Interface Document WinCC - PLC

WinCC Standardapplication for SIMOCRANE CMS V4.2

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SIMOCRANE CMS V4.2

Interface document

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1 Introduction

1.1 Overview

This document is part of SIMOCRANE CMS and refers to the CMS standard application based on SIMATIC WinCC.

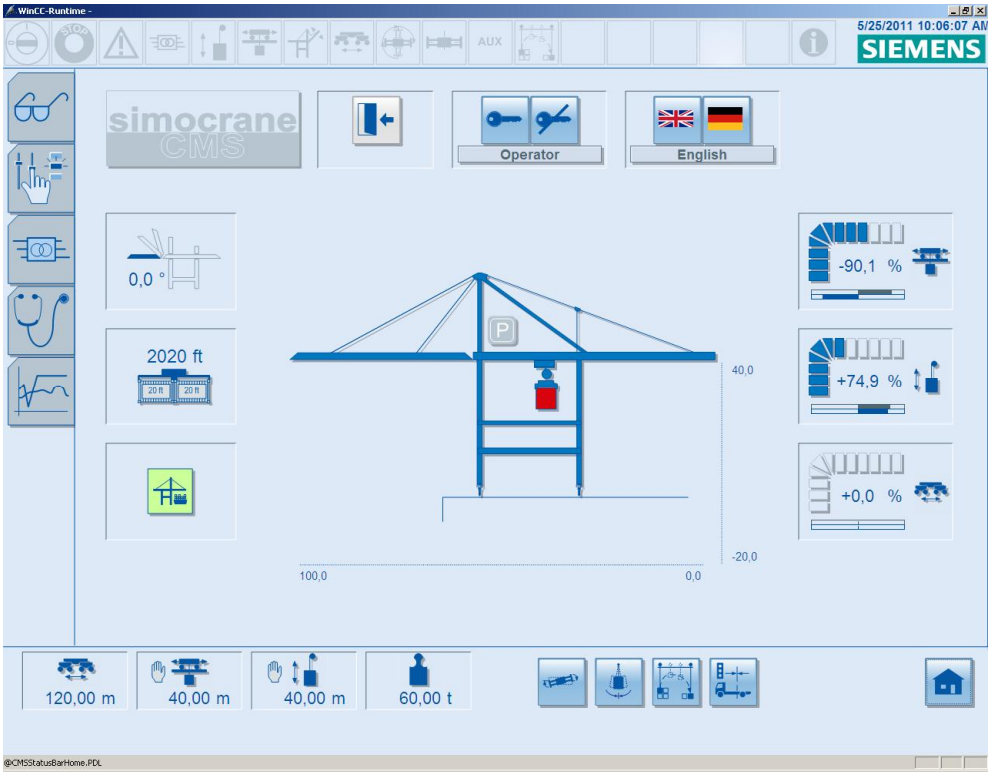
It describes the interface tags of the standard application. The address parameters described in this document are based upon SIMATIC S7.

The CMS standard application provides the following functions for a typical crane application:

- Control- and monitoring functions
- Fault diagnostics
- Acquisition of operational data
- Trends and Trace data display

User interface overview

Figure 1-1: Start screen of the CMS application



Target group

The CMS application addresses project engineers for HMIs in crane applications.

Technical environment

This application was configured with SIMATIC WinCC 7.0 SP3 Upd6.

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Purpose of this application

The CMS application provides a basis for a crane application in order to facilitate the start of an HMI project. This document mainly describes the CMS interface.

Delimitations

This application is a template for projects. Before using this application within a project you have to check and if necessary adapt the functionality of the application.

Required skills

Basic knowledge of SIMATIC WinCC is assumed.

1.2 Required Software Components

Standard software components

The application was created with SIMATIC WinCC V7.0 SP3 Upd6.

Sample files and projects

The following list includes all files and projects that are used in this example.

Table 1-1: Sample files and projects

Component	Note
Application_CMS_4.2.zip	This zip file includes the WinCC project for CMS without RCMS Server
Interface_CMS_V4.2_en.pdf	This document

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2 Interface Structure

2.1 General information

Naming conventions

The following naming-convention is used for the Tags in WinCC:

- Shortcut of data type + object-/component-name + tellingly description

Numeric values

All numeric values are transferred in physical units or in percent. The CMS uses no scaling function. Scaling has to be done on the PLC.

Binary values

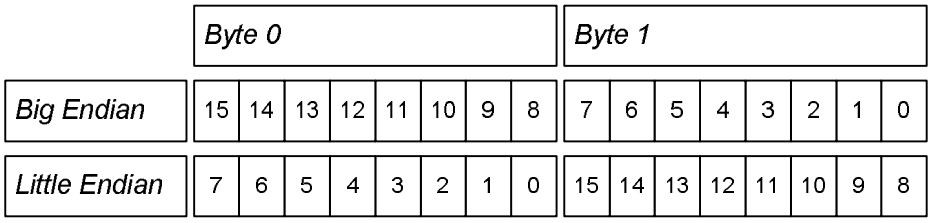
Binary values are transferred as Byte or Word between PLC and CMS application. The description of binary values in this document distinguishes between to different types:

- Bit monitoring: One precise Bit in the Byte or Word is monitored.
- Status monitoring: The Byte or Word is used for a Status display. Each binary Status in this Byte or Word has to be distinct.

NOTE The Byte order in a Word or Dword might be different on PLC and in the CMS.

- "Little Endian" is the Byte order in the CMS while "Big Endian" is the Byte order on SIMATIC S7.
- Most of the binary information is transferred as Byte to avoid this problem.
- The description of binary data in this document is based upon the addressing of bits in WinCC. You have to swap the Bytes on the PLC if it is necessary.

Figure 2-1: Byte order



Order	Description
Big Endian	The Byte with the most significant bits has the lowest storage address
Little Endian	The Byte with the least significant bits has the lowest storage address

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2.1 Interface structure

Table 2-1: Interface structure

Tag group	Data block S7	Chapter
General_ Diagnostics	DB 108	3.1 General
Hoist_General	DB 208	3.2 Hoist_General
Hoist_Drive1	DB 218	3.3 Hoist_Drive
Hoist_Drive2	DB 228	3.4 Hoist_Drive2
Trolley_General	DB 308	3.5 Trolley_General
Trolley_Drive1	DB 318	3.6 Trolley_Drive1
Trolley_Drive2	DB 328	3.7 Trolley_Drive2
Boomhoist_General	DB 418	3.8 Boomhoist_General
Boomhoist_Drive1	DB 418	3.9 Boomhoist_Drive1
Gantry_General	DB 508	3.10 Gantry_General
Gantry_Drive1	DB 518	3.11 Gantry_Drive1
Gantry_Drive2	DB 528	3.12 Gantry_Drive2
Spreader1	DB 718	3.14 Spreader
TrimListSkew	DB 758	3.15 TrimListSkew
Technology_Functions	DB 980 / DB 981	3.16 Technology_Functions
Messages	DB 1000	3.17 Messages
TimeSynch	DB 1909	3.18 TimeSynch
MoveData	DB 1916	3.19 MoveData
MmbfData	DB 1917	3.20 MmbfData
Counter_Total	DB 1918	3.21 Counter_Total
Counter_Reset	DB 1919	3.22 Counter_Reset

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3 WinCC Tags

3.1 General_ Diagnostics

No.	Address	Tag name	Description	Type
1.	DB 108 DBW 64	wrdControlPanel	Binary information see below	Word
2.	DB 108 DBB 66	bytDiagGeneral2	Binary information see below	Byte
3.	DB 108 DBB 67	bytDiagGeneral1	Binary information see below	Byte
4.	DB 108 DBB 68	bytStatusSupplyUnit4	Binary information see below	Byte
5.	DB 108 DBB 69	bytStatusSupplyUnit3	Binary information see below	Byte
6.	DB 108 DBB 70	bytStatusSupplyUnit2	Binary information see below	Byte
7.	DB 108 DBB 71	bytStatusSupplyUnit1	Binary information see below	Byte
8.	DB 108 DBB 72	bytEstop4	Binary information see below	Byte
9.	DB 108 DBB 73	bytEstop3	Binary information see below	Byte
10.	DB 108 DBB 74	bytEstop2	Binary information see below	Byte
11.	DB 108 DBB 75	bytEstop1	Binary information see below	Byte
12.	DB 108 DBB 76	bytDrivesReady4	spare	Byte
13.	DB 108 DBB 77	bytDrivesReady3	spare	Byte
14.	DB 108 DBB 78	bytDrivesReady2	spare	Byte
15.	DB 108 DBB 79	bytDrivesReady1	Binary information see below	Byte
16.	DB 108 DBB 80	bytZeroPosStandstill4	spare	Byte
17.	DB 108 DBB 81	bytZeroPosStandstill3	spare	Byte
18.	DB 108 DBB 82	bytZeroPosStandstill2	spare	Byte
19.	DB 108 DBB 83	bytZeroPosStandstill1	Binary information see below	Byte
20.	DB 108 DBB 84	bytAuxiliary4	spare	Byte
21.	DB 108 DBB 85	bytStatusLVD	Binary information see below	Byte
22.	DB 108 DBB 86	bytStatusLoadMeasure	Binary information see below	Byte
23.	DB 108 DBB 87	bytStatusLHV	Binary information see below	Byte
24.	DB 108 DBB 88	bytDiagSupply4	Binary information see below	Byte
25.	DB 108 DBB 89	bytDiagSupply3	Binary information see below	Byte
26.	DB 108 DBB 90	bytDiagSupply2	Binary information see below	Byte
27.	DB 108 DBB 91	bytDiagSupply1	Binary information see below	Byte
28.	DB 108 DBB 107	bytCraneInterlock4	Binary information see below	Byte
29.	DB 108 DBB 108	bytCraneInterlock3	Binary information see below	Byte
30.	DB 108 DBB 109	bytCraneInterlock2	Binary information see below	Byte
31.	DB 108 DBB 110	bytCraneInterlock1	Binary information see below	Byte
32.	DB 108 DBD 136	fltWindSpeedms	Actual wind speed in m/s	Float
33.	DB 108 DBD 140	fltWindDirection	Actual wind direction in °	Float
	DB 108 DBB 144	**PowerMeter1**	Instance of structure type *PowerMeter*	Power Meter
34.	DB 108 DBD 144	PowerMeter1.fltVoltageL1	Actual voltage L1 in V	Float
35.	DB 108 DBD 148	PowerMeter1.fltVoltageL2	Actual voltage L2 in V	Float
36.	DB 108 DBD 152	PowerMeter1.fltVoltageL3	Actual voltage L3 in V	Float
37.	DB 108 DBD 156	PowerMeter1.fltCurrentL1	Actual current L1 in A	Float

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No.	Address	Tag name	Description	Type
38.	DB 108 DBD 160	PowerMeter1.fltCurrentL2	Actual current L2 in A	Float
39.	DB 108 DBD 164	PowerMeter1.fltCurrentL3	Actual current L3 in A	Float
40.	DB 108 DBD 168	PowerMeter1.fltReactivePower	Actual reactive power in var	Float
41.	DB 108 DBD 172	PowerMeter1.fltActivePower	Actual active power in W	Float
42.	DB 108 DBD 176	PowerMeter1.fltPowerFactor	Actual power factor	Float
43.	DB 108 DBD 180	PowerMeter1.fltThdFactor	Actual THD factor (Total Harmonic Distortion)	Float
44.	DB 108 DBD 184	PowerMeter1.fltVoltageL1Min	Minimum voltage L1 in V	Float
45.	DB 108 DBD 188	PowerMeter1.fltVoltageL2Min	Minimum voltage L2 in V	Float
46.	DB 108 DBD 192	PowerMeter1.fltVoltageL3Min	Minimum voltage L3 in V	Float
47.	DB 108 DBD 196	PowerMeter1.fltVoltageL1Max	Maximum voltage L1 in V	Float
48.	DB 108 DBD 200	PowerMeter1.fltVoltageL2Max	Maximum voltage L2 in V	Float
49.	DB 108 DBD 204	PowerMeter1.fltVoltageL3Max	Maximum voltage L3 in V	Float
50.	DB 108 DBD 208	PowerMeter1.fltCurrentL1Max	Maximum current L1 in A	Float
51.	DB 108 DBD 212	PowerMeter1.fltCurrentL2Max	Maximum current L2 in A	Float
52.	DB 108 DBD 216	PowerMeter1.fltCurrentL3Max	Maximum current L3 in A	Float
53.	DB 108 DBW 240	wrdFaultSupplyUnit04	Fault number supply unit 1	Word
54.	DB 108 DBW 244	wrdFaultSupplyUnit03	Fault number supply unit 2	Word
55.	DB 108 DBW 248	wrdFaultSupplyUnit02	Fault number supply unit 3	Word
56.	DB 108 DBW 252	wrdFaultSupplyUnit01	Fault Number supply unit 4	Word
57.	DB 108 DBW 254	wrdCraneStatus	Crane status word, Binary information see below	Word
58.	DB 108 DBW 258	srtCranePositionX	Actual x-position of the crane on the terminal → RCMS	Short
59.	DB 108 DBW 260	srtCranePositionY	Actual y-position of the crane on the terminal → RCMS	Short

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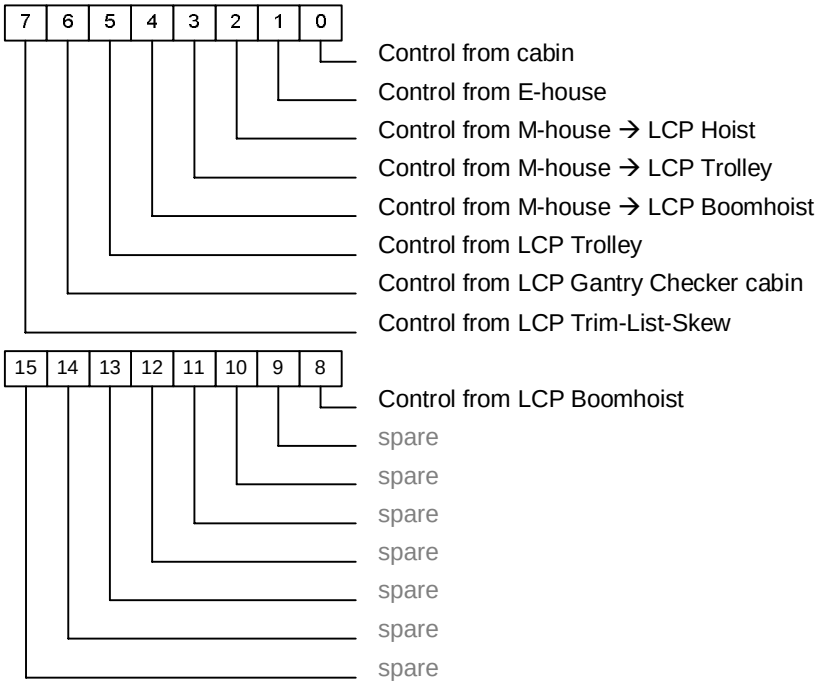
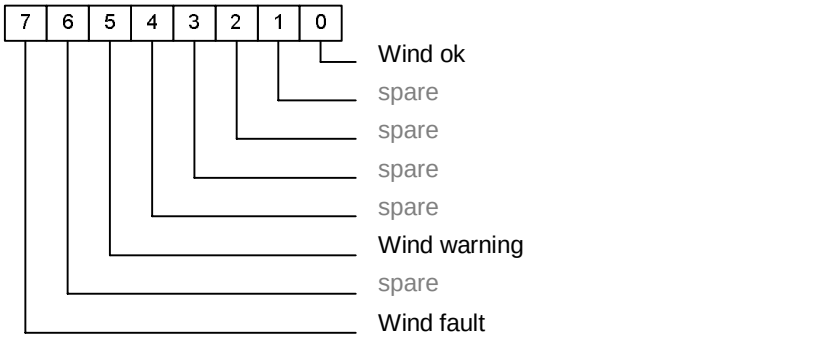
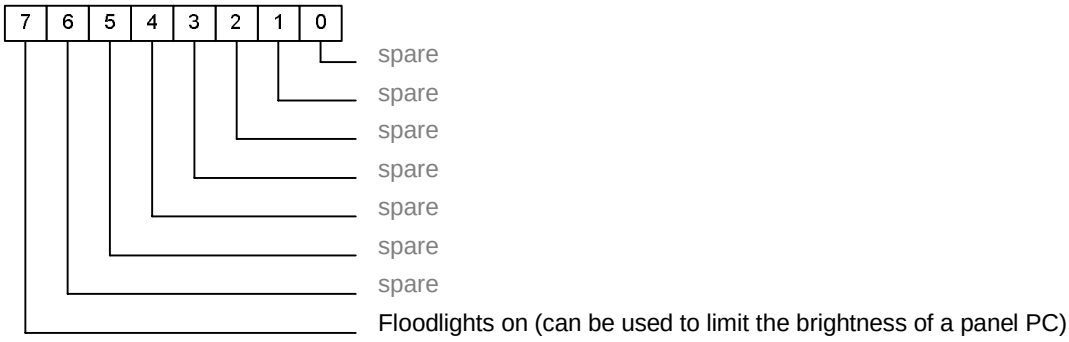
DB 108 DBW 64	wrdControlPanel



DB 108 DBB 66	bytDiagGeneral2



DB 108 DBB 67	bytDiagGeneral1



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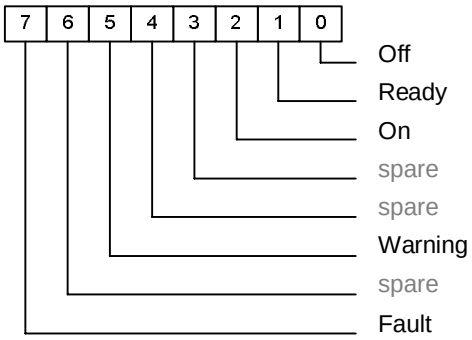
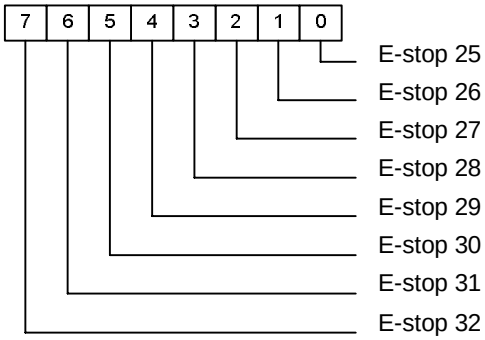
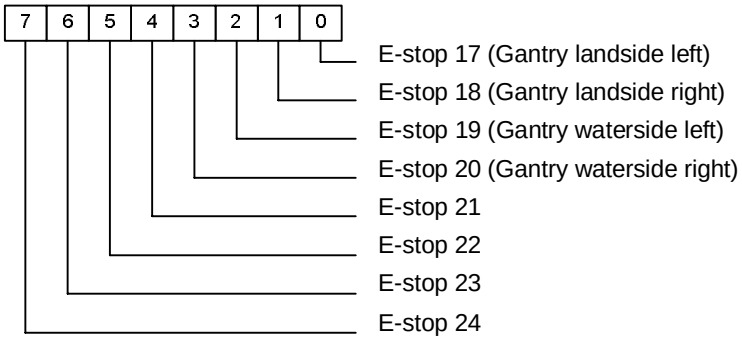
DB 108 DBB 68	**bytStatusSupplyUnit4**
DB 108 DBB 69	**bytStatusSupplyUnit3**
DB 108 DBB 70	**bytStatusSupplyUnit2**
DB 108 DBB 71	**bytStatusSupplyUnit1**



DB 108 DBB 72	**bytEstop4**



DB 108 DBB 73	**bytEstop3**



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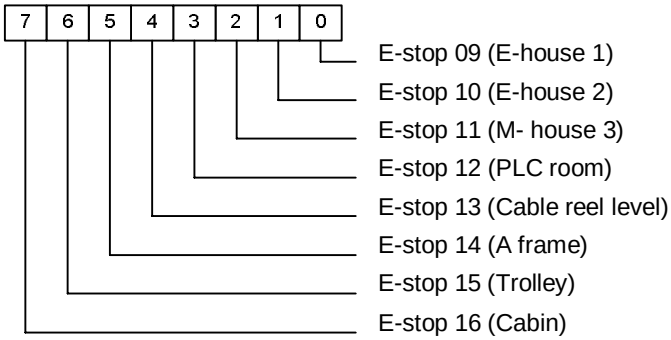
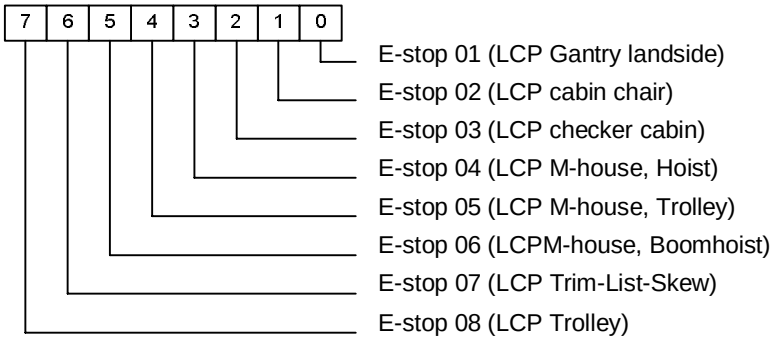
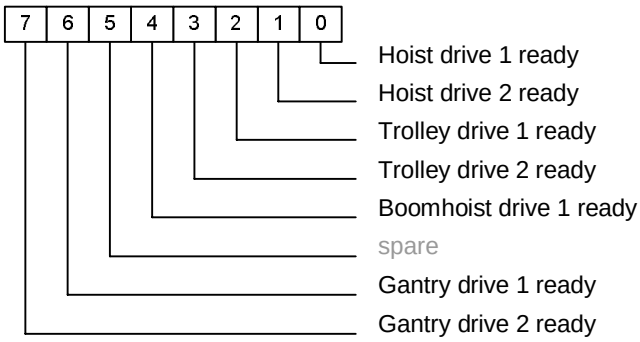
DB 108 DBB 74	bytEstop2



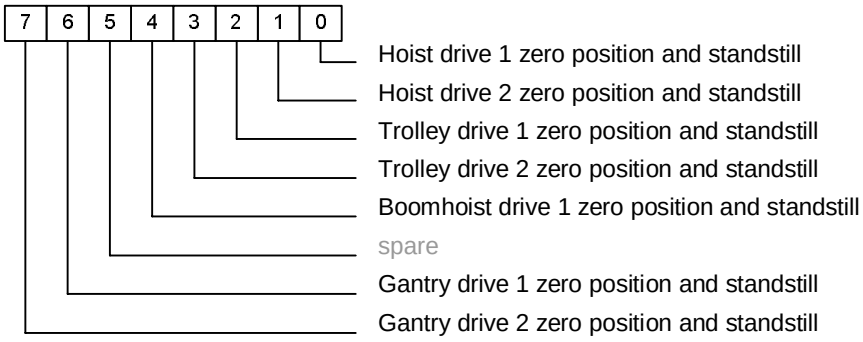
DB 108 DBB 75	bytEstop1



DB 108 DBB 79	bytDiagDrivesReady1



DB 108 DBB 83	bytDiagZeroPosStandstill1



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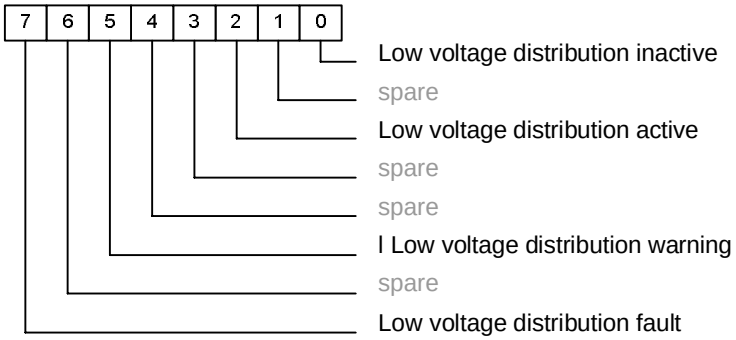
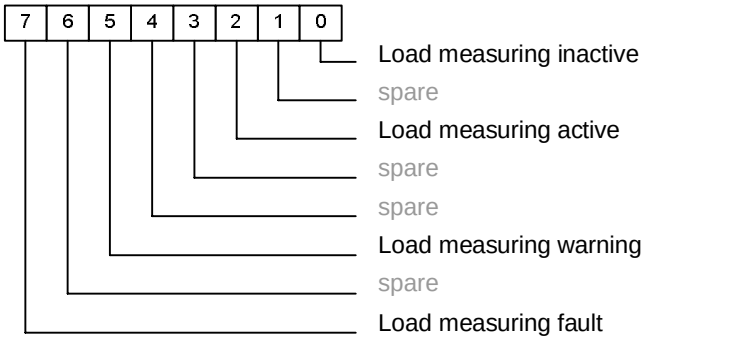
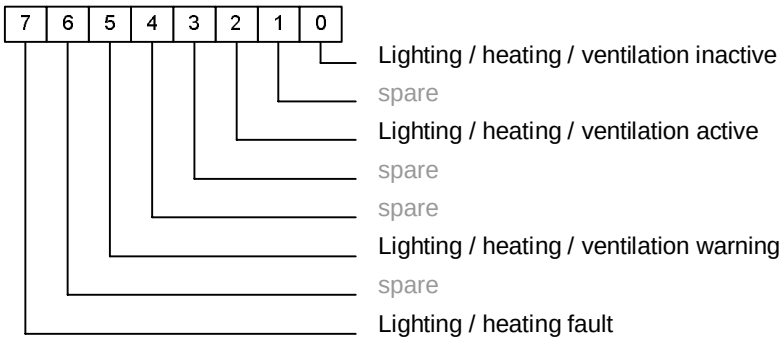
DB 108 DBB 85	bytStatusLVD



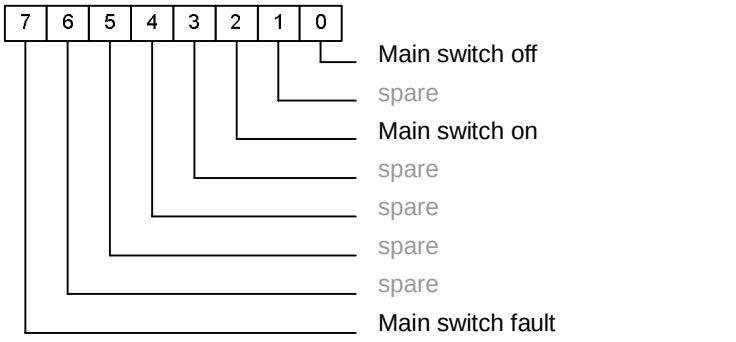
DB 108 DBB 86	bytStatusLoadMeasure



DB 108 DBB 87	bytStatusLHV



DB 108 DBB 88	bytDiagSupply4



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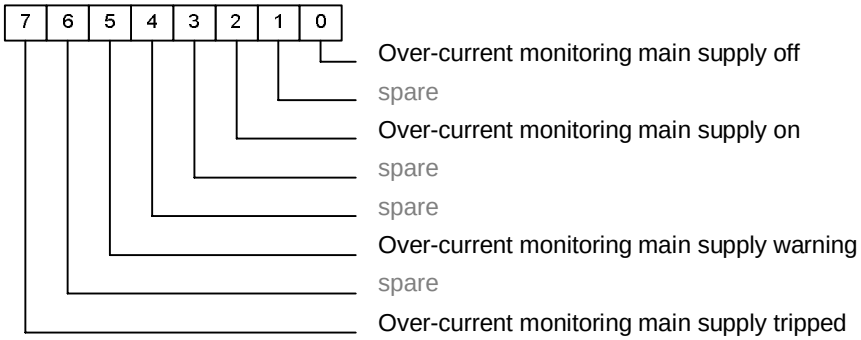
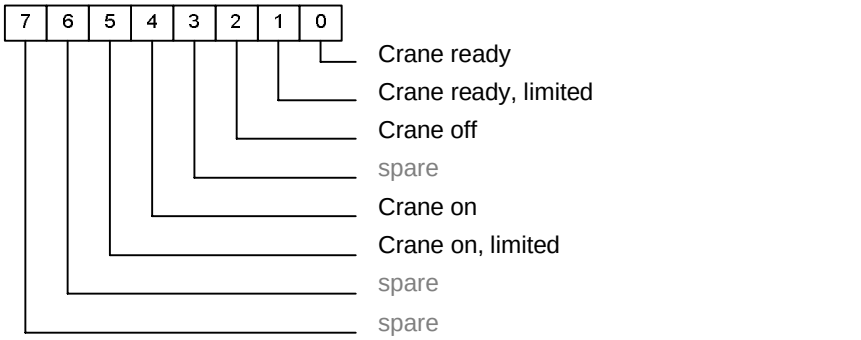
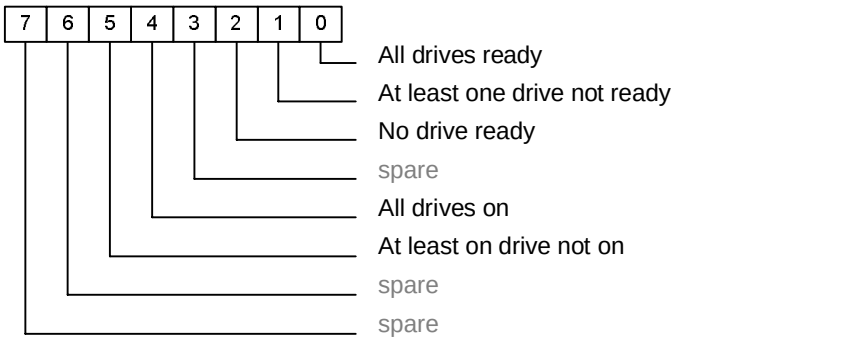
DB 108 DBB 89	bytDiagSupply3



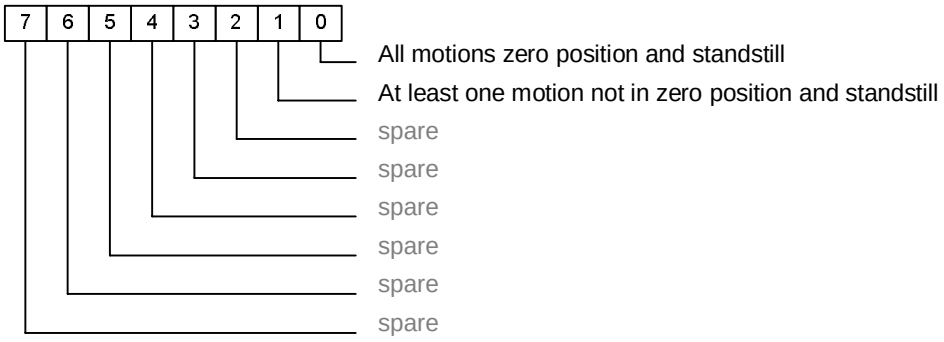
DB 108 DBB 107	bytCraneInterlock4



DB 108 DBB 108	bytCraneInterlock3



DB 108 DBB 109	bytCraneInterlock2



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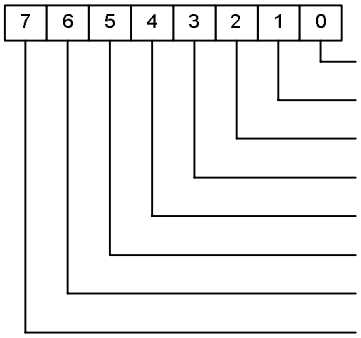
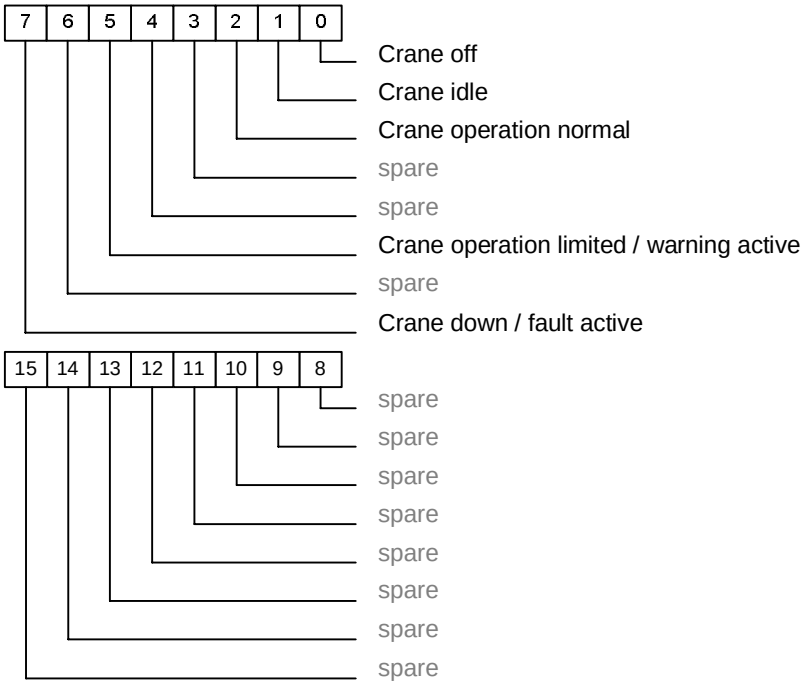
DB 108 DBB 110	bytCraneInterlock1



DB 108 DBW 254	wrdCraneStatus



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3.2 Hoist_General

No.	Address	Tag name	Description	Type
1.	DB 208 DBB 64	**HoistBinary**	Instance of structure type *MotionBinary*	Motion Binary
2.	DB 208 DBB 64	HoistBinary.bytMotion	Binary information see below	Byte
3.	DB 208 DBB 67	HoistBinary.bytStop	Binary information see below	Byte
4.	DB 208 DBB 68	HoistBinary.bytSwitches2	Binary information see below	Byte
5.	DB 208 DBB 69	HoistBinary.bytSwitches1	Binary information see below	Byte
6.	DB 308 DBB 70	HoistBinary.bytBinary	spare	Byte
7.	DB 208 DBB 71	HoistBinary.bytStick	Binary information see below	Byte
8.	DB 208 DBB 72	HoistBinary.bytRopeDrum	Binary information see below	Byte
9.	DB 208 DBB 78	HoistBinary.bytInterlocks2	spare	Byte
10.	DB 208 DBB 79	HoistBinary.bytInterlocks1	spare	Byte
11.	DB 208 DBB 84	HoistBinary.bytSafetyBrake4	Binary information see below	Byte
12.	DB 208 DBB 85	HoistBinary.bytSafetyBrake3	Binary information see below	Byte
13.	DB 208 DBB 86	HoistBinary.bytSafetyBrake2	Binary information see below	Byte
14.	DB 208 DBB 87	HoistBinary.bytSafetyBrake1	Binary information see below	Byte
15.	DB 208 DBB 112	**HoistLoad**	Instance of structure type *Load*	Load
16.	DB 208 DBD 112	HoistLoad fltNetLeft	Netto load left in t	Float
17.	DB 208 DBD 116	HoistLoad fltNetRight	Netto load right in t	Float
18.	DB 208 DBD 120	HoistLoad fltNetTotal	Total netto load in t	Float
19.	DB 208 DBD 124	HoistLoad fltGrossLeft	Gross load left in t	Float
20.	DB 208 DBD 128	HoistLoad fltGrossRight	Gross load right in t	Float
21.	DB 208 DBD 132	HoistLoad fltGrossTotal	Gross netto load in t	Float
22.	DB 208 DBD 136	**HoistAnalog**	Instance of structure type *MotionAnalog*	Motion Analog
23.	DB 208 DBD 136	HoistAnalog.fltPositionActual	Actual positon in m	Float
24.	DB 208 DBD 140	HoistAnalog. fltSpeedMasterSwitch	Speed setpoint from master switch in %	Float
25.	DB 208 DBD 144	HoistAnalog.fltSpeedActual	Actual speed in %	Float
26.	DB 208 DBD 148	HoistAnalog.fltSpeedActualMSec	Actual speed in m/s	Float
27.	DB 208 DBD 160	HoistAnalog.fltPositionSetpoint	Positon setpoint in m	Float

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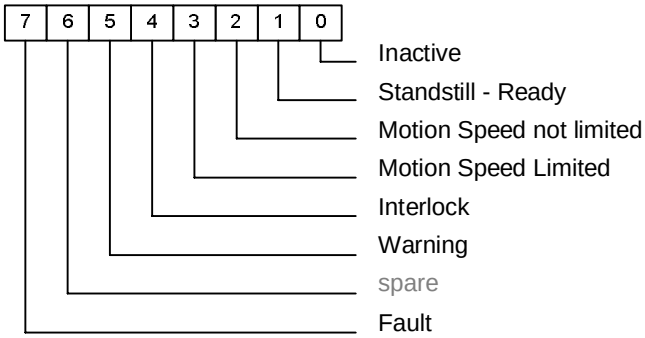
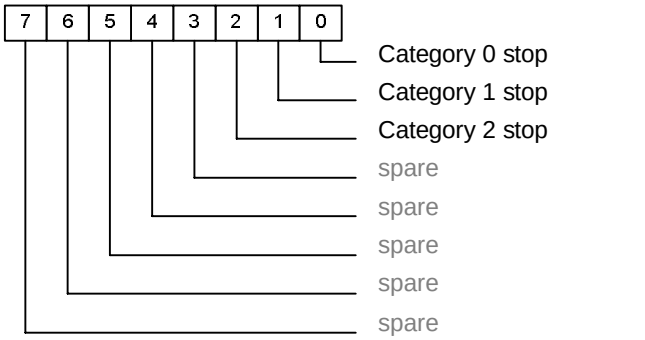
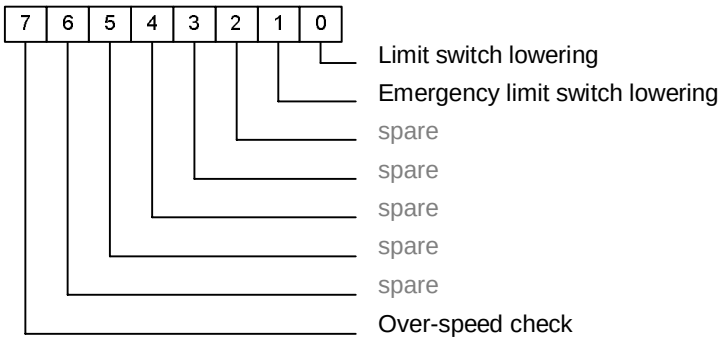
DB 208 DBB 64	HoistBinary.bytMotion



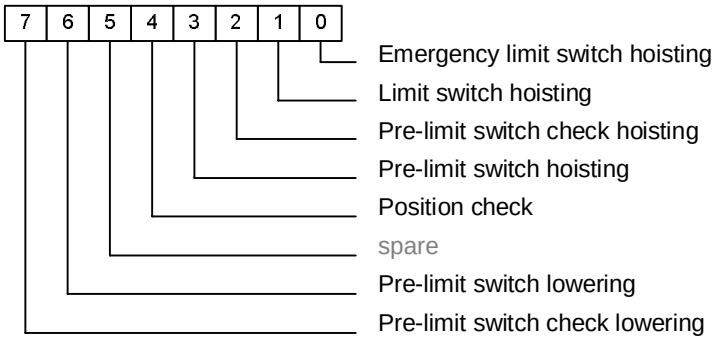
DB 208 DBB 67	HoistBinary.bytStop



DB 208 DBB 68	HoistBinary.bytSwitches2



DB 208 DBB 69	HoistBinary.bytSwitches1



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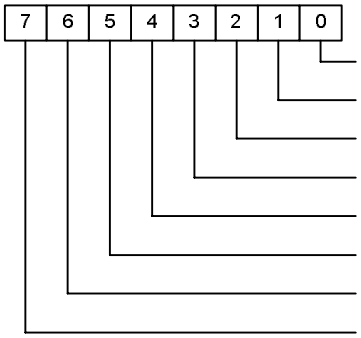
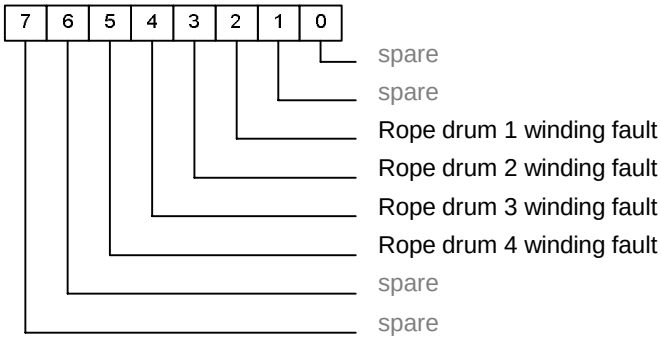
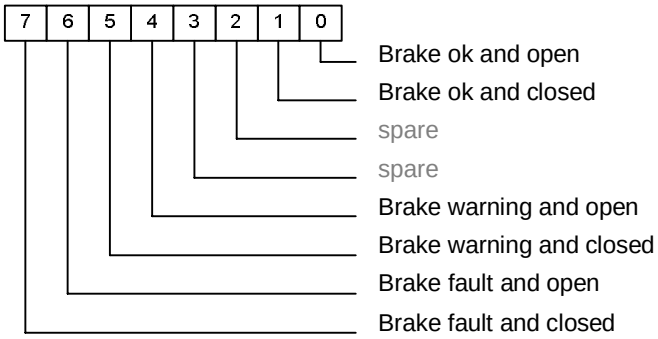
DB 208 DBB 71	HoistBinary.bytStick



DB 208 DBB 72	HoistBinary.bytRopeDrum



DB 208 DBB 84	HoistBinary.bytSafetyBrake4
DB 208 DBB 85	HoistBinary.bytSafetyBrake3
DB 208 DBB 86	HoistBinary.bytSafetyBrake2
DB 208 DBB 87	HoistBinary.bytSafetyBrake1



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3.3 Hoist_Drive1

No.	Address	Tag name	Description	Type
1.	DB 218 DBB 0	**HoistDrive1**	Instance of structure type *Drive*	Drive
2.	DB 218 DBW 0	HoistDrive1.wrdControl1	PLC: PZD 1 (Basic Technology)	Word
3.	DB 218 DBW 4	HoistDrive1.wrdControl2	PLC: PZD 3 (Basic Technology)	Word
4.	DB 218 DBW 8	HoistDrive1.srtRampUpTime	PLC: PZD 5 (Basic Technology)	Short
5.	DB 218 DBW 10	HoistDrive1.srtRampDownTime	PLC: PZD 6 (Basic Technology)	Short
6.	DB 218 DBW 16	HoistDrive1.wrdApplControl1	PLC: PZD 9 (Basic Technology)	Word
7.	DB 218 DBW 18	HoistDrive1.wrdApplControl2	PLC: PZD 10 (Basic Technology)	Word
8.	DB 218 DBW 32	HoistDrive1.wrdStatus1	Drive: PZD 1 (Basic Technology)	Word
9.	DB 218 DBW 36	HoistDrive1.wrdStatus2	Drive: PZD 3 (Basic Technology)	Word
10.	DB 218 DBW 38	HoistDrive1.wrdFaultNumber	Drive: PZD 4 (Basic Technology)	Short
11.	DB 218 DBW 48	HoistDrive1.wrdApplStatus1	Drive: PZD 9 (Basic Technology)	Word
12.	DB 218 DBW 50	HoistDrive1.wrdApplStatus2	Drive: PZD 10 (Basic Technology)	Word
13.	DB 218 DBB 67	HoistDrive1.bytStop	Binary information see below	Byte
14.	DB 218 DBB 74	HoistDrive1.bytBrake2	Binary information see below	Byte
15.	DB 218 DBB 75	HoistDrive1.bytBrake1	Binary information see below	Byte
16.	DB 218 DBB 77	HoistDrive1.bytStatus	Binary information see below	Byte
17.	DB 218 DBB 80	HoistDrive1.bytMotor	Binary information see below	Byte
18.	DB 218 DBB 81	HoistDrive1.bytFaultSimotion	Binary information see below	Byte
19.	DB 218 DBD 136	HoistDrive1.fltPositionActual	Actual Position in m	Float
20.	DB 218 DBD 140	HoistDrive1. fltSpeedSetpointPLC	Speed setpoint from PLC in %	Float
21.	DB 218 DBD 144	HoistDrive1.fltSpeedActual	Actual speed in %	Float
22.	DB 218 DBD 152	HoistDrive1.fltSpeedRpm	Actual speed in RPM	Float
23.	DB 218 DBD 160	HoistDrive1.fltPositionSetpoint	Position setpoint in m	Float
24.	DB 218 DBD 164	HoistDrive1.fltVoltageActual	Actual voltage in V	Float
25.	DB 218 DBD 168	HoistDrive1.fltCurrentActual	Actual current in A	Float
26.	DB 218 DBD 172	HoistDrive1.fltTorqueActual	Actual torque in Nm	Float
27.	DB 218 DBD 176	HoistDrive1.fltTorqueSetpoint	Torque setpoint in Nm	Float
28.	DB 218 DBD 180	HoistDrive1.fltSpeedSetpoint	Speed setpoint in %	Float
29.	DB 218 DBD 196	HoistDrive1.fltCurrentSetpoint	Current setpoint in A	Float

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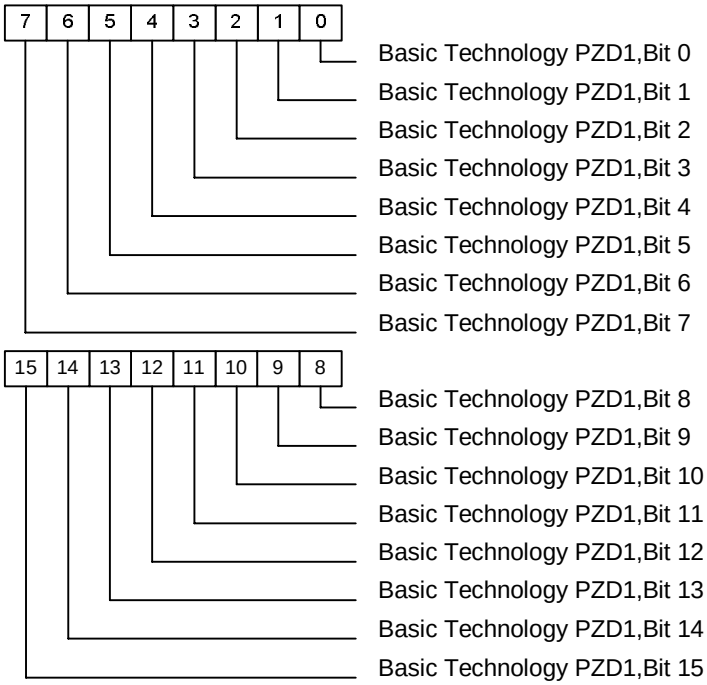
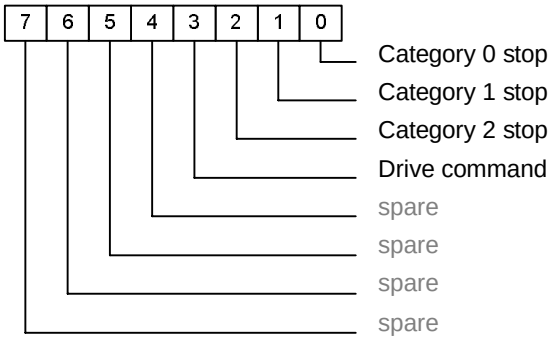
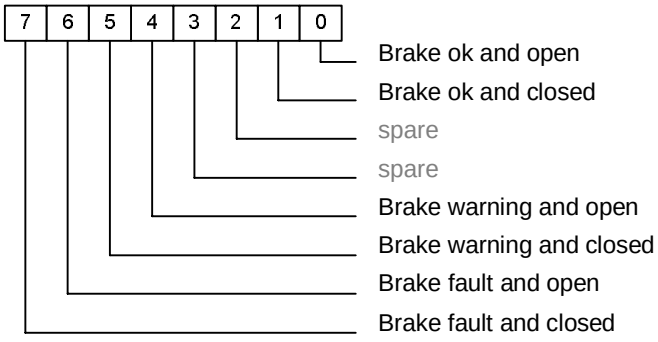
DB 218 DBW 0	HoistDrive1.wrdControl1



DB 218 DBB 67	HoistDrive1.bytStop



DB 218 DBB 74 DB 218 DBB 75	HoistDrive1.bytBrake2 HoistDrive1.bytBrake1



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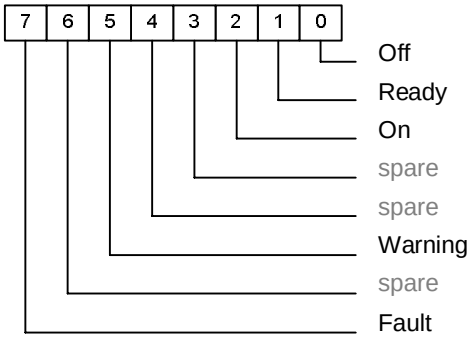
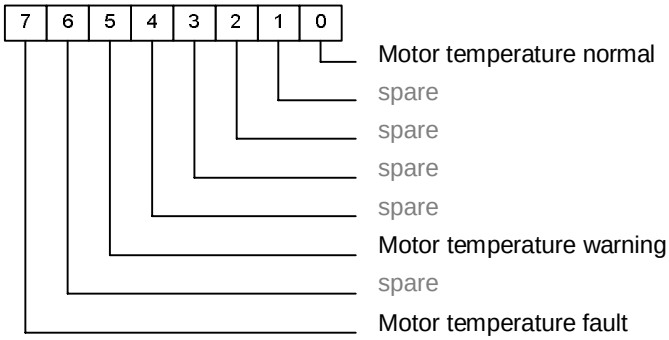
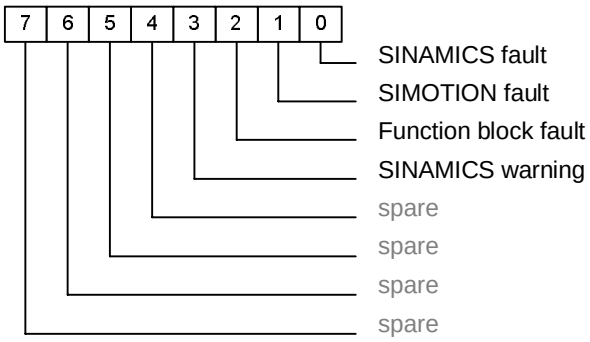
DB 218 DBB 77	HoistDrive1.bytStatus



DB 218 DBB 80	HoistDrive1.bytMotor



DB 218 DBB 81	HoistDrive1.bytFaultSimotion



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3.4 Hoist_Drive2

Tags for “Hoist_Drive2” are the same as for “Hoist_Drive1”. For “Hoist_Drive2” the tags are located in DB 228. The tag prefix is “HoistDrive2” instead of “HoistDrive1”.

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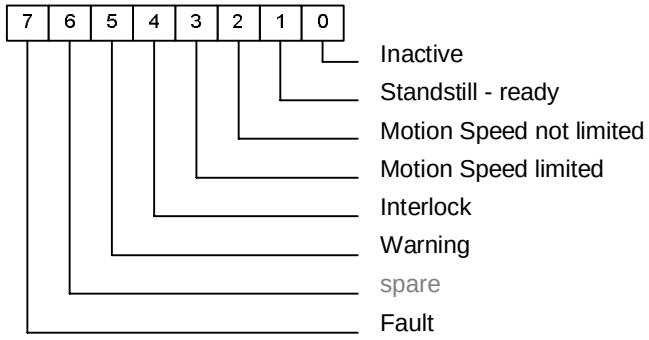
3.5 Trolley_General

No.	Address	Tag name	Description	Type
1.	DB 308 DBB 64	**TrolleyBinary**	Instance of structure type *MotionBinary*	Motion Binary
2.	DB 308 DBB 64	TrolleyBinary.bytMotion	Binary information see below	Byte
3.	DB 308 DBB 67	TrolleyBinary.bytStop	Binary information see below	Byte
4.	DB 308 DBB 68	TrolleyBinary.bytSwitches2	Binary information see below	Byte
5.	DB 308 DBB 69	TrolleyBinary.bytSwitches1	Binary information see below	Byte
6.	DB 308 DBB 70	TrolleyBinary.bytBinary	spare	Byte
7.	DB 308 DBB 71	TrolleyBinary.bytStick	Binary information see below	Byte
8.	DB 308 DBB 72	TrolleyBinary.bytRopeDrum	Binary information see below	Byte
9.	DB 308 DBB 78	TrolleyBinary.bytInterlocks2	spare	Byte
10.	DB 308 DBB 79	TrolleyBinary.bytInterlocks1	spare	Byte
11.	DB 308 DBB 84	TrolleyBinary. bytSafetyBrake4	Binary information see below	Byte
12.	DB 308 DBB 85	TrolleyBinary. bytSafetyBrake3	Binary information see below	Byte
13.	DB 308 DBB 86	TrolleyBinary. bytSafetyBrake2	Binary information see below	Byte
14.	DB 308 DBB 87	TrolleyBinary. bytSafetyBrake1	Binary information see below	Byte
15.	DB 308 DBD 136	**TrolleyAnalog**	Instance of structure type *MotionAnalog*	Motion Analog
16.	DB 308 DBD 136	TrolleyAnalog. fltPositionActual	Actual positon in m	Float
17.	DB 308 DBD 140	TrolleyAnalog. fltSpeedMasterSwitch	Speed setpoint from master switch in %	Float
18.	DB 308 DBD 144	TrolleyAnalog.fltSpeedActual	Actual speed in %	Float
19.	DB 308 DBD 148	TrolleyAnalog. fltSpeedActualMSec	Actual speed in m/s	Float
20.	DB 308 DBD 160	TrolleyAnalog. fltPositionSetpoint	Positon setpoint in m	Float

DB 308 DBB 64 TrolleyBinary.bytMotion



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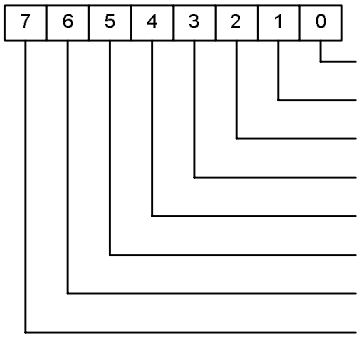
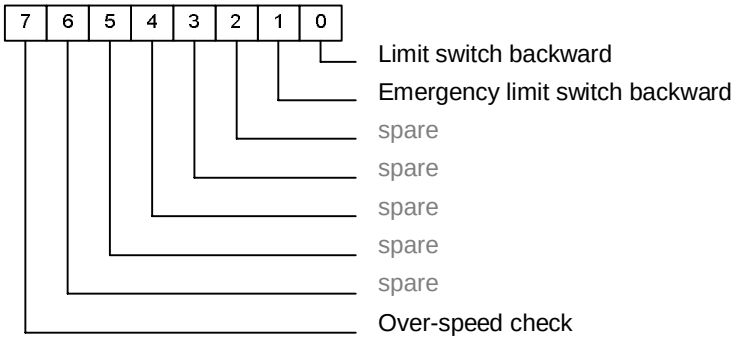
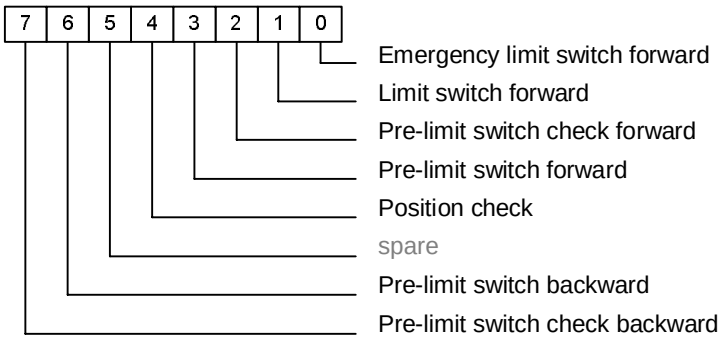
DB 308 DBB 67	TrolleyBinary.bytStop



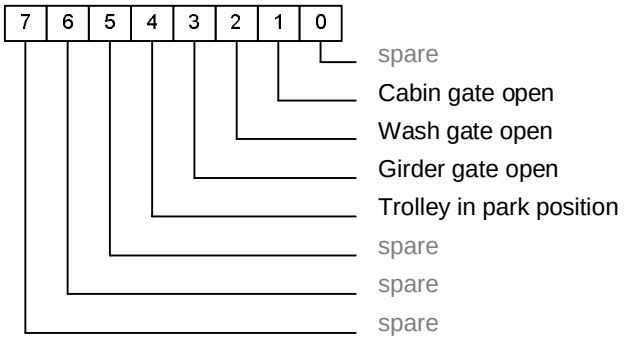
DB 308 DBB 68	TrolleyBinary.bytSwitches2



DB 308 DBB 69	TrolleyBinary.bytSwitches1



DB 308 DBB 70	TrolleyBinary.bytBinary



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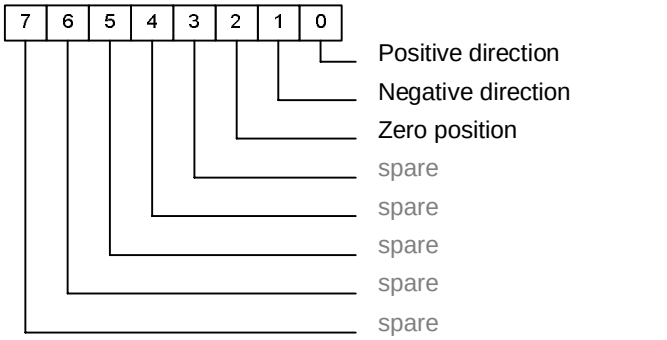
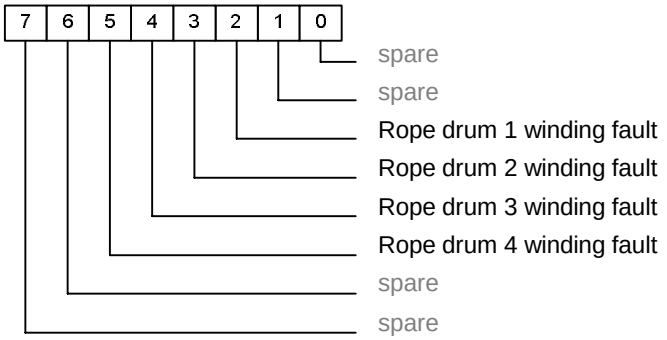
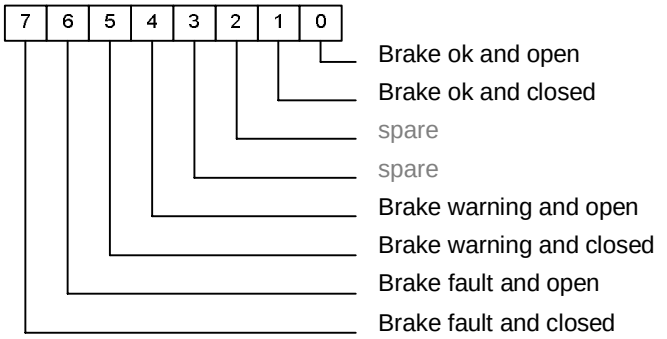
DB 308 DBB 71	TrolleyBinary.bytStick



DB 308 DBB 72	TrolleyBinary.bytRopeDrum



DB 308 DBB 84	TrolleyBinary.bytSafetyBrake4
DB 308 DBB 85	TrolleyBinary.bytSafetyBrake3
DB 308 DBB 86	TrolleyBinary.bytSafetyBrake2
DB 308 DBB 87	TrolleyBinary.bytSafetyBrake1



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3.6 Trolley_Drive1

No.	Address	Tag name	Description	Type
1.	DB 318 DBB 0	**TrolleyDrive1**	Instance of structure type *Drive*	Drive
2.	DB 318 DBW 0	TrolleyDrive1.wrdControl1	PLC: PZD 1 (Basic Technology)	Word
3.	DB 318 DBW 4	TrolleyDrive1.wrdControl2	PLC: PZD 3 (Basic Technology)	Word
4.	DB 318 DBW 8	TrolleyDrive1.srtRampUpTime	PLC: PZD 5 (Basic Technology)	Short
5.	DB 318 DBW 10	TrolleyDrive1. srtRampDownTime	PLC: PZD 6 (Basic Technology)	Short
6.	DB 318 DBW 16	TrolleyDrive1.wrdApplControl1	PLC: PZD 9 (Basic Technology)	Word
7.	DB 318 DBW 18	TrolleyDrive1.wrdApplControl2	PLC: PZD 10 (Basic Technology)	Word
8.	DB 318 DBW 32	TrolleyDrive1.wrdStatus1	Drive: PZD 1 (Basic Technology)	Word
9.	DB 318 DBW 36	TrolleyDrive1.wrdStatus2	Drive: PZD 3 (Basic Technology)	Word
10.	DB 318 DBW 38	TrolleyDrive1.wrdFaultNumber	Drive: PZD 4 (Basic Technology)	Short
11.	DB 318 DBW 48	TrolleyDrive1.wrdApplStatus1	Drive: PZD 9 (Basic Technology)	Word
12.	DB 318 DBW 50	TrolleyDrive1.wrdApplStatus2	Drive: PZD 10 (Basic Technology)	Word
13.	DB 318 DBB 67	TrolleyDrive1.bytStop	Binary information see below	Byte
14.	DB 318 DBB 74	TrolleyDrive1.bytBrake2	Binary information see below	Byte
15.	DB 318 DBB 75	TrolleyDrive1.bytBrake1	Binary information see below	Byte
16.	DB 318 DBB 77	TrolleyDrive1.bytStatus	Binary information see below	Byte
17.	DB 318 DBB 80	TrolleyDrive1.bytMotor	Binary information see below	Byte
18.	DB 318 DBB 81	TrolleyDrive1.bytFaultSimotion	Binary information see below	Byte
19.	DB 318 DBD 136	TrolleyDrive1.fltPositionActual	Actual Position in m	Float
20.	DB 318 DBD 140	TrolleyDrive1. fltSpeedSetpointPLC	Speed setpoint from PLC in %	Float
21.	DB 318 DBD 144	TrolleyDrive1.fltSpeedActual	Actual speed in %	Float
22.	DB 318 DBD 152	TrolleyDrive1.fltSpeedRpm	Actual speed in RPM	Float
23.	DB 318 DBD 160	TrolleyDrive1. fltPositionSetpoint	Position setpoint in m	Float
24.	DB 318 DBD 164	TrolleyDrive1.fltVoltageActual	Actual voltage in V	Float
25.	DB 318 DBD 168	TrolleyDrive1.fltCurrentActual	Actual current in A	Float
26.	DB 318 DBD 172	TrolleyDrive1.fltTorqueActual	Actual torque in Nm	Float
27.	DB 318 DBD 176	TrolleyDrive1.fltTorqueSetpoint	Torque setpoint in Nm	Float
28.	DB 318 DBD 180	TrolleyDrive1.fltSpeedSetpoint	Speed setpoint in %	Float
29.	DB 318 DBD 196	TrolleyDrive1.fltCurrentSetpoint	Current setpoint in A	Float

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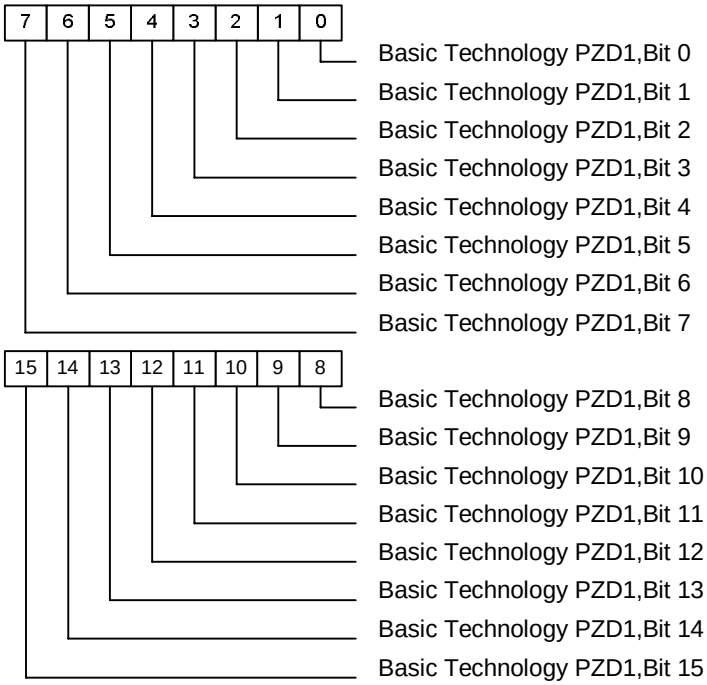
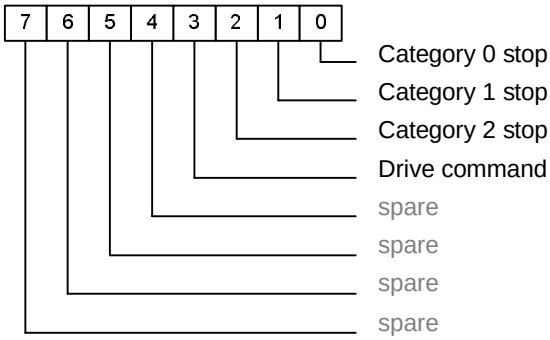
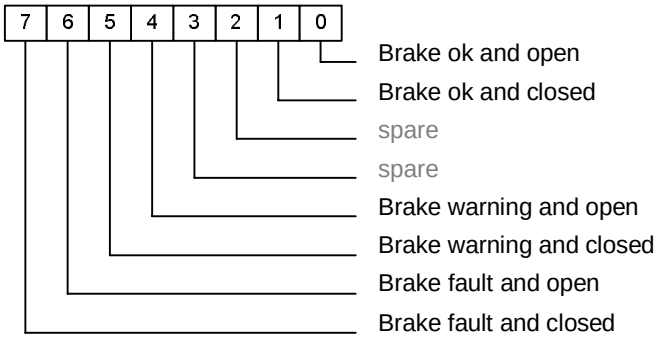
DB 318 DBW 0	TrolleyDrive1.wrdControl1



DB 318 DBB 67	TrolleyDrive1.bytStop



DB 318 DBB 74	TrolleyDrive1.bytBrake2
DB 318 DBB 75	TrolleyDrive1.bytBrake1



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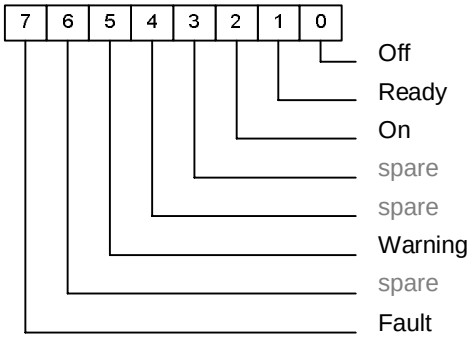
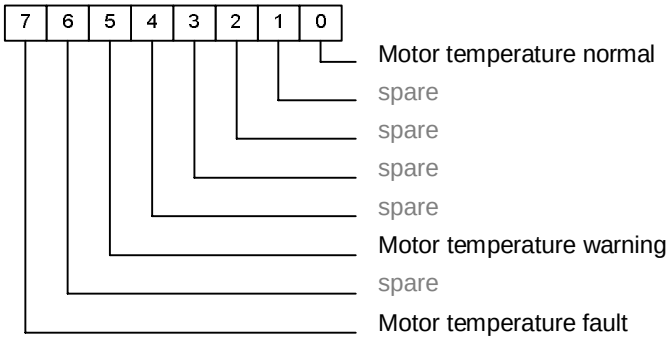
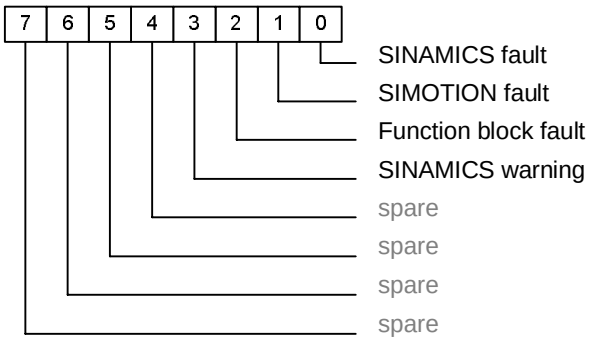
DB 318 DBB 77	TrolleyDrive1.bytStatus



DB 318 DBB 80	TrolleyDrive1.bytMotor



DB 318 DBB 81	TrolleyDrive1.bytFaultSimotion



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3.7 Trolley_Drive2

Tags for “Trolley_Drive2” are the same as for “Trolley_Drive1”. For “Trolley _Drive2” the tags are located in DB 328. The tag prefix is “TrolleyDrive2” instead of “TrolleyDrive1”.

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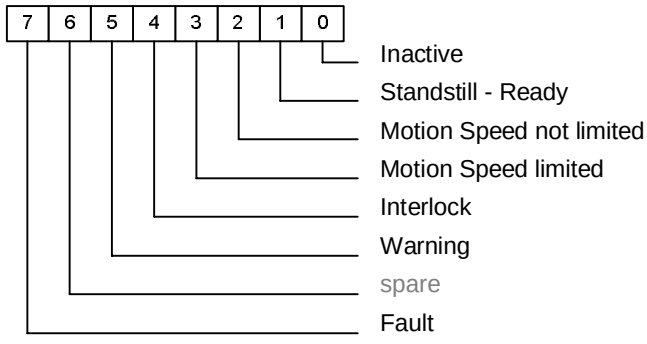
3.8 Boomhoist_General

No.	Address	Tag name	Description	Type
1.	DB 418 DBB 64	**BoomhoistBinary**	Instance of structure type *MotionBinary*	Motion Binary
2.	DB 418 DBB 64	BoomhoistBinary.bytMotion	Binary information see below	Byte
3.	DB 418 DBB 67	BoomhoistBinary.bytStop	Binary information see below	Byte
4.	DB 418 DBB 68	BoomhoistBinary.bytSwitches2	Binary information see below	Byte
5.	DB 418 DBB 69	BoomhoistBinary.bytSwitches1	Binary information see below	Byte
6.	DB 418 DBB 70	BoomhoistBinary.bytBinary	spare	Byte
7.	DB 418 DBB 71	BoomhoistBinary.bytStick	Binary information see below	Byte
8.	DB 418 DBB 72	BoomhoistBinary.bytRopeDrum	Binary information see below	Byte
9.	DB 418 DBB 78	BoomhoistBinary.bytInterlocks2	spare	Byte
10.	DB 418 DBB 79	BoomhoistBinary.bytInterlocks1	spare	Byte
11.	DB 418 DBB 84	BoomhoistBinary.bytSafetyBrake4	Binary information see below	Byte
12.	DB 418 DBB 85	BoomhoistBinary.bytSafetyBrake3	Binary information see below	Byte
13.	DB 418 DBB 86	BoomhoistBinary.bytSafetyBrake2	Binary information see below	Byte
14.	DB 418 DBB 87	BoomhoistBinary.bytSafetyBrake1	Binary information see below	Byte
15.	DB 418 DBD 136	**BoomhoistAnalog**	Instance of structure type *MotionAnalog*	Motion Analog
16.	DB 418 DBD 136	BoomhoistAnalog. fltPositionActual	Actual positon in m	Float
17.	DB 418 DBD 140	BoomhoistAnalog. fltSpeedMasterSwitch	Speed setpoint from master switch in %	Float
18.	DB 418 DBD 144	BoomhoistAnalog.fltSpeedActual	Actual speed in %	Float
19.	DB 418 DBD 148	BoomhoistAnalog. fltSpeedActualMSec	Actual speed in m/s	Float
20.	DB 418 DBD 160	BoomhoistAnalog. fltPositionSetpoint	Positon setpoint in m	Float

DB 418 DBB 64 BoomhoistBinary.bytMotion



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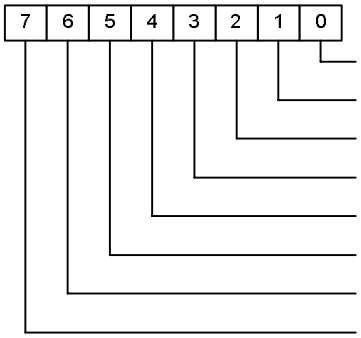
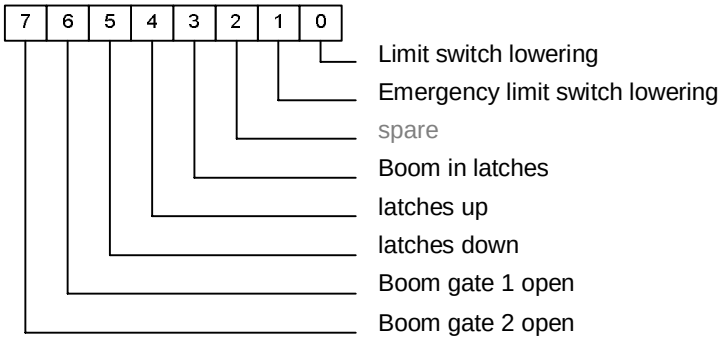
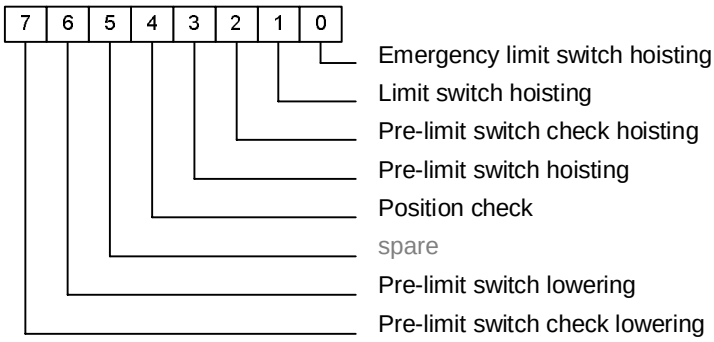
DB 418 DBB 67	BoomhoistBinary.bytStop



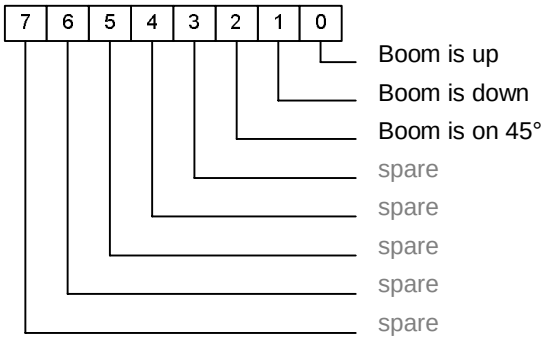
DB 418 DBB 68	BoomhoistBinary.bytSwitches2



DB 418 DBB 69	BoomhoistBinary.bytSwitches1



DB 418 DBB 70	BoomhoistBinary.bytBinary



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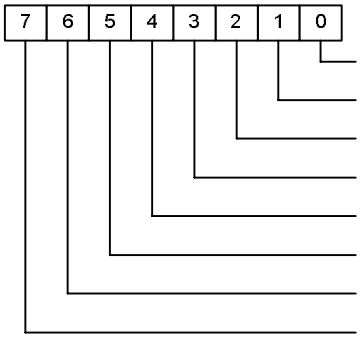
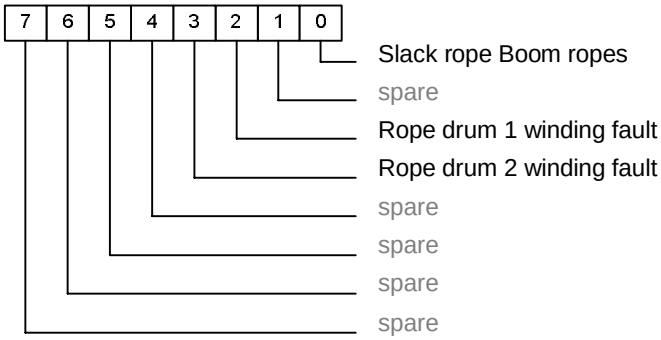
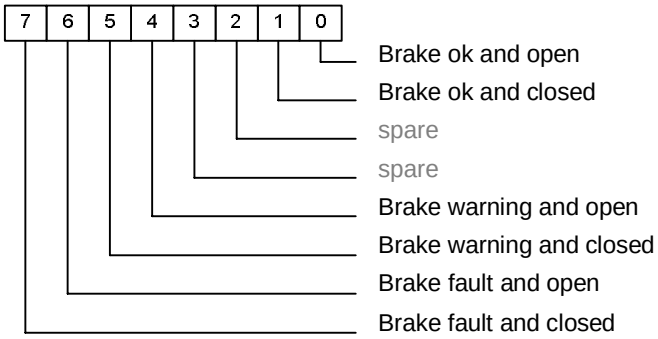
DB 418 DBB 71	BoomhoistBinary.bytStick



DB 418 DBB 72	BoomhoistBinary.RopeDrum



DB 418 DBB 85	BoomhoistBinary.bytSafetyBrake4
DB 418 DBB 86	BoomhoistBinary.bytSafetyBrake3
DB 418 DBB 87	BoomhoistBinary.bytSafetyBrake2
DB 418 DBB 88	BoomhoistBinary.bytSafetyBrake1



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3.9 Boomhoist_Drive1

No.	Address	Tag name	Description	Type
1.	DB 418 DBB 0	**BoomhoistDrive1**	Instance of structure type *Drive*	Drive
2.	DB 418 DBW 0	BoomhoistDrive1.wrdControl1	PLC: PZD 1 (Basic Technology)	Word
3.	DB 418 DBW 4	BoomhoistDrive1.wrdControl2	PLC: PZD 3 (Basic Technology)	Word
4.	DB 418 DBW 8	BoomhoistDrive1.srtRampUpTime	PLC: PZD 5 (Basic Technology)	Short
5.	DB 418 DBW 10	BoomhoistDrive1. srtRampDownTime	PLC: PZD 6 (Basic Technology)	Short
6.	DB 418 DBW 16	BoomhoistDrive1. wrdApplControl1	PLC: PZD 9 (Basic Technology)	Word
7.	DB 418 DBW 18	BoomhoistDrive1. wrdApplControl2	PLC: PZD 10 (Basic Technology)	Word
8.	DB 418 DBW 32	BoomhoistDrive1.wrdStatus1	Drive: PZD 1 (Basic Technology)	Word
9.	DB 418 DBW 36	BoomhoistDrive1.wrdStatus2	Drive: PZD 3 (Basic Technology)	Word
10.	DB 418 DBW 38	BoomhoistDrive1. wrdFaultNumber	Drive: PZD 4 (Basic Technology)	Short
11.	DB 418 DBW 48	BoomhoistDrive1.wrdApplStatus1	Drive: PZD 9 (Basic Technology)	Word
12.	DB 418 DBW 50	BoomhoistDrive1.wrdApplStatus2	Drive: PZD 10 (Basic Technology)	Word
13.	DB 418 DBB 67	BoomhoistDrive1.bytStop	Binary information see below	Byte
14.	DB 418 DBB 74	BoomhoistDrive1.bytBrake2	Binary information see below	Byte
15.	DB 418 DBB 75	BoomhoistDrive1.bytBrake1	Binary information see below	Byte
16.	DB 418 DBB 77	BoomhoistDrive1.bytStatus	Binary information see below	Byte
17.	DB 418 DBB 80	BoomhoistDrive1.bytMotor	Binary information see below	Byte
18.	DB 418 DBB 81	BoomhoistDrive1. bytFaultSimotion	Binary information see below	Byte
19.	DB 418 DBD 136	BoomhoistDrive1.fltPositionActual	Actual Position in m	Float
20.	DB 418 DBD 140	BoomhoistDrive1. fltSpeedSetpointPLC	Speed setpoint from PLC in %	Float
21.	DB 418 DBD 144	BoomhoistDrive1.fltSpeedActual	Actual speed in %	Float
22.	DB 418 DBD 152	BoomhoistDrive1.fltSpeedRpm	Actual speed in RPM	Float
23.	DB 418 DBD 160	BoomhoistDrive1. fltPositionSetpoint	Position setpoint in m	Float
24.	DB 418 DBD 164	BoomhoistDrive1.fltVoltageActual	Actual voltage in V	Float
25.	DB 418 DBD 168	BoomhoistDrive1.fltCurrentActual	Actual current in A	Float
26.	DB 418 DBD 172	BoomhoistDrive1.fltTorqueActual	Actual torque in Nm	Float
27.	DB 418 DBD 176	BoomhoistDrive1. fltTorqueSetpoint	Torque setpoint in Nm	Float
28.	DB 418 DBD 180	BoomhoistDrive1. fltSpeedSetpoint	Speed setpoint in %	Float

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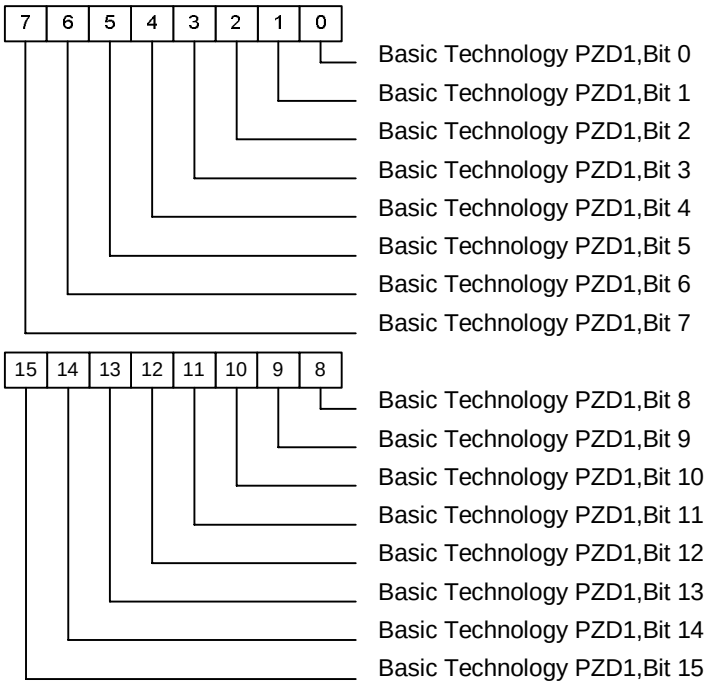
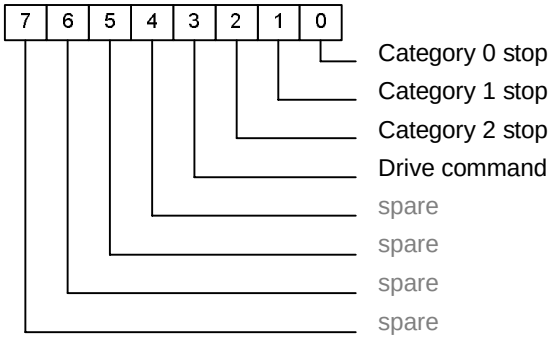
No.	Address	Tag name	Description	Type
29.	DB 418 DBD 196	BoomhoistDrive1. fltCurrentSetpoint	Current setpoint in A	Float

DB 418 DBW 0	BoomhoistDrive1.wrdControl1



DB 418 DBB 67	BoomhoistDrive1.bytStop



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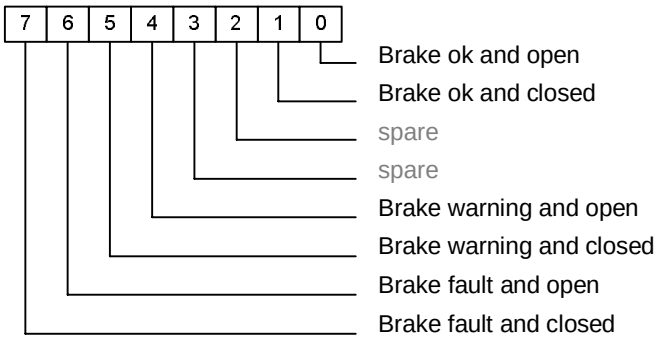
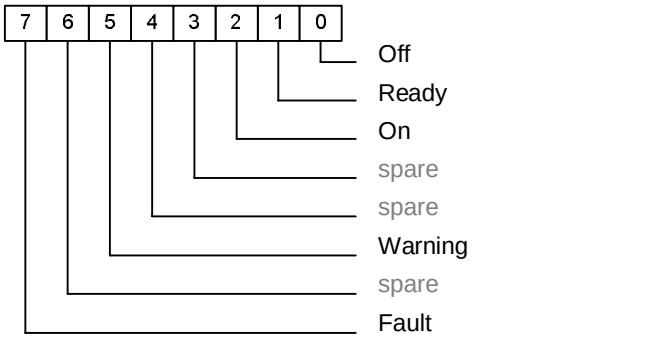
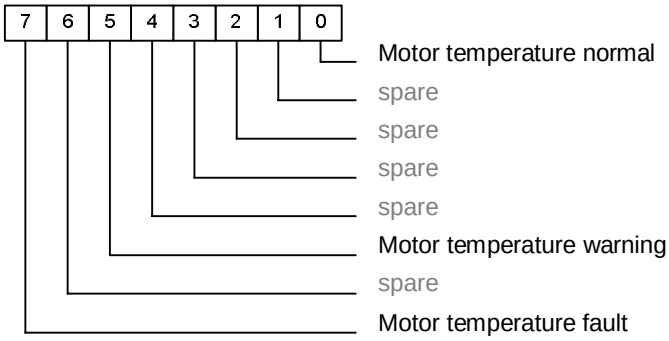
DB 418 DBB 74	BoomhoistDrive1.bytBrake2
DB 418 DBB 75	BoomhoistDrive1.bytBrake1



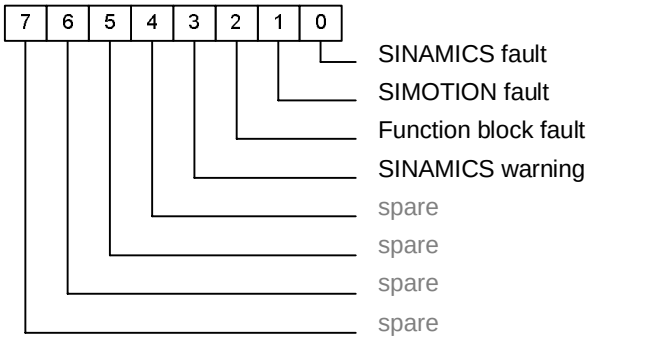
DB 418 DBB 77	BoomhoistDrive1.bytStatus



DB 418 DBB 80	BoomhoistDrive1.bytMotor



DB 418 DBB 81	BoomhoistDrive1.bytFaultSimotion



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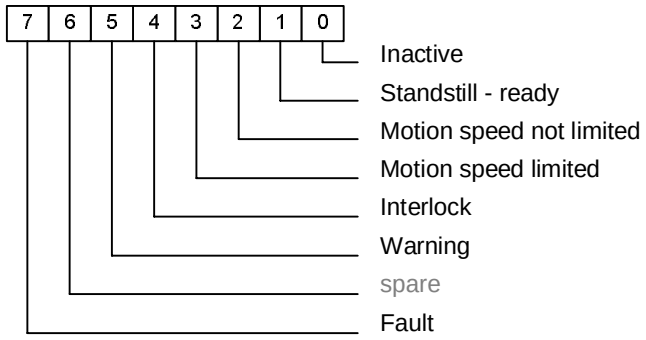
3.10 Gantry_General

No.	Address	Tag name	Description	Type
1.	DB 508 DBB 64	**GantryBinary**	Instance of structure type *MotionBinary*	Motion Binary
2.	DB 508 DBB 64	GantryBinary.bytMotion	Binary information see below	Byte
3.	DB 508 DBB 67	GantryBinary.bytStop	Binary information see below	Byte
4.	DB 508 DBB 68	GantryBinary.bytSwitches2	Binary information see below	Byte
5.	DB 508 DBB 69	GantryBinary.bytSwitches1	Binary information see below	Byte
6.	DB 508 DBB 70	GantryBinary.bytBinary	spare	Byte
7.	DB 508 DBB 71	GantryBinary.bytStick	Binary information see below	Byte
8.	DB 508 DBB 72	GantryBinary.bytRopeDrum	Binary information see below	Byte
9.	DB 508 DBB 78	GantryBinary.bytInterlocks2	spare	Byte
10.	DB 508 DBB 79	GantryBinary.bytInterlocks1	spare	Byte
11.	DB 508 DBB 84	GantryBinary.bytSafetyBrake4	spare	Byte
12.	DB 508 DBB 85	GantryBinary.bytSafetyBrake3	spare	Byte
13.	DB 508 DBB 86	GantryBinary.bytSafetyBrake2	Binary information see below	Byte
14.	DB 508 DBB 87	GantryBinary.bytSafetyBrake1	Binary information see below	Byte
15.	DB 508 DBD 136	**GantryAnalog**	Instance of structure type *MotionAnalog*	Motion Analog
16.	DB 508 DBD 136	GantryAnalog.fltPositionActual	Actual positon in m	Float
17.	DB 508 DBD 140	GantryAnalog. fltSpeedMasterSwitch	Speed setpoint from master switch in %	Float
18.	DB 508 DBD 144	GantryAnalog.fltSpeedActual	Actual speed in %	Float
19.	DB 508 DBD 148	GantryAnalog. fltSpeedActualMSec	Actual speed in m/s	Float
20.	DB 508 DBD 160	GantryAnalog.fltPositionSetpoint	Positon setpoint in m	Float
21.	DB 508 DBD 164	fltGantryMisalignment	Misalignment in m	Float

DB 508 DBB 64 **GantryBinary.bytMotion**



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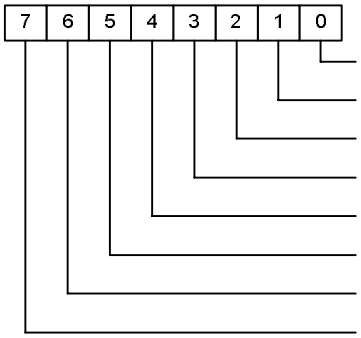
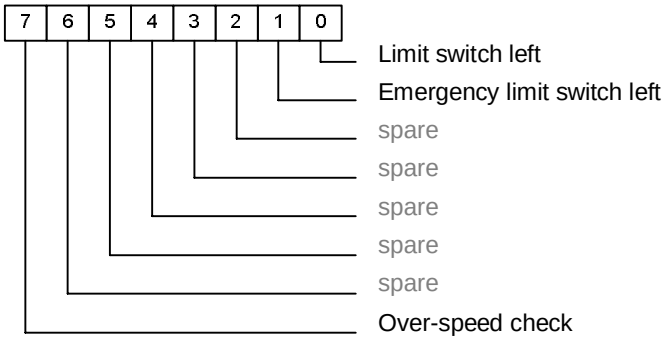
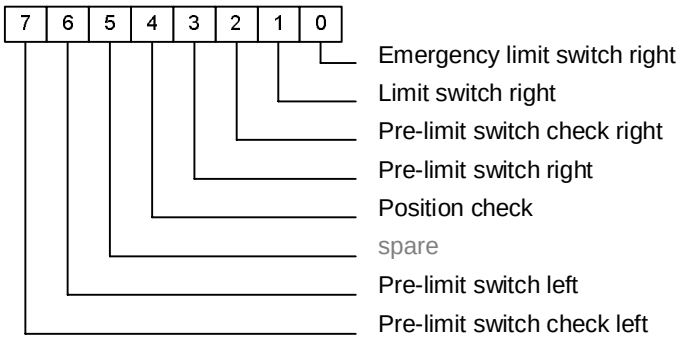
DB 508 DBB 67	GantryBinary.bytStop



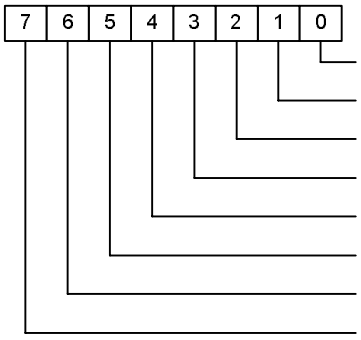
DB 508 DBB 68	GantryBinary.bytSwitches2



DB 508 DBB 69	GantryBinary.bytSwitches1



DB 508 DBB 71	GantryBinary.bytStick



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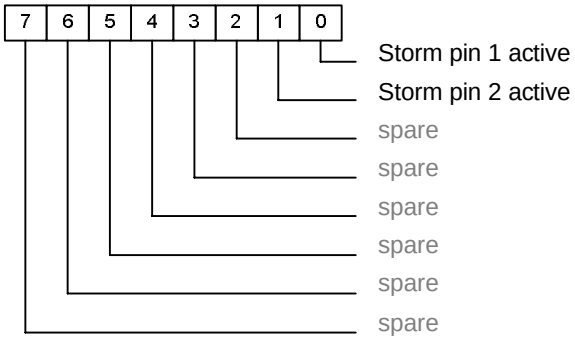
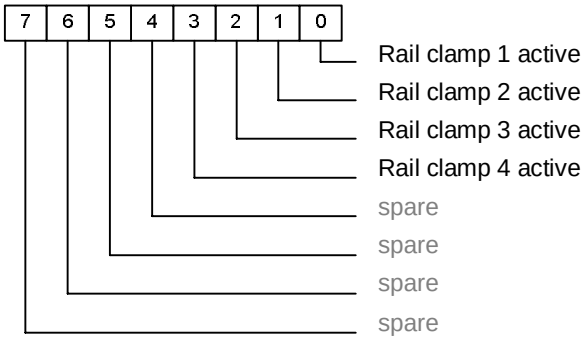
DB 508 DBB 86	GantryBinary.bytSafetyBrake2



DB 508 DBB 87	GantryBinary.bytSafetyBrake1



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3.11 Gantry_Drive1

No.	Address	Tag name	Description	Type
1.	DB 518 DBB 0	**GantryDrive1**	Instance of structure type *Drive*	Drive
2.	DB 518 DBW 0	GantryDrive1.wrdControl1	PLC: PZD 1 (Basic Technology)	Word
3.	DB 518 DBW 4	GantryDrive1.wrdControl2	PLC: PZD 3 (Basic Technology)	Word
4.	DB 518 DBW 8	GantryDrive1.srtRampUpTime	PLC: PZD 5 (Basic Technology)	Short
5.	DB 518 DBW 10	GantryDrive1.srtRampDownTime	PLC: PZD 6 (Basic Technology)	Short
6.	DB 518 DBW 16	GantryDrive1.wrdApplControl1	PLC: PZD 9 (Basic Technology)	Word
7.	DB 518 DBW 18	GantryDrive1.wrdApplControl2	PLC: PZD 10 (Basic Technology)	Word
8.	DB 518 DBW 32	GantryDrive1.wrdStatus1	Drive: PZD 1 (Basic Technology)	Word
9.	DB 518 DBW 36	GantryDrive1.wrdStatus2	Drive: PZD 3 (Basic Technology)	Word
10.	DB 518 DBW 38	GantryDrive1.wrdFaultNumber	Drive: PZD 4 (Basic Technology)	Short
11.	DB 518 DBW 48	GantryDrive1.wrdApplStatus1	Drive: PZD 9 (Basic Technology)	Word
12.	DB 518 DBW 50	GantryDrive1.wrdApplStatus2	Drive: PZD 10 (Basic Technology)	Word
13.	DB 518 DBB 67	GantryDrive1.bytStop	Binary information see below	Byte
14.	DB 518 DBB 74	GantryDrive1.bytBrake2	Binary information see below	Byte
15.	DB 518 DBB 75	GantryDrive1.bytBrake1	Binary information see below	Byte
16.	DB 518 DBB 77	GantryDrive1.bytStatus	Binary information see below	Byte
17.	DB 518 DBB 80	GantryDrive1.bytMotor	Binary information see below	Byte
18.	DB 518 DBB 81	GantryDrive1.bytFaultSimotion	Binary information see below	Byte
19.	DB 518 DBB 84	Gantry1Brakes1.bytBrake1	Binary information see below	Byte
20.	DB 518 DBB 85	Gantry1Brakes1.bytBrake2	Binary information see below	Byte
21.	DB 518 DBB 86	Gantry1Brakes1.bytBrake3	Binary information see below	Byte
22.	DB 518 DBB 87	Gantry1Brakes1.bytBrake4	Binary information see below	Byte
23.	DB 518 DBB 88	Gantry1Brakes1.bytBrake5	Binary information see below	Byte
24.	DB 518 DBB 89	Gantry1Brakes1.bytBrake6	Binary information see below	Byte
25.	DB 518 DBB 90	Gantry1Brakes1.bytBrake7	Binary information see below	Byte
26.	DB 518 DBB 91	Gantry1Brakes1.bytBrake8	Binary information see below	Byte
27.	DB 518 DBD 136	GantryDrive1.fltPositionActual	Actual Position in m	Float
28.	DB 518 DBD 140	GantryDrive1. fltSpeedSetpointPLC	Speed setpoint from PLC in %	Float
29.	DB 518 DBD 144	GantryDrive1.fltSpeedActual	Actual speed in %	Float
30.	DB 518 DBD 152	GantryDrive1.fltSpeedRpm	Actual speed in RPM	Float
31.	DB 518 DBD 160	GantryDrive1.fltPositionSetpoint	Position setpoint in m	Float

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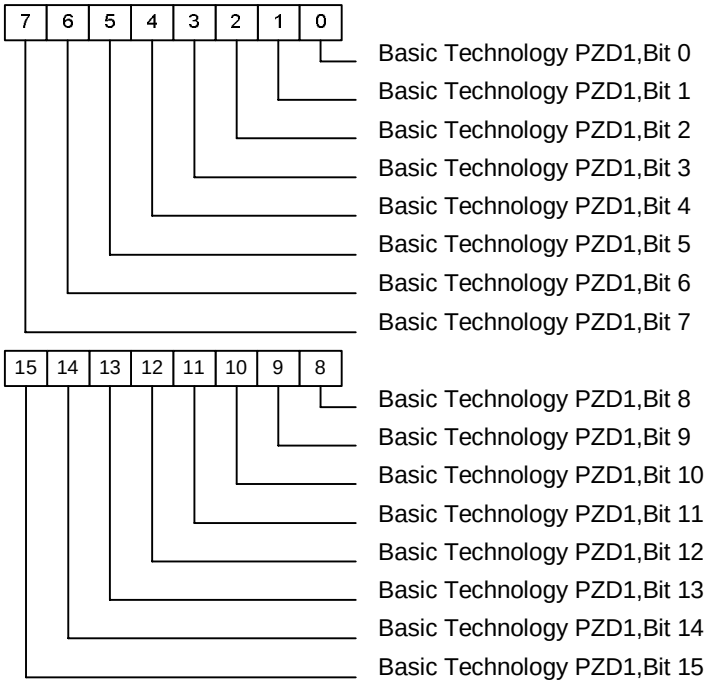
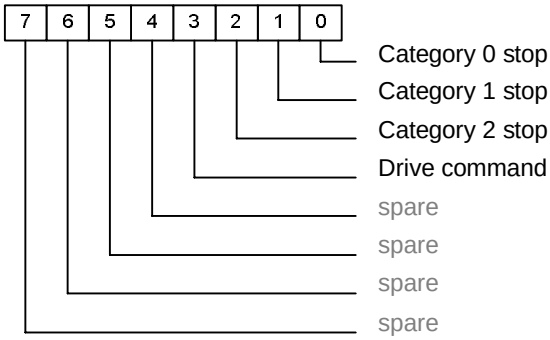
No.	Address	Tag name	Description	Type
32.	DB 518 DBD 164	GantryDrive1.fltVoltageActual	Actual voltage in V	Float
33.	DB 518 DBD 168	GantryDrive1.fltCurrentActual	Actual current in A	Float
34.	DB 518 DBD 172	GantryDrive1.fltTorqueActual	Actual torque in Nm	Float
35.	DB 518 DBD 176	GantryDrive1.fltTorqueSetpoint	Torque setpoint in Nm	Float
36.	DB 518 DBD 180	GantryDrive1.fltSpeedSetpoint	Speed setpoint in %	Float
37.	DB 518 DBD 196	GantryDrive1.fltCurrentSetpoint	Current setpoint in A	Float

DB 518 DBW 0 **GantryDrive1.wrdControl1**



DB 518 DBB 67 **GantryDrive1.bytStop**



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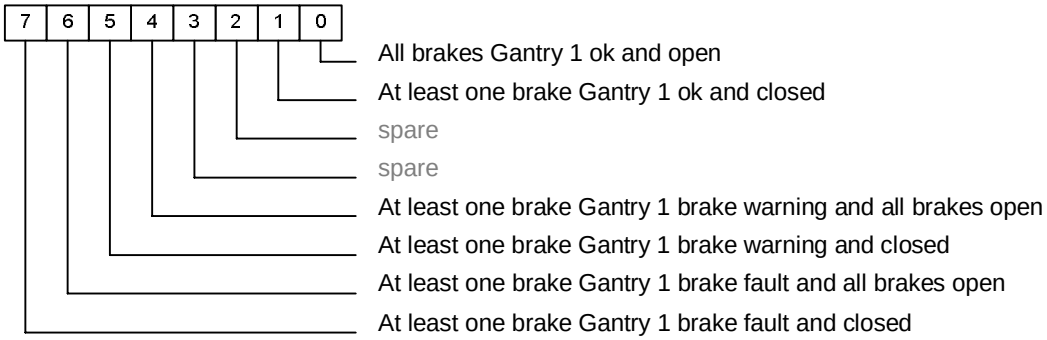
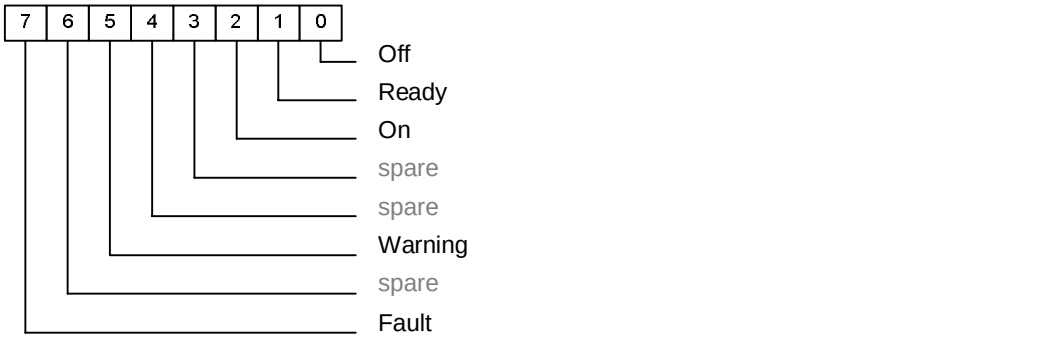
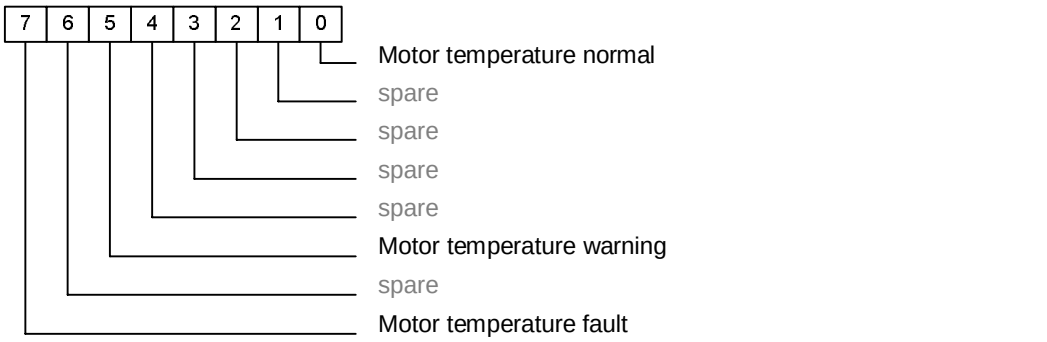
DB 518 DBB 75	GantryDrive1.bytBrake1



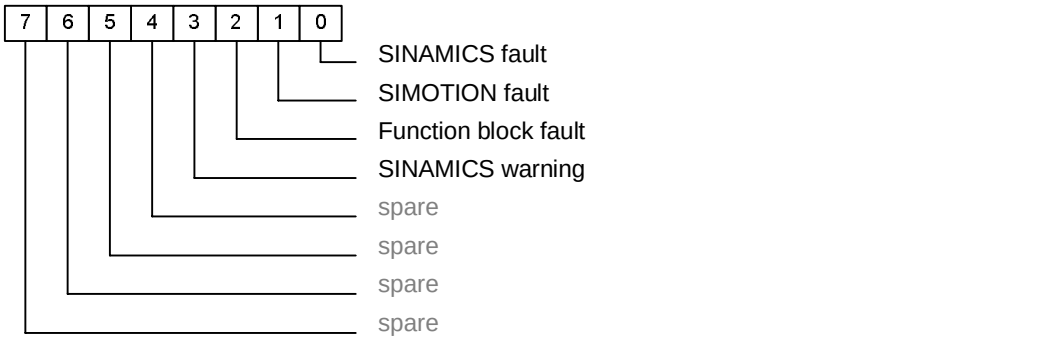
DB 518 DBB 77	GantryDrive1.bytStatus



DB 518 DBB 80	GantryDrive1.bytMotor



DB 518 DBB 81	GantryDrive1.bytFaultSimotion



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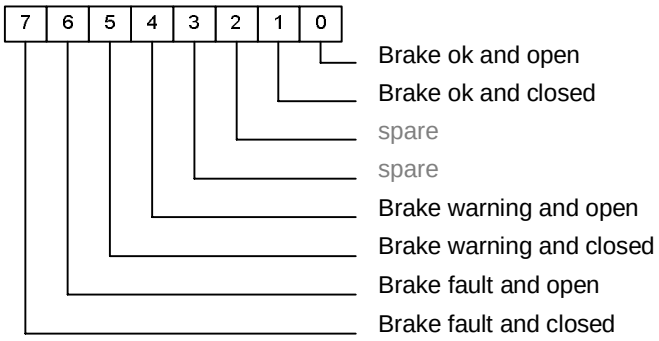
DB 518 DBB 84	**GantryBrakes1.bytBrake1**
DB 518 DBB 85	**GantryBrakes1.bytBrake2**
DB 518 DBB 86	**GantryBrakes1.bytBrake3**
DB 518 DBB 87	**GantryBrakes1.bytBrake4**
DB 518 DBB 88	**GantryBrakes1.bytBrake5**
DB 518 DBB 89	**GantryBrakes1.bytBrake6**
DB 518 DBB 90	**GantryBrakes1.bytBrake7**
DB 518 DBB 91	**GantryBrakes1.bytBrake8**



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3.12 Gantry_Drive2

Tags for “Gantry_Drive2” are the same as for “Gantry _Drive1”. For “Gantry _Drive2” the tags are located in DB 528. The tag prefix is “GantryDrive2” instead of “GantryDrive1” and “Gantry2Brakes1” instead of “Gantry1Brakes1”.

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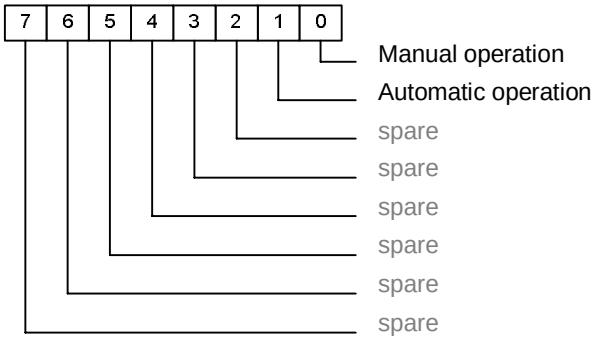
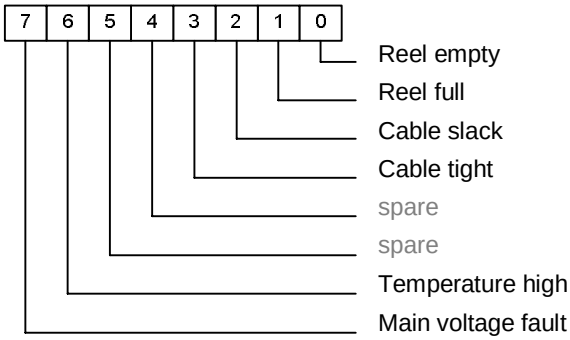
3.13 HV_Cable_Reel

No.	Address	Tag name	Description	Type
1.	DB 558 DBB 64	bytHVCableReelBinary4	spare	Byte
2.	DB 558 DBB 65	bytHVCableReelBinary3	spare	Byte
3.	DB 558 DBB 66	bytHVCableReelBinary2	Binary information see below	Byte
4.	DB 558 DBB 67	bytHVCableReelBinary1	Binary information see below	Byte
5.	DB 558 DBB 77	bytHVCableReelStatus	Binary information see below	Byte

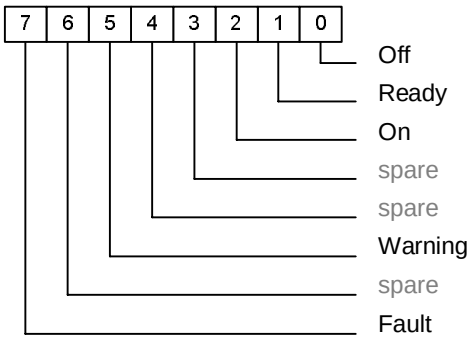
DB 558 DBB 66 **bytHVCableReelBinary2**



DB 558 DBB 67 **bytHVCableReelBinary1**



DB 558 DBB 77 **bytHVCableReelStatus**



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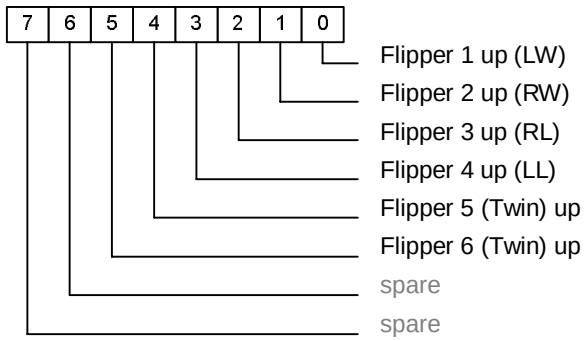
3.14 Spreader1

No.	Address	Tag name	Description	Type
1.	DB 718 DBB 64	Spreader1	Instance of structure *Spreader*	Spreader
2.	DB 718 DBB 64	Spreader1.bytFlipper	Binary information see below	Byte
3.	DB 718 DBB 65	Spreader1.bytLanded	Binary information see below	Byte
4.	DB 718 DBB 67	Spreader1.bytLocked	Binary information see below	Byte
5.	DB 718 DBB 69	Spreader1.bytControl1	Binary information see below	Byte
6.	DB 718 DBB 70	Spreader1.bytBinary4	Binary information see below	Byte
7.	DB 718 DBB 71	Spreader1.bytBinary3	Binary information see below	Byte
8.	DB 718 DBB 72	Spreader1.bytBinary2	Binary information see below	Byte
9.	DB 718 DBB 73	Spreader1.bytBinary1	Binary information see below	Byte
10.	DB 718 DBB 74	Spreader1.bytSize	Binary information see below	Byte
11.	DB 718 DBB 77	Spreader1.bytStatus	Binary information see below	Byte
12.	DB 718 DBB 101	Spreader1.bytCableReel4	Binary information see below	Byte
13.	DB 718 DBB 102	Spreader1.bytCableReel3	Binary information see below	Byte
14.	DB 718 DBB 103	Spreader1.bytCableReel2	Binary information see below	Byte
15.	DB 718 DBB 104	Spreader1.bytCableReel1	Binary information see below	Byte
16.	DB 718 DBD 140	Spreader1.fltTwinRight	Size of twin gap right in mm	Float
17.	DB 718 DBD 144	f Spreader1.ltTwinLeft	Size of twin gap left in mm	Float
18.	DB 718 DBD 160	Spreader1.fltLoadLeftWaterside	Load cell left waterside in t	Float
19.	DB 718 DBD 164	Spreader1.fltLoadRightWaterside	Load cell right waterside in t	Float
20.	DB 718 DBD 168	Spreader1.fltLoadRightLandside	Load cell right landside in t	Float
21.	DB 718 DBD 172	Spreader1.fltLoadLeftLandside	Load cell left landside in t	Float
22.	DB 718 DBD 192	Spreader1.fltLoadID	Load ID	Float
23.	DB 718 DBW 236	Spreader1.srtSize	Actual spreader size (20, 30, 40, 45, 2020)	Short
24.	DB 718 DBW 238	Spreader1.srtID	Spreader ID	Short

DB 718 DBB 64 **Spreader1.bytFlipper**



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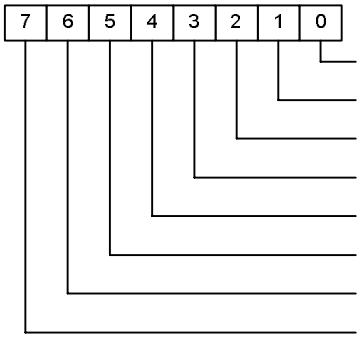
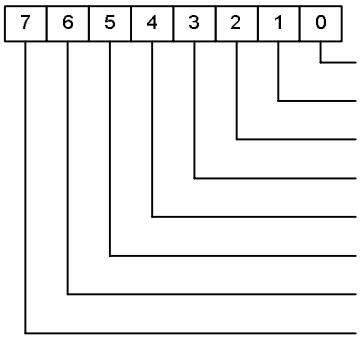
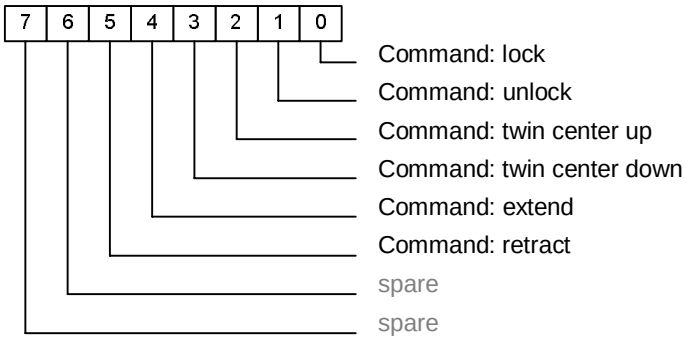
DB 718 DBB 65	Spreader1.bytLanded



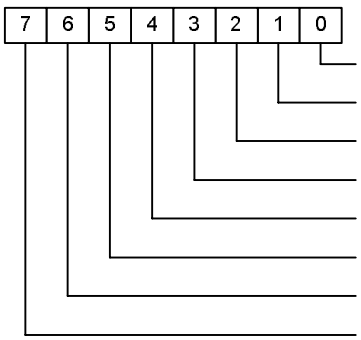
DB 718 DBB 67	Spreader1.bytLocked



DB 718 DBB 69	Spreader1.bytControl1



DB 718 DBB 70	Spreader1.bytBinary4



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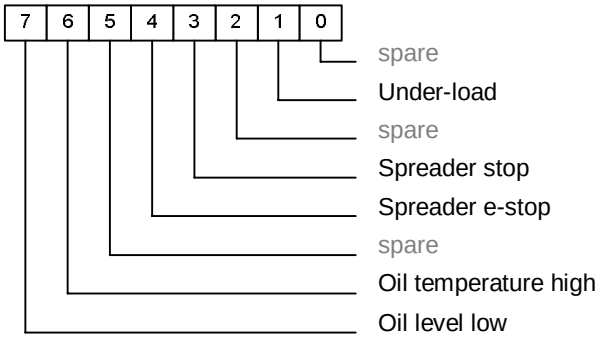
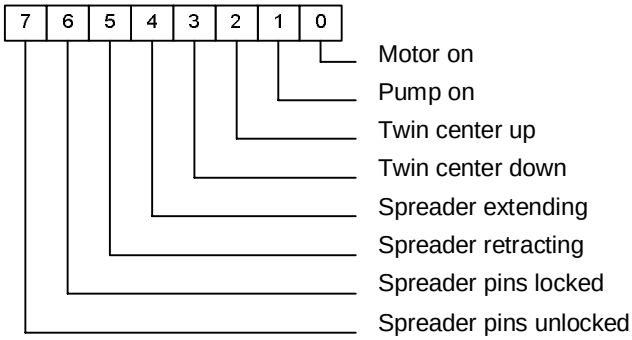
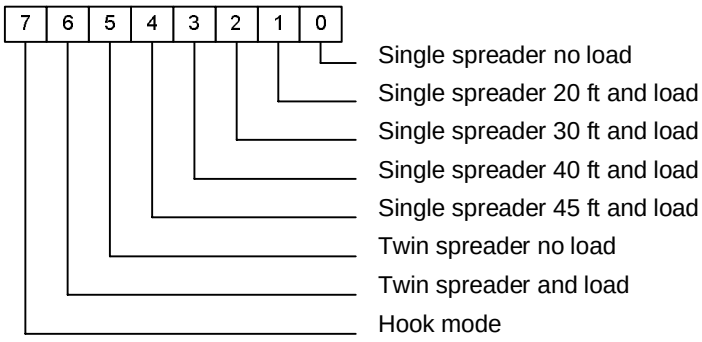
DB 718 DBB 71	Spreader1.bytBinary3



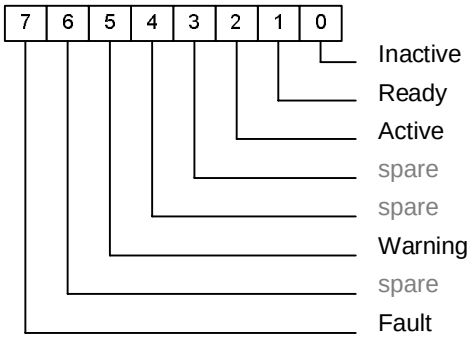
DB 718 DBB 73	Spreader1.bytBinary1



DB 718 DBB 74	Spreader1.bytSize



DB 718 DBB 77	Spreader1.bytStatus



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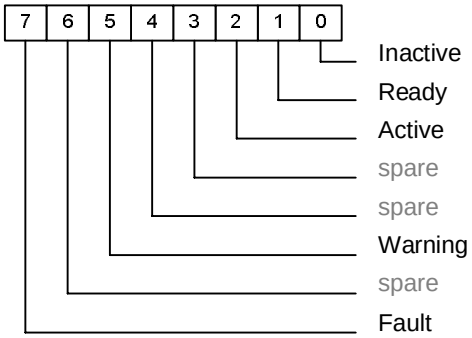
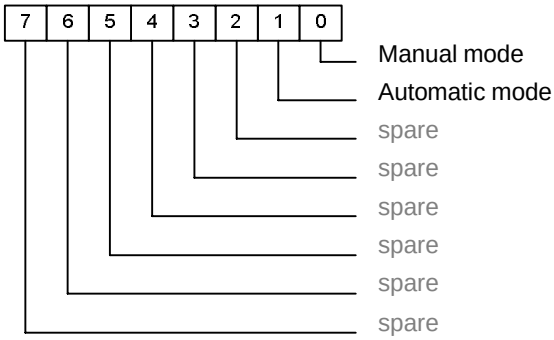
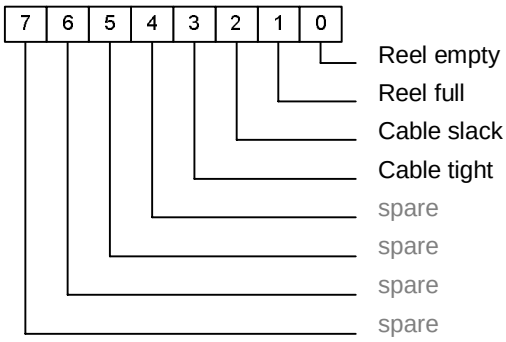
DB 718 DBB 101	Spreader1.bytCableReel4



DB 718 DBB 103	Spreader1.bytCableReel2



DB 718 DBB 104	Spreader1.bytCableReel1



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3.15 TrimListSkew1

No.	Address	Tag name	Description	Type
1.	DB 758 DBB 64	TLS1	Instance of structure *TLS*	TLS
2.	DB 758 DBB 64	TLS1.bytStick	Binary information see below	Byte
3.	DB 758 DBB 65	TLS1.bytPosition	Binary information see below	Byte
4.	DB 758 DBB 66	TLS1.bytCylinder4	Binary information see below	Byte
5.	DB 758 DBB 67	TLS1.bytCylinder3	Binary information see below	Byte
6.	DB 758 DBB 70	TLS1.bytCylinder2	Binary information see below	Byte
7.	DB 758 DBB 71	TLS1.bytCylinder1	Binary information see below	Byte
8.	DB 758 DBB 74	TLS1.bytBinary2	Binary information see below	Byte
9.	DB 758 DBB 75	TLS1.bytBinary1	Binary information see below	Byte
10.	DB 758 DBD 136	TLS1.fltCylinder1DevHome	Cylinder 1 deviation actual position - home position in mm	Float
11.	DB 758 DBD 140	TLS1.fltCylinder2DevHome	Cylinder 2 deviation actual position - home position in mm	Float
12.	DB 758 DBD 144	TLS1.fltCylinder3DevHome	Cylinder 3 deviation actual position - home position in mm	Float
13.	DB 758 DBD 148	TLS1.fltCylinder4DevHome	Cylinder 4 deviation actual position - home position in mm	Float
14.	DB 758 DBD 152	TLS1.fltCylinder1PositionHome	Cylinder 1 home position in mm	Float
15.	DB 758 DBD 156	TLS1.fltCylinder2PositionHome	Cylinder 2 home position in mm	Float
16.	DB 758 DBD 160	TLS1.fltCylinder3PositionHome	Cylinder 3 home position in mm	Float
17.	DB 758 DBD 164	TLS1.fltCylinder4PositionHome	Cylinder 4 home position in mm	Float
18.	DB 758 DBD 168	TLS1.fltCylinder1PositionActual	Cylinder 1 actual position in mm	Float
19.	DB 758 DBD 172	TLS1.fltCylinder2PositionActual	Cylinder 2 actual position in mm	Float
20.	DB 758 DBD 176	TLS1.fltCylinder3PositionActual	Cylinder 3 actual position in mm	Float
21.	DB 758 DBD 180	TLS1.fltCylinder4PositionActual	Cylinder 4 actual position in mm	Float
22.	DB 758 DBD 184	TLS1.fltTrimAngle	Actual Trim angle in °	Float
23.	DB 758 DBD 188	TLS1.fltListAngle	Actual List angle in °	Float
24.	DB 758 DBD 192	TLS1.fltSkewAngle	Actual Skew angle in °	Float

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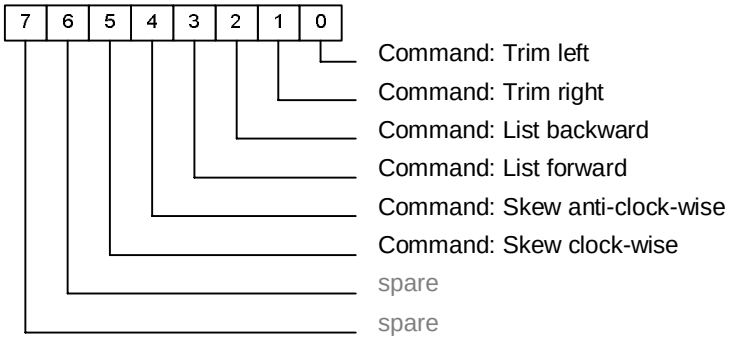
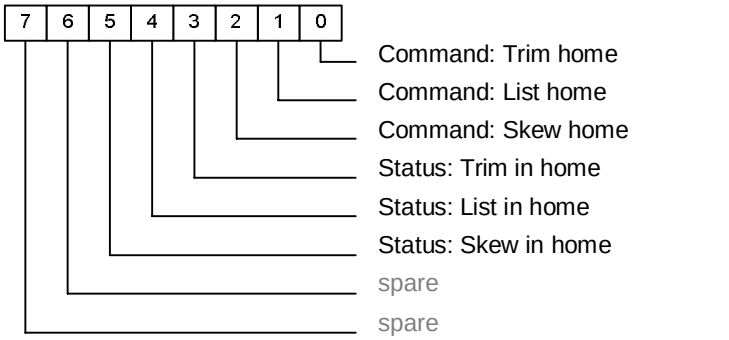
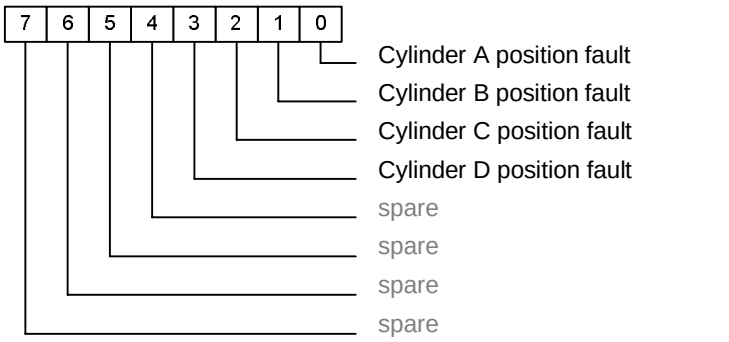
DB 758 DBB 64	TLS1.bytStick



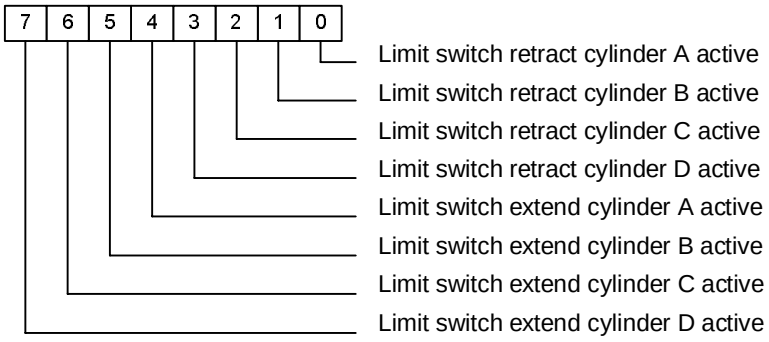
DB 758 DBB 65	TLS1.bytPosition



DB 758 DBB 66	TLS1.bytCylinder4



DB 758 DBB 67	TLS1.bytCylinder3



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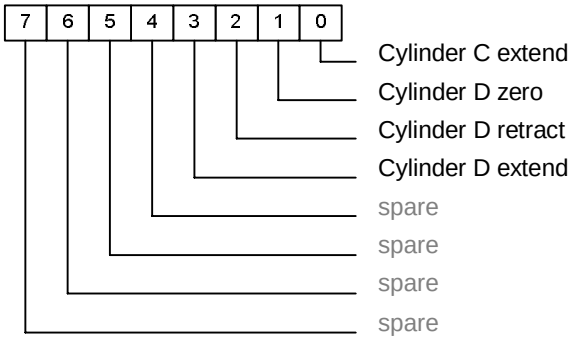
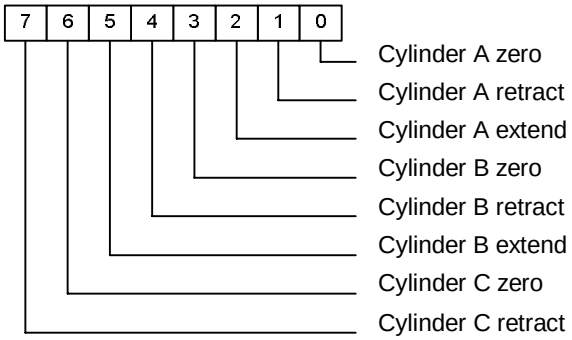
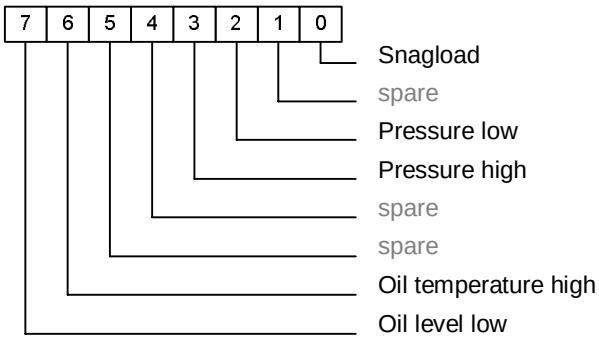
DB 758 DBB 70	TLS1.bytCylinder2



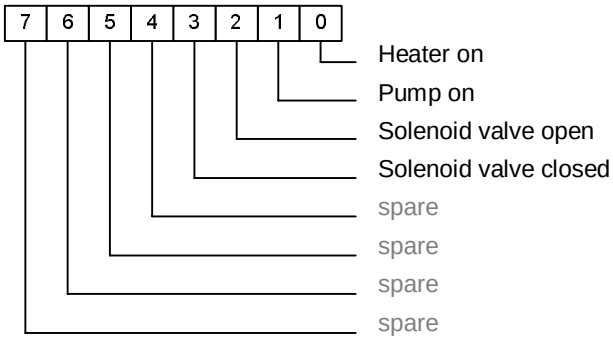
DB 758 DBB 71	TLS1.bytCylinder1



DB 758 DBB 74	TLS1.bytBinary2



DB 758 DBB 75	TLS1.bytBinary1



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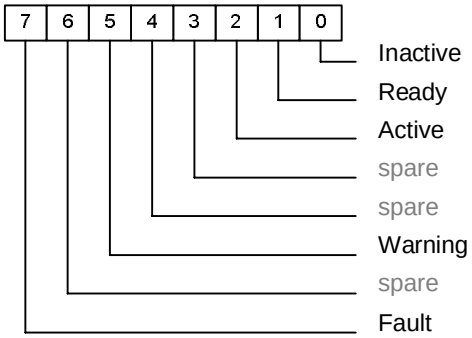
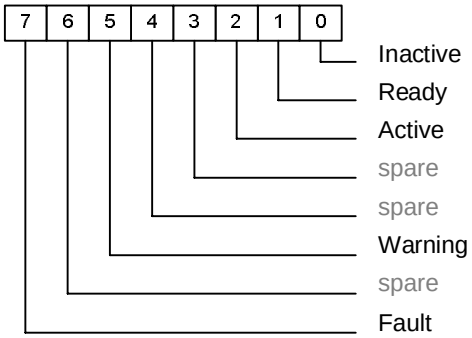
DB 758 DBB 77	TLS1.bytStatus



DB 758 DBB 78	TLS1.bytStatusRopeTens



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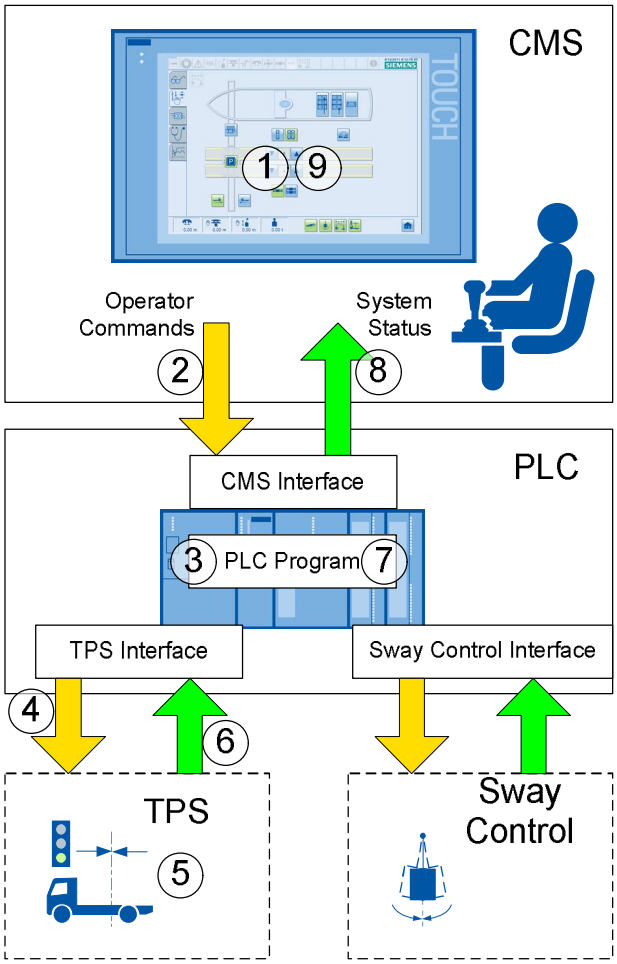
3.16 Technology_Functions

The CMS user interface can be used to adapt settings for advanced technologies (e.g. SIMOCRANE Sway Control or SIMOCRANE TPS):

Figure 3-1: Settings for advanced technologies



No.	Description
1.	The operator presses a button in the CMS user interface → The color of the button pressed turns yellow.
2.	A command bit is set in the CMS-PLC interface.
3.	The command bit is read in the PLC program and assigned to the correct advanced technology.
4.	The command bit is transferred to the Function-PLC interface (e.g. TPS-PLC).
5.	The advanced technology (e.g. TPS) reacts according to the command bit.
6.	The status bit for the requested function is transferred to the PLC interface again.
7.	The status bit is read in the PLC program.
8.	The status bit is set in the CMS-PLC interface.
9.	The color of the button pressed turns green if the requested function has been activated. Otherwise the color of the button stays yellow.

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NOTE This document only describes the tags in the interface with the PLC. You will get further information on the advanced technologies in the documentation of these systems (SIMOCRANE TPS, SIMOCRANE Sway Control).

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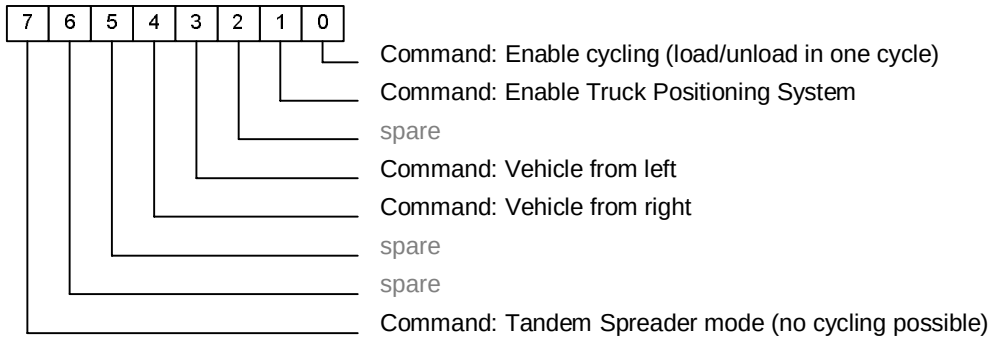
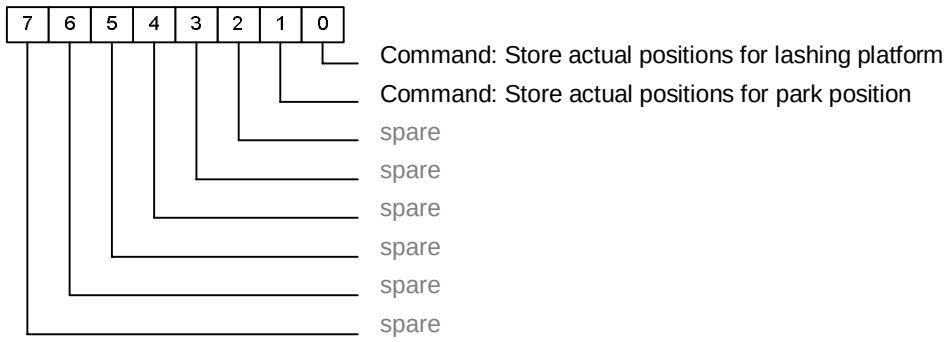
3.16.1 CMS to PLC ("Operator commands")

No.	Address	Tag name	Description	Type
1.	DB 980 DBB 1	oBytTruckPositioningCmd3	Binary information see below	Byte
2.	DB 980 DBB 4	oBytSwayControlCmd4	Binary information see below	Byte
3.	DB 980 DBB 5	oBytSwayControlCmd3	Binary information see below	Byte
4.	DB 980 DBB 24	oBytLane2Number	Lane number 1 (waterside)	Byte
5.	DB 980 DBB 25	oBytLane1Number	Lane number 2 (landside)	Byte
6.	DB 980 DBB 26	oBytStoreCurrentPosition	Teach actual positions of Hoist and Trolley for a lane. 0 … no action 1 … lane 1 2 … lane 2 … 32 … lane 32	Byte
7.	DB 980 DBB 28	oBytLane2Status	Binary information see below	Byte
8.	DB 980 DBB 30	oBytLane1Status	Binary information see below	Byte

DB 980 DBB 1 **oBytTruckPositioningCmd3**



DB 980 DBB 4 **oBytSwayControlCmd4**



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DB 980 DBB 5	oBytSwayControlCmd3

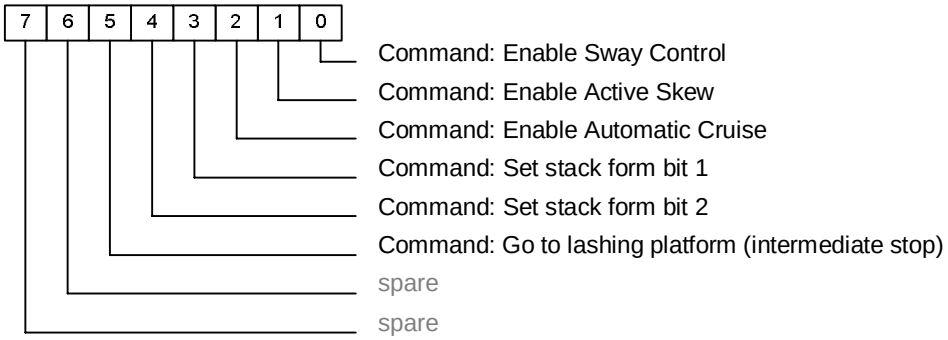

Table 3-1: Stack form bits

Stack form bit 1	Stack form bit 2	Description
0	0	Go to park position
0	1	Load/unload in series from landside to waterside
1	0	Load/unload in series from waterside to landside
1	1	Load/unload by stacks

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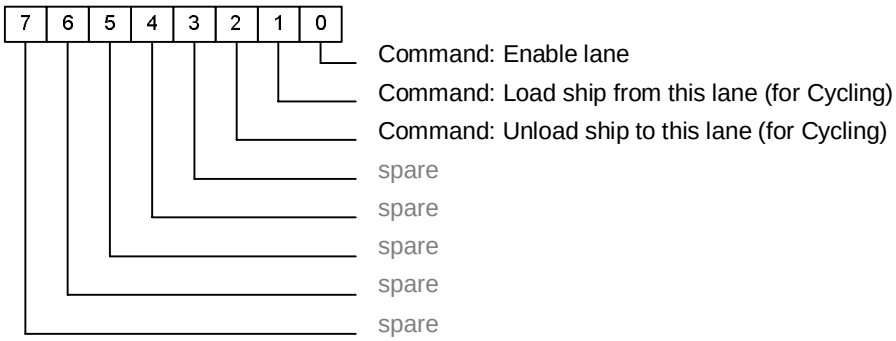
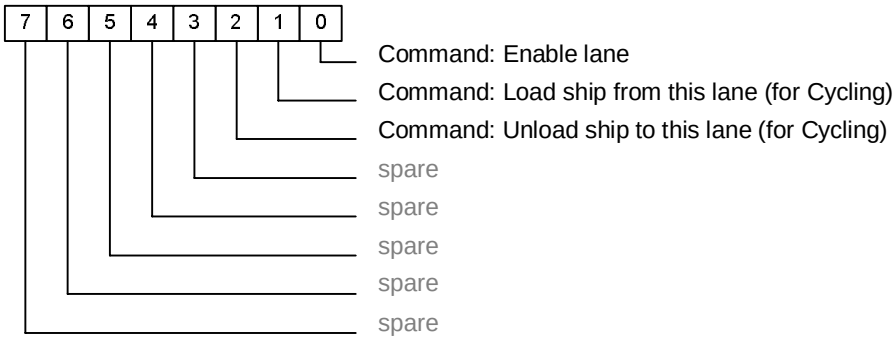
DB 980 DBB 28	oBytLaneWSStatus



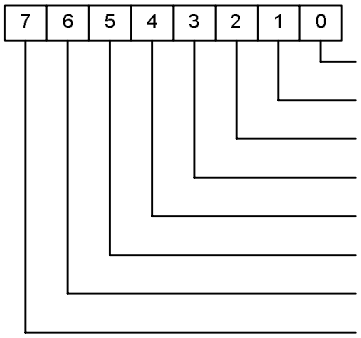
DB 980 DBB 30	oBytLaneLSStatus



3.16.2 PLC to CMS (“System status”)

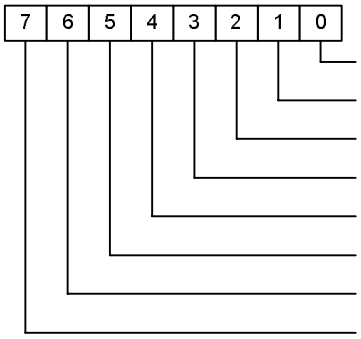
No.	Address	Tag name	Description	Type
1.	DB 981 DBB 1	bytTruckPositioningStatus3	Binary information see below	Byte
2.	DB 981 DBB 4	bytSwayControlStatus4	Binary information see below	Byte
3.	DB 981 DBB 5	bytSwayControlStatus3	Binary information see below	Byte
4.	DB 981 DBB 7	bytSwayControlStatus1	Binary information see below	Byte
5.	DB 981 DBB 20	wrdAutomaticStatus2	Binary information see below	Word
6.	DB 981 DBB 28	bytLane2Status	Binary information see below	Byte
7.	DB 981 DBB 30	bytLane1Status	Binary information see below	Byte
8.	DB 981 DBB 32	bytVehicle2Status	Binary information see below	Byte
9.	DB 981 DBB 34	bytVehicle1Status	Binary information see below	Byte

DB 981 DBB 1 **bytTruckPositioningStatus3**



- Bit 0: Cycling is active (load/unload in one cycle)
- Bit 1: Truck Positioning System is active
- Bit 2: spare
- Bit 3: Vehicle from left
- Bit 4: Vehicle from right
- Bit 5: spare
- Bit 6: spare
- Bit 7: Tandem Spreader mode is active (no cycling possible)

DB 981 DBB 4 **bytSwayControlStatus4**



- Bit 0: spare
- Bit 1: spare
- Bit 2: Positions for lane, lashing platform or park position stored
- Bit 3: spare
- Bit 4: spare
- Bit 5: spare
- Bit 6: spare
- Bit 7: spare

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DB 981 DBB 5	bytSwayControlStatus3

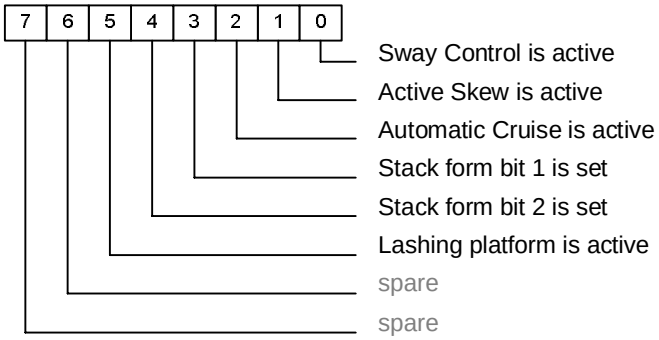

Table 3-2: Stack form bits

Stack form bit 1	Stack form bit 2	Description
0	0	Go to park position
0	1	Load/unload in series from landside to waterside
1	0	Load/unload in series from waterside to landside
1	1	Load/unload by stacks

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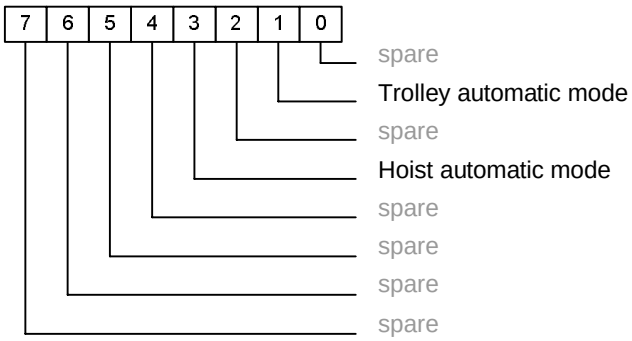
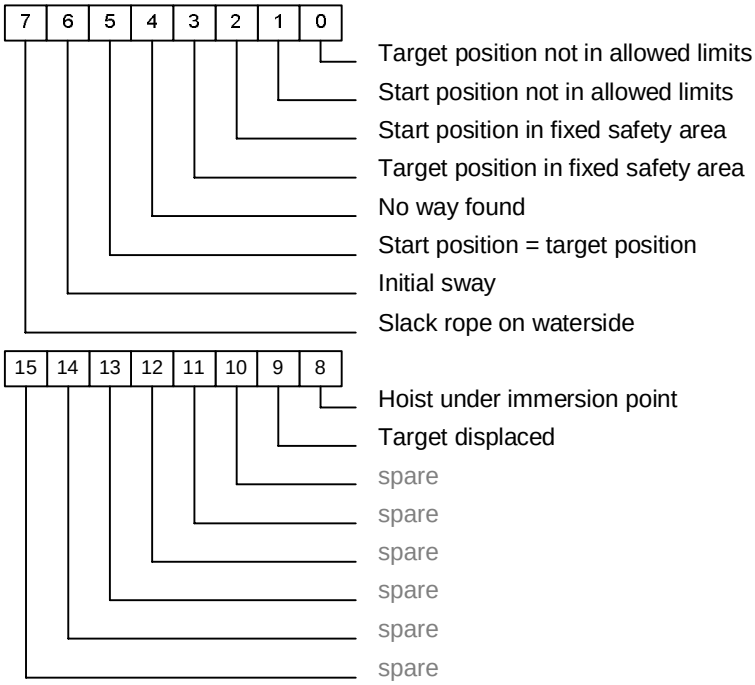
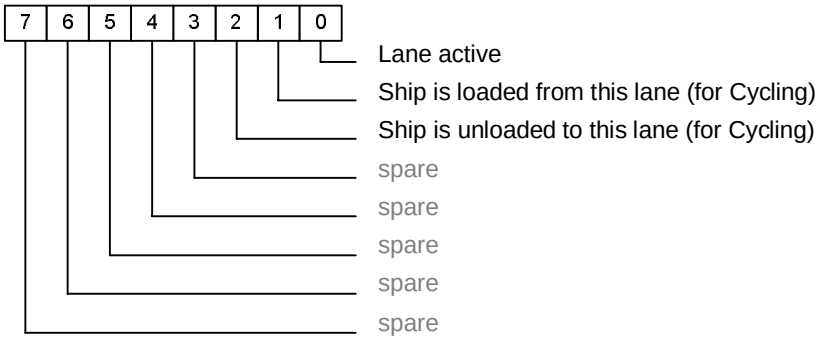
DB 981 DBB 7	bytSwayControlStatus1



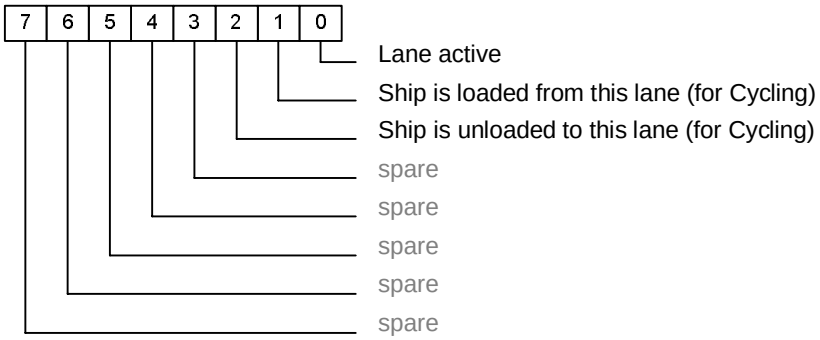
DB 981 DBB 20	wrdAutomaticStatus2



DB 981 DBB 28	bytLane2Status



DB 981 DBB 30	bytLane1Status



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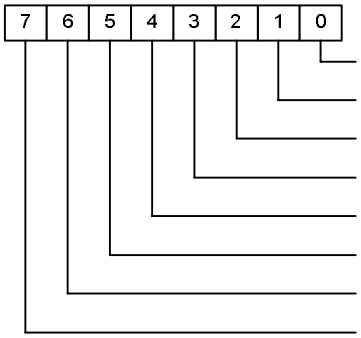
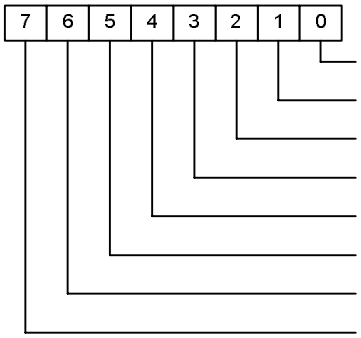
DB 981 DBB 32	bytVehicle2Status



Truck Positioning inactive
Truck Positioning active, vehicle from right, NOT in position
Truck Positioning active, vehicle from left, NOT in position
Truck Positioning active, vehicle from right, in position
Truck Positioning active, vehicle from left, in position
spare
spare
spare

DB 981 DBB 34	bytVehicle1Status



Truck Positioning inactive
Truck Positioning active, vehicle from right, NOT in position
Truck Positioning active, vehicle from left, NOT in position
Truck Positioning active, vehicle from right, in position
Truck Positioning active, vehicle from left, in position
spare
spare
spare

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3.17 Messages

The CMS application is prepared for up to 3008 bit messages. The message bits are merged in Dword Tags.

The following naming convention is valid for the Dword-Tags in the CMS application:

- FDW_Message-bit-Start_Message-bit-End

The following table exemplarily shows the available message tags in the CMS interface:

No.	Address	Tag name	Description	Type
1.	DB 1000 DBD 0	FDW_0001_0032	fault message bits 01 – 32	Dword
2.	DB 1000 DBD 4	FDW_0033_0064	fault message bits 33 – 64	Dword
3.	…	…	…	…
4.	DB 1000 DBD 372	FDW_2977_3008	fault message bits 2977 - 3008	Dword

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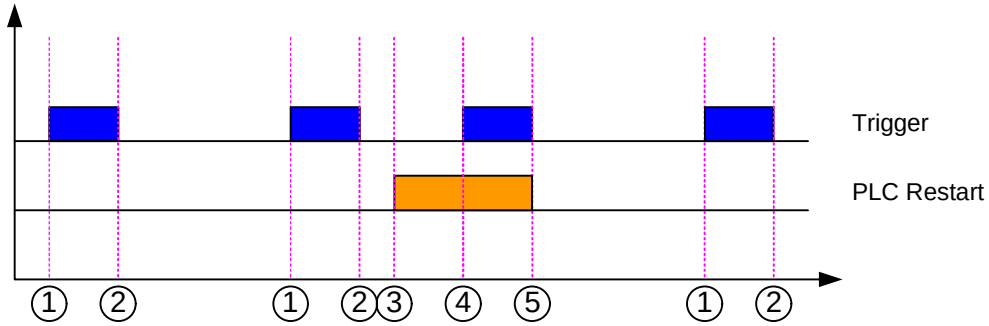
3.18 TimeSynch

In the CMS application an action to set the timestamp of the PLC (*PLCTimeSynchronisation*) can be activated by configuring the trigger of that action in the C-Editor. Two types of trigger have to be defined for the action:

- Cyclic trigger (e.g. *1 hour*)
- Tag trigger *blnTriggerPLCStartup*

Figure 3-2: Time synchronization



No.	Description
1.	The cyclic trigger (e.g. *1 hour*) starts the action *PLCTimeSynchronisation*: • The action writes the timestamp to the time stamp tags in the interface. • The action sets the trigger bit *blnTriggerTimeSynch* in the interface.
2.	The PLC • reads the timestamp tags from the interface • sets the PLC time • resets the trigger bit *blnTriggerTimeSynch* in the interface
3.	If the PLC is restarted: • The PLC sets the start up bit *blnTriggerPLCStartup* in the interface.
4.	The start up bit *blnTriggerPLCStartup* starts the action *PLCTimeSynchronisation*: • The action writes the timestamp to the time stamp tags in the interface. • The action sets the trigger bit blnTriggerTimeSynch in the interface.
5.	The PLC • reads the timestamp tags from the interface • sets the PLC time • resets the trigger bit *blnTriggerTimeSynch* in the interface • resets the start up bit *blnTriggerPLCStartup* in the interface

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No.	Address	Tag name	Description	Type
1.	DB 1909 DBX 0.0	blnTriggerPLCStartup	Restart-Bit Trigger time synchronisation PLC start up → 1	Bool
2.	DB 1909 DBX 0.1	blnTriggerTimeSynch	Cyclic trigger for time synchronization	Bool
3.	DB 1909 DBB 1	bytSystemtimeYear	ByteToBCDByte (Standardization in WinCC)	Byte
4.	DB 1909 DBB 2	bytSystemtimeMonth	ByteToBCDByte (Standardization in WinCC)	Byte
5.	DB 1909 DBB 3	bytSystemtimeDay	ByteToBCDByte (Standardization in WinCC)	Byte
6.	DB 1909 DBB 4	bytSystemtimeHour	ByteToBCDByte (Standardization in WinCC)	Byte
7.	DB 1909 DBB 5	bytSystemtimeMinute	ByteToBCDByte (Standardization in WinCC)	Byte
8.	DB 1909 DBB 6	bytSystemtimeSecond	ByteToBCDByte (Standardization in WinCC)	Byte
9.	DB 1909 DBB 7	bytLocaltimeYear	ByteToBCDByte (Standardization in WinCC)	Byte
10.	DB 1909 DBB 8	bytLocaltimeMonth	ByteToBCDByte (Standardization in WinCC)	Byte
11.	DB 1909 DBB 9	bytLocaltimeDay	ByteToBCDByte (Standardization in WinCC)	Byte
12.	DB 1909 DBB 10	bytLocaltimeHour	ByteToBCDByte (Standardization in WinCC)	Byte
13.	DB 1909 DBB 11	bytLocaltimeMinute	ByteToBCDByte (Standardization in WinCC)	Byte
14.	DB 1909 DBB 12	bytLocaltimeSecond	ByteToBCDByte (Standardization in WinCC)	Byte
15.	DB 1909 DBD 14	TimeZoneDiffHours	Time difference UTC-Localtime in hours	Float
16.	DB 1909 DBD 18	TimeZoneDiffMinutes	Time difference UTC-Localtime in minutes	Float

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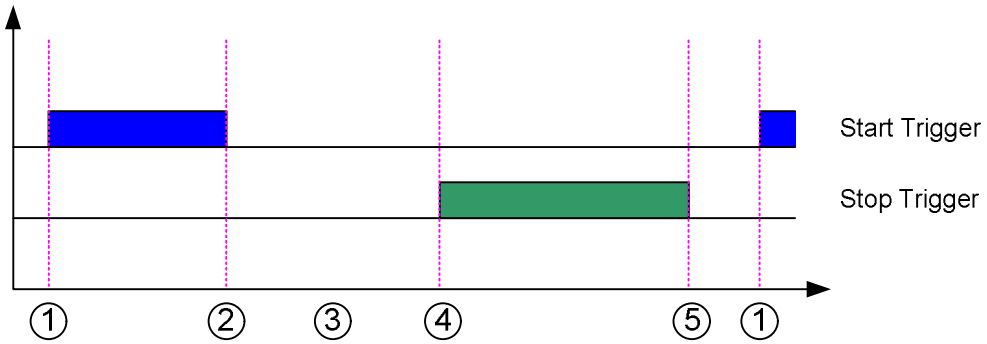
3.19 MoveData

The CMS acquires a set of move data for each load handling sequence from the PLC. You will find detailed information in the CMS System Manual, Chapter 4.1.8. (See also Related Literature)

Sequence

Figure 3-3: Move data sequence



No.	Description
1.	A load handling sequence (Move) starts. • Direct acquisition: The PLC set the start trigger *blnMoveStart* in the interface. • Buffered acquisition: The PLC stores the start time stamp for this data set and set the start trigger *blnMoveStart* in the interface. The stop trigger has to be '0' before the start trigger is set.
2.	• Direct acquisition: The CMS stores the start time stamp and resets the start trigger *blnMoveStart* in the interface. • Buffered acquisition: The CMS resets the start trigger *blnMoveStart* in the interface.
3.	The load handling sequence ends: • The PLC stores values of the data set to the interface or to the buffer.
4.	The PLC sets the stop trigger *blnMoveStop* in the interface. The start trigger has to be '0' before the stop trigger is set.
5.	• Direct acquisition: The CMS stores the stop time stamp, reads the data from the interface, writes the dataset to the Tag Logging archive and resets the stop trigger *blnMoveStop* in the interface. • Buffered acquisition: The CMS reads the data from the interface, writes the dataset to the Tag Logging archive and resets the stop trigger *blnMoveStop* in the interface.

Timestamps

The time stamps (start time and stop time) of a move data record can be acquired on the PLC or on the CMS-PC.

The first case can be used for data buffering on the PLC. In this case the time stamps are read together with the data set values from WinCC tags in the interface if the stop trigger is set *blnMoveStop* = 1.

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NOTICE **Timestamps on the PLC have to be decimal coded and 24 h –based. If the timestamp is transferred wrong to the WinCC anyway, please check if the BCD coding had been made in the PLC or in WinCC. This must only be made once.**

No.	Address	Tag name	Description	Type
1.	DB 1916 DBX 7544.0	blnMoveStop	stop move trigger	Bool
2.	DB 1916 DBX 7545.0	blnMoveStart	start move trigger	Bool
3.	DB 1916 DBW 7556	srtMoveMode	operation mode	Short
4.	DB 1916 DBW 7558	srtMoveDirection	move direction	Short
5.	DB 1916 DBW 7560	srtMoveSize1	Spreader 1 size in ft (20, 30, 45, 2020)	Short
6.	DB 1916 DBW 7564	srtMoveWeightTotal	total Load in t	Short
7.	DB 1916 DBB 7566	MoveStarttime.Year	start time: year	Byte
8.	DB 1916 DBB 7567	MoveStarttime.Month	start time: month	Byte
9.	DB 1916 DBB 7568	MoveStarttime.Day	start time: day	Byte
10.	DB 1916 DBB 7569	MoveStarttime.Hour	start time: hour	Byte
11.	DB 1916 DBB 7570	MoveStarttime.Minute	start time: minute	Byte
12.	DB 1916 DBB 7571	MoveStarttime.Second	start time: second	Byte
13.	DB 1916 DBB 7574	MoveStoptime.Year	stop time: year	Byte
14.	DB 1916 DBB 7575	MoveStoptime.Month	stop time: month	Byte
15.	DB 1916 DBB 7576	MoveStoptime.Day	stop time: day	Byte
16.	DB 1916 DBB 7577	MoveStoptime.Hour	stop time: hour	Byte
17.	DB 1916 DBB 7578	MoveStoptime.Minute	stop time: minute	Byte
18.	DB 1916 DBB 7579	MoveStoptime.Second	stop time: seond	Byte
19.	DB 1916 DBD 7582	fltMoveStartX	start coordinate x	Float
20.	DB 1916 DBD 7586	fltMoveStartY	start coordinate y	Float
21.	DB 1916 DBD 7590	fltMoveStartZ	start coordinate z	Float
22.	DB 1916 DBD 7594	fltMoveStopX	stop coordinate x	Float
23.	DB 1916 DBD 7598	fltMoveStopY	stop coordinate y	Float
24.	DB 1916 DBD 7602	fltMoveStopZ	stop coordinate z	Float
25.	DB 1916 DBW 7626	srtMoveSize2	Spreader 2 size in ft (20, 30, 45, 2020)	Short
26.	DB 1916 DBW 7628	srtMoveWeight1Left	load Spreader 1 left	Short
27.	DB 1916 DBW 7630	srtMoveWeight1Right	load Spreader 1 right	Short
28.	DB 1916 DBW 7632	srtMoveWeight2Left	load Spreader 2 left	Short
29.	DB 1916 DBW 7634	srtMoveWeight2Right	load Spreader 2 right	Short

Table 3-3: srtMoveMode

Value	Description
1	single mode
2	dual mode
3	automatic mode
4	hook mode

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Value	Description
5	hook mode, heavy lift
6	non container mode
7	twin mode, sway control
8	twin mode
9	lift cover

Table 3-4: srtMoveDirection

Value	Description
1	landside → waterside
2	waterside → landside
3	landside → landside
4	waterside → waterside
11	into stack
12	out of stack
13	shuffle in stack
14	shuffle out stack

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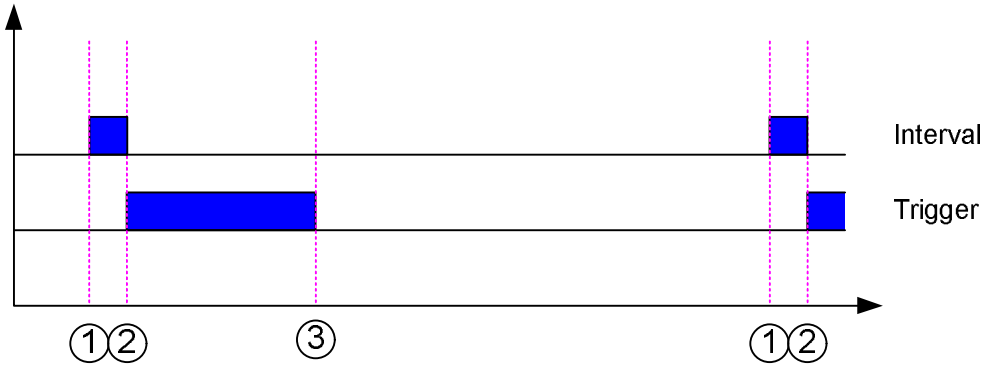
3.20 MmbfData

The CMS acquires a set of MMBF data (Mean Moves Between Failure) from the PLC. You will find detailed information in the CMS System Manual, Chapter 4.1.8. (See also Related Literature)

Sequence

Figure 3-4: MMBF data sequence



No.	Description
1.	The MMBF data interval (e.g. 1 month) is active: • Direct acquisition: The PLC stores the values of the data set to the interface. • Buffered acquisition: The PLC stores the values and the time stamp of the data set to the interface or to the buffer.
2.	The PLC sets the trigger *blnMmbfTrigger* in the interface.
3.	• Direct acquisition: The CMS stores the time stamp, reads the values from the interface, writes the dataset to the Tag Logging archive and resets the trigger *blnMmbfTrigger* in the interface. • Buffered acquisition: The CMS reads the values from the interface, writes the dataset to the Tag Logging archive and resets the trigger *blnMmbfTrigger* in the interface.

Timestamps

The timestamp of the MMBF data record can be acquired on the PLC or on the CMS-PC.

The first case can be used for data buffering on the PLC. In this case the timestamp is read together with the data set values from WinCC tags if the trigger is set.

NOTICE **Timestamps on the PLC have to be decimal coded and 24 h –based. If the timestamp is transferred wrong to the WinCC anyway, please check if the BCD coding had been made in the PLC or in WinCC. This must only be made once.**

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No.	Address	Tag name	Description	Type
1.	DB 1917 DBW 40	srtMmbfTotalFaultNum	Actual number of the fault that caused the last MMBF total fault.	Short
2.	DB 1917 DBW 42	srtMmbfExternalFaultNum	Actual number of fault that caused the last MMBF external fault.	Short
3.	DB 1917 DBX 2508.0	blnMmbfTrigger	MMBF trigger	Bool
4.	DB 1917 DBB 2520	MmbfStarttime.Year	Timestamp: year	Byte
5.	DB 1917 DBB 2521	MmbfStarttime.Month	Timestamp: month	Byte
6.	DB 1917 DBB 2522	MmbfStarttime.Day	Timestamp: day	Byte
7.	DB 1917 DBB 2523	MmbfStarttime.Hour	Timestamp: hour	Byte
8.	DB 1917 DBB 2524	MmbfStarttime.Minute	Timestamp: minute	Byte
9.	DB 1917 DBB 2525	MmbfStarttime.Second	Timestamp: second	Byte
10.	DB 1917 DBW 2530	srtMmbfNumberFaultsTotal	Total MMBF-faults	Short
11.	DB 1917 DBW 2532	srtMmbfNumberFaults External	External MMBF-faults	
12.	DB 1917 DBW 2536	srtMmbfNumberMoves Total	Number of moves	Short
13.	DB 1917 DBW 2538	srtMmbfValueTotal	Total MMBF value	Short
14.	DB 1917 DBW 2540	srtMmbfValueExternal	External MMBF value	Short

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3.21 Counter_Total

No.	Address	Tag name	Description	Type
1.	DB 1918 DBD 16	dwdTmrCraneOn	Hours crane switched on	Dword
2.	DB 1918 DBD 26	dwdTmrSingleMode	Hours operation single mode	Dword
3.	DB 1918 DBD 36	dwdTmrDualMode	Hours operation dual mode (Hoist + Gantry)	Dword
4.	DB 1918 DBD 46	dwdTmrMainHoist	Hours operation Hoist	Dword
5.	DB 1918 DBD 56	dwdTmrTrolley	Hours operation Trolley	Dword
6.	DB 1918 DBD 66	dwdTmrGantry	Hours operation Gantry	Dword
7.	DB 1918 DBD 76	dwdTmrBoomHoist	Hours operation Boomhoist	Dword
8.	DB 1918 DBD 86	dwdTmrSlewing	Hours operation Slewing	Dword
9.	DB 1918 DBD 116	dwdTmrIdleTime	Hours idle	Dword
10.	DB 1918 DBD 126	dwdTmrDownTime	Hours down	Dword
11.	DB 1918 DBD 136	dwdTmrOperationTime	Hours operation	Dword
12.	DB 1918 DBD 146	dwdTmrTwinMode	Hours operation twin mode	Dword
13.	DB 1918 DBD 176	dwdTmrTruckPositioning	Hours Truck Positioning switched on	Dword
14.	DB 1918 DBD 186	dwdTmrSwayControlOn	Hours Sway Control switched on	Dword
15.	DB 1918 DBD 256	dwdTmrStormPinUnit	Hours operation storm pin unit	Dword
16.	DB 1918 DBD 266	dwdTmrTLSUnit	Hours operation Trim List Skew unit	Dword
17.	DB 1918 DBD 276	dwdTmrHoistTrolleyComb	Hours operation dual mode (Hoist + Trolley)	Dword
18.	DB 1918 DBD 306	dwdCntrMainCircuitBreaker	Number main circuit breaker off → on	Dword
19.	DB 1918 DBD 316	dwdCntrLinecontactor	Number line contactor off → on	Dword
20.	DB 1918 DBD 326	dwdCntrFlipperMoves	Number flippers down → up	Dword
21.	DB 1918 DBD 336	dwdCntrNumberOfSpreader ExtRet	Number Spreader retract → extend	Dword
22.	DB 1918 DBD 366	dwdCntrTwistlockMoves20ft	Number twist locks unlocked → locked 20 ft	Dword
23.	DB 1918 DBD 376	dwdCntrTwistlockMoves40ft	Number twist locks unlocked → locked 40 ft	Dword
24.	DB 1918 DBD 386	dwdCntrTwistlockMoves45ft	Number twist locks unlocked → locked 45 ft	Dword
25.	DB 1918 DBD 396	dwdCntrTwistlockMoves2020ft	Number twist locks unlocked → locked 2020 ft	Dword
26.	DB 1918 DBD 406	dwdCntrMainHoistTwistLock Moves	Number twist locks unlocked → locked	Dword
27.	DB 1918 DBD 416	dwdCntrBreakdown	Number breakdowns	Dword
28.	DB 1918 DBD 426	dwdCntrMmbfFaults	Number MMBF faults	Dword
29.	DB 1918 DBD 436	dwdCntrMovesTotal	Number moves total	Dword
30.	DB 1918 DBD 446	dwdCntrNumberMovesQuad	Number moves with 4 * 20 ft containers	Dword
31.	DB 1918 DBD 456	dwdCntrWeightMovesQuad	Weight moves with 4 * 20 ft	Dword

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No.	Address	Tag name	Description	Type
			containers	
32.	DB 1918 DBD 466	dwdCntrAutoOptimalCont	Number containers in optimal automatic mode	Dword
33.	DB 1918 DBD 476	dwdCntrOptimalCont	Number containers in optimal mode	Dword
34.	DB 1918 DBD 496	dwdCntrNumberMovesWater Water	Number moves waterside → waterside	Dword
35.	DB 1918 DBD 506	dwdCntrNumberMovesLand Land	Number moves landside → landside	Dword
36.	DB 1918 DBD 516	dwdCntrMainHoist20ft	Number containers 20 ft	Dword
37.	DB 1918 DBD 526	dwdCntrMainHoist40ft	Number containers 40 ft	Dword
38.	DB 1918 DBD 536	dwdCntrMainHoist45ft	Number containers 45 ft	Dword
39.	DB 1918 DBD 546	dwdCntrMainHoistWeight	Weight containers in t	Dword
40.	DB 1918 DBD 586	dwdCntrSingleModeCont	Number containers single mode	Dword
41.	DB 1918 DBD 596	dwdCntrDualModeCont	Number containers dual mode	Dword
42.	DB 1918 DBD 606	dwdCntrMeasuringkWh	Consumed energy in kWh	Dword
43.	DB 1918 DBD 616	dwdCntrMainHoist2020ft	Number containers 2020 ft	Dword
44.	DB 1918 DBD 626	dwdCntrNumber40-50Ton	Number containers 40-50 t	Dword
45.	DB 1918 DBD 636	dwdCntrNumberOfLoads	Number of loads	Dword
46.	DB 1918 DBD 646	dwdCntrNumberMoves Waterside	Number moves landside → waterside	Dword
47.	DB 1918 DBD 656	dwdCntrNumberMoves Landside	Number moves waterside → landside	Dword
48.	DB 1918 DBD 666	dwdCntrNumberHeavyLifts	Number heavy lifts	Dword
49.	DB 1918 DBD 676	dwdCntrNumberNonCont	Number non container loads	Dword
50.	DB 1918 DBD 686	dwdCntrNumber0-10Tons	Number loads 0-10 t	Dword
51.	DB 1918 DBD 696	dwdCntrNumber10-20Tons	Number loads 10-20 t	Dword
52.	DB 1918 DBD 706	dwdCntrNumber20-30Tons	Number loads 20-30 t	Dword
53.	DB 1918 DBD 716	dwdCntrNumber30-40Tons	Number loads 30-40 t	Dword
54.	DB 1918 DBD 726	dwdCntrNumberLoadsMore32 Tons	Number loads > 32 t	Dword
55.	DB 1918 DBD 736	dwdCntrNumberLoadsMore50 Tons	Number loads > 50 t	Dword
56.	DB 1918 DBD 746	dwdCntrWeightMoves Waterside	Weight loads landside → waterside	Dword
57.	DB 1918 DBD 756	dwdCntrWeightMoves Landside	Weight loads waterside → landside	Dword
58.	DB 1918 DBD 766	dwdCntrWeightHeavyLifts	Weight heavy lifts	Dword
59.	DB 1918 DBD 776	dwdCntrWeightNonCont	Weight non container loads	Dword
60.	DB 1918 DBD 786	dwdCntrWeight20ft	Weight 20 ft loads	Dword
61.	DB 1918 DBD 796	dwdCntrWeight40ft	weight 40 ft loads	Dword
62.	DB 1918 DBD 806	dwdCntrWeight45ft	Weight 45 ft loads	Dword
63.	DB 1918 DBD 816	dwdCntrWeight2020ft	Weight 2020 ft loads	Dword
64.	DB 1918 DBD 826	dwdCntrAutoModeCont	Number container automatic mode	Dword

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3.22 Counter_Reset

The reset counters are incremented parallel to the total counters on the PLC. The CMS reads the actual values of the reset-counters which can be reset by a reset-bit from the CMS. Each reset-counter has a dedicated reset bit:

With a button in the CMS user interface the reset bit is set (= 1). With a positive edge of the reset bit the CPU resets the value of the corresponding reset counter. Afterwards the PLC resets the reset bit (= 0) again.

NOTICE

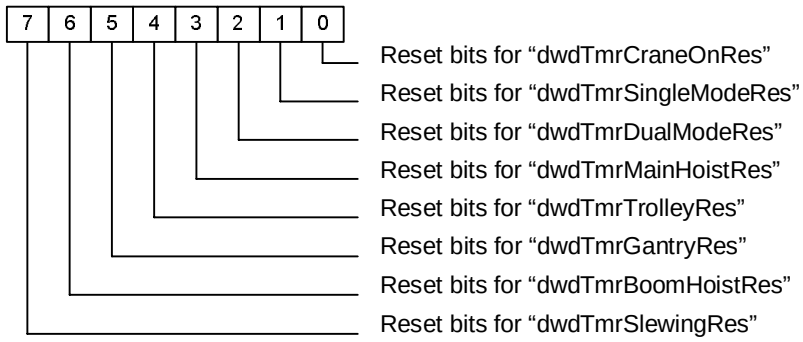
Please mind the following naming convention for reset counters:

Total counter → Name (e.g. dwdTmrCraneOn)

Reset counter → NameRes (e.g. dwdTmrCraneOnRes)

No.	Address	Tag name	Description	Type
1.	DB 1919 DBD 842	bytCounterReset001_008	Reset bits for counter ID 1-8	Byte
2.	DB 1919 DBD 843	bytCounterReset009_016	reset bits for counter ID 9-16	Byte
3.	DB 1919 DBD 844	bytCounterReset017_024	reset bits for counter ID 17-24	Byte
4.	DB 1919 DBD 845	bytCounterReset025_032	reset bits for counter ID 25-32	Byte
5.	DB 1919 DBD 846	bytCounterReset033_040	reset bits for counter ID 33-40	Byte
6.	DB 1919 DBD 847	bytCounterReset041_048	reset bits for counter ID 41-48	Byte
7.	DB 1919 DBD 848	bytCounterReset049_056	reset bits for counter ID 49-56	Byte
8.	DB 1919 DBD 849	bytCounterReset057_064	reset bits for counter ID 57-64	Byte
9.	DB 1919 DBD 850	bytCounterReset065_072	reset bits for counter ID 65-72	Byte
10.	DB 1919 DBD 851	bytCounterReset073_080	reset bits for counter ID 73-80	Byte
11.	DB 1919 DBD 852	bytCounterReset081_088	reset bits for counter ID 81-88	Byte
12.	DB 1919 DBD 853	bytCounterReset089_096	reset bits for counter ID 89-96	Byte

DB 1919 DBD 842 **bytCounterReset001_008**



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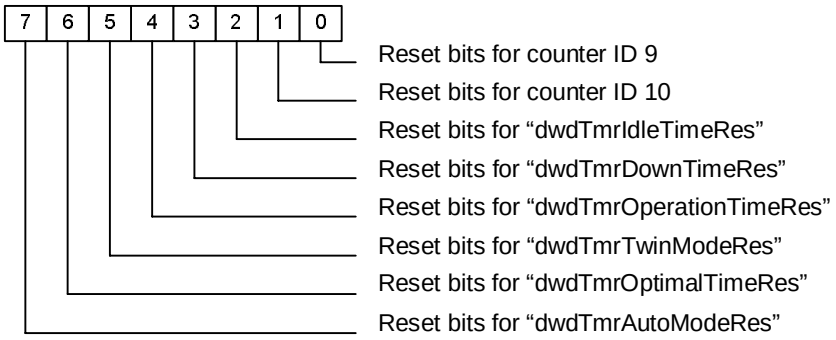
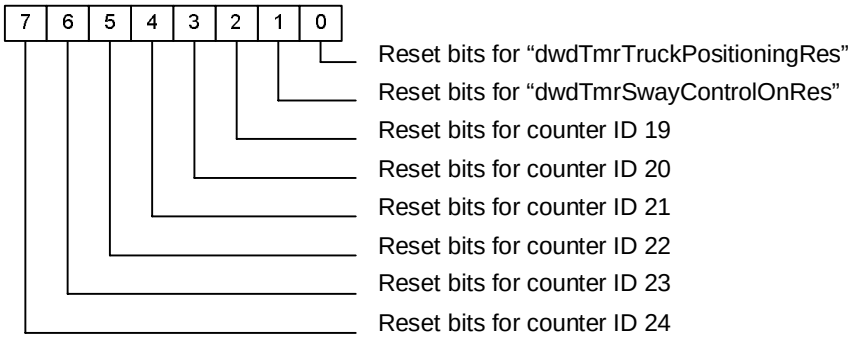
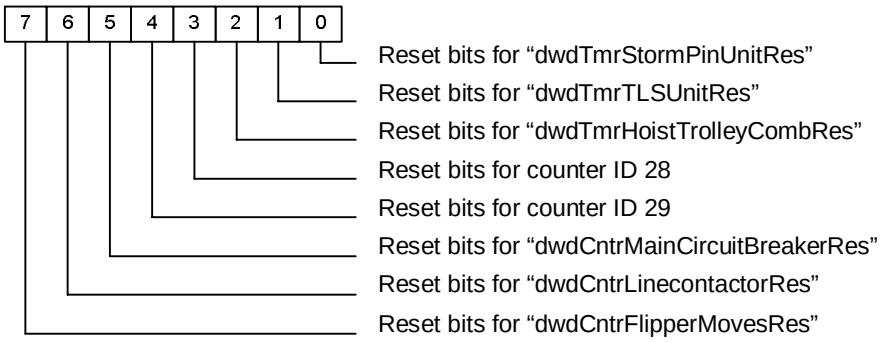
DB 1919 DBD 843	bytCounterReset009_016



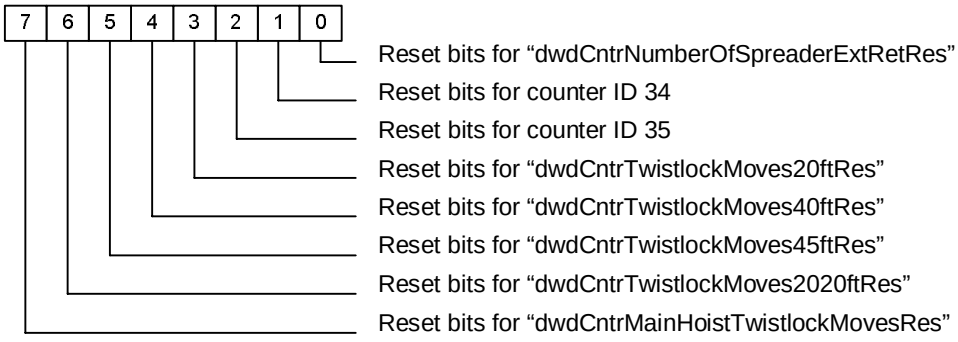
DB 1919 DBD 844	bytCounterReset017_024



DB 1919 DBD 845	bytCounterReset025_032



DB 1919 DBD 846	bytCounterReset033_040



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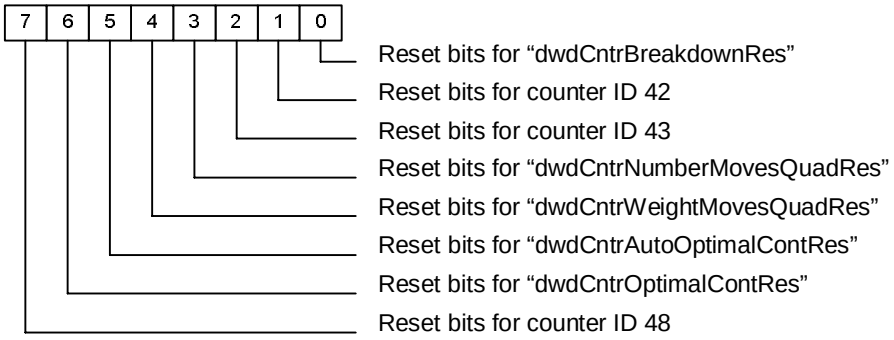
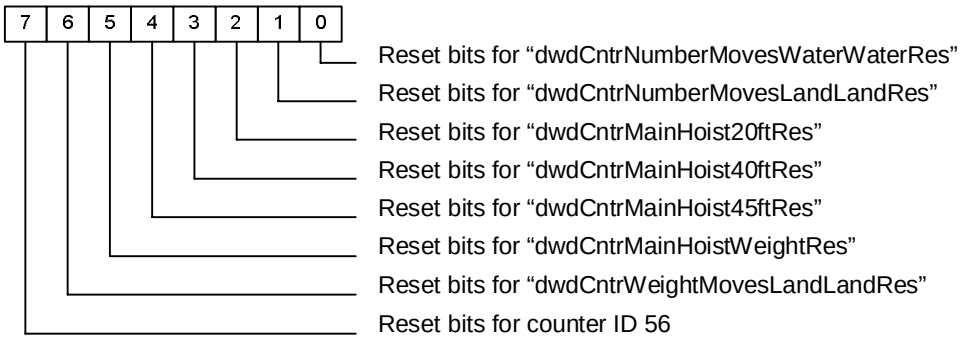
DB 1919 DBD 847	bytCounterReset041_048



DB 1919 DBD 848	bytCounterReset049_056



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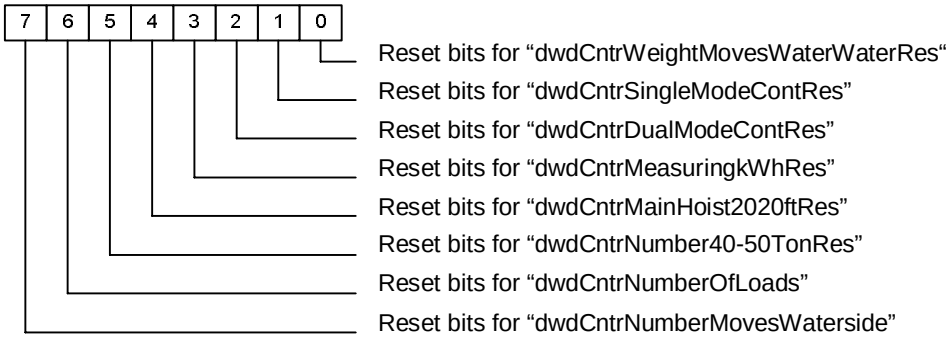

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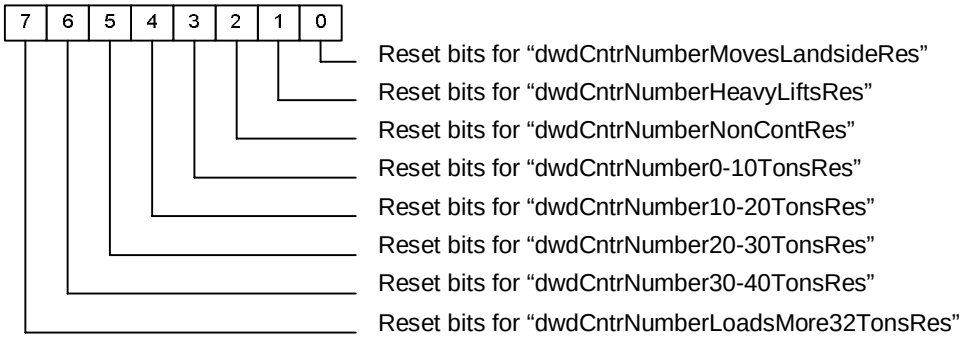

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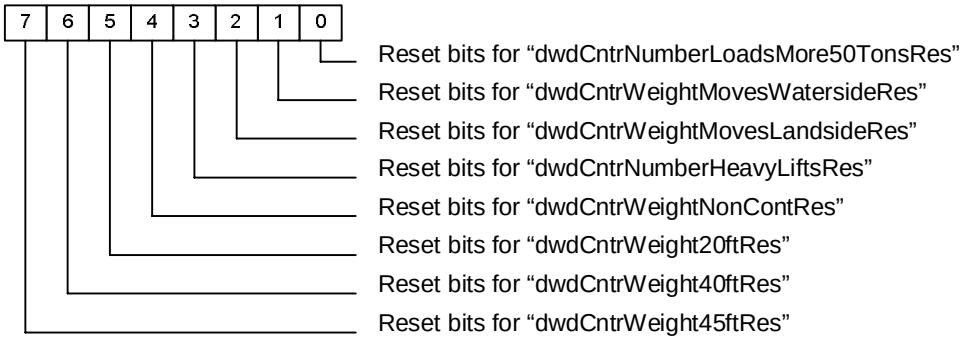
DB 1919 DBD 851	bytCounterReset073_080



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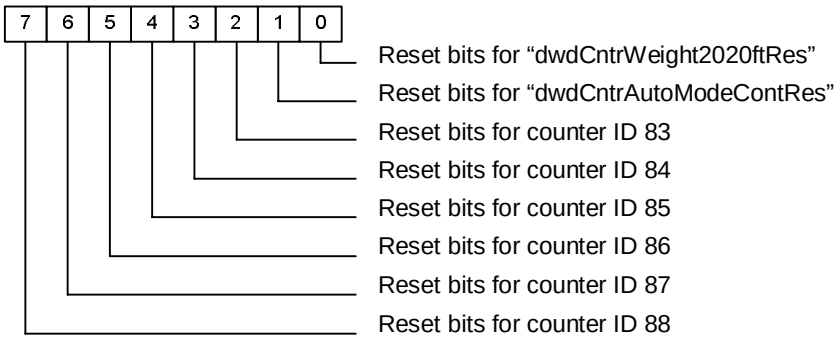

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4 Related Literature

This list is not complete and only represents a selection of relevant literature.

Table 4-1: Related literature

	Subject	Title
/1/	CMS System Manual & Operating instructions	SIMOCRANE System Manual CMS / SIMOCRANE Operating Instructions CMS Edition: 02/2014 http://support.automation.siemens.com/WW/view/en/10807397/133300

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5 History

Table 5-1: History

Version	Date	Modifications
V1.0	05.2009	Interface description CMS Application for SIMOCRANE CMS V4.1
V2.0	06.2011	Interface description CMS Application for SIMOCRANE CMS V4.1 SP1
V2.1	07.2011	Changes in this document
V2.2	02.2014	Interface description CMS Application for SIMOCRANE CMS V4.2

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