFilterStrip	-	1	0 = Disable 1 = Enable
STRIP FILTER PARAMETERS				
Strip All Non Printable Chars	/Codes/Filters /StrepFilterPar /StripFilterAllNoStpChars	-	1	0 = Disable 1 = Enable
Char(s) to be Stripped	/Codes/Filters /StrepFilterPar /StripFilterString	-	3	Length: 0 to 128
Strip Filter Collapse	/Codes/Filters /StrepFilterPar /StripFIlterCollaps	-	1	0 = Disable 1 = Enable
Replacement Char	/Codes/Filters /StrepFilterPar StripFilterRepChar	-	3	Length: 1
FILTER OUT LOW HEIGHT CODES PARAMETERS				
Filter Out Single Readings	/Codes/Filters /SecondLevelFilterNELP /FOSR	-	1	0 = Disable 1 = Enable
Minimum Difference in Readings Between Scanners	/Codes/Filters /SecondLevelFilterNELP /MRDBS	-	1	0 = Disable 1=1 2=2 3=3 4=4 5=5 6=6 7=7 8=8 9=9 10=10
CODE LABEL SETTING #N (DEPTH: N = 1 to 10)				
Enable	/Codes /Code#N/Enable	1	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Code Symbology	/Codes /Code#N /Type	2	1	0 = Code 128 1 = Interleaved 2 of 5 2 = Code 39 3 = Code GS1-128 4 = EAN-13 5 = EAN-8 6 = UPC-A 7 = UPC-E 8 = All EAN-UPC 9 = Codabar 10 = Code 93 16 = GS1 Databar 26 = GS1 Databar Limited 27 = GS1 Databar Expanded
EAN AddOn	/Codes /Code#N /AddOn	32	1	0 = No Add On 1 = 2 digits Add On 2 = 5 digits Add On
Label Length	/Codes /Code#N /Length	70	1	0 = Variable 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 … 60 = 60
Minimum Label Length	/Codes /Code#N /MinLength	3	0	Range: 1 to 60
Maximum Label Length	/Codes /Code#N /MaxLength	4	0	Range: 1 to 60
Label Length (GS1 Databar Expanded)	/Codes /Code#N/ LengthGS1Expanded	5578	1	0 = Variable 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 … 74 = 74
Minimum Label Length (GS1 Databar Expanded)	/Codes /Code#N /MinLengthGS1 Expanded	5579	0	Range: 2 to 74
Maximum Label Length (GS1 Databar Expanded)	/Codes /Code#N /MaxLengthGS1 Expanded	5580	0	Range: 2 to 74
Min Code Position	/Codes /Code#N /MinCodePos	262	0	Range: 0 to 255

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Max Code Position	/Codes /Code#N /MaxCodePos	263	0	Range: 0 to 255
Check Digit	/Codes /Code#N /CheckDigit	5	1	0 = Disable 1 = Enable
Check Digit Transmission	/Codes /Code#N /CheckDigitTx	524	1	0 = Disable 1 = Enable
Match String Rule	/Codes /Code#N /MatchStrRule	-	1	0 = Match 1 = Do Not Match
Pattern Match String	/Codes /Code#N /PatMatch	-	3	Length: 0 to 200
Code Label Local No Read String	/Codes /Code#N /LocNoRead	18	3	Length: 0 to 48
Code Label Local Multiple Read String	/Codes /Code#N /LocMulRead	328	3	Length: 0 to 48
Start Character Transmission (only for Codabar)	/Codes /Code#N /StartChTx	382	1	0 = Disabled 2 = Lower Case 3 = Upper Case
Stop Character Transmission (only for Codabar)	/Codes /Code#N /StopChTx	383	1	0 = Disabled 2 = Lower Case 3 = Upper Case

4.2 OPERATING MODES

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
OPERATING MODES				
Operating Mode Selection	/Operating /Selection	31	1	0 = On Line 4 = Continuous 5 = PackTrack
On Line Options	/Operating /OnLOpt	73	1	0 = On Line 1 input 1 = On Line 2 input 2 = Serial On Line
Extended Phase	/Operating /ExtendedPhase	-	1	0 = Disable 1 = Enable
Serial Start String	/Operating /SerialStart	86	3	Length: 1 to 32
Start Input Number	/Operating /ONLStartIn	74	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Start Input Active Level	/Operating /ONLStartInLev	75	1	0 = Active Closed 1 = Active Open

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Serial Stop String	/Operating /SerialStop	87	3	Length: 1 to 32
Stop Input Number	/Operating /ONLStopIn	76	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Stop Input Active Level	/Operating /ONLStopInLev	77	1	0 = Active Closed 1 = Active Open
Stop Phase Edge	/Operating /PhaseOffLeadEdge	-	1	0 = Trailing 1 = Leading
Reading Phase Timeout	/Operating /OnLTimOutEn	78	1	0 = Disable 1 = Enable
Timeout (ms)	/Operating /ONLTimeOut	79	0	Range: 40 to 15000
Timeout Counting From	/Operating /ONLToutStart	-	1	0 = Start 1 = Stop
Stop Priority	/Operating /ONLStopPrio	80	1	0 = Input / SerialStop 1 = Always Timeout
Continuous Threshold (number of scans)	/Operating /ContThreshold	-	0	Range: 10 to 32765
Physical Encoder	/Operating /PhyEnc	200	1	0 = Disable 1 = Enable
Encoder Step (hundredths of millimeter)	/Operating /EncStep	201	0	Range: 1 to 10000
Conveyor Speed (mm/sec)	/Operating /PktrSpeed	216	0	Range: 50 to 10000
PS Line (mm)	/Operating /PktrPsLine	202	0	Range: -32767 to 32767y
Presence Sensor Input	/Operating /PktrPsIn	203	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Presence Sensor Input Level	/Operating /PktrPsLev	204	1	0 = Active Closed 1 = Active Open
Distance from PS Line to TX Line (mm)	/Operating /PktrTxLineDist	205	0	Range: 100 to 20000
Transmission Edge	/Operating /PktrTxLineEdge	206	1	0 = Leading 1 = Trailing
Max Number of Packs	/Operating /PktrMaxPacks	207	0	Range: 2 to 40
Minimum Distance Error Behaviour	/Operating /PktrMinDistEn	211	1	0 = Ignore Error 1 = Compose 2 = Discard Last
Minimum Distance Between Packs (mm)	/Operating /PktrMinDist	208	0	Range: 10 to 10000
Minimum Pack Length Error Behaviour	/Operating /PktrMinLenEn	212	1	0 = Ignore Error 1 = Discard Item

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Minimum Pack Length (mm)	/Operating /PktrMinLen	209	0	Range: 50 to 1000
Window Dimension (mm)	/Operating /PktrWinDim	210	0	Range: 0 to 1000
Encoder Delay Error Behaviour	/Operating /PktrEncErr	214	1	0 = Ignore Error 1 = Fast Resync 2 = Safe Resync
Max. Encoder Delay For Code	/Operating /PktrEncMaxDelay	213	0	Range: 50 to 100000
Max. Consecutive Delayed Codes For Node	/Operating /PktrMaxDelayOfCode	-	0	Range: 0 to 255
Max. Safe Resync For Node	/Operating /PktrMaxNodeResync	-	0	Range: 0 to 255
Bidirectional	/Operating /Bidirectional	-	1	0 = Disable 1 = Enable
Direction Input	/Operating /PktrInDir	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Reverse Direction Level	/Operating /PktrInDirLev	-	1	0 = Closed 1 = Open
Reverse Presence Sensor Input	/Operating /PktrPsRev	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Reverse Presence Sensor Input Level	/Operating /PktrPsRevLev	-	1	0 = Active Closed 1 = Active Open
Distance from PS to Reverse PS (mm)	/Operating /PktrRevOffsY	-	0	Range: 100 to 20000
Start Input from Bus (Profibus Models Only)	/Operating /PbusOnl	-	1	0 = Disable 1 = Enable
Start Input from Bus (Ethernet Models Only)	/Operating /EthOnl	-	1	0 = Disable 1 = Enable
Use Encoder (Continuous Mode Only)	/Operating /ContOpt	-	1	0 = Disable 1 = Physical Encoder 2 = Auto Encoder
Encoder Step (hundredths of millimeter)	/Operating /ContEncEncStep	-	0	Range: 1 to 10000
Conveyor Speed (mm/sec)	/Operating /ContEncSpeed	-	0	Range: 50 to 10000
Encoder Delay Error Behaviour	/Operating /ContEncErr	-	1	0 = Ignore Error 1 = Fast Resync 2 = Safe Resync
Max. Encoder Delay For Code	/Operating /ContEncMaxDelay	-	0	Range: 50 to 10000

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Max. Consecutive Delayed Codes For Node	/Operating /ContEncMaxDelayOf Code	-	0	Range: 0 to 255
Max. Safe Resync For Node	/Operating /ContEncMaxNode Resync	-	0	Range: 0 to 255
Replicate same code when symbologies don't match	/Operating /CodTypeFiltEn	-	1	0 = Disable 1 = Enable
Code Filter Depth	/Operating /CodeFilterDepth	502	0	Range: 0 to 127
Code Filter	/Operating /CodFiltToutEncEn	-	1	0 = Disable 1 = Timeout 2 = Encoder Steps 3 = Tx Line
Filter Timeout Value (ms)	/Operating /FilterTimeout	-	0	Range:40 to 15000
Filter Number of Encoder Steps	/Operating /FilterNumEncStep	-	0	Range:1 to 15000
Distance from (x,y,z) origin to Tx Line (mm)	/Operating /ContTxLineDist	-	0	Range:100 to 20000
Replicate same code when X positions don't match	/Operating /CodUseCoordinateX	-	1	0 = Disable 1 = Enable
Replicate same code when Y positions don't match	/Operating /CodUseCoordinateY	-	1	0 = Disable 1 = Enable
Replicate same code when Z positions don't match	/Operating /CodUseCoordinateZ	-	1	0 = Disable 1 = Enable
Encoder Divided by 2 (PackTrack only)	/Operating /EncoderDividedBy2	-	1	0 = Disable 1 = Enable
Encoder Divided by 2 (Continuous only)	/Operating /ContEncoderDividedBy2	-	1	0 = Disable 1 = Enable
Beam Shutter Triggered	/Operating /BeamShTriggered	-	1	0 = Disable 1 = Enable
Beam Shutter Timeout	/Operating /PktrBeamShutter Timeout	-	1	0 = Disable 1 = 1 sec 2 = 10 sec 3 = 30 sec 4 = 1 min 5 = 5 min 6 = 10 min 7 = 15 min
Protocol Index	/Operating /ProtocolIndex	-	1	0 = Disable 1 = Enable
Hybrid System	/Operating /HybridSystem	-	1	0 = Disable 1 = Use SC6000 as Master 2 = Use SC6000 as Slave
PROTOCOL INDEX PARAMETERS / AUX				

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Use Aux Serial Port	/Operating /ProtocolIndexParameters /AuxPar/AuxEn	-	1	0 = Disable 1 = Enable Without Request Message 2 = Enable With Request Message
Header	/Operating /ProtocolIndexParameters /AuxPar/StrAux	-	3	Length: 0 to 1
Terminator	/Operating /ProtocolIndexParameters /AuxPar/StpAux	-	3	Length: 0 to 1
Protocol Index Length	/Operating /ProtocolIndexParameters /AuxPar/PILengthAux	-	1	0 = Length In Message 1 = Variable length 3 = 3 4 = 4 5 = 5 … 12 = 12
No Index Char	/Operating /ProtocolIndexParameters /AuxPar/NOIndexCharAux	-	3	Length: 0 to 1
Protocol Index Request Message	/Operating /ProtocolIndexParameters /AuxPar/PIReqMsgAux	-	3	Length: 0 to 32
Distance from Protocol Index to Trigger Line (mm)	/Operating /ProtocolIndexParameters /AuxPar/TxPtFromRef_aux	-	0	Range:0 to 65532
PROTOCOL INDEX PARAMETERS / MAIN				
Use Main Serial Port	/Operating /ProtocolIndexParameters /MainPar/MainEn	-	1	0 = Disable 1 = Enable Without Request Message 2 = Enable With Request Message
Header	/Operating /ProtocolIndexParameters /MainPar/StrMain	-	3	Length: 0 to 1
Terminator	/Operating /ProtocolIndexParameters /MainPar/StpMain	-	3	Length: 0 to 1
Protocol Index Length	/Operating /ProtocolIndexParameters /MainPar/PILengthMain	-	1	0 = Length In Message 1 = Variable length 3 = 3 4 = 4 5 = 5 … 12 = 12
No Index Char	/Operating /ProtocolIndexParameters /MainPar/NOIndexCharMain	-	3	Length: 0 to 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Protocol Index Request Message	/Operating /ProtocolIndexParameters /MainPar/PIReqMsgMain	-	3	Length: 0 to 32
Distance from Protocol Index to Trigger Line (mm)	/Operating /ProtocolIndexParameters /MainPar/TxPtFromRef_main	-	0	Range:0 to 65532
PROTOCOL INDEX PARAMETERS / MODEM				
Use Modem Serial Port	/Operating /ProtocolIndexParameters /ModemPar/ModemEn	-	1	0 = Disable 1 = Enable Without Request Message 2 = Enable With Request Message
Header	/Operating /ProtocolIndexParameters /ModemPar/StrModem	-	3	Length: 0 to 1
Terminator	/Operating /ProtocolIndexParameters /ModemPar/StpModem	-	3	Length: 0 to 1
Protocol Index Length	/Operating /ProtocolIndexParameters /ModemPar/PILengthModem	-	1	0 = Length In Message 1 = Variable length 3 = 3 4 = 4 5 = 5 … 12 = 12
No Index Char	/Operating /ProtocolIndexParameters /ModemPar /NOIndexCharModem	-	3	Length: 0 to 1
Protocol Index Request Message	/Operating /ProtocolIndexParameters /ModemPar /PIReqMsgModem	-	3	Length: 0 to 32
Distance from Protocol Index to Trigger Line (mm)	/Operating /ProtocolIndexParameters /ModemPar/ /TxPtFromRef_modem	-	0	Range:0 to 65532
PROTOCOL INDEX PARAM. / ETH1 / PIUSERSOCKET #N (DEPTH: N = 1 to 3)				
Use Socket	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /SockEn	-	1	0 = Disable 1 = Enable Without Request Message 2 = Enable With Request Message
Header	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /StrSock	-	3	Length: 0 to 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Terminator	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /StpSock	-	3	Length: 0 to 1
Protocol Index Length	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /PILengthSock	-	1	0 = Length In Message 1 = Variable length 3 = 3 4 = 4 5 = 5 … 12 = 12
No Index Char	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /NOIndexCharSock	-	3	Length: 0 to 1
Protocol Index Request Message	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /PIReqMsgSock	-	3	Length: 0 to 32
Distance from Protocol Index to Trigger Line (mm)	/Operating /ProtocolIndexParameters /Eth1/PIUserSocket#N /TxPtFromRef_Sock	-	0	Range:0 to 65532
PROTOCOL INDEX PARAM. / ETH2 / PIUSERSOCKET1 #N (DEPTH: N = 1 to 3)				
Use Socket	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /SockEn1	-	1	0 = Disable 1 = Enable Without Request Message 2 = Enable With Request Message
Header	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /StrSock1	-	3	Length: 0 to 1
Terminator	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /StpSock1	-	3	Length: 0 to 1
Protocol Index Length	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /PILengthSock1	-	1	0 = Length In Message 1 = Variable length 3 = 3 4 = 4 5 = 5 … 12 = 12
No Index Char	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /NOIndexCharSock1	-	3	Length: 0 to 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Protocol Index Request Message	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /PIReqMsgSock1	-	3	Length: 0 to 32
Distance from Protocol Index to Trigger Line (mm)	/Operating /ProtocolIndexParameters /Eth2/PIUserSocket#N /TxPtFromRef_Sock1	-	0	Range:0 to 65532
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS				
Enable NVS	/Operating/NVSHS/NVS	-	1	0 = Disable 1 = Simple 2 = Advanced
First NVS9000 Number	/Operating/NVSHS /NVSFirstSlaveNB	-	0	Range: 1 to 31
Number of NVS9000s in Cluster	/Operating/NVSHS /NVSNBSlaves	-	0	Range: 0 to 9
Select User Socket or Serial Port (model 1230 only)	/Operating/NVSHS /NVSTransport	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3 6 = Additional User Socket 1 7 = Additional User Socket 2 8 = Additional User Socket 3 12 = Auxiliary Serial Port 13 = Main Serial Port 14 = Modem Serial Port
Select User Socket or Serial Port	/Operating/NVSHS /NVSTransportInt	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3 9 = Auxiliary Serial Port 10 = Main Serial Port 11 = Modem Serial Port
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS / READ INFO MESSAGE				
Distance from Read Info Message to Trigger Line (mm)	/Operating/NVSHS/NVSRI /NVSSockTxRI	-	0	-
Distance From NVS Trigger Line And SC6000 Reference Line (mm)	/Operating/NVSHS/NVSRI /NVSDELTA	-	0	-
Encoder Synchronization Input	/Operating/NVSHS/NVSRI /NVSENCIN	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Group Separator	/Operating/NVSHS/NVSRI /NVSGS	-	3	Length: 0 to 1
Label Separator	/Operating/NVSHS/NVSRI /NVSLS	-	3	Length: 0 to 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Field Separator	/Operating/NVSHS/NVSRI /NVSFS	-	3	Length: 0 to 1
Global Header	/Operating/NVSHS/NVSRI /NVSGH	-	3	Length: 0 to 1
Global Field Separator	/Operating/NVSHS/NVSRI /NVSGFS	-	3	Length: 0 to 1
Local No Read	/Operating/NVSHS/NVSRI /NVSLNR	-	3	Length: 0 to 1
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS / DIAG. INFO MESSAGE				
Diagnostic Info Timeout (sec)	/Operating/NVSHS/NVSDI /NVSSockTimeOutDI	-	0	Range: 5 to 3600
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS / SC6000 HEARTBEAT MSG				
SC6000 Heartbeat Timeout (sec)	/Operating/NVSHS/NVSHB /NVSSockTimeOutHB	-	0	Range: 5 to 3600
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS / NVS9000 HEARTBEAT MSG				
NVS9000 Heartbeat Timeout (sec)	/Operating/NVSHS /NVSSlvHB /NVSSlaveSockTimeOutHB	-	0	Range: 5 to 3600
NVS9000 HYBRID SYSTEM SLAVE PARAMETERS / CONVEYOR INFO MSG				
Send Conveyor Info Message	/Operating/NVSHS/NVSCI /NVSSendCI	-	1	0 = Disable 1 = Enable
SC6000 HYBRID SYSTEM SLAVE PARAMETERS				
Enable SC6000	/Operating/SLVHS /SLVEnableSlave	-	1	0 = Disable 1 = Enable
Select User Socket (model 1230 only)	/Operating/SLVHS /SLVTransport	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3 6 = Additional User Socket 1 7 = Additional User Socket 2 8 = Additional User Socket 3
Select User Socket	/Operating/SLVHS /SLVTransportInt	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3
SC6000 HYBRID SYSTEM SLAVE PARAMETERS / SC6000 HEARTBEAT MSG				
SC6000 Heartbeat Timeout (sec)	/Operating/SLVHS/SLVHB /SLVHBSockTimeOutHB	-	0	Range: 5 to 3600
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS				
Enable RBS	/Operating/RBSHS /RBS	-	1	0 = Disable 1 = Enable
First RFID Antenna Number	/Operating/RBSHS /RBSFirstSlaveNB	-	0	Range: 1 to 31

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Number of RFID Antennas	/Operating/RBSHS /RBSNBSlaves	-	0	Range: 0 to 4
Select User Socket (model 1230 only)	/Operating/RBSHS /RBSTransport	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3 6 = Additional User Socket 1 7 = Additional User Socket 2 8 = Additional User Socket 3
Select User Socket	/Operating/RBSHS /RBSTransportInt	-	1	1 = User Socket 1 2 = User Socket 2 3 = User Socket 3
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS / READ INFO MESSAGE				
Distance from Read Info Message to Trigger Line (mm)	/Operating/RBSHS/RBSRI /RBSSockTxRI	-	0	-
Group Separator	/Operating/RBSHS/RBSRI /RBSGS	-	3	Length: 0 to 1
Label Separator	/Operating/RBSHS/RBSRI /RBSLS	-	3	Length: 0 to 1
Field Separator	/Operating/RBSHS/RBSRI /RBSFS	-	3	Length: 0 to 1
Global Header	/Operating/RBSHS/RBSRI /RBSGH	-	3	Length: 0 to 1
Global Field Separator	/Operating/RBSHS/RBSRI /RBSGFS	-	3	Length: 0 to 1
Local No Read	/Operating/RBSHS/RBSRI /RBSLNR	-	3	Length: 0 to 1
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS / DIAG. INFO MESSAGE				
Diagnostic Info Timeout (sec)	/Operating/RBSHS/RBSDI /RBSSockTimeOutDI	-	0	Range: 5 to 3600
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS / SC6000 HEARTBEAT MSG				
SC6000 Heartbeat Timeout (sec)	/Operating/RBSHS/RBSHB /RBSSockTimeOutHB	-	0	Range: 5 to 3600
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS / SIMATIC RBS HEARTBEAT MSG				
SIMATIC RBS Heartbeat Timeout (sec)	/Operating/RBSHS /RBSSlvHB /RBSSlaveSockTimeOutHB	-	0	Range: 5 to 3600
SIMATIC RBS HYBRID SYSTEM SLAVE PARAMETERS / CONVEYOR INFO MSG				
Send Conveyor Info Message	/Operating/RBSHS/RBSCI /RBSSendCI	-	1	0 = Disable 1 = Enable

4.3 READING SYSTEM LAYOUT

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
READING SYSTEM LAYOUT				
Device Assignment	/Layout/DevAssO	196	1	1 = Master RS232 (Type A) 2 = Master Lonworks and RS232 (Type A) 4 = Controller Lon Old8k 5 = Controller Lon SC8000
Lon Noise Threshold	/Layout /NoiseLonThreshold	702	0	Range: 0 to 7
Number of Slaves (Type A)	/Layout/NumSlSer	34	0	Range: 1 to 9
Number of LonWorks Slaves	/Layout/NumSlOld8k	-	0	Range: 1 to 14
Number of LonWorks Slaves	/Layout/NumSlNet	36	0	Range: 1 to 31
Display Installer Info	/Layout/ShowDbg	38	1	0 = Disable 1 = Enable
Modify&Backup Lon Slave Configuration	/Layout/Update	64	1	0 = Disable 1 = Enable
Enable Automatic Replacement (D.A.R.P.)	/Layout/EnableDARP	-	1	0 = Disable 1 = Enable
Motor Delay (ms)	/Layout/MotorDelay	-	0	Range: 500 to 5000
LONWORKS SLAVES COMMON PARAMETERS (for backward compatibility)				
CODE PARAMETERS				
Code 3 of 9	/Layout/SlvPar/CodPar /Cod39	140	1	0 = Disable 1 = Enable
Code 2 of 5 Interleaved	/Layout/SlvPar/CodPar /Cod25	141	1	0 = Disable 1 = Enable
Code 2 of 5 Compressed	/Layout/SlvPar/CodPar /Cod25Cmp	150	1	0 = Disable 1 = Enable
Code Codabar	/Layout/SlvPar/CodPar /CodBar	152	1	0 = Disable 1 = Enable
Code 93	/Layout/SlvPar/CodPar /Cod93	151	1	0 = Disable 1 = Enable
Code 128	/Layout/SlvPar/CodPar /Cod128	142	1	0 = Disable 1 = Enable
Code GS1-128 (ex EAN 128)	/Layout/SlvPar/CodPar /CodEAN128	143	1	0 = Disable 1 = Enable
Code EAN 13	/Layout/SlvPar/CodPar /EAN13	144	1	0 = Disable 1 = Enable
Code EAN 8	/Layout/SlvPar/CodPar /EAN8	145	1	0 = Disable 1 = Enable
Code UPC A	/Layout/SlvPar/CodPar /UPCA	146	1	0 = Disable 1 = Enable
Code UPC E	/Layout/SlvPar/CodPar /UPCE	147	1	0 = Disable 1 = Enable
EAN/UPC ADD ON 2	/Layout/SlvPar/CodPar /AddOn2	148	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
EAN/UPC ADD ON 5	/Layout/SlvPar/CodPar /AddOn5	149	1	0 = Disable 1 = Enable
CODE 3 OF 9 PARAMETERS				
Decoding Severity	/Layout/SlvPar/CodPar /Code39Par/DecSev	161	0	Range: 1 to 5
Check Digit	/Layout/SlvPar/CodPar /Code39Par/ChkDgt	162	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /Code39Par/Lentyp	180	1	0 = Variable 1 = Fixed
CODE 3 OF 9 FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /Code39Par/Digit#N	163	0	Range: 0 to 50
CODE 2 OF 5 INTERLEAVED PARAMETERS				
Decoding Severity	/Layout/SlvPar/CodPar /Code25Par/DecSev	164	0	Range: 1 to 5
Check Digit	/Layout/SlvPar/CodPar /Code25Par/ChkDgt	165	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /Code25Par/Lentyp	181	1	0 = Variable 1 = Fixed
CODE2 OF 5 INTERLEAVED FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /Code25Par/Digit#N	166	0	Range: 0 to 50
CODE 2 OF 5 COMPRESSED PARAMETERS				
Decoding Severity	/Layout/SlvPar/CodPar /Code25CmpPar /DecSev	167	0	Range: 1 to 5
Check Digit	/Layout/SlvPar/CodPar /Code25CmpPar/ChkDgt	168	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /Code25CmpPar/Lentyp	182	1	0 = Variable 1 = Fixed
CODE2 OF 5 COMPRESSED FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /Code25CmpPar/Digit#N	169	0	Range: 0 to 50
CODABAR PARAMETERS				
Check Digit	/Layout/SlvPar/CodPar /CodBarPar/ChkDgt	170	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /CodBarPar/Lentyp	183	1	0 = Variable 1 = Fixed
CODABAR FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /CodBarPar/Digit#N	171	0	Range: 0 to 50
CODE 93 PARAMETERS				

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Decoding Severity	/Layout/SlvPar/CodPar /Code93Par/DecSev	172	0	Range: 1 to 5
Ink Spread	/Layout/SlvPar/CodPar /Code93Par/InkSp	173	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /Code93Par/Lentyp	184	1	0 = Variable 1 = Fixed
CODE 93 FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /Code93Par/Digit#N	174	0	Range: 0 to 50
CODE 128 PARAMETERS				
Decoding Severity	/Layout/SlvPar/CodPar /Code128Par/DecSev	177	0	Range: 1 to 5
Ink Spread	/Layout/SlvPar/CodPar /Code128Par/InkSp	178	1	0 = Disable 1 = Enable
Length Type	/Layout/SlvPar/CodPar /Code128Par/Lentyp	185	1	0 = Variable 1 = Fixed
CODE 128 FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /Code128Par/Digit#N	179	0	Range: 0 to 50
CODE GS1-128 (ex EAN 128) PARAMETERS				
Length Type	/Layout/SlvPar/CodPar /CodeEAN128Par /Lentyp	186	1	0 = Variable 1 = Fixed
CODE GS1-128 (ex EAN 128) FIXED LENGTH #N (DEPTH: N = 1 to 12)				
Fixed Length	/Layout/SlvPar/CodPar /CodeEAN128Par /Digit#N	187	0	Range: 0 to 50
CODE EAN-UPC PARAMETERS				
Decoding Severity	/Layout/SlvPar/CodPar /CodeEANUPCPar /DecSev	175	0	Range: 1 to 5
Ink Spread	/Layout/SlvPar/CodPar /CodeEANUPCPar /InkSp	176	1	0 = Disable 1 = Enable
RECONSTRUCTION PARAMETERS				
Overflow	/Layout/SlvPar/RecPar /Ovrflw	153	0	Range: 2 to 50
Reconstruction Severity	/Layout/SlvPar/RecPar /RecSev	154	0	Range: 1 to 5
Max Stacked Codes	/Layout/SlvPar/RecPar /MaxStCd	155	0	Range: 1 to 3
Out Codes Per Cluster	/Layout/SlvPar/RecPar /OutCdPC	156	0	Range: 1 to 3
Inter Character Gap	/Layout/SlvPar/RecPar /InterChG	157	0	Range: 2 to 8

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
LONWORKS SINGLE SLAVES PARAMETERS (for backward compatibility)				
SLAVE NUMBER #N (DEPTH: N = 1 to 31)				
Max Scan Gap	/Layout/SngSlv/Slave#N /MaxScG	158	0	Range: 1 to 10000
Direction	/Layout/SngSlv/Slave#N /X_Y_Inversion	-	1	0 = Forward 1 = Backward
PS Offset (mm)	/Layout/SngSlv/Slave#N /Y_Adjust	-	0	Range: 0 to 65535
Reading Condition 8K	/Layout/SngSlv/Slave#N /LayoutReading Condition8K	707	1	0 = Standard 1 = Skew 45 2 = Low Contrast 3 = External Mirror 4 = Max Gain Boost
Reading Condition 6K	/Layout/SngSlv/Slave#N /LayoutReading Condition6K	708	1	0 = Standard 1 = Low Contrast 2 = Toggle Standard/Low Contrast

4.4 DATA COMMUNICATION SETTING

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
DATA COMMUNICATION SETTING				
Host Application Protocol Type	/Comms/Application	84	1	0 = Standard 1 = Crisplant 2 = Cargoscan
DATA FORMAT				
Header TX Start	/Comms/OutForm /HeadTx	505	1	0 = With Data 1 = After Reading Phase On
Termination after No Read Message	/Comms /OutForm /TermAfter	506	1	0 = Disable 1 = Enable
Message Tx Selection (On Line Operating Mode)	/Comms /OutForm /TxTrigSel	507	1	0 = On Decoding 1 = After Reading Phase Off
Format Type	/Comms/OutForm /FormatType	330	1	0 = Standard 1 = Advanced
Master Max Tx Delay After Phase Off (ms)	/Comms/OutForm /TX_TimeoutMaster	-	1	50 = 50 60 = 60 70 = 70 80 = 80 90 = 90 100 = 100 110 = 110 120 = 120 130 = 130 140 = 140 150 = 150 160 = 160 170 = 170 180 = 180 190 = 190 200 = 200 250 = 250 300 = 300 500 = 500
Code Identifier	/Comms /OutForm /codeID	399	1	0 = Disabled 1 = Standard AIM ID 2 = Custom
DATA FORMAT / CUSTOM CODE IDENTIFIER STRINGS				
Code 128 Identifier String	/Comms/OutForm /codIDStr/cod128	400	3	Length: 1 to 32
Code Interleaved 2/5 Identifier String	Comms/OutForm /codIDStr/cod25IL	401	3	Length: 1 to 32
Code 39 Standard Identifier String	Comms/OutForm /codIDStr/cod39	402	3	Length: 1 to 32
Code GS1-128 Identifier String	/Comms/OutForm /codIDStr/codEAN128	403	3	Length: 1 to 32

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Code EAN 13 Identifier String	Comms/OutForm /codIDStr/codEAN13	404	3	Length: 1 to 32
Code EAN 8 Identifier String	Comms/OutForm /codIDStr/codEAN8	405	3	Length: 1 to 32
Code UPCA Identifier String	/Comms/OutForm /codIDStr/codUPCA	406	3	Length: 1 to 32
Code UPCE Identifier String	/Comms/OutForm /codIDStr/codUPCE	407	3	Length: 1 to 32
Code Codabar Identifier String	/Comms/OutForm /codIDStr/codBAR	409	3	Length: 1 to 32
Code 93 Identifier String	/Comms/OutForm /codIDStr/cod93	410	3	Length: 1 to 32
Code EAN 13 Addon 2 Identifier String	/Comms/OutForm /codIDStr/codEAN13ADD2	419	3	Length: 1 to 32
Code EAN 8 Addon 2 Identifier String	/Comms/OutForm /codIDStr/codEAN8ADD2	420	3	Length: 1 to 32
Code UPC A Addon 2 Identifier String	/Comms/OutForm /codIDStr/codUPCAADD2	421	3	Length: 1 to 32
Code UPC E Addon 2 Identifier String	/Comms/OutForm /codIDStr/codUPCEADD2	422	3	Length: 1 to 32
Code EAN 13 Addon 5 Identifier String	/Comms/OutForm /codIDStr/codEAN13ADD5	423	3	Length: 1 to 32
Code EAN 8 Addon 5 Identifier String	/Comms/OutForm /codIDStr/codEAN8ADD5	424	3	Length: 1 to 32
Code UPC A Addon 5 Identifier String	/Comms/OutForm /codIDStr/codUPCAADD5	425	3	Length: 1 to 32
Code UPC E Addon 5 Identifier String	/Comms/OutForm /codIDStr/codUPCEADD5	426	3	Length: 1 to 32
GS1 DataBar Identifier String	/Comms/OutForm /codIDStr/GS1DataBar	441	3	Length: 1 to 32
GS1 DataBar Limited Identifier String	/Comms/OutForm /codIDStr /GS1DataBarLimited	444	3	Length: 1 to 32
GS1 DataBar Exp. Identifier String	/Comms/OutForm /codIDStr /GS1DataBarExpanded	445	3	Length: 1 to 32
DATA FORMAT / STANDARD PARAMETERS				
Header String	/Comms/OutForm /Standard/Header	6	3	Length: 0 to 128
Code Position Tx	/Comms/OutForm /Standard/CodePosition	-	1	0 = Disable 1 = Enable
Code Direction Identifier Enable	/Comms/OutForm /Standard/DirEn	508	1	0 = Disable 1 = Enable
Forward Direction String	/Comms/OutForm /Standard/FwDirection	509	3	Length: 0 to 32
Reverse Direction String	/Comms/OutForm /Standard/RvDirection	528	3	Length: 0 to 32

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Termination String	/Comms/OutForm /Standard/Terminator	7	3	Length: 0 to 128
Data Packet Separators	/Comms/OutForm /Standard/Separator	82	3	Length: 0 to 128
Code Field Length Setting	/Comms/OutForm /Standard/FieldType	45	1	0 = Variable Length 1 = Fixed Length
Code Field Length	/Comms/OutForm /Standard/FieldLen	46	0	Range: 0 to 60
Data Justification	/Comms/OutForm /Standard/FillDir	47	1	0 = Left 1 = Right
Fill Character	/Comms/OutForm /Standard/FillCh	48	3	Length: 1
DATA FORMAT / MULTIDATA				
Address Tx	/Comms/OutForm /Multidata/Address	-	1	0 = Disable 1 = Enable
Header	/Comms/OutForm /Multidata/AddrHeader	-	3	Length: 0 to 32
Separator	/Comms/OutForm /Multidata/AddrSeparator	-	3	Length: 0 to 32
CRISPLANT PARAMETERS				
Crisplant Manufacturer ID	/Comms/CrispPar /ID	61	2	Length: 1
Heartbeat Message	/Comms/CrispPar /HBEnable	-	1	0 = Disable 1 = Enable
Heartbeat Message Timing (ms)	/Comms/CrispPar /HBTime	-	0	Range: 40 to 60000
Type of Crisplant Protocol	/Comms/CrispPar /Protocol	-	1	0 = CSC 1 = CMC 2 = P10
Reading Mask Tx	/Comms/CrispPar /ReadMask	-	1	0 = Disable 1 = Enable
Code Type Tx	/Comms/CrispPar /CodeType	-	1	0 = Disable 1 = Enable
GS1-128 AI Stripping	/Comms/CrispPar /Gs1128AIStrip	-	1	0 = Disable 1 = Enable
Discard Reading in case of Missed Index Telegram	/Comms/CrispPar /MissedIdxDisc	715	1	0 = Disable 1 = Enable
CARGOSCAN PARAMETERS				
Code Field Length Setting	/Comms/CargoPar /FieldType	-	1	0 = Variable Length 1 = Fixed Length
Code Field Length	/Comms/CargoPar /FieldLen	-	0	Range: 0 to 48
Data Justification	/Comms/CargoPar/FillDir	-	1	0 = Left 1 = Right
Fill Character	/Comms/CargoPar/FillCh	-	3	Length: 1
Header String	/Comms/CargoPar/Header	-	3	Length: 0 to 128

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Termination String	/Comms/CargoPar /Terminator	-	3	Length: 0 to 128
S/W Divide Encoder Frequency	/Comms/CargoPar/DivEnc	-	1	0 = Disable 1 = Enable
CARGOSCAN PARAMETERS / OUTPUT MESSAGES SETTING				
Add AIM Prefix	/Comms/CargoPar /OutMsg/AddAimPrefix	-	1	0 = Disable 1 = Enable
Purolator Custom Check	/Comms/CargoPar /OutMsg /PurolatorCustumCheck	-	1	0 = Disable 1 = Enable
AM/PM Behaviour	/Comms/CargoPar /OutMsg/AMPM	-	1	0 = Disable 1 = Enable
AM Message Target	/Comms/CargoPar /OutMsg/AMPort	-	1	0 = Main 1 = Aux 2 = Modem 3 = Socket1 4 = Socket2 5 = Socket3 6 = Ext Eth Socket1 7 = Ext Eth Socket2 8 = Ext Eth Socket3
Heartbeat Function	/Comms/CargoPar /OutMsg/HBEn	-	1	0 = Disable 1 = Enable
Heartbeat Timeout (ms)	/Comms/CargoPar /OutMsg/HBTimeOut	-	0	Range: 40 to 60000
Heartbeat String	/Comms/CargoPar /OutMsg/HBString	-	3	Length: 0 to 18
Conveyor Directionality Input	/Comms/CargoPar /OutMsg/ConvDirIn	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Photoeye Counter Function	/Comms/CargoPar /OutMsg/PhtECnt	-	1	0 = Disable 1 = Enable
Photoeye Counter Function Input	/Comms/CargoPar /OutMsg/PhtEIn	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Photoeye Leading Edge Message	/Comms/CargoPar /OutMsg/PhtEMsg	-	3	Length: 0 to 16
Spontaneous Status Message	/Comms/CargoPar /OutMsg/ExtDiag	-	1	0 = Disable 1 = Enable
Multi Tx Transport Disabled	/Comms/CargoPar /OutMsg/MTxEnable	-	1	0 = Disable 1 = Enable
Diagnostic Data On Main Serial Channel	/Comms/CargoPar /OutMsg/DiagSerMain	-	1	0 = Disable 1 = Enable
Diagnostic Data on Auxiliary Serial Channel	/Comms/CargoPar /OutMsg/DaigSerAux	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Diagnostic Data On Modem Serial Channel	/Comms/CargoPar /OutMsg/DiagSerModem	-	1	0 = Disable 1 = Enable
Diagnostic Data on User Socket (depth: N = 1 to 3)	/Comms/CargoPar /OutMsg/Ethernet /DiagUsrSock#N	-	1	0 = Disable 1 = Enable
Diagnostic Data on Ext Eth User Socket (depth: N = 1 to 3)	/Comms/CargoPar /OutMsg/Ethernet1 /DiagUsrSock#N	-	1	0 = Disable 1 = Enable
Debug Data on Main Serial Channel	/Comms/CargoPar /OutMsg/DbgSerMain	-	1	0 = Disable 1 = Enable
Debug Data on Auxiliary Serial Channel	/Comms/CargoPar /OutMsg/DbgSerAux	-	1	0 = Disable 1 = Enable
Debug Data On Modem Serial Channel	/Comms/CargoPar /OutMsg/DbgSerModem	-	1	0 = Disable 1 = Enable
Debug Data on User Socket (depth: N = 1 to 3)	/Comms/CargoPar /OutMsg/Ethernet /DbgUsrSock#N	-	1	0 = Disable 1 = Enable
Debug Data on Ext Eth User Socket (depth: N = 1 to 3)	/Comms/CargoPar /OutMsg/Ethernet1 /DbgUsrSock#N	-	1	0 = Disable 1 = Enable
CARGOSCAN PARAMETERS / CODE FILTERS				
Enable UPS Code Filter	/Comms/CargoPar /CarCodes/UPSFlt	-	1	0 = Disable 1 = Enable
Enable German Post 2/5 IL Code Filter	/Comms/CargoPar /CarCodes/GPFlt	-	1	0 = Disable 1 = Enable
Enable SSCC-18 Code Filter	/Comms/CargoPar /CarCodes/EANFlt	-	1	0 = Disable 1 = Enable
Enable DPD Code Filter	/Comms/CargoPar /CarCodes/DPDFltEn	-	1	0 = Disable 1 = Enable
CARGOSCAN PARAMETERS / CODE FILTERS / UPS CODE TYPE FILTERS				
UPS codes 1Z Type	/Comms/CargoPar /CarCodes /UPSFIlter/UPS1Z	43	1	0 = Disable 1 = Enable
Service Upgrade, '403' Start String length 8	/Comms/CargoPar /CarCodes /UPSFIlter/UPSServ	-	1	0 = Disable 1 = Enable
Transmit all codes PTN type except codes below that must be selected	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/UPSPTN	44	1	0 = Disable 1 = Enable
Including codes that start with '400…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN400	-	1	0 = Disable 1 = Enable
Including codes that start with '420…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN420	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Including codes that start with '421…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN421	-	1	0 = Disable 1 = Enable
Including codes that start with '51L…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN51L	-	1	0 = Disable 1 = Enable
Including codes that start with '52L…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN52L	-	1	0 = Disable 1 = Enable
Including codes that start with '54L…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN54L	-	1	0 = Disable 1 = Enable
Including codes that start with '55L…'	/Comms/CargoPar /CarCodes /UPSFIlter/PTN/PTN55L	-	1	0 = Disable 1 = Enable
Start with '420' length 8 or 12	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS420	-	1	0 = Disable 1 = Enable
Start with '421' length from 6 to 15	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS421	-	1	0 = Disable 1 = Enable
Start with '51L' length 8, 9, 12	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS51L	-	1	0 = Disable 1 = Enable
Start with '52L' length 8, 9, 12	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS52L	-	1	0 = Disable 1 = Enable
Start with '54L' length from 6 to 19	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS54L	-	1	0 = Disable 1 = Enable
Start with '55L' length from 6 to 19	/Comms/CargoPar /CarCodes /UPSFIlter/POS/POS55L	-	1	0 = Disable 1 = Enable
CARGOSCAN PARAMETERS / CODE FILTERS / DPD CODE TYPE FILTERS				
Enable codes 2/5 with length 10 digits filter	/Comms/CargoPar /CarCodes /DPDFlt/DPD10	-	1	0 = Disable 1 = Enable
Enable codes 2/5 with length 12 digits filter	/Comms/CargoPar /CarCodes /DPDFlt/DPD12	-	1	0 = Disable 1 = Enable
Enable codes 2/5 with length 4 digits starting with '0…' filter	/Comms/CargoPar /CarCodes /DPDFlt/DPD0	-	1	0 = Disable 1 = Enable
Enable codes 2/5 with length 4 digits starting with '90..' filter	/Comms/CargoPar /CarCodes /DPDFlt/DPD90	-	1	0 = Disable 1 = Enable
Enable codes 128 with length 28 digits filter	/Comms/CargoPar /CarCodes /DPDFlt/DPD128	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
MAIN SERIAL PORT				
Data Tx	/Comms/SerMain /SerMain	510	1	0 = Disable 1 = Enable
Heartbeat	/Comms/SerMain /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/SerMain /HeartbeatTimeOut	-	0	Range: 1 to 3600
Heartbeat Header String	/Comms/SerMain /heartbeatStart	-	3	Length: 0 to 32
Heartbeat Terminator String	/Comms/SerMain /HeartbeatStop	-	3	Length: 0 to 32
Send Diagnostic Info	/Comms /SerMain/SDSMAIN	-	1	0 = Disable 1 = Enable
MAIN SERIAL PORT PARAMETERS				
Main Port Communication Mode	/Comms/SerMain /Line/Mode	33	1	0 = Standard 2 = Siemens 3964 3 = Siemens RK512
Main Port Electrical Interface	/Comms/SerMain /Line/MainHW	10	1	0 = RS232 1 = RS485 Full Duplex
Handshake (RS232)	/Comms/SerMain /Line/FlowCtrl	57	1	0 = None 1 = Hardware (RTS/CTS) 2 = Software (Xon/Xoff)
Handshake (RS485)	/Comms/SerMain /Line/Flow485	60	1	0 = None 1 = Software (Xon/Xoff)
Baud Rate	/Comms/SerMain /Line/StdBaud	49	1	8 = 1200 1 = 2400 2 = 4800 3 = 9600 4 = 19200 5 = 38400 6 = 57600 7 = 115200
Parity	/Comms/SerMain /Line/Parity	50	1	0 = None 1 = Odd 2 = Even
Data Bits	/Comms/SerMain /Line/Data	51	1	0 = 7 1 = 8
Stop Bits	/Comms/SerMain /Line/Stop	52	1	0 = 1 1 = 2
Checksum (Siemens)	/Comms/SerMain /Line/S3964Chk	-	1	0 = Disable 1 = Enable
Priority (Siemens)	/Comms/SerMain /Line/S3964Prio	-	1	0 = Low 1 = High
Header n. 5 (Siemens RK512)	/Comms/SerMain /Line/SRKHead5	-	3	Length: 1
Header n. 6 (Siemens RK512)	/Comms/SerMain /Line/SRKHead6	-	3	Length: 1
Header n. 9 (Siemens RK512)	/Comms/SerMain /Line/SRKHead9	-	3	Length: 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Header n. 10 (Siemens RK512)	/Comms/SerMain /Line/SRKHead10	-	3	Length: 1
Filler Character (Siemens RK512)	/Comms/SerMain /Line/SRKFillChar	-	3	Length: 1
Filler Position (Siemens RK512)	/Comms/SerMain /Line/SRKFillerPos	-	1	0 = Before Data 1 = After Data
AUXILIARY SERIAL PORT				
Data Tx	/Comms/SerAux /SerAux	511	1	0 = Disable 1 = Enable
Heartbeat	/Comms/SerAux /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/SerAux /HeartbeatTimeOut	-	0	Range: 1 to 3600
Heartbeat Header String	/Comms/SerAux /heartbeatStart	-	3	Length: 0 to 32
Heartbeat Terminator String	/Comms/SerAux /HeartbeatStop	-	3	Length: 0 to 32
Pass Through	/Comms/SerAux /PTSource	512	1	0 = Disable 1 = Enable
Send Diagnostic Info	/Comms/SerAux /SDSAUX	-	1	0 = Disable 1 = Enable
PASS THROUGH OPTIONS				
String Max Length	/Comms/SerAux /PTOpt/PTMaxDim	513	0	Range: 0 to 32767
Termination String	/Comms /SerAux/PTOpt /PTTerm	514	3	Length: 1 to 32
AUXILIARY SERIAL PORT PARAMETERS				
Baud Rate	/Comms/SerAux /Line/StdBaud	53	1	8 = 1200 1 = 2400 2 = 4800 3 = 9600 4 = 19200 5 = 38400 6 = 57600 7 = 115200
Parity	/Comms/SerAux /Line/Parity	54	1	0 = None 1 = Odd 2 = Even
Data Bits	/Comms/SerAux /Line/Data	55	1	0 = 7 1 = 8
Stop Bits	/Comms/SerAux /Line/Stop	56	1	0 = 1 1 = 2
BUILT-IN ETHERNET / LINE PARAMETERS				
Status	/Comms/Ethernet /System/Status	90	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
SW Release (Read-only)	/Comms/Ethernet /System/Sw_release	91	2	Length: 0 to 10
MAC Address (Read-only)	/Comms/Ethernet /System/MAC	92	2	Length: 0 to 16
Ethernet Speed	/Comms/Ethernet /System/Eth_speed	94	1	0 = Auto 1 = 10Mbit Half 2 = 10Mbit Full 3 = 100Mbit Half 4 = 100Mbit Full"
DHCP	/Comms/Ethernet /System/DHCP	95	1	0 = Disable 1 = Enable
IP Address	/Comms/Ethernet /System/IP_address	96	2	Length: 0 to 16
IP Address Active	/Comms/Ethernet /System/IP_addressBuiltA	672	2	Length: 0 to 16
IP Address Standby	/Comms/Ethernet /System/IP_addressBuiltS	673	2	Length: 0 to 16
IP Address Working	/Comms/Ethernet /System/IP_addressBuiltW	674	2	Length: 0 to 16
IP Address Protecting	/Comms/Ethernet /System/IP_addressBuiltP	675	2	Length: 0 to 16
IP Address Actual (Read-only)	/Comms/Ethernet /System/IP_addressBuilt Actual	676	2	Length: 0 to 16
Subnet Address	/Comms/Ethernet /System/IP_netmask	97	2	Length: 0 to 16
Gateway Address	/Comms/Ethernet /System/IP_gateway	98	2	Length: 0 to 16
DNS Address 1	/Comms/Ethernet /System/IP_dns1	99	2	Length: 0 to 16
DNS Address 2	/Comms/Ethernet /System/IP_dns2	100	2	Length: 0 to 16
BUILT-IN ETHERNET / SERVICES / ETHERNET IP				
Status	/Comms/Ethernet /Services/EthernetIP /Status	66	1	0 = Disable 1 = Enable
PS Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/PS	-	1	0 = Disable 1 = Enable
PS AUX Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/PSAUX	-	1	0 = Disable 1 = Enable
Input 1 Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/Input1	291	1	0 = Disable 1 = Enable
Input 2 Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/Input2	292	1	0 = Disable 1 = Enable
Input 3 Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/Input3	293	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Phase Echo	/Comms/Ethernet /Services/EthernetIP /IO/In/PhaseEcho	295	1	0 = Disable 1 = Enable
Output 1	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output1	296	1	0 = Disable 1 = Enable
Output 2	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output2	297	1	0 = Disable 1 = Enable
Output 3	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output3	298	1	0 = Disable 1 = Enable
Output 4	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output4	-	1	0 = Disable 1 = Enable
Output 5	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output5	-	1	0 = Disable 1 = Enable
Output 6	/Comms/Ethernet /Services/EthernetIP /IO/Out/Output6	-	1	0 = Disable 1 = Enable
BUILT-IN ETHERNET / SERVICES / MODBUS CLIENT				
Status	/Comms/Ethernet /Services/ModbusClient /Status	125	1	0 = Disable 1 = Enable
Data Tx	/Comms/Ethernet /Services/ModbusClient /ModbusC	-	1	0 = Disable 1 = Enable
Server Address	/Comms/Ethernet /Services/ModbusClient /Server_address	126	2	Max Length: 256
Start Register Number	/Comms/Ethernet /Services/ModbusClient /Start_reg	127	0	Range: 0 to (231-1)
Number Of Registers	/Comms/Ethernet /Services/ModbusClient /Num_reg	128	0	Range: 1 to (231-1)
BUILT-IN ETHERNET / SERVICES / WEBSENTINEL CLIENT				
Enable	/Comms/Ethernet /Services/SentinelClient /Enable	-	1	0 = Disable 1 = Enable
WebSentinel Socket	/Comms/Ethernet /Services/SentinelClient /SentinelSocket	-	1	0 = Socket 1 1 = Socket 2 2 = Socket 3
Conveyor Speed Check Type	/Comms/Ethernet /Services/SentinelClient /ConvSpeedCheck /ConvSpeedCheckType	-	1	0 = Percent 1 = Absolute

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Max Conveyor Speed Percent Error (%)	/Comms/Ethernet /Services/SentinelClient /ConvSpeedCheck /MaxConvSpeed PercentError	-	0	Range: 0 to 20
Max Conveyor Speed Absolute Error (mm/s)	/Comms/Ethernet /Services/SentinelClient /ConvSpeedCheck /MaxConvSpeedAbs Error	-	0	Range: 0 to 3000
Input timeout (secs)	/Comms/Ethernet /Services/SentinelClient /InputCheck /InputTimeOut	-	0	Range: 3 to 10
Send Autoconfiguration Message	/Comms/Ethernet /Services/SentinelClient /SentineAuto configurationMessage	-	1	0 = Disable 1 = Enable
Send Extended Parcel Message	/Comms/Ethernet /Services/SentinelClient /SentinelExteNded Parcel	-	1	0 = Disable 1 = Enable
BUILT-IN ETHERNET / SERVICES / USER SOCKET #N (DEPTH: N = 1 to 3)				
Status	/Comms/Ethernet /Services/UserSocket#N /Status	134	1	0 = Disable 1 = Enable
Data Tx	/Comms/Ethernet /Services/UserSocket#N /Sock	-	1	0 = Disable 1 = Enable
Heartbeat	/Comms/Ethernet /Services/UserSocket#N /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/Ethernet /Services/UserSocket#N /HeartbeatTimeOut	-	0	Range: 5 to 3600
Heartbeat Header String	/Comms/Ethernet /Services/UserSocket#N /heartbeatStart	-	3	Length: 0 to 32
Heartbeat Terminator String	/Comms/Ethernet /Services/UserSocket#N /HeartbeatStop	-	3	Length: 0 to 32
Send Diagnostic Info	/Comms/Ethernet /Services/UserSocket#N /SDSSOCK	-	1	0 = Disable 1 = Enable
Socket Type	/Comms/Ethernet /Services/UserSocket#N /Type	135	1	0 = Server 1 = Client
Server Address	/Comms/Ethernet /Services/UserSocket#N /Server_address	136	2	Length: 0 to 256

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Protocol	/Comms/Ethernet /Services/UserSocket#N /Protocol	137	1	0 = TCP 1 = UDP
Port Number	/Comms/Ethernet /Services/UserSocket#N /Port	138	0	Range: 0 to 65535
DEVICENET				
Data Tx	/Comms/DeviceNet /DeviceNet	381	1	0 = Disable 1 = Enable
DEVICENET / INTERNAL PARAMETERS				
Parameters Updating	/Comms/DeviceNet /System/UpdatePar	-	1	0 = Disable 1 = Enable
DEVICENET / DATA PORT PROTOCOL				
Serial Protocol	/Comms/DeviceNet /SerialData/Protocol	-	1	0 = Generic/Std 1 = Generic/Rev 4 = Header/Std 5 = Header/Rev
Termination Char Enable	/Comms/DeviceNet /SerialData /InStrSuffixEnable	-	1	0 = Disable 1 = Enable
Termination Char Value	/Comms/DeviceNet /SerialData /InStrSuffixValue	-	0	Range: 0 to 31
Buffer Flush Enable	/Comms/DeviceNet /SerialData /BufFlushEnable	-	1	0 = Disable 1 = Enable
Buffer Flush Delay (milliseconds)	/Comms/DeviceNet /SerialData /BufFlushDelay	-	0	Range: 8 to 9999
DEVICENET / BUS COMMUNICATION				
Data Rate	/Comms/DeviceNet /BusData/BusRate	-	1	0 = 125K 1 = 250K 2 = 500k
Node Address (MAC ID)	/Comms/DeviceNet /BusData/NodeAddr	-	0	Range: 0 to 63
Protocol	/Comms/DeviceNet /BusData/Protocol	-	1	0 = Polled 1 = Bit Strobe 2 = Change of State
Master Input Area Size	/Comms/DeviceNet /BusData/TxMsgSize	-	0	Range: 0 to 254
Master Output Area Size	/Comms/DeviceNet /BusData/RxMsgSize	-	0	Range: 0 to 254
PROFIBUS				
Data Tx	/Comms/ProfiBus /ProfiBus	266	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Heartbeat	/Comms/ProfiBus /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/ProfiBus /HeartbeatTimeOut	-	0	Range: 1 to 3600
Heartbeat Header String	/Comms/ProfiBus /heartbeatStart	-	3	Length: 0 to 32
Heartbeat Terminator String	/Comms/ProfiBus /HeartbeatStop	-	3	Length: 0 to 32
Send Diagnostic Info	/Comms/ProfiBus /SDSPBUS	-	1	0 = Disable 1 = Enable
Host Heartbeat	/Comms/ProfiBus /HostHeartbeat	-	1	0 = Disable 1 = Enable
Host Heartbeat Timeout	/Comms/ProfiBus /HostHeartbeatTimeOut	-	0	Range: 1 to 3600
PROFIBUS / BUS COMMUNICATION				
Node Address	/Comms/ProfiBus /BusData/NodeAddr	268	0	Range: 0 to 125
Data Flow Control	/Comms/ProfiBus /BusData/FlowControl	269	1	0 = Disable 1 = DPD Driver 2 = DAD Driver 3 = SDP Driver
Data Consistency	/Comms/ProfiBus /ConsistencyAbil	290	1	0 = Disable 1 = Enable
PROFIBUS / DIGITAL I/O CONDITIONING				
PS Echo	/Comms/ProfiBus /BusData/IO/In/PS	-	1	0 = Disable 1 = Enable
PS AUX Echo	/Comms/ProfiBus /BusData/IO/In/PSAUX	-	1	0 = Disable 1 = Enable
Input 1 Echo	/Comms/ProfiBus /BusData/IO/In/Input1	-	1	0 = Disable 1 = Enable
Input 2 Echo	/Comms/ProfiBus /BusData/IO/In/Input2	-	1	0 = Disable 1 = Enable
Input 3 Echo	/Comms/ProfiBus /BusData/IO/In/Input3	-	1	0 = Disable 1 = Enable
Phase Echo	/Comms/ProfiBus /BusData/IO/In/PhaseEcho	-	1	0 = Disable 1 = Enable
Output 1	/Comms/ProfiBus /BusData/IO/Out/Ioutput1	-	1	0 = Disable 1 = Enable
Output 2	/Comms/ProfiBus /BusData/IO/Out/Ioutput2	-	1	0 = Disable 1 = Enable
Output 3	/Comms/ProfiBus /BusData/IO/Out/Ioutput3	-	1	0 = Disable 1 = Enable
Output 4	/Comms/ProfiBus /BusData/IO/Out/Ioutput4	-	1	0 = Disable 1 = Enable
Output 5	/Comms/ProfiBus /BusData/IO/Out/Ioutput5	-	1	0 = Disable 1 = Enable
Output 6	/Comms/ProfiBus /BusData/IO/Out/Ioutput6	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
ADDITIONAL ETHERNET / LINE PARAMETERS (Only -1230 Models)				
Status	/Comms/Ethernet1 /System/Status	612	1	0 = Disable 1 = Enable
SW Release (Read-only)	/Comms/Ethernet1 /System/Sw_release	613	2	Length: 0 to 10
MAC Address (Read-only)	/Comms/Ethernet1 /System/MAC	614	2	Length: 0 to 16
Ethernet Speed	/Comms/Ethernet1 /System/Eth_speed	616	1	0 = Auto 1 = 10Mbit Half 2 = 10Mbit Full 3 = 100Mbit Half 4 = 100Mbit Full"
DHCP	/Comms/Ethernet1 /System/DHCP	617	1	0 = Disable 1 = Enable
IP Address	/Comms/Ethernet1 /System/IP_address	618	2	Length: 0 to 16
IP Address Active	/Comms/Ethernet1 /System/IP_addressBuiltA	677	2	Length: 0 to 16
IP Address Standby	/Comms/Ethernet1 /System/IP_addressBuiltS	678	2	Length: 0 to 16
IP Address Working	/Comms/Ethernet1 /System/IP_addressBuiltW	679	2	Length: 0 to 16
IP Address Protecting	/Comms/Ethernet1 /System/IP_addressBuiltP	680	2	Length: 0 to 16
IP Address Actual (Read-only)	/Comms/Ethernet1 /System/IP_addressBuilt Actual	681	2	Length: 0 to 16
Subnet Address	/Comms/Ethernet1 /System/IP_netmask	619	2	Length: 0 to 16
Gateway Address	/Comms/Ethernet1 /System/IP_gateway	620	2	Length: 0 to 16
DNS Address 1	/Comms/Ethernet1 /System/IP_dns1	621	2	Length: 0 to 16
DNS Address 2	/Comms/Ethernet1 /System/IP_dns2	622	2	Length: 0 to 16
ADDITIONAL ETHERNET / SERVICES / MODBUS CLIENT				
Status	/Comms/Ethernet1 /Services/ModbusClient /Status	647	1	0 = Disable 1 = Enable
Data Tx	/Comms/Ethernet1 /Services/ModbusClient /ModbusC	-	1	0 = Disable 1 = Enable
Server Address	/Comms/Ethernet1 /Services/ModbusClient /Server_address	648	2	Max Length: 256
Start Register Number	/Comms/Ethernet1 /Services/ModbusClient /Start_reg	649	0	Range: 0 to (231-1)
Number Of Registers	/Comms/Ethernet1 /Services/ModbusClient /Num_reg	650	0	Range: 1 to (231-1)

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
ADDITIONAL ETHERNET / SERVICES / WEBSENTINEL CLIENT				
Enable	/Comms/Ethernet1 /Services/SentinelClient /Enable	-	1	0 = Disable 1 = Enable
WebSentinel Socket	/Comms/Ethernet1 /Services/SentinelClient /SentinelSocket	-	1	0 = Socket 1 1 = Socket 2 2 = Socket 3
Conveyor Speed Check Type	/Comms/Ethernet1 /Services/SentinelClient /ConvSpeedCheck /ConvSpeedCheckType	-	1	0 = Percent 1 = Absolute
Max Conveyor Speed Percent Error (%)	/Comms/Ethernet1 /Services/SentinelClient /ConvSpeedCheck /MaxConvSpeed PercentError	-	0	Range: 0 to 20
Max Conveyor Speed Absolute Error (mm/s)	/Comms/Ethernet1 /Services/SentinelClient /ConvSpeedCheck /MaxConvSpeedAbs Error	-	0	Range: 0 to 3000
Input timeout (secs)	/Comms/Ethernet1 /Services/SentinelClient /InputCheck /InputTimeOut	-	0	Range: 3 to 10
Send Autoconfiguration Message	/Comms/Ethernet1 /Services/SentinelClient /SentineAuto configurationMessage1	-	1	0 = Disable 1 = Enable
Send Extended Parcel Message	/Comms/Ethernet1 /Services/SentinelClient /SentinelExteNded Parcel1	-	1	0 = Disable 1 = Enable
ADDITIONAL ETHERNET / SERVICES / USER SOCKET #N (DEPTH: N = 1 to 3)				
Status	/Comms/Ethernet1 /Services/UserSocket#N /Status	656	1	0 = Disable 1 = Enable
Data Tx	/Comms/Ethernet1 /Services/UserSocket#N /Sock	-	1	0 = Disable 1 = Enable
Heartbeat	/Comms/Ethernet1 /Services/UserSocket#N /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/Ethernet1 /Services/UserSocket#N /HeartbeatTimeOut	-	0	Range: 5 to 3600
Heartbeat Header String	/Comms/Ethernet1 /Services/UserSocket#N /heartbeatStart	-	3	Length: 0 to 32

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Heartbeat Terminator String	/Comms/Ethernet1 /Services/UserSocket#N /HeartbeatStop	-	3	Length: 0 to 32
Send Diagnostic Info	/Comms/Ethernet1 /Services/UserSocket#N /SDSSOCK	-	1	0 = Disable 1 = Enable
Socket Type	/Comms/Ethernet1 /Services/UserSocket#N /Type	657	1	0 = Server 1 = Client
Server Address	/Comms/Ethernet1 /Services/UserSocket#N /Server_address	658	2	Length: 0 to 256
Protocol	/Comms/Ethernet1 /Services/UserSocket#N /Protocol	659	1	0 = TCP 1 = UDP
Port Number	/Comms/Ethernet1 /Services/UserSocket#N /Port	660	0	Range: 0 to 65535
MODEM SERIAL PORT				
Data Tx	/Comms/SerModem /SerModem	682	1	0 = Disable 1 = Enable
Heartbeat	/Comms/SerModem /Heartbeat	-	1	0 = Disable 1 = Enable Unconditioned 2 = Enable Conditioned
Heartbeat Timeout	/Comms/SerModem /HeartbeatTimeOut	-	0	Range: 1 to 3600
Heartbeat Header String	/Comms/SerModem /heartbeatStart	-	3	Length: 0 to 32
Heartbeat Terminator String	/Comms/SerModem /HeartbeatStop	-	3	Length: 0 to 32
Send Diagnostic Info	/Comms/SerModem /SDSMODEM	-	1	0 = Disable 1 = Enable
MODEM SERIAL PORT PARAMETERS				
Baud Rate	/Comms/SerModem /Line/StdBaud	683	1	8 = 1200 1 = 2400 2 = 4800 3 = 9600 4 = 19200 5 = 38400 6 = 57600 7 = 115200
Configure and Reset Modem on Restart	/Comms/SerModem /Line/ConfigureResetModem OnRestart	704	1	0 = Disable 1 = Enable
Modem Enabled	/Comms/SerModem /Line/ModemEnabled	684	1	0 = Disable 1 = Enable
Country Code	Comms/SerModem /Line/Country	685	1	0 = Europe 1 = Albania 2 = Algeria 3 = Andorra 4 = Argentina

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
				5 = Australia 6 = Bolivia 7 = Bosnia-Herzegovina 8 = Brazil 9 = Brunei 10 = Bulgaria 11 = Canada 12 = Chile 13 = China 14 = Colombia 15 = CostaRica 16 = Croatia 17 = Cyprus 18 = CzechRep 19 = DominicanRep 20 = Ecuador 21 = Egypt 22 = ElSalvador 23 = Estonia 24 = Guatemala 25 = Honduras 26 = HongKong 27 = Hungary 28 = India 29 = Indonesia 30 = Israel 31 = Japan 32 = Jordan 33 = Korea 34 = Kuwait 35 = Lebanon 36 = Lithuania 37 = Macedonia 38 = Malaysia 39 = Malta 40 = Mexico 41 = Monaco 42 = Montenegro 43 = Morocco 44 = NewZealand 45 = Nicaragua 46 = Nigeria 47 = Oman 48 = Pakistan 49 = Panama 50 = Paraguay 51 = Peru 52 = Philippines 53 = Poland 54 = Romania 55 = Russia 56 = SanMarino 57 = SaudiArabia

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
				58 = Senegal 59 = Serbia 60 = Singapore 61 = SlovakRep 62 = Slovenia 63 = SouthAfrica 64 = SriLanka 65 = Taiwan 66 = Thailand 67 = Tunisia 68 = Turkey 69 = Ukraine 70 = UAE 71 = Uruguay 72 = USA 73 = Venezuela 75 = Belarus 76 = Yemen

4.5 DIGITAL I/O SETTING

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
DIGITAL INPUT LINES				
Debouncing For Input 1, 2 and 3	/IO/In/Debounce_inputs	11	1	1 = 500 μs 3 = 5 ms
Debouncing For Encoder	/IO/In/Debounce_tach	13	1	1 = 500 μs 3 = 5 ms
Debouncing For PS and PS AUX	/IO/In/Debounce_ps	13	1	1 = 500 μs 3 = 5 ms
PS Active Level Overridden by Operating Mode	/IO/In/PS_Lev	229	1	0 = Active Closed 1 = Active Open
PS AUX Active Level Overridden By Operating Mode	/IO/In/PSAUX_Lev	231	1	0 = Active Closed 1 = Active Open
Input 1 Active Level Overridden By Operating Mode	/IO/In/IN1_Lev	232	1	0 = Active Closed 1 = Active Open
Input 2 Active Level Overridden By Operating Mode	/IO/In/IN2_Lev	-	1	0 = Active Closed 1 = Active Open
Input 3 Active Level Overridden By Operating Mode	/IO/In/IN3_Lev	-	1	0 = Active Closed 1 = Active Open

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
DIGITAL OUTPUT LINES / OUTPUT 1				
Use	/IO/Out/Out0/Use	-	1	1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out0/Idle	19	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Out/Out0/Active	20	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Out/Out0/Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Out/Out0/Deactive	21	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out0/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Out/Out0 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out0 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Out/Out0/Timeout	22	0	Range: 40 to 15000
DIGITAL OUTPUT LINES / OUTPUT 2				
Use	/IO/Out/Out1/Use	-	1	1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out1/Idle	23	1	0 = Normally Open 1 = Normally Closed

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Activation Event	/IO/Out/Out1/Active	24	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Out/Out1/Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Out/Out1/Deactive	25	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out1/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Out/Out1 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out1 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Out/Out1 /Timeout	26	0	Range: 40 to 15000
DIGITAL OUTPUT LINES / OUTPUT 3				
Use	/IO/Out/Out2/Use	-	1	1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out2/Idle	27	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Out/Out2/Active	28	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Alternative Activation Event	/IO/Out/Out2/Active1		1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Out/Out2/Deactive	29	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out2/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Out/Out2 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out2 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Out/Out2 /Timeout	30	0	Range: 40 to 15000
DIGITAL OUTPUT LINES / OUTPUT 4				
Use	/IO/Out/Out3/Use	-	1	1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out3/Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Out/Out3/Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Out/Out3/Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Deactivation Event	/IO/Out/Out3/Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out3/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Out/Out3 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out3 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Out/Out3/Timeout	-	0	Range: 40 to 15000
DIGITAL OUTPUT LINES / OUTPUT 5				
Use	/IO/Out/Out4/Use	-	1	1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out4/Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Out/Out4/Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Out/Out4/Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Out/Out4/Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out4/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Activate On Error	/IO/Out/Out4 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out4 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Out/Out4/Timeout	-	0	Range: 40 to 15000
DIGITAL OUTPUT LINES / OUTPUT 6				
Use	/IO/Out/Out5/Use	-	1	0 = Redundancy 1 = Local 2 = Built-in EthernetIP 3 = Built-in Profinet 4 = Additional EthernetIP 5 = Additional Profinet 6 = Profibus
Line State	/IO/Out/Out5/Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Out/Out5/Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Out/Out5/Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Out/Out5/Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Out/Out5/Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Out/Out5 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Out/Out5 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Deactivation Timeout (ms)	/IO/Out/Out5/Timeout	-	0	Range: 40 to 15000
RELAYS / RELAY 1				
Line State	/IO/Relays/Relay0 /Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Relays/Relay0 /Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Relays/Relay0 /Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Relays/Relay0 /Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Relays/Relay0 /Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Relays/Relay0 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Relays/Relay0 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Relays/Relay0 /Timeout	-	0	Range: 500 to 15000
RELAYS / RELAY 2				
Line State	/IO/Relays/Relay1 /Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Relays/Relay1 /Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Alternative Activation Event	/IO/Relays/Relay1 /Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Relays/Relay1 /Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Relays/Relay1 /Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off
Activate On Error	/IO/Relays/Relay1 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Relays/Relay1 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Relays/Relay1 /Timeout	-	0	Range: 500 to 15000
RELAYS / RELAY 3				
Line State	/IO/Relays/Relay2 /Idle	-	1	0 = Normally Open 1 = Normally Closed
Activation Event	/IO/Relays/Relay2 /Active	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Alternative Activation Event	/IO/Relays/Relay2 /Active1	-	1	0 = None 1 = Complete Read 2 = Partial Read 3 = No Read 5 = Phase On 6 = Phase Off 8 = Multiple Read
Deactivation Event	/IO/Relays/Relay2 /Deactive	-	1	0 = None 7 = Timeout 5 = Phase On 6 = Phase Off
Alternative Deactivation Event	/IO/Relays/Relay2 /Deactive1	-	1	0 = None 5 = Phase On 6 = Phase Off

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Activate On Error	/IO/Relays/Relay2 /ActiveDiagnoErr	-	1	0 = Disable 1 = Any Diagnostic Error 2 = PS or Encoder Error
Deactivate When Errors Recovered	/IO/Relays/Relay2 /DeactiveDiagnoNoErr	-	1	0 = Disable 1 = All Diagnostic Errors Recovered 2 = PS and Encoder Errors Recovered
Deactivation Timeout (ms)	/IO/Relays/Relay2 /Timeout	-	0	Range: 500 to 15000

4.6 SCANNER CLUSTER

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
LOCAL DEVICE NETWORK SETTING				
Cluster Description	/Cluster/Descr	-	2	Length: 0 to 32
Topology Role	/Cluster/TopRole	193	1	0 = Master (SYNCHRONIZED) 1 = Master (MULTIDATA) 3 = Other
Lon Noise Threshold	/Cluster /NoiseLonThresholdCluster	703	0	Range: 0 to 7
DEVICE IDENTIFICATION #N (DEPTH: N = 1 to 31)				
Device Enable	/Cluster/Device#N /Enable	-	1	0 = Disable 1 = Enable
Device Cluster	/Cluster/Device#N /Descr	-	2	Length: 0 to 32

4.7 DIAGNOSTICS

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
DIAGNOSTICS				
PackTrack Debug Message Tx	/Diagno /PkTrDbg_MsgTx	-	1	0 = Disable 1 = Enable
PackTrack Debug Message Target	/Diagno/MessagePort	-	1	0 = Main 1 = Aux 2 = Socket1 3 = Socket2 4 = Socket3 6 = Ext Eth Socket1 7 = Ext Eth Socket2 8 = Ext Eth Socket3 9 = Modem

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
PackTrack Debug Message Digital Input	/Diagno/PkTrDbg_Input	-	1	0 = None 1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Lonworks Debug Application Message Tx	/Diagno /LonApplMsg	-	1	0 = Disable 1 = Enable
Lonworks Debug Application Message Target	/Diagno /LonApplMsgPort	-	1	0 = Main 1 = Aux 2 = Socket1 3 = Socket2 4 = Socket3 6 = Ext Eth Socket1 7 = Ext Eth Socket2 8 = Ext Eth Socket3 9 = Modem
Enable	/Diagno/Enable	-	1	0 = Disable 1 = Enable
Conveyor Info	/Diagno/ConveyorInfo	-	1	0 = Not Available 1 = Available
Conveyor Info Provider	/Diagno /ConveyorInfoProvider	-	1	0 = Application SW 1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Refresh Time	/Diagno/RefreshT	-	1	1 = 1 sec 2 = 2 sec 5 = 5 sec 10 = 10 sec 30 = 30 sec 60 = 1 min
Slave Diagnostics	/Diagno/NetDiag	37	1	0 = Disable 1 = Enable
Local Network Failure	/Diagno/LocalNetBoard	-	1	0 = Disable 1 = Enable
Local Ethernet Failure	/Diagno/LocalEthBoard	-	1	0 = Disable 1 = Enable
Local Compact Flash Failure	/Diagno/LocalCF	-	1	0 = Disable 1 = Enable
No Phase Timeout	/Diagno/NoPhaseTO	-	1	0 = Disable 1 = 1 sec 2 = 5 sec 3 = 10 sec 4 = 20 sec 5 = 1 min 6 = 5 min 7 = 10 min 8 = 20 min
Presence Sensor Failure	/Diagno/PSFail	-	1	0 = Disable 1 = Enable

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Presence Sensor Stuck Timeout	/Diagno/PSStuck	-	1	0 = Disable 1 = 1 sec 2 = 2 sec 5 = 5 sec 10 = 10 sec 30 = 30 sec 60 = 1 min
Start/Stop Input Failure (Online 2 Iiput Only)	/Diagno/InFail	-	1	0 = Disable 1 = Enable
Encoder Failure Timeout	/Diagno/EncFailTO	-	1	0 = Disable 1 = 1 sec 2 = 2 sec 5 = 5 sec 10 = 10 sec 30 = 30 sec 60 = 1 min
Encoder Failure	/Diagno/EncFail	-	1	0 = Disable 1 = Enable
Display Warnings as Alarms	/Diagno/SendWarningAlarm ToSentinel	-	1	0 = Disable 1 = Enable
Photoeye Alarm Message	/Diagno/Photoeye	-	1	0 = No Alarm Message Available 1 = Alarm Message Available
Photoeye Alarm Message Digital Input	/Diagno /PhotoInfoProvider	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Auxiliary Photoeye Alarm Message	/Diagno/Photoeye1	-	1	0 = No Alarm Message Available 1 = Alarm Message Available
Auxiliary Photoeye Alarm Message Digital Input	/Diagno /PhotoInfoProvider1	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Protocol Index Alarms	/Diagno/ProtocolIndexEn	-	1	0 = Disable 1 = Enable
DIAGNOSTICS / ACTIONS				
Tx Mode	/Diagno/Actions /TxMode	-	1	0 = On Timeout 1 = With Code"
Tx Refresh	/Diagno/Actions /AsyncTO	-	1	1 = 1 sec 2 = 2 sec 5 = 5 sec 10 = 10 sec 20 = 20 sec 30 = 30 sec 60 = 1 min 300 = 5 min"

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Message Position	/Diagno/Actions /SyncOpt	-	1	0 = Append to Code 1 = Replace Code
Aux	/Diagno/Actions /SerAuxTx	-	1	0 = Disable 1 = Enable
Main	/Diagno/Actions /SerMainTx	-	1	0 = Disable 1 = Enable
Modem	/Diagno/Actions /SerModemTx	-	1	0 = Disable 1 = Enable
Ethernet IP (Built-In Ethernet)	/Diagno/Actions /Eth1/ethIP	-	1	0 = Disable 1 = Enable
Modbus Client (Built-In Ethernet)	/Diagno/Actions /Eth1/modBusC	-	1	0 = Disable 1 = Enable
User Socket#N (Depth: N = 1 to 3) (Built-In Ethernet)	/Diagno/Actions /Eth1/UsrSocket#N	-	1	0 = Disable 1 = Enable
Ethernet IP (Additional Ethernet)	/Diagno/Actions /Eth2/ethIP1	-	1	0 = Disable 1 = Enable
Modbus Client (Additional Ethernet)	/Diagno/Actions /Eth2/modBusC1	-	1	0 = Disable 1 = Enable
User Socket#N (Depth: N = 1 to 3) (Additional Ethernet)	/Diagno/Actions /Eth2/UsrSocket1#N	-	1	0 = Disable 1 = Enable
DIAGNOSTICS / FORMAT				
Header String	/Diagno/Format /Header	-	3	Length: 1 to 128
Terminator String	/Diagno/Format /Terminator	-	3	Length: 1 to 128
Error Message Type	/Diagno/Format /MsgType	-	1	0 = Numeric 1 = Global String
Global String	/Diagno/Format /GlobalStr	-	3	Length: 1 to 32
DIAGNOSTICS / REDUNDANCY DIAGNOSTIC NOTIFICATION				
Enable on Master Active	/Diagno/RedundancyDiag /Enable	-	1	0 = Disable 1 = Enable
Enable on Master Standby	/Diagno/RedundancyDiag /Enable1	-	1	0 = Disable 1 = Enable
Select Reds Debug Message Target	/Diagno/RedundancyDiag /RedsMsgTarget	-	1	0 = None 1 = Main 2 = Aux 3 = Socket1 4 = Socket2 5 = Socket3 6 = Ext Eth Socket1 7 = Ext Eth Socket2 8 = Ext Eth Socket3 9 = Modem

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
DIAGNOSTICS / SIMATIC RBS HYBRID SYSTEM ALARMS				
RFID System Connection Alarm	/Diagno/RBS /RfidNotConnected	-	1	0 = Disable 1 = Enable
RFID Reader Connection Alarm	/Diagno/RBS /ReaderError	-	1	0 = Disable 1 = Enable
RFID Digital IO Card Alarm	/Diagno/RBS /IOCardError	-	1	0 = Disable 1 = Enable
Maintenance Mode Alarm	/Diagno/RBS /MaintenanceModeActive	-	1	0 = Disable 1 = Enable
License Expiring Alarm	/Diagno/RBS /NoAuthorization	-	1	0 = Disable 1 = Enable
Trial License Expired Alarm	/Diagno/RBS /LicenceExpired	-	1	0 = Disable 1 = Enable
PLC Connection Service Alarm	/Diagno/RBS /TransportConnector	-	1	0 = Disable 1 = Enable
Encoder Alarm	/Diagno/RBS /EncoderError	-	1	0 = Disable 1 = Enable
RFID Climate Unit Alarm	/Diagno/RBS /ClimateError	-	1	0 = Disable 1 = Enable
Presence Sensor Alarm	/Diagno/RBS /PSError	-	1	0 = Disable 1 = Enable
Slave Communication Alarm	/Diagno/RBS /RbsSlaveNotConn	-	1	0 = Disable 1 = Enable

4.8 REDUNDANCY

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
REDUNDANCY PARAMETERS				
Enable	/RedsPar/RedsFun	-	1	0 = Disable 1 = Enable
WebSentinel Operating Mode	/RedsPar /SentinelOperatingMode	-	3	0 = Standard 1 = Redundant
Topology Redundancy Role	/RedsPar /TopRoleReds	610	1	0 = Master Alone 1 = Master Working 2 = Master Protecting
Redundancy Role (Read-Only)	/RedsPar /RedundancyRole	611	1	0 = None 1 = Active 2 = Standby
IP Address Selection Rule	/RedsPar /IpSelector	-	1	0 = Topology Role (W/P) 1 = Redundancy Role (A/S)
REDUNDANCY SWITCH PARAMETERS				
Check Presence Sensor Failure	/RedsPar/SwitchPar /CheckPsFailure	-	1	0 = Disable 1 = Enable
Presence Sensor Event Failure Filter	/RedsPar/SwitchPar /PsFilterValue	-	0	Range: 1 to 10
Check Encoder Failure	/RedsPar/SwitchPar /CheckEncoderFailure	-	1	0 = Disable 1 = Enable

Encoder Event Failure Filter	/RedsPar/SwitchPar /EncoderFilterValue	-	0	Range: 1 to 10
Check Max Consecutive Lost Parcels	/RedsPar/SwitchPar /CMaxConsPLost	-	1	0 = Disable 1 = Enable
Max Consecutive Lost Parcels	/RedsPar/SwitchPar /MaxConsPLost	-	0	Range: 2 to 20
Check Max % Of Lost Parcels (Out Of 100 Parcels)	/RedsPar/SwitchPar /CMaxPerCentPLost	-	1	0 = Disable 1 = Enable
Max % Of Lost Parcels (Out Of 100 Parcels)	/RedsPar/SwitchPar /MaxPerCentPLost	-	0	Range: 2 to 100

4.9 ENERGY SAVING

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
ENERGY SAVING				
Energy Saving Configuration	/ES/ESE	-	1	0 = Disable 1 = Enable
ACTIVATION & DEACTIVATION				
Use Digital Input For	/ES/ESAD/ADdi	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Select Digital Input	/ES/ESAD/Di	-	1	1 = PS 3 = PSAUX 4 = Input_1 5 = Input_2 6 = Input_3
Use Auxiliary Port For	/ES/ESAD/ADAux	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Header	/ES/ESAD/AuxPar /ADStrAux	-	3	Length: 0 to 1
Terminator	/ES/ESAD/AuxPar /ADStpAux	-	3	Length: 0 to 1
Activation String	/ES/ESAD/AuxPar /ADActStringAux	-	2	Length: 0 to 10
Deactivation String	/ES/ESAD/AuxPar /ADDeactStringAux	-	2	Length: 0 to 10
Use Main Port For	/ES/ESAD/ADMain	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Header	/ES/ESAD/MainPar /ADStrMain	-	3	Length: 0 to 1
Terminator	/ES/ESAD/MainPar /ADStpMain	-	3	Length: 0 to 1
Activation String	/ES/ESAD/MainPar /ADActStringMain	-	2	Length: 0 to 10
Deactivation String	/ES/ESAD/MainPar /ADDeactStringMain	-	2	Length: 0 to 10
Use Modem Port For	/ES/ESAD/ADModem	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Header	/ES/ESAD/ModemPar /ADStrModem	-	3	Length: 0 to 1
Terminator	/ES/ESAD/ModemPar /ADStpModem	-	3	Length: 0 to 1
Activation String	/ES/ESAD/ModemPar /ADActStringModem	-	2	Length: 0 to 10
Deactivation String	/ES/ESAD/ModemPar /ADDeactStringModem	-	2	Length: 0 to 10
BUILT-IN ETHERNET / USER SOCKET #N (DEPTH: N = 1 to 3)				
Use User Socket For	/ES/ESAD/ADBltEth /ADUserSocket#N /ADBlt	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Header	ES/ESAD/ADBltEth /ADUserSocket#N /ADBltStrSock	-	3	Length: 0 to 1
Terminator	ES/ESAD/ADBltEth /ADUserSocket#N /ADBltStpSock	-	3	Length: 0 to 1
Activation String	ES/ESAD/ADBltEth /ADUserSocket#N /ADActStringBltSock	-	2	Length: 0 to 10
Deactivation String	ES/ESAD/ADBltEth /ADUserSocket#N /ADDeactStringBltSock	-	2	Length: 0 to 10
ADDITIONAL ETHERNET / USER SOCKET #N (DEPTH: N = 1 to 3)				
Use User Socket For	/ES/ESAD/ADAddEth /ADUserSocket#N /ADAdd	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Header	ES/ESAD/ADAddEth /ADUserSocket#N /ADAddStrSock	-	3	Length: 0 to 1
Terminator	ES/ESAD/ADAddEth /ADUserSocket#N /ADAddStpSock	-	3	Length: 0 to 1

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
Activation String	ES/ESAD/ADAddEth /ADUserSocket#N /ADActStringAddSock	-	2	Length: 0 to 10
Deactivation String	ES/ESAD/ADAddEth /ADUserSocket#N /ADDeactStringAddSock	-	2	Length: 0 to 10
ENCODER				
Use Encoder For	/ES/ESAD/ADEnc	-	1	0 = None 1 = Deactivation 2 = Activation 3 = Activation & Deactivation
Activation Encoder Timeout	/ES/ESAD/ACEncT	-	1	5 = 5 min 10 = 10 min 15 = 15 min 20 = 20 min 25 = 25 min 30 = 30 min
Deactivation Encoder Timeout	/ES/ESAD/DCEncT	-	1	5 = 5 sec 10 = 10 sec 20 = 20 sec 30 = 30 sec 1 = 1 min 2 = 2 min

4.10 USER INFORMATION SECTION

PARAMETER	COMPLETE PATH	SHC	PT	VALUE
USER INFORMATION SECTION				
User Name	/UserInfo/EndUser	521	2	Length: 0 to 32
Device Name	/UserInfo/Name	522	2	Length: 0 to 128
Line Name	/UserInfo/Line	523	2	Length: 0 to 128

A SPECIAL COMMANDS AND TABLES

CONTROL RULES TABLE

This paragraph provides a list of the most important control rules that can be applied to the SC6000 parameters.

PARAMETER	CONTROL RULES
CODE DEFINITION	
Code Combination	Must be ≠ *Single Label* and ≠ *Code Collection* if Host Application Protocol Type = *Crisplant*. Must be ≠ *Standard Multi Label* and ≠ *Logical Combination* if Operating Mode Selection = *Continuous*. Must be ≠ *Code Collection* if No Read Message = *Local No Read(s) Message.*
No Read Message	Must be ≠ *Local No Read(s) Message* if Code Combination = *Single Label*. Must be ≠ *Local No Read(s) Message* if Code Combination = *Code Collection*.
Associate Same Codes When Coming From Different Scanners	Not available if Scanner Cluster Topology Role ≠ *Master Synchronized* or ≠ *Master Multidata*.
CODE LABEL SETTINGS #N (DEPTH: n = 1 to 10)	
Minimum Label Length	Value must be ≤ Maximum Label Length
Maximum Label Length	Value must be ≥ Minimum Label Length
Minimum Code Position	Value must be ≤ Maximum Code Position
Maximum Code Position	Value must be ≥ Minimum Code Position
OPERATING MODES	
Operating Mode Selection	Must be ≠ *Continuous* if Host Application Protocol Type = *Crisplant*. Must be ≠ *Continuous* if Code Combination ≠ *Single Label*. Must be ≠ *Continuous* if Scanner Cluster Topology Role = *Master Synchronized*.
On Line Options	Must be ≠ *Serial On Line* if Host Application Protocol Type = *Crisplant*.
Stop Phase Edge (only for On Line 2 Input)	Must be ≠ *Leading* if Extended Phase = *Enable*
READING SYSTEM LAYOUT	
Device Assignment	Must be ≠ *Master RS232 (Type A)* if Auxiliary Serial Port Data TX = *Enable*. Must be ≠ *Master RS232 (Type A)* if Auxiliary Serial Port Pass Through = *Enable*.

PARAMETER	CONTROL RULES
DATA COMMUNICATION SETTING	
Host Application Protocol Type	Must be ≠ *Crisplant* if Operating Mode Selection = *Continuous.* Must be ≠ *Cargoscan* if Operating Mode Selection ≠ *Continuous.* Must be ≠ *Crisplant* and ≠ *Cargoscan* if On Line Options = *Serial On Line*. Must be ≠ *Crisplant* and ≠ *Cargoscan t* if Main Port Communication Mode ≠ *Standard*. Must be ≠ *Crisplant* and ≠ *Cargoscan* if Auxiliary Serial Port Pass Through = *Enable*.
MAIN SERIAL PORT	
Main Port Communication Mode	Must be = Standard if Host Application Protocol Type ≠ *Standard*.
AUXILIARY SERIAL PORT	
Data Transmission	Must be = Disable if Device Assignment = *Master RS232 (Type A)*
Pass Through	Must be = Disable if Host Application Protocol Type ≠ *Standard*. Must be = Disable if Device Assignment = *Master RS232 (Type A)*

ERROR CODES TABLE

This paragraph provides a list of the most important error codes.

CODE	INTERPRETATION
COMMAND PARSING	
-3	Parameter does not exist.
-4	Invalid range.
-8	Wrong syntax error.
-9	Wrong shortcut error.
-12	Path not found.
-13	Unknown command.
-14	Too many parameters in the programming string.
-15	No command is present in the programming string.
-16	Wrong number of parameters in the programming string.
-17	Unexpected error.
-19	One or more parameters are not applicable.
PARAMETERS PROGRAMMING	
3	The current Path is not valid.
7	The current Path is a Folder
8	Parameter Type is not correct.
9	Parameter Value is not correct.
12	One or more Control Rules are not satisfied.
13	Access denied.

ASCII TABLE

CHARACTER TO HEX CONVERSION TABLE					
CHAR	**HEX**	**CHAR**	**HEX**	**CHAR**	**HEX**
NUL	**00**	*	**2A**	U	**55**
SOH	**01**	+	**2B**	V	**56**
STX	**02**	,	**2C**	W	**57**
ETX	**03**	-	**2D**	X	**58**
EOT	**04**	.	**2E**	Y	**59**
ENQ	**05**	/	**2F**	Z	**5A**
ACK	**06**	0	**30**	[	**5B**
BEL	**07**	1	**31**	\	**5C**
BS	**08**	2	**32**	]	**5D**
HT	**09**	3	**33**	^	**5E**
LF	**0A**	4	**34**	_	**5F**
VT	**0B**	5	**35**	`	**60**
FF	**0C**	6	**36**	a	**61**
CR	**0D**	7	**37**	b	**62**
SO	**0E**	8	**38**	c	**63**
SI	**0F**	9	**39**	d	**64**
DLE	**10**	:	**3A**	e	**65**
DC1	**11**	;	**3B**	f	**66**
DC2	**12**	<	**3C**	g	**67**
DC3	**13**	=	**3D**	h	**68**
DC4	**14**	>	**3E**	i	**69**
NAK	**15**	?	**3F**	j	**6A**
SYN	**16**	@	**40**	k	**6B**
ETB	**17**	A	**41**	l	**6C**
CAN	**18**	B	**42**	m	**6D**
EM	**19**	C	**43**	n	**6E**
SUB	**1A**	D	**44**	o	**6F**
ESC	**1B**	E	**45**	p	**70**
FS	**1C**	F	**46**	q	**71**
GS	**1D**	G	**47**	r	**72**
RS	**1E**	H	**48**	s	**73**
US	**1F**	I	**49**	t	**74**
SPACE	**20**	J	**4A**	u	**75**
!	**21**	K	**4B**	v	**76**
"	**22**	L	**4C**	w	**77**
#	**23**	M	**4D**	x	**78**
$	**24**	N	**4E**	y	**79**
%	**25**	O	**4F**	z	**7A**
&	**26**	P	**50**	{	**7B**
'	**27**	Q	**51**	|	**7C**
(	**28**	R	**52**	}	**7D**
)	**29**	S	**53**	~	**7E**
		T	**54**	DEL	**7F**



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