ChrgPlgLock_VD

[COMP]

I [ChrgPlgLock_VD]

1 Function Definition

1.1 Purpose

Locking and Unlocking of Electrical Plug

1.2 Introduction

Locking and Unlocking of Electrical Plug

2 Function Description

2.1 Behavior in normal mode

Figure 1 ChrgPlgLock_VD [ChrgPlgLock_VD]

ChrgPlgLock_VD_Runnable_Init

ChrgPlgLock_VD_Runnable_1ms

function()	
ChrgPlg_stPlgLockCmd_Val_read	ChgrPlug_stPlgLock_Val_write
ChrgPlgPosn_st_Val_read	ChgrPlug_stPlgLockStMac_Val_write
BattU_bVoltEnbPinDiag_Val_read	IntlckChrgPlg_rActr_Val_write
VehCoorn_stPwrMod_Val_read	IntlckChrgPlg_tiActr_Val_write

Inputs:
- 2 ChrgPlg_stPlgLockCmd_Val
- 3 ChrgPlgPosn_st_Val
- 4 BattU_bVoltEnbPinDiag_Val
- 5 VehCoorn_stPwrMod_Val

Outputs:
- 1 ChgrPlug_stPlgLock_Val
- 2 ChgrPlug_stPlgLockStMac_Val
- 3 IntlckChrgPlg_rActr_Val
- 4 IntlckChrgPlg_tiActr_Val

ChrgPlgLock_VD_Runnable_1ms_sys
DTC_ChgrPlugLockSnsrErr_GetEventFailed
DTC_ChgrPlugLockSnsrErr_GetEventTested
DTC_IntlckChrgPlgHBrgOL1_GetEventFailed
DTC_IntlckChrgPlgHBrgOL1_GetEventTested
DTC_IntlckChrgPlgHBrgOL1_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgOL1_SetEventStatus
DTC_IntlckChrgPlgHBrgOL2_GetEventFailed
DTC_IntlckChrgPlgHBrgOL2_GetEventTested
DTC_IntlckChrgPlgHBrgOL2_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgOL2_SetEventStatus
DTC_IntlckChrgPlgHBrgSCB1_GetEventFailed
DTC_IntlckChrgPlgHBrgSCB1_GetEventTested
DTC_IntlckChrgPlgHBrgSCB1_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgSCB1_SetEventStatus
DTC_IntlckChrgPlgHBrgSCB2_GetEventFailed
DTC_IntlckChrgPlgHBrgSCB2_GetEventTested
DTC_IntlckChrgPlgHBrgSCB2_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgSCB2_SetEventStatus
DTC_IntlckChrgPlgHBrgSCG1_GetEventFailed
DTC_IntlckChrgPlgHBrgSCG1_GetEventTested
DTC_IntlckChrgPlgHBrgSCG1_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgSCG1_SetEventStatus
DTC_IntlckChrgPlgHBrgSCG2_GetEventFailed
DTC_IntlckChrgPlgHBrgSCG2_GetEventTested
DTC_IntlckChrgPlgHBrgSCG2_ResetEventDebounceStatus
DTC_IntlckChrgPlgHBrgSCG2_SetEventStatus
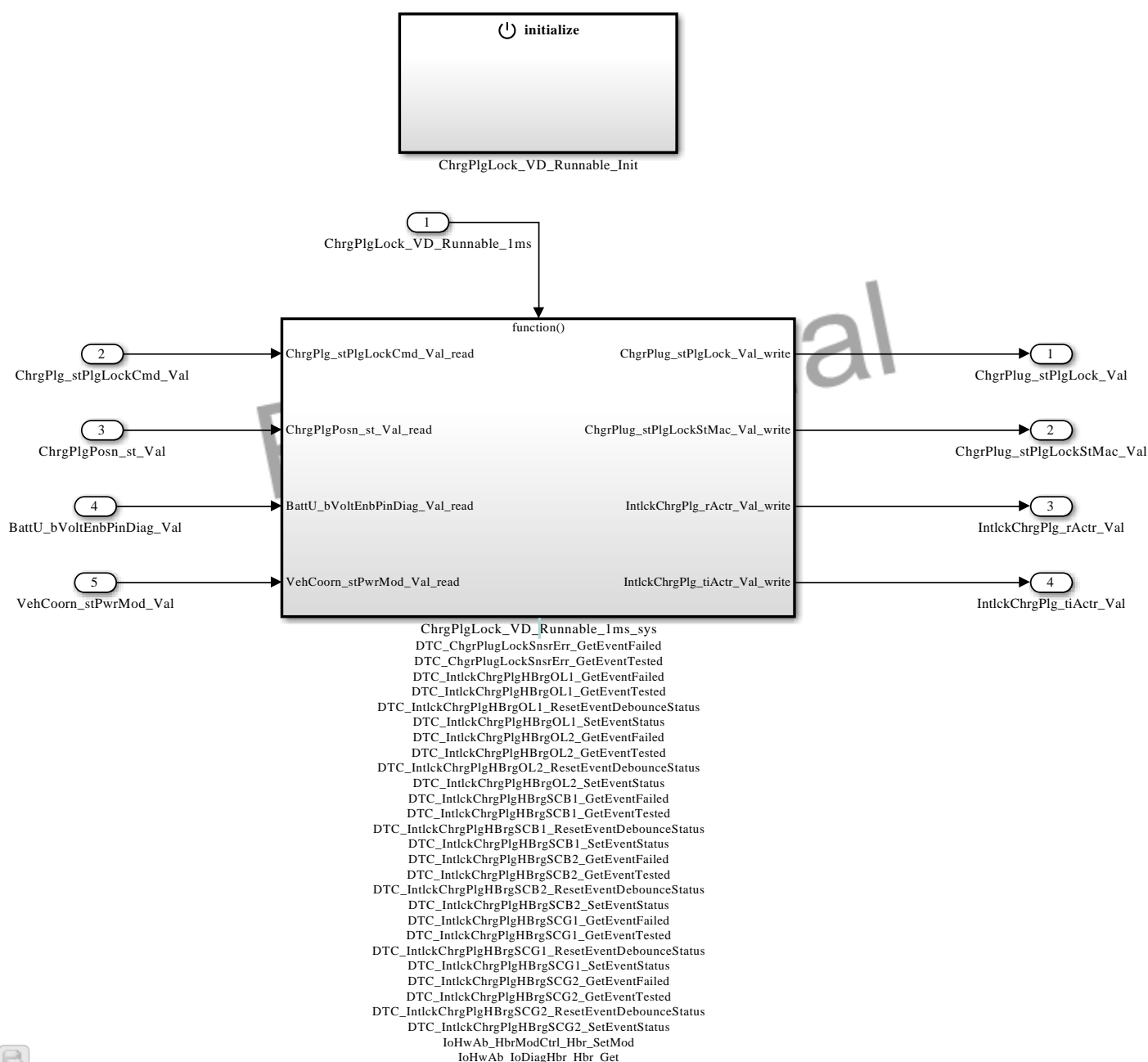IoHwAb_HbrModCtrl_Hbr_SetMod
IoHwAb_IoDiagHbr_Hbr_Get

Figure 2 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys]

Figure 3 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Chart2 [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Chart2]
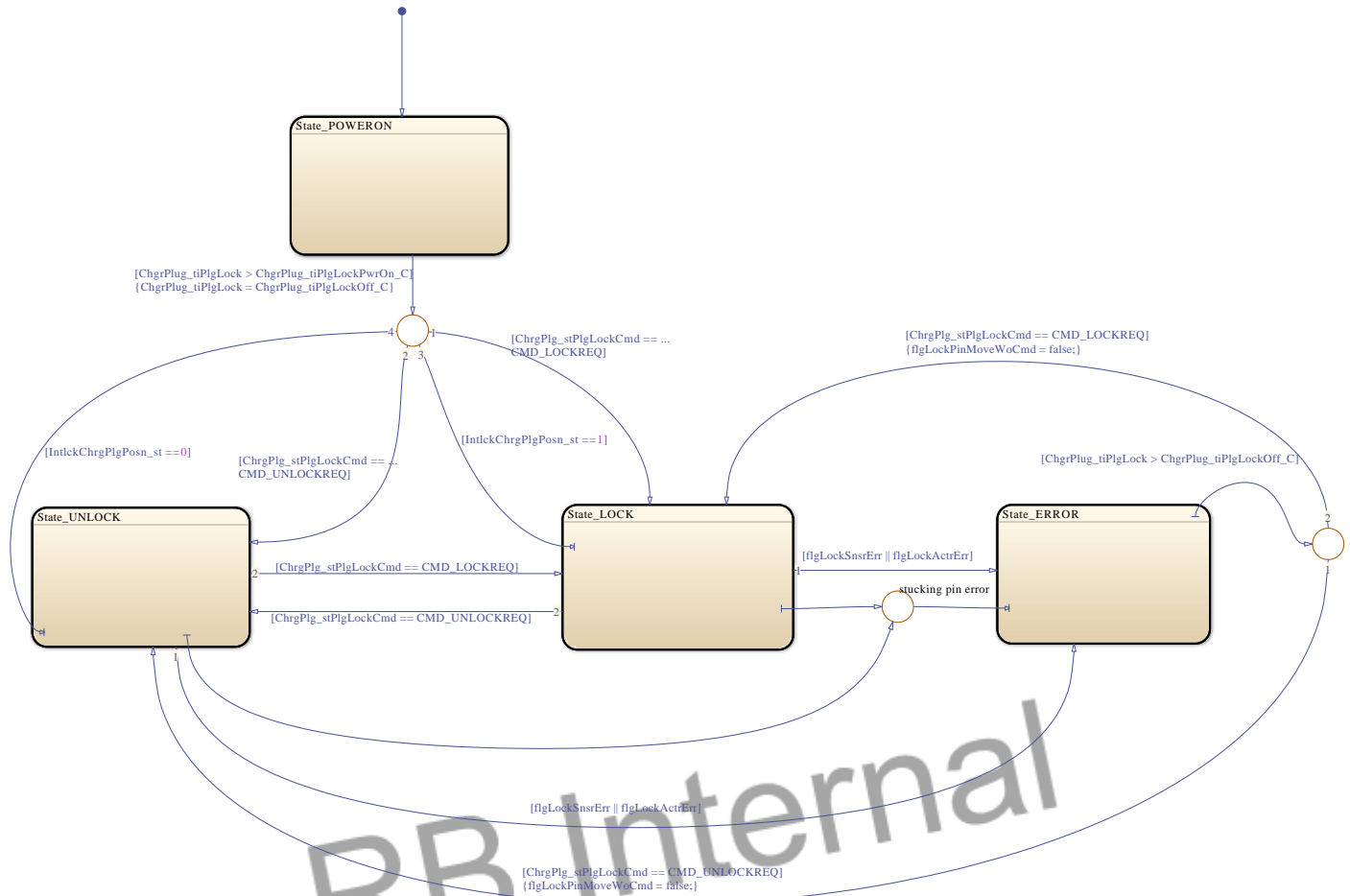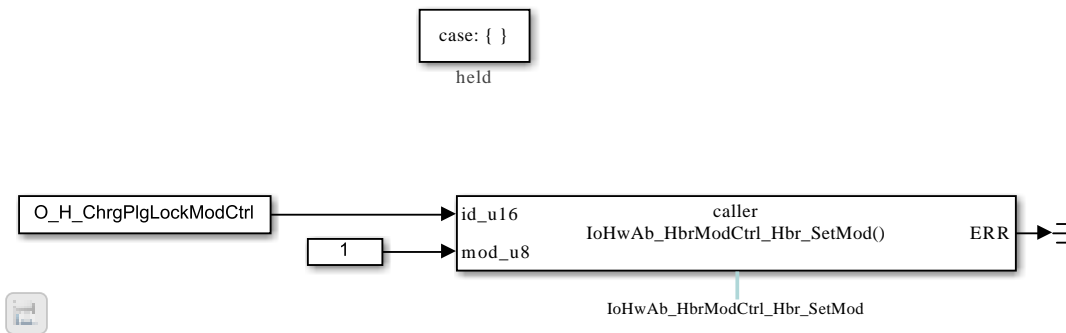
State_POWERON

[ChgrPlug_tiPlgLock > ChgrPlug_tiPlgLockPwrOn_C]
{ChgrPlug_tiPlgLock = ChgrPlug_tiPlgLockOff_C}

[ChrgPlg_stPlgLockCmd == ...
CMD_LOCKREQ]

[ChrgPlg_stPlgLockCmd == CMD_LOCKREQ]
{flgLockPinMoveWoCmd = false;}

[IntlckChrgPlgPosn_st ==0]

[ChrgPlg_stPlgLockCmd == ...
CMD_UNLOCKREQ]

[IntlckChrgPlgPosn_st ==1]

[ChgrPlug_tiPlgLock > ChgrPlug_tiPlgLockOff_C]

State_UNLOCK

State_LOCK

State_ERROR

[ChrgPlg_stPlgLockCmd == CMD_LOCKREQ]

[flgLockSnsrErr || flgLockActrErr]

[ChrgPlg_stPlgLockCmd == CMD_UNLOCKREQ]

stucking pin error

[flgLockSnsrErr || flgLockActrErr]

[ChrgPlg_stPlgLockCmd == CMD_UNLOCKREQ]
{flgLockPinMoveWoCmd = false;}

Figure 4 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Lock [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Lock]

case: { }

held

O_H_ChrgPlgLockModCtrl

id_u16

1   mod_u8

caller
IoHwAb_HbrModCtrl_Hbr_SetMod()

ERR

IoHwAb_HbrModCtrl_Hbr_SetMod

Figure   5   ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOffDiagErr_DeBounceReset   [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOffDiagErr_DeBounceReset]

else { }

held

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

DebounceResetStatus

caller
DTC_IntlckChrgPlgHBrgOL1_ResetEventDebounceStatus()

ERR

DTC_IntlckChrgPlgHBrgOL1_ResetEventDebounceStatus

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

DebounceResetStatus

caller
DTC_IntlckChrgPlgHBrgOL2_ResetEventDebounceStatus()

ERR

DTC_IntlckChrgPlgHBrgOL2_ResetEventDebounceStatus

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Figure 6 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOffDiagErr_Set [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOffDiagErr_Set]
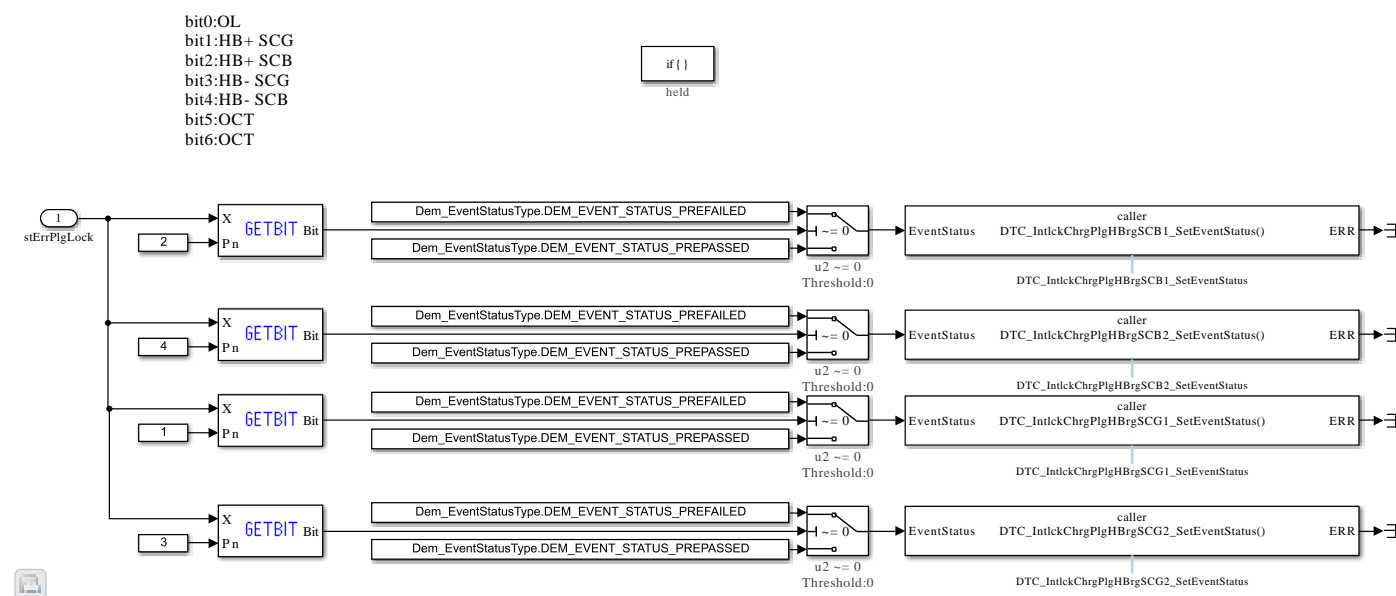
bit0:OL
bit1:HB+ SCG
bit2:HB+ SCB
bit3:HB- SCG
bit4:HB- SCB
bit5:OCT
bit6:OCT

if { }
held

Dem_EventStatusType.DEM_EVENT_STATUS_PREFAILED

Dem_EventStatusType.DEM_EVENT_STATUS_PREPASSED

Dem_EventStatusType.DEM_EVENT_STATUS_PREFAILED

Dem_EventStatusType.DEM_EVENT_STATUS_PREPASSED

stErrPlgLock

GETBIT

u2 ~= 0
Threshold:0

u2 ~= 0
Threshold:0

caller
EventStatus   DTC_IntlckChrgPlgHBrgOL1_SetEventStatus()   ERR

DTC_IntlckChrgPlgHBrgOL1_SetEventStatus

caller
EventStatus   DTC_IntlckChrgPlgHBrgOL2_SetEventStatus()   ERR

DTC_IntlckChrgPlgHBrgOL2_SetEventStatus

Figure 7 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOnDiagErr_DeBounceReset [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOnDiagErr_DeBounceReset]

else { }
held

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

caller
DebounceResetStatus   DTC_IntlckChrgPlgHBrgSCB1_ResetEventDebounceStatus()   ERR

DTC_IntlckChrgPlgHBrgSCB1_ResetEventDebounceStatus

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

caller
DebounceResetStatus   DTC_IntlckChrgPlgHBrgSCB2_ResetEventDebounceStatus()   ERR

DTC_IntlckChrgPlgHBrgSCB2_ResetEventDebounceStatus

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

caller
DebounceResetStatus   DTC_IntlckChrgPlgHBrgSCG1_ResetEventDebounceStatus()   ERR

DTC_IntlckChrgPlgHBrgSCG1_ResetEventDebounceStatus

Dem_DebounceResetStatusType.DEM_DEBOUNCE_STATUS_RESET

caller
DebounceResetStatus   DTC_IntlckChrgPlgHBrgSCG2_ResetEventDebounceStatus()   ERR

DTC_IntlckChrgPlgHBrgSCG2_ResetEventDebounceStatus

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Figure 8 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOnDiagErr_Set [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_PlgLockOnDiagErr_Set]

Figure 9 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Standby [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Standby]
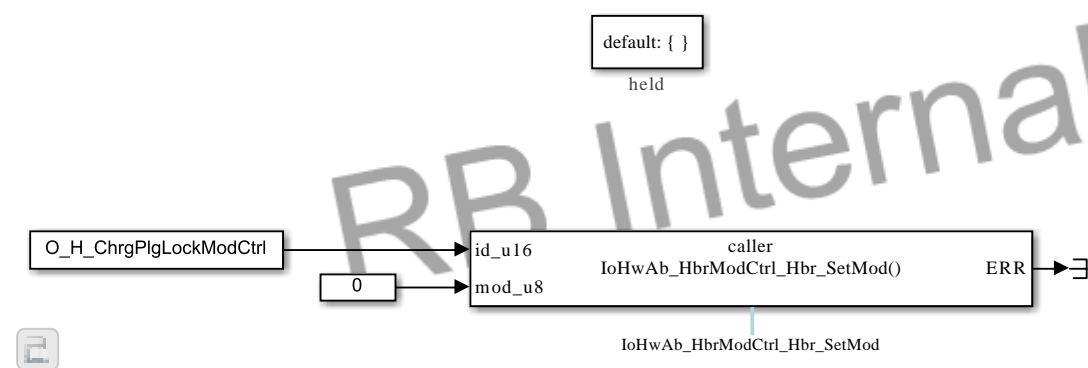
Figure 10 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Unlock [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_1ms_sys_Unlock]
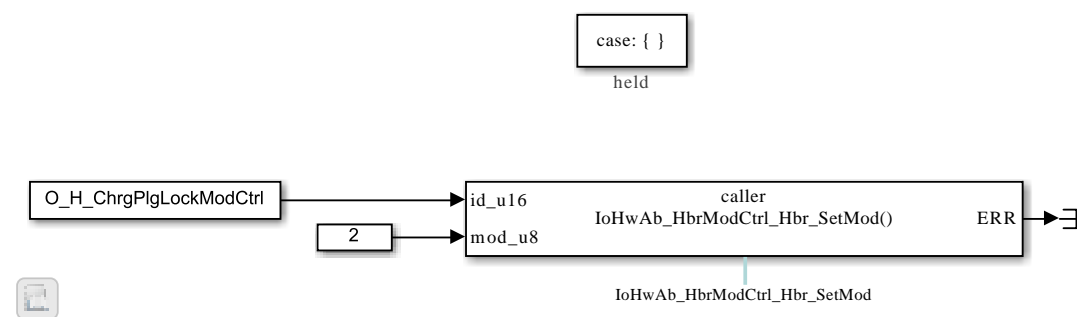
Figure 11 ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_Init [ChrgPlgLock_VD_ChrgPlgLock_VD_Runnable_Init]

Table 1 Data Types for port interfaces [PortInterfaceDataTypes]

Port	AccessMode	Interface	DE	Datatype
ChrgPlg_stPlgLockCmd	ImplicitReceive	ChrgPlg_stPlgLockCmd	Val	uint8
ChrgPlgPosn_st	ImplicitReceive	ChrgPlgPosn_st	Val	uint8
BattU_bVoltEnbPinDiag	ImplicitReceive	BattU_bVoltEnbPinDiag	Val	boolean
VehCoorn_stPwrMod	ImplicitReceive	VehCoorn_stPwrMod	Val	uint8

Port	AccessMode	Interface	DE	Datatype
ChgrPlug_stPlgLock	ImplicitSend	ChgrPlug_stPlgLock	Val	uint8
ChgrPlug_stPlgLockStMac	ImplicitSend	ChgrPlug_stPlgLockStMac	Val	uint8
IntlckChrgPlg_rActr	ImplicitSend	IntlckChrgPlg_rActr	Val	Perc_q0p0122_Perc_s16
IntlckChrgPlg_tiActr	ImplicitSend	IntlckChrgPlg_tiActr	Val	Ti_q1_us_u32

Table 2 Data Types for ADT [ApplicationDataTypes]

Name	Length	IsSigned	CompuMethod
Perc_q0p0122_Perc_s16	16	true	CM_Perc_q0p0122_Perc
Ti_q1_us_u32	32	false	CM_Ti_q1_us

3 Conversion forms

Table 3 Conversion forms

Name	Category	Unit	Contents int
CM_Fac_q0p001	LINEAR		f(phys) := 1000phys
CM_Frq_q0p1_Hz	LINEAR	Hz	f(phys) := 10phys
CM_I_q0p25_mA	LINEAR	mA	f(phys) := 4phys
CM_N_q1_rpm	LINEAR		f(phys) := 1phys
CM_P_q2_hPa	LINEAR	hPa	f(phys) := 1phys / 2
CM_Perc_q0p0122_Perc	LINEAR	%	f(phys) := 81.92phys
CM_T_q0p1_o273p14_DegC	LINEAR	DegC	f(phys) := (10phys--2731.3999999999996)
CM_Ti_q0p001_s	LINEAR		f(phys) := 1000phys
CM_Ti_q1_us	LINEAR	us	f(phys) := 1phys
CM_U_q1_mV	LINEAR	mV	f(phys) := 1phys
CM_boolean	TEXTTABLE		(FALSE, 0), (TRUE, 1)
Dem_DTCFormatType	TEXTTABLE		(DEM_DTC_FORMAT_OBD, 0), (DEM_DTC_FORMAT_UDS, 1), (DEM_DTC_FOR-MAT_J1939, 2)
Dem_DebounceResetStatusTy-pe	TEXTTABLE		(DEM_DEBOUNCE_STATUS_FREEZE, 0), (DEM_DEBOUNCE_STATUS_RESET, 1)
Dem_EventStatusType	TEXTTABLE		(DEM_EVENT_STATUS_PASSED, 0), (DEM_EVENT_STATUS_FAILED, 1), (DEM_EVENT_STATUS_PREPASSED, 2), (DEM_EVENT_STATUS_PREFAILED, 3), (DEM_EVENT_STATUS_FDC_THRESHOLD_REACHED, 4), (DEM_EVENT_STA-TUS_PASSED_CONDITIONS_NOT_FULFILLED, 5), (DEM_EVENT_STATUS_FAI-LED_CONDITIONS_NOT_FULFILLED, 6), (DEM_EVENT_STATUS_PREPASSED_CON-DITIONS_NOT_FULFILLED, 7), (DEM_EVENT_STATUS_PREFAILED_CONDITIO-NS_NOT_FULFILLED, 8)
Dem_UdsStatusByteType	SCALE_LINE-AR_AND_TEXT-TABLE		
Identcl	IDENTICAL		
boolean_CompuMethod	TEXTTABLE		(FALSE, 0), (TRUE, 1)

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II Production Note

Table 4 Configuration chosen for DocuNG

Parameter	Value
User	
Project Name	GAC_ZCUT_FRM_C0Sample
Generator Mode	Continue on non-fatal error
Ascet graphic generator engine	UnifiedGraphicGenerator
Matlab graphic generator engine	UnifiedGraphicGenerator
DocType	CDGBookAllDetailed
Condition Evaluation	true
Title Page Logo	
Print Algorithms To Review	true
Support Fallback Language	true
Print List Of Converted System Constants	true
Create Label Alias Mapping	true
HTML	false
PDF	true
PDF: Language	EN - English
PDF: Links in Graphics	true
PDF: Line Numbers	false
PDF: Confidential Level 2	true
PDF: Docu Security Option	false

Table 5 Version Information

Program Module	Version
Product	AEEE-Pro 2020.2.0