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HvacDampr_Ctrl_2019b

[COMP]

RB Internal

I [HvacDampr_Ctrl_2019b]

1 Function Definition

1.1 Purpose

HVAC Damper Control

1.2 Introduction

HVAC Damper Control

2 Function Description

2.1 Behavior in normal mode

Figure 1 HvacDampr_Ctrl [HvacDampr_Ctrl]

Figure 2 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys]
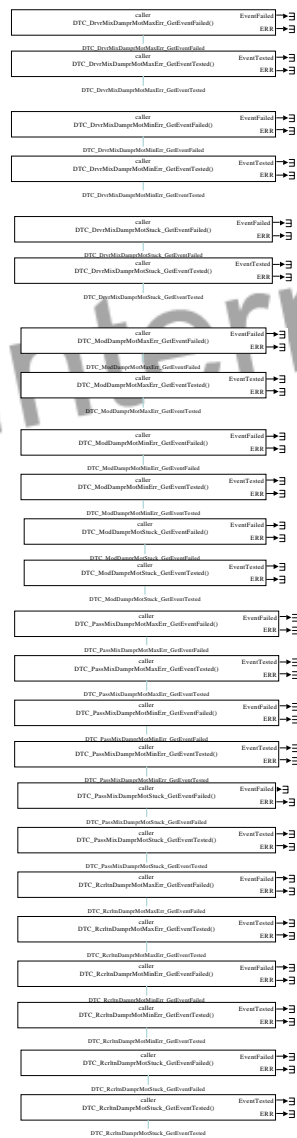
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Figure 3 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02Dr-CRC_Moto]
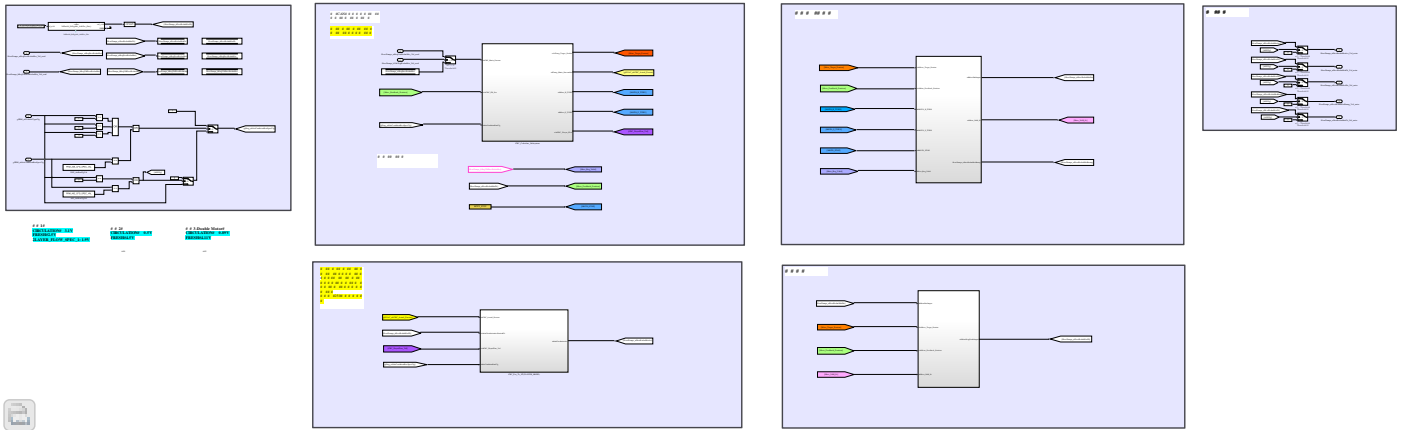

Figure 4 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem]

Figure   5   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_A02_CRC_Pos_Action   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_A02_CRC_Pos_Action]
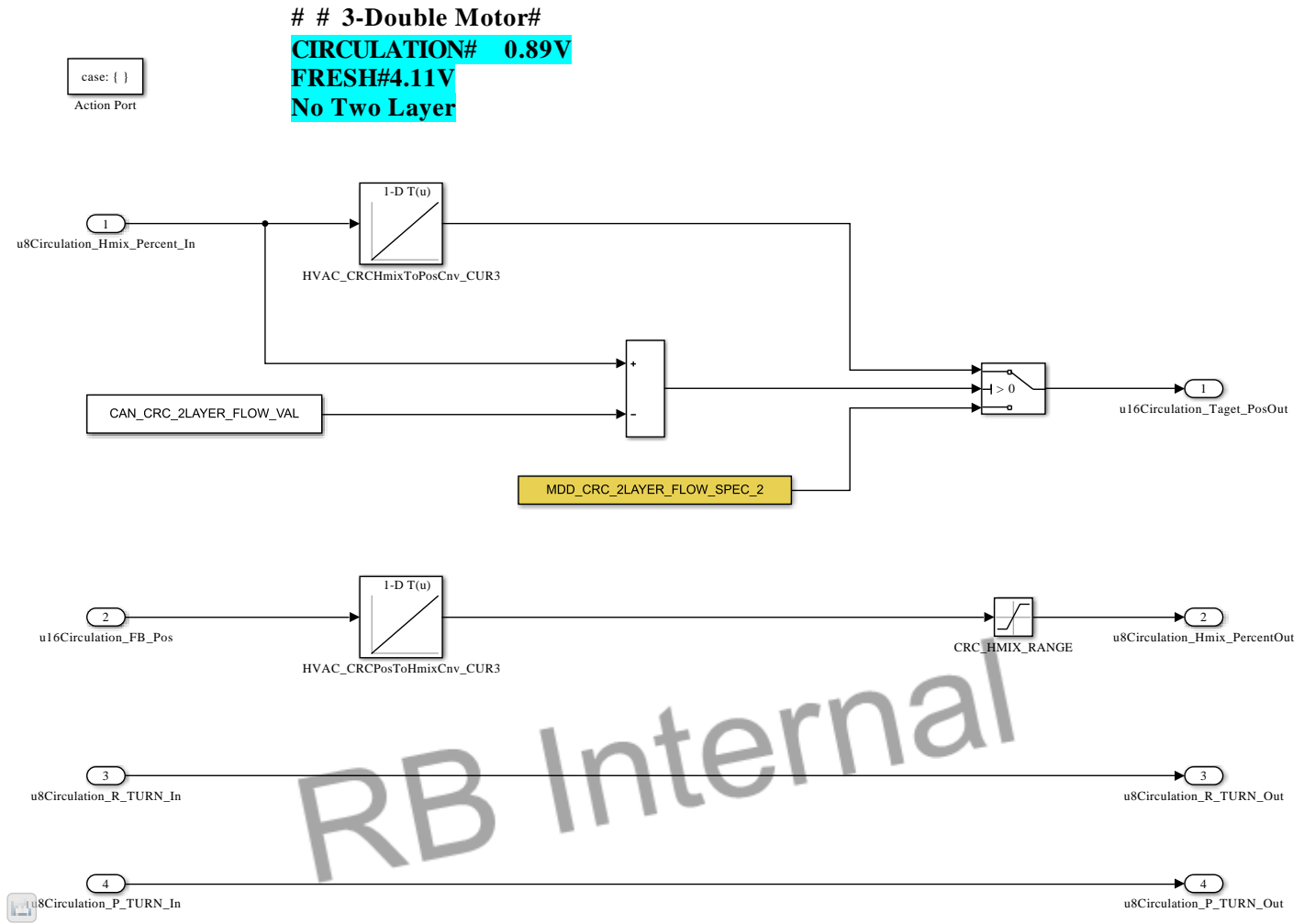
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Figure 6 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_A29_CRC_Pos_Action [HvacDam-pr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_A29_CRC_Pos_Action]
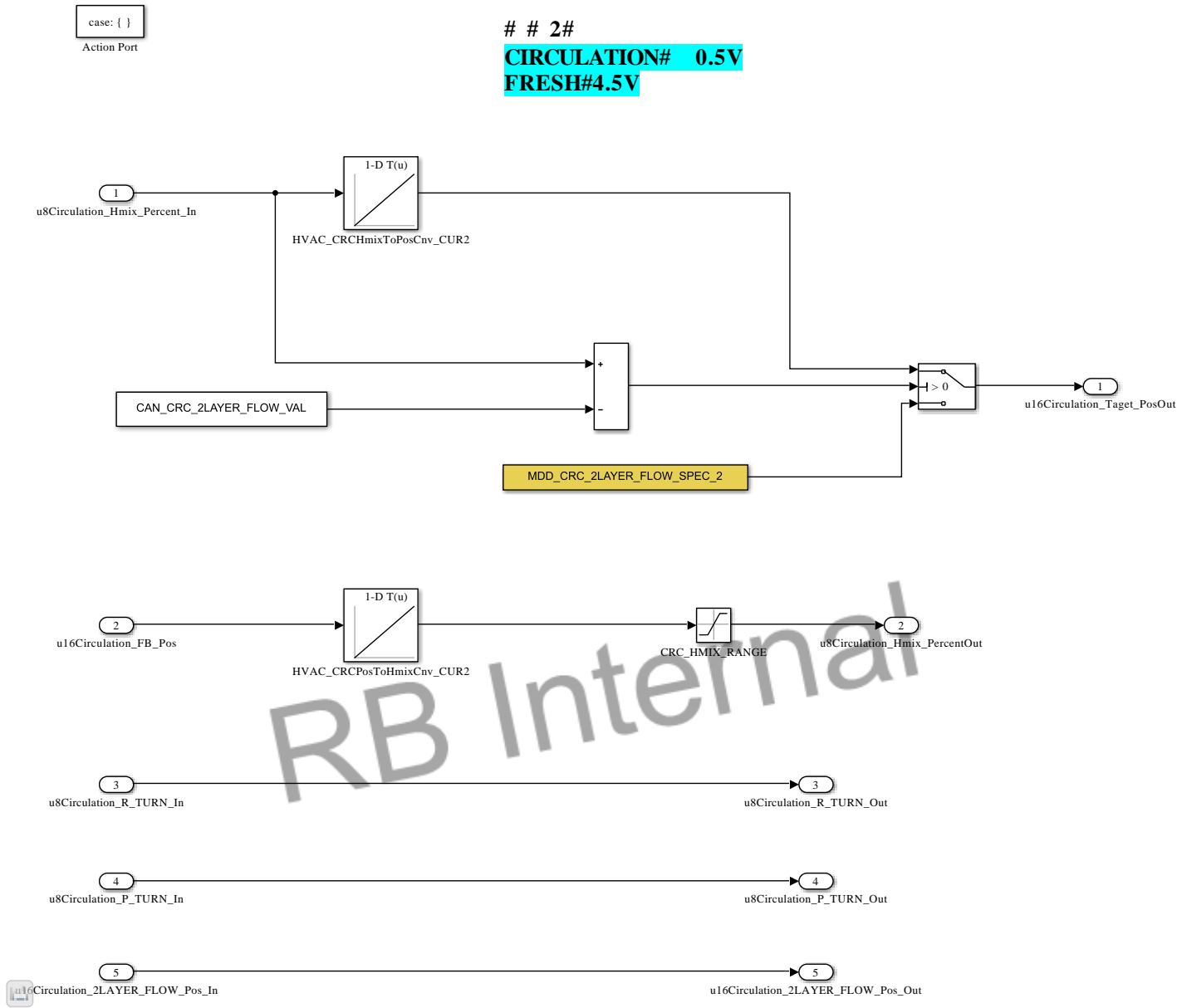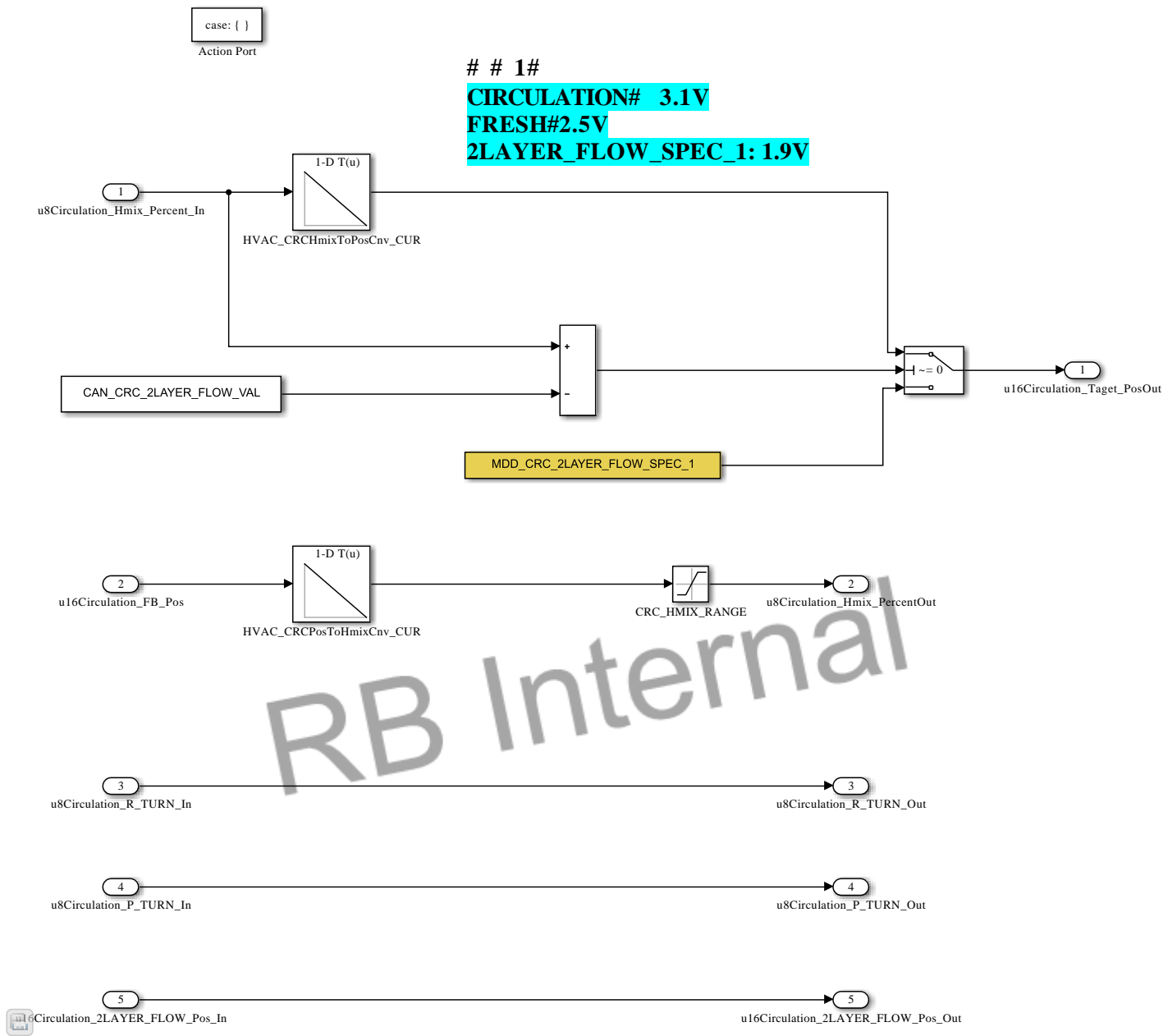
Figure   7   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_CRC_Pos_Action_Else   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Calculate_Subsystem_CRC_Pos_Action_Else]
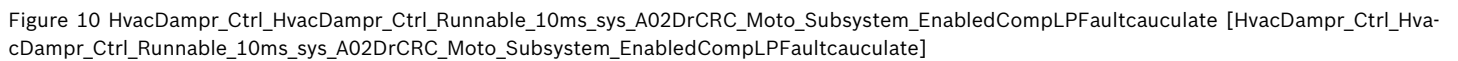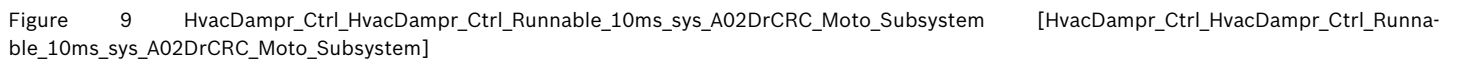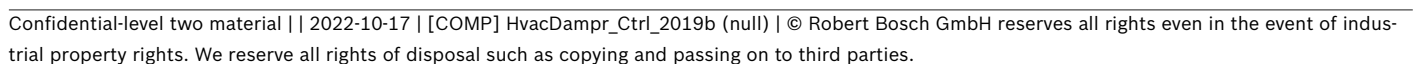
case: { }
Action Port

1#
CIRCULATION#   3.1V
FRESH#2.5V
2LAYER_FLOW_SPEC_1: 1.9V

1
u8Circulation_Hmix_Percent_In

1-D T(u)
HVAC_CRCHmixToPosCnv_CUR

CAN_CRC_2LAYER_FLOW_VAL

MDD_CRC_2LAYER_FLOW_SPEC_1

~= 0

1
u16Circulation_Taget_PosOut

2
u16Circulation_FB_Pos

1-D T(u)
HVAC_CRCPosToHmixCnv_CUR

CRC_HMIX_RANGE

2
u8Circulation_Hmix_PercentOut

3
u8Circulation_R_TURN_In

3
u8Circulation_R_TURN_Out

4
u8Circulation_P_TURN_In

4
u8Circulation_P_TURN_Out

5
u16Circulation_2LAYER_FLOW_Pos_In

5
u16Circulation_2LAYER_FLOW_Pos_Out

Figure 8   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Pos_To_ST(2LAYER_MODE)   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_CRC_Pos_To_ST(2LAYER_MODE)]

Figure 9   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem]

Figure 10 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledCompLPFaultcauculate]

Figure 11 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledSubsystem]
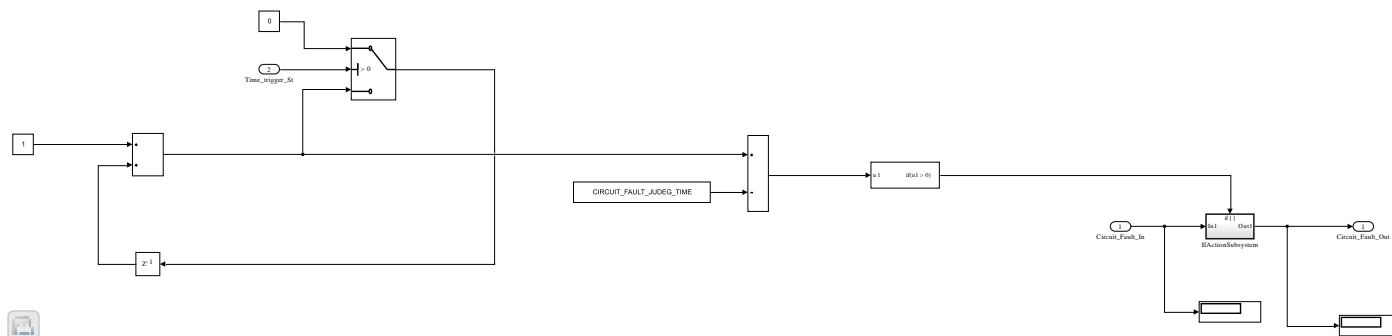

Figure 12 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem]
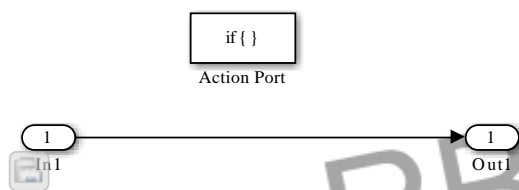

Figure 13 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem_IfActionSubsystem]
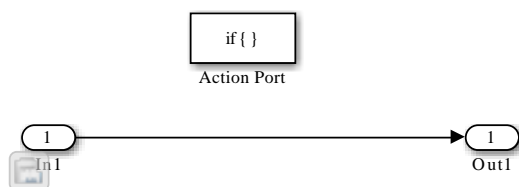

Figure 14 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem2 [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem2]
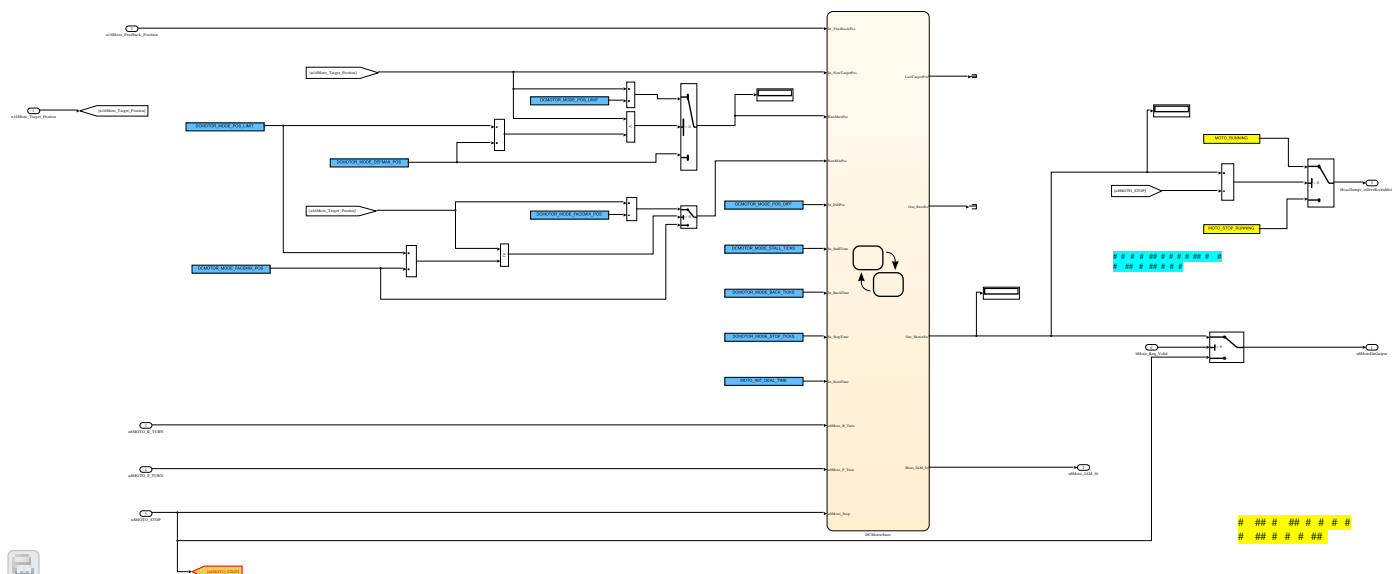
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Figure 15 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A02DrCRC_Moto_Subsystem2_DCMotorState]
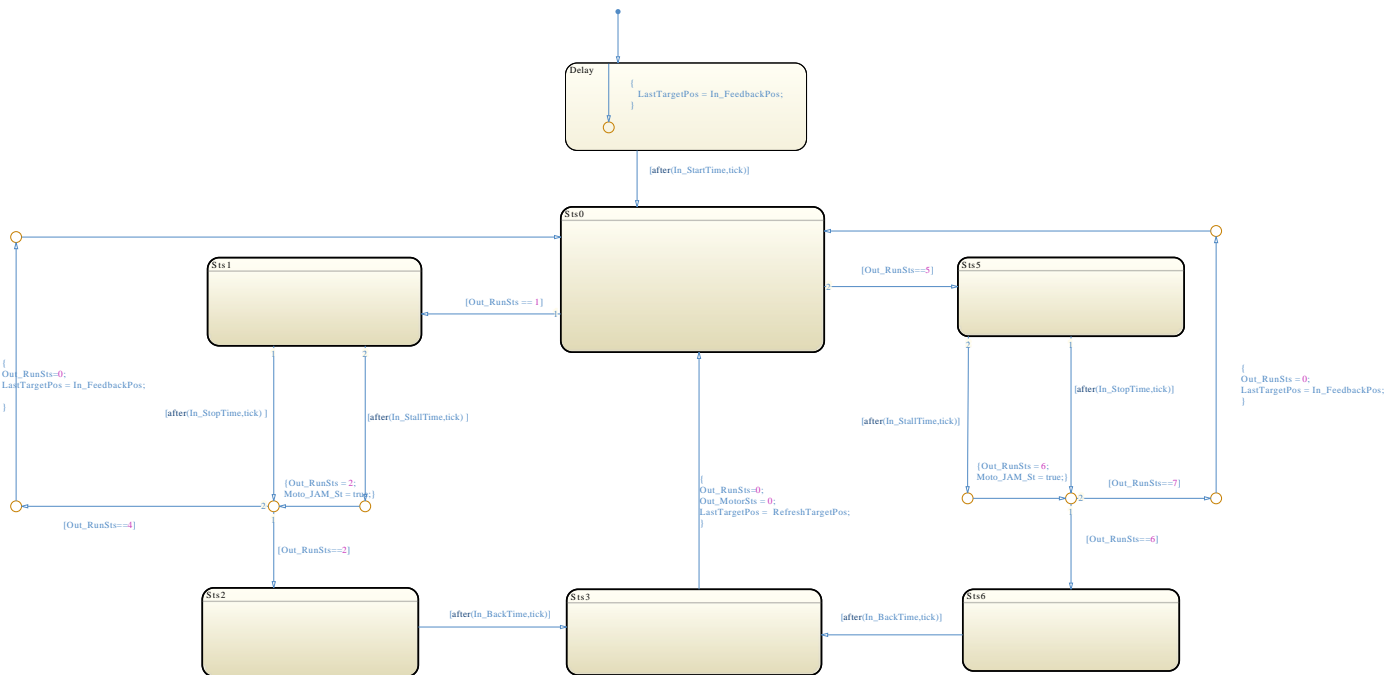

Figure 16 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto]
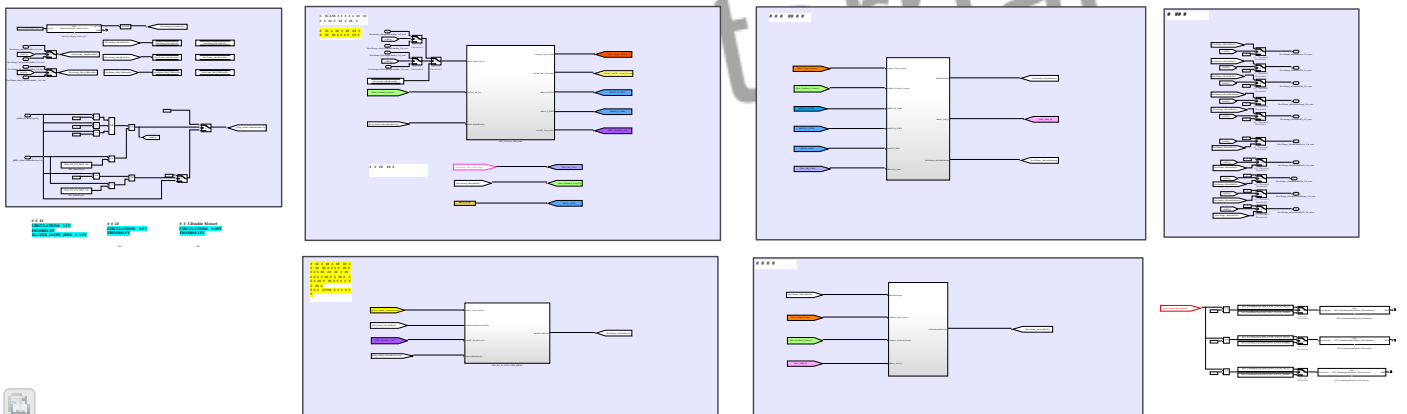
Figure 17 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem]

Figure 18 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_A02_CRC_Pos_Action [Hvac-
Dampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_A02_CRC_Pos_Action]
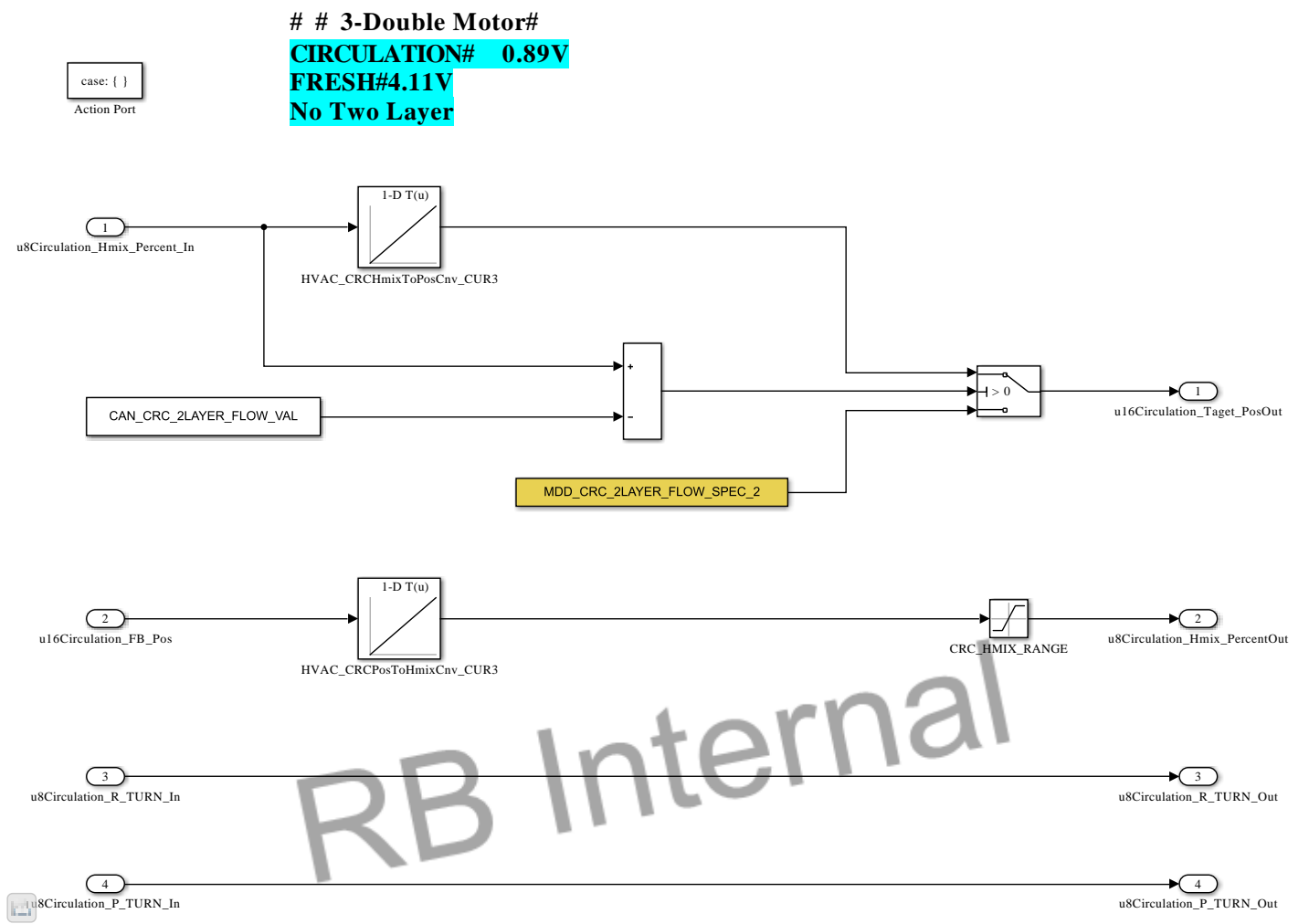
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Figure 19 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_A29_CRC_Pos_Action [Hvac-Dampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_A29_CRC_Pos_Action]
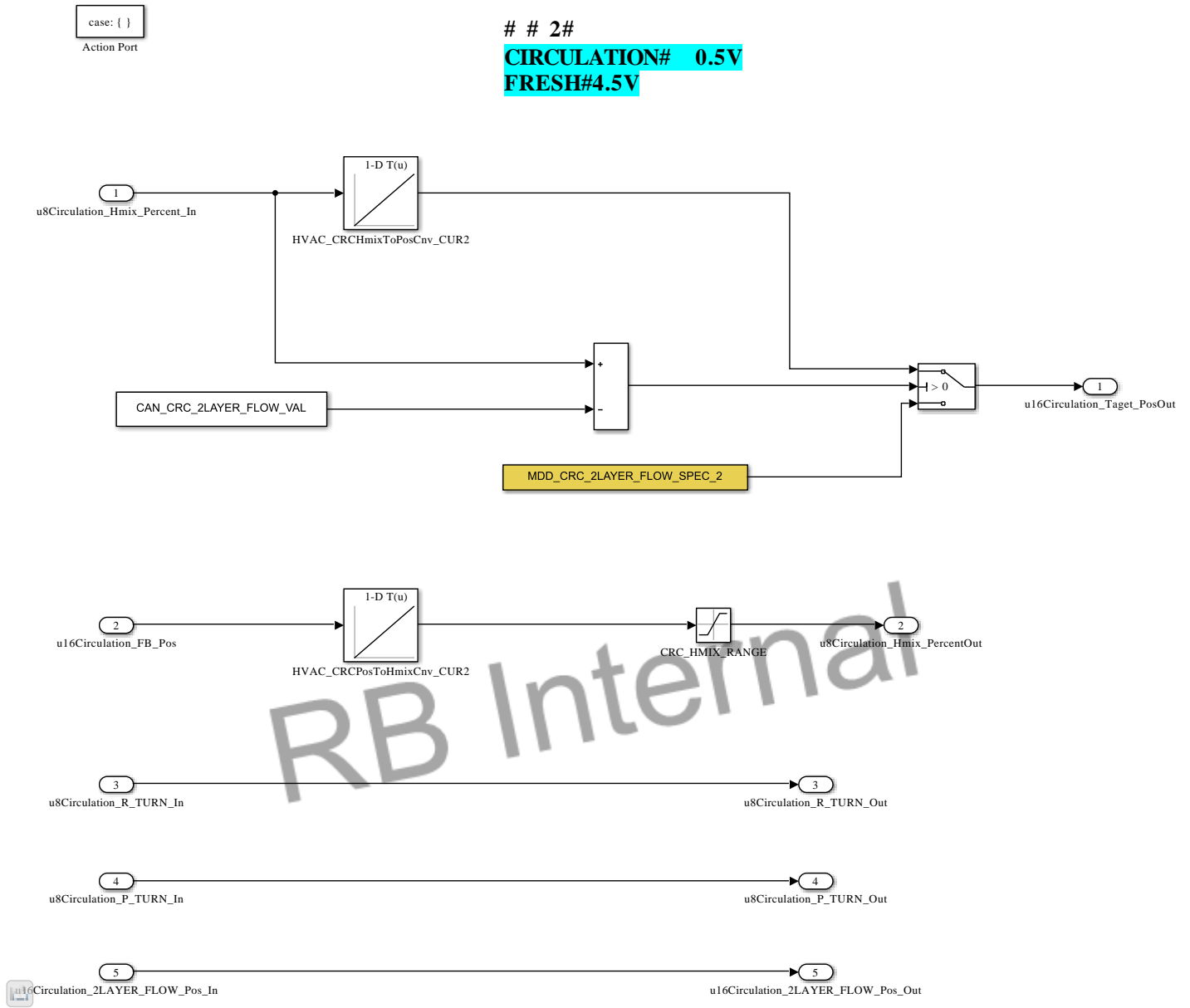
case: { }
Action Port

2#
CIRCULATION#   0.5V
FRESH#4.5V

1-D T(u)
HVAC_CRCHmixToPosCnv_CUR2

1
u8Circulation_Hmix_Percent_In

CAN_CRC_2LAYER_FLOW_VAL

MDD_CRC_2LAYER_FLOW_SPEC_2

| > 0

1
u16Circulation_Taget_PosOut

1-D T(u)
HVAC_CRCPosToHmixCnv_CUR2

2
u16Circulation_FB_Pos

CRC_HMIX_RANGE

2
u8Circulation_Hmix_PercentOut

3
u8Circulation_R_TURN_In

3
u8Circulation_R_TURN_Out

4
u8Circulation_P_TURN_In

4
u8Circulation_P_TURN_Out

5
u16Circulation_2LAYER_FLOW_Pos_In

5
u16Circulation_2LAYER_FLOW_Pos_Out

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Figure 20 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_CRC_Pos_Action_Else [Hvac-Dampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Calculate_Subsystem_CRC_Pos_Action_Else]
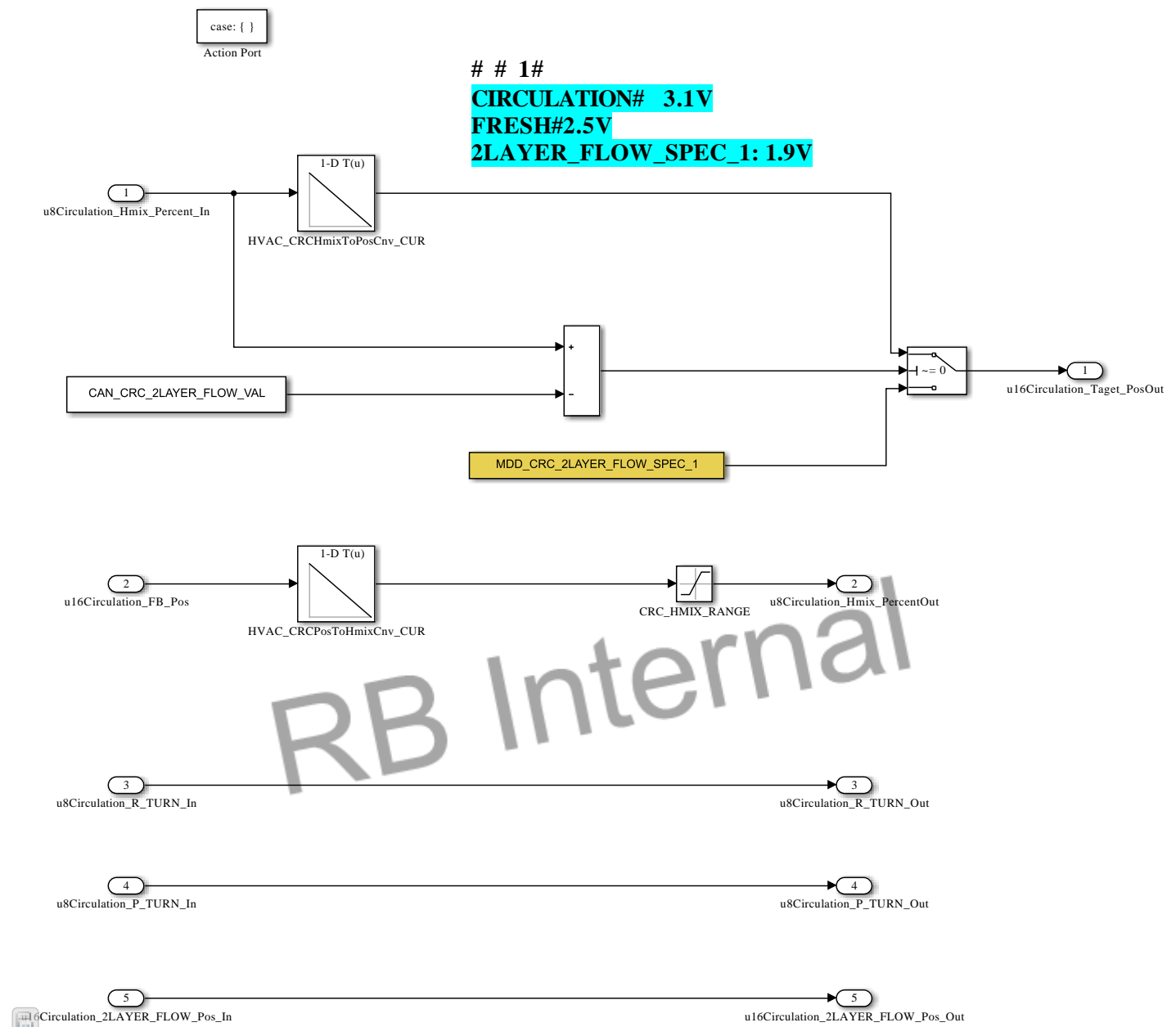

Figure 21 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Pos_To_ST(2LAYER_MODE) [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_CRC_Pos_To_ST(2LAYER_MODE)]
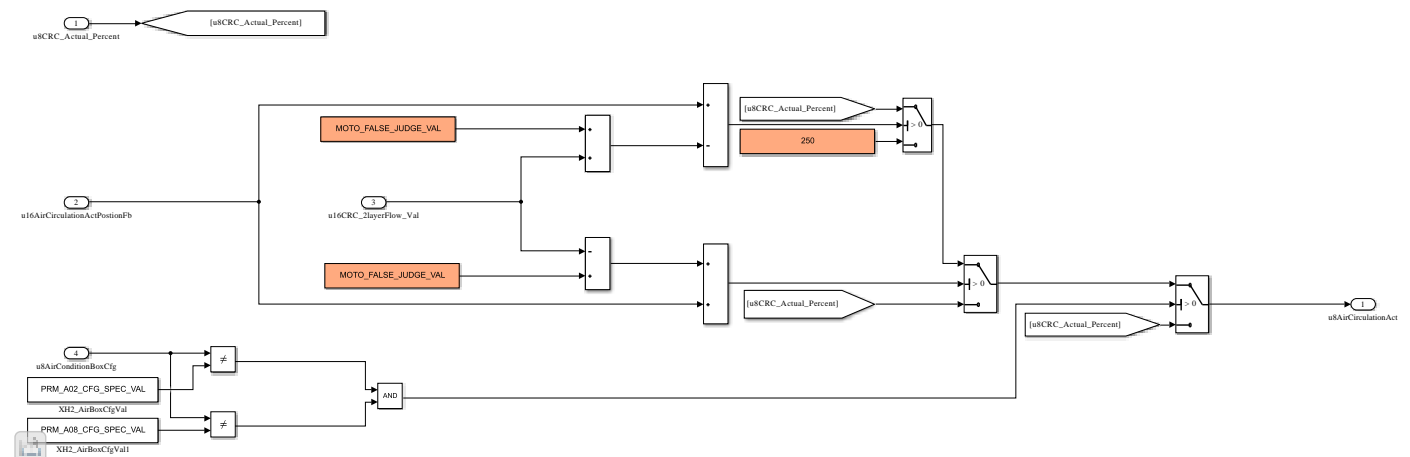
Figure 22 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem]
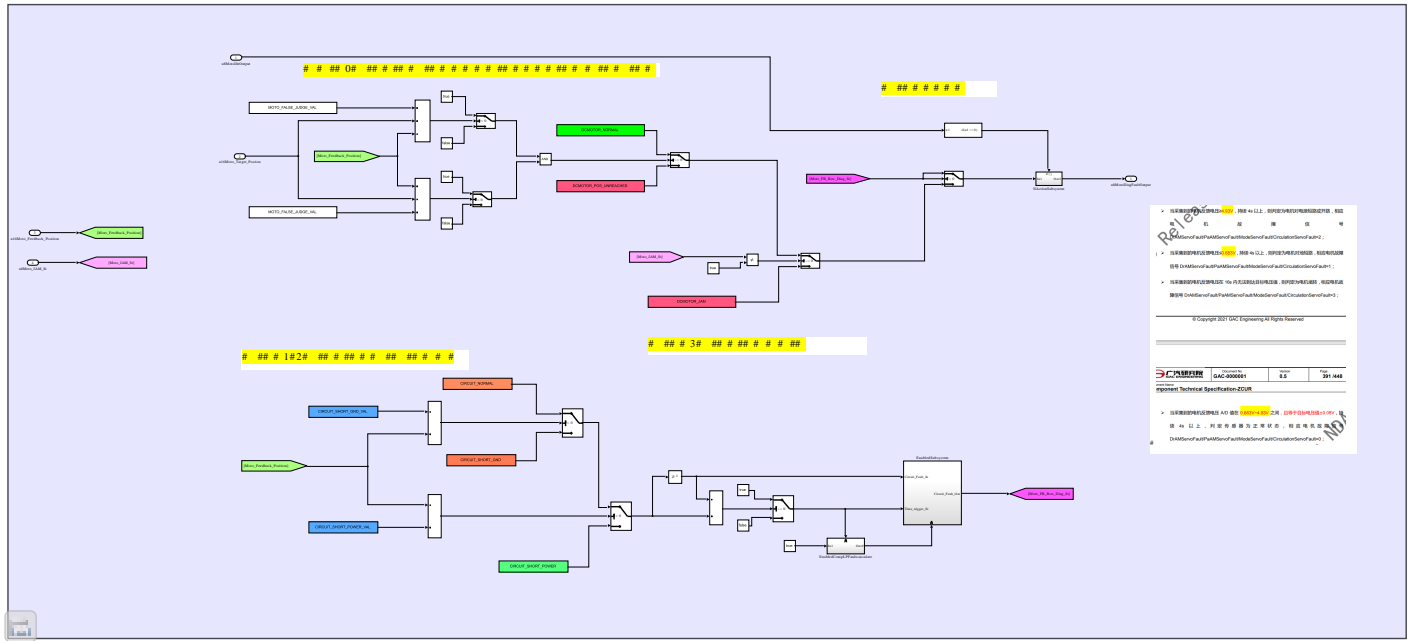

Figure 23 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledCompLPFaultcauculate]
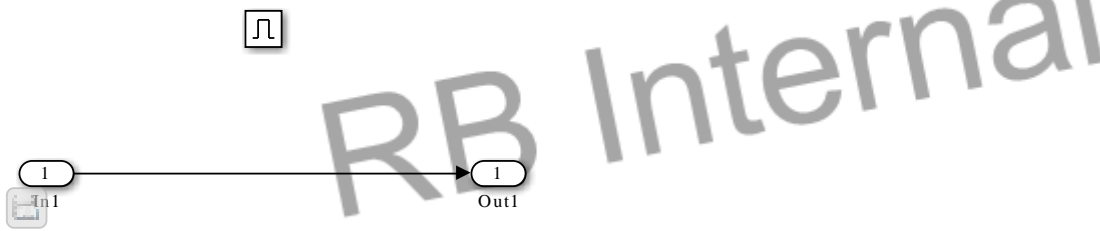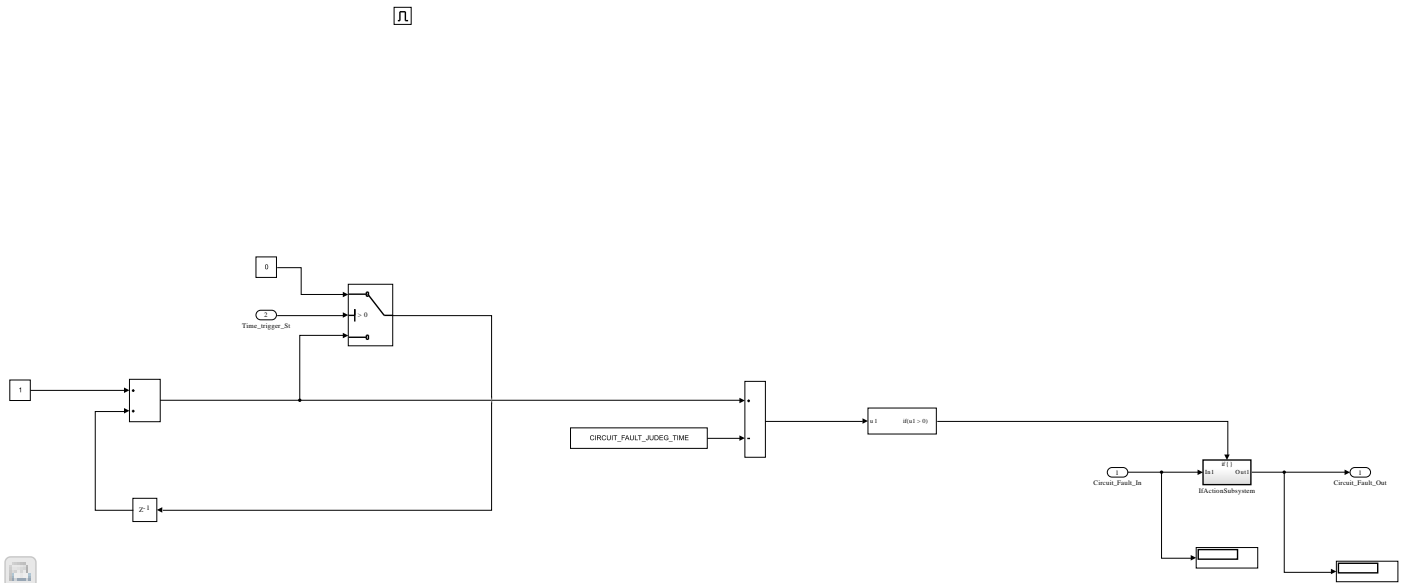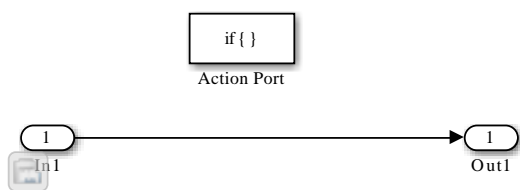

Figure 24 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledSubsystem]

Figure 25 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem [Hvac-Dampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem]

Figure 26 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_IfActionSubsystem [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem_IfActionSubsystem]

Figure 27 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem2 [HvacDampr_Ctrl_HvacDampr_Ctrl_Runna-ble_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem2]

Figure 28 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_A09CRC_A02PaCRC_Moto_Subsystem2_DCMotorState]
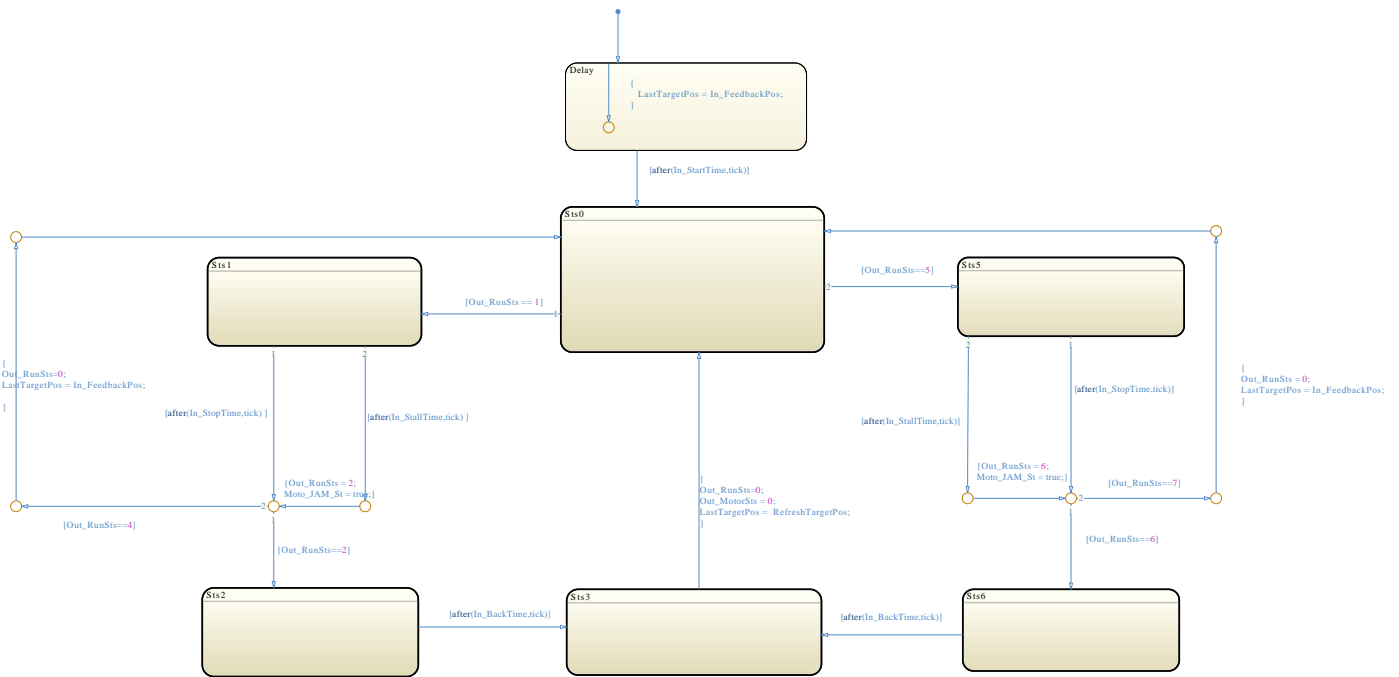

Figure 29 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto]
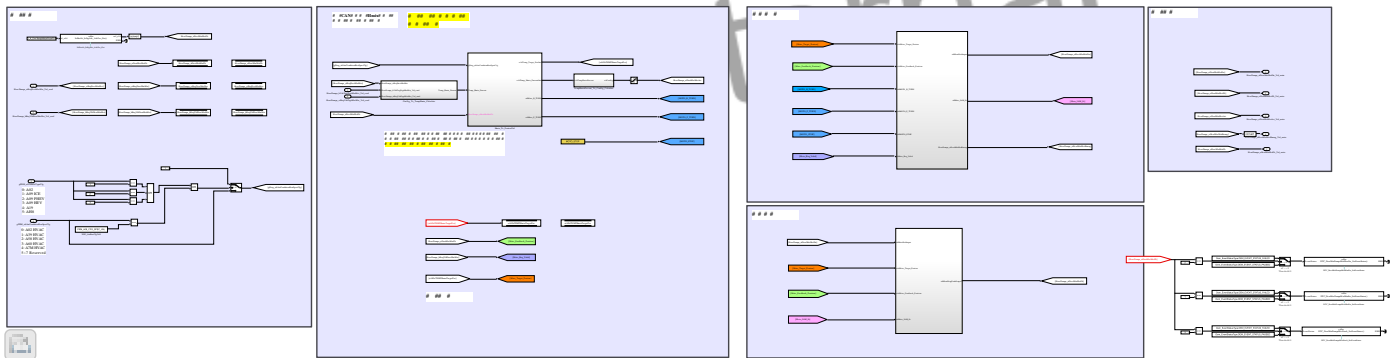

Figure 30 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_CanSig_To_TempHmix_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_CanSig_To_TempHmix_Calculate]
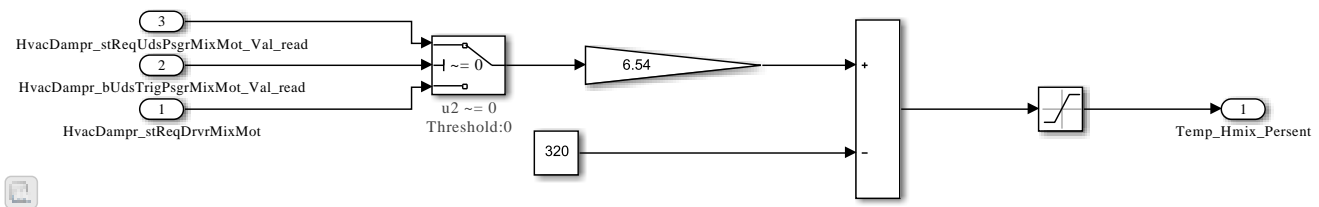
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Figure 31 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal]
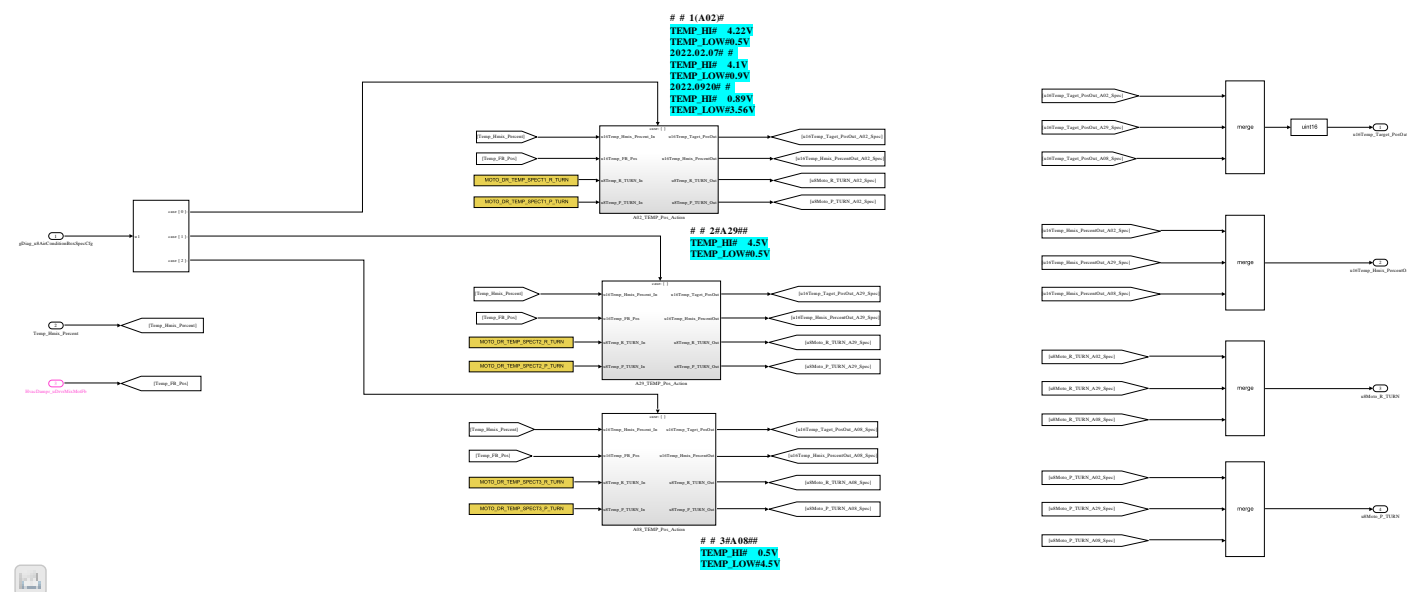

Figure 32 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A02_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A02_TEMP_Pos_Action]
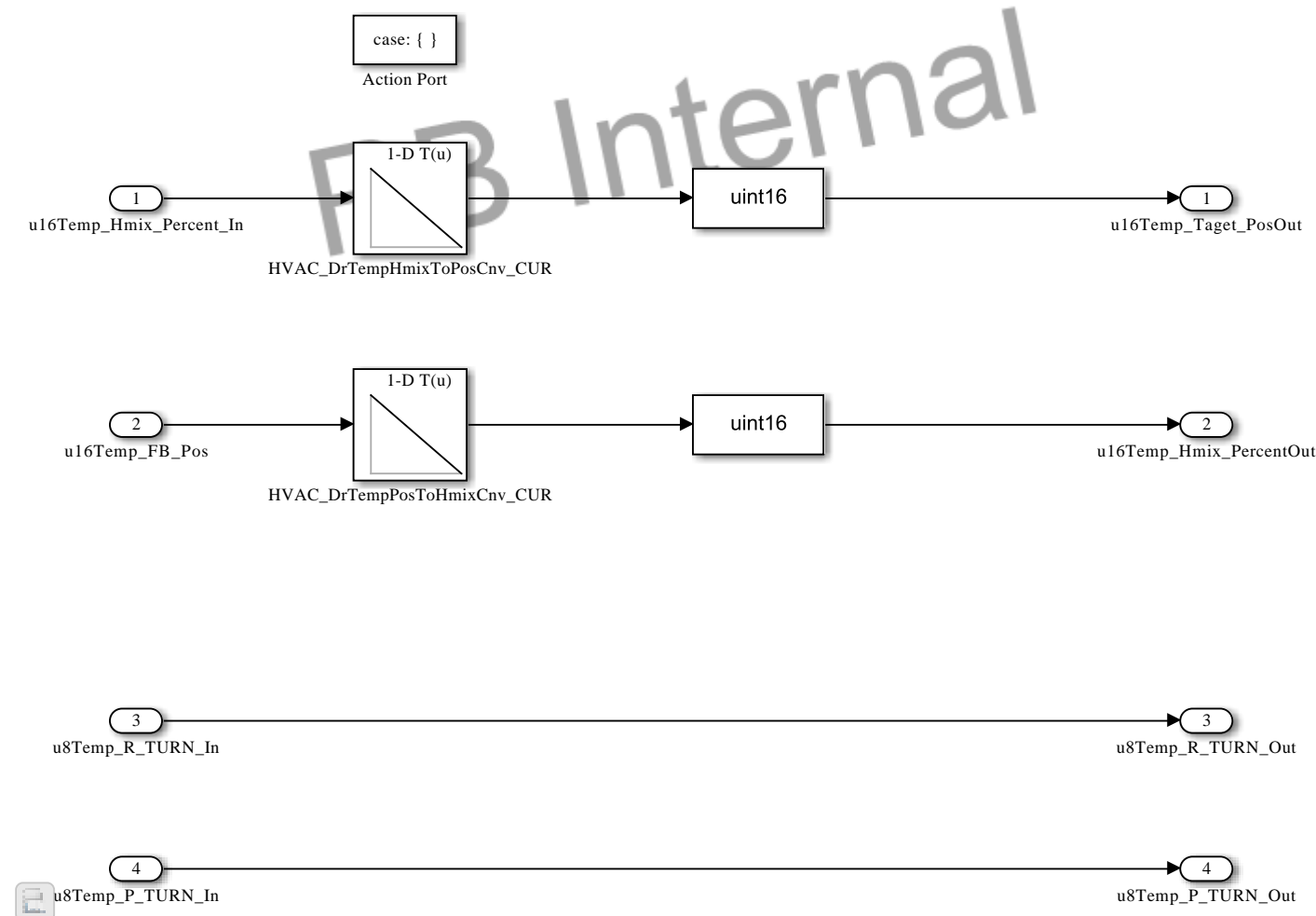
Figure 33 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A08_TEMP_Pos_Action [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A08_TEMP_Pos_Action]

case: { }

Action Port

1
u16Temp_Hmix_Percent_In

1-D T(u)

HVAC_DrTempHmixToPosCnv_CUR3

1
u16Temp_Taget_PosOut

2
u16Temp_FB_Pos

1-D T(u)

HVAC_DrTempPosToHmixCnv_CUR3

2
u16Temp_Hmix_PercentOut

3
u8Temp_R_TURN_In

3
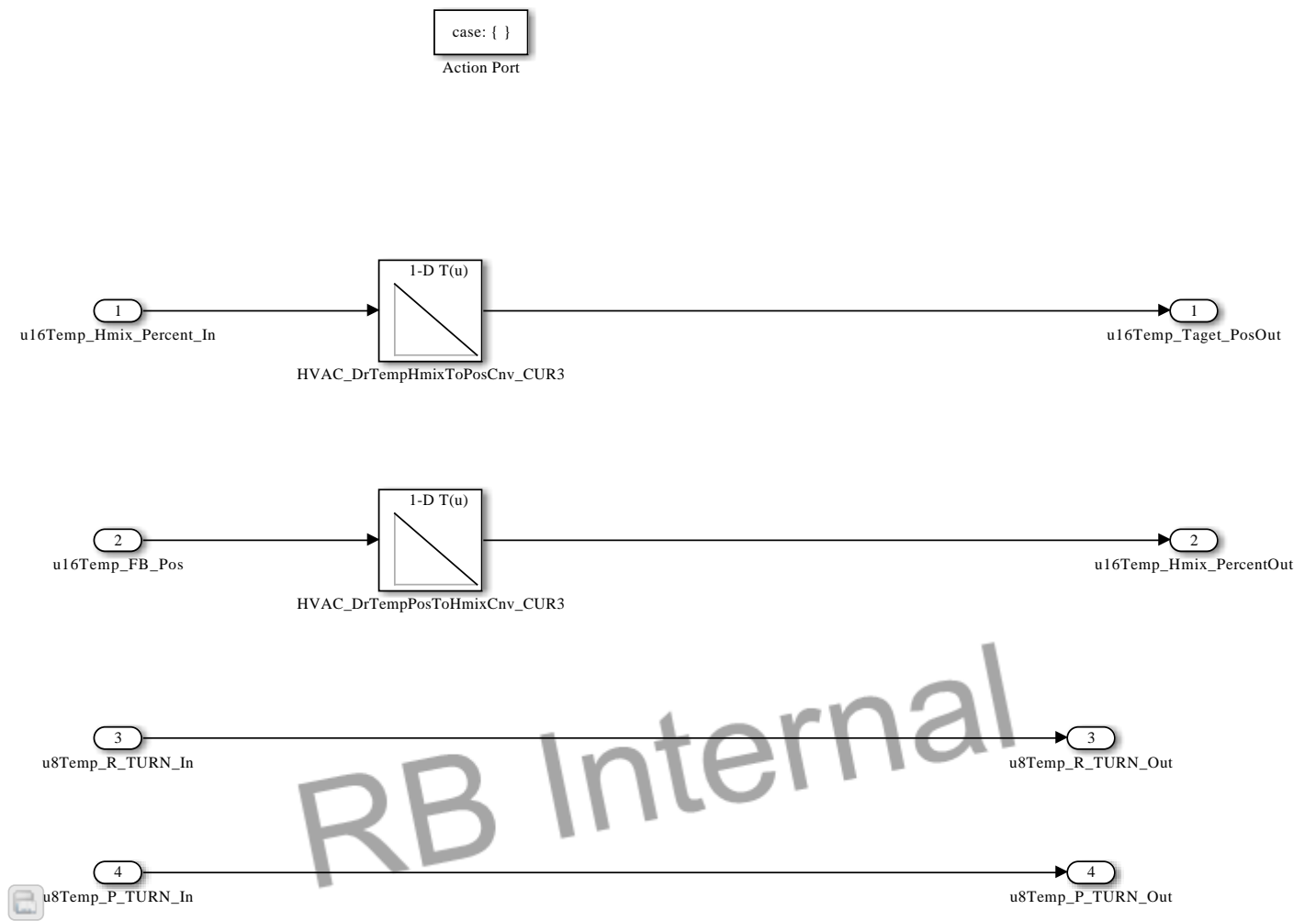u8Temp_R_TURN_Out

4
u8Temp_P_TURN_In

4
u8Temp_P_TURN_Out

Figure 34 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A29_TEMP_Pos_Action [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Hmix_To_PostionVal_A29_TEMP_Pos_Action]
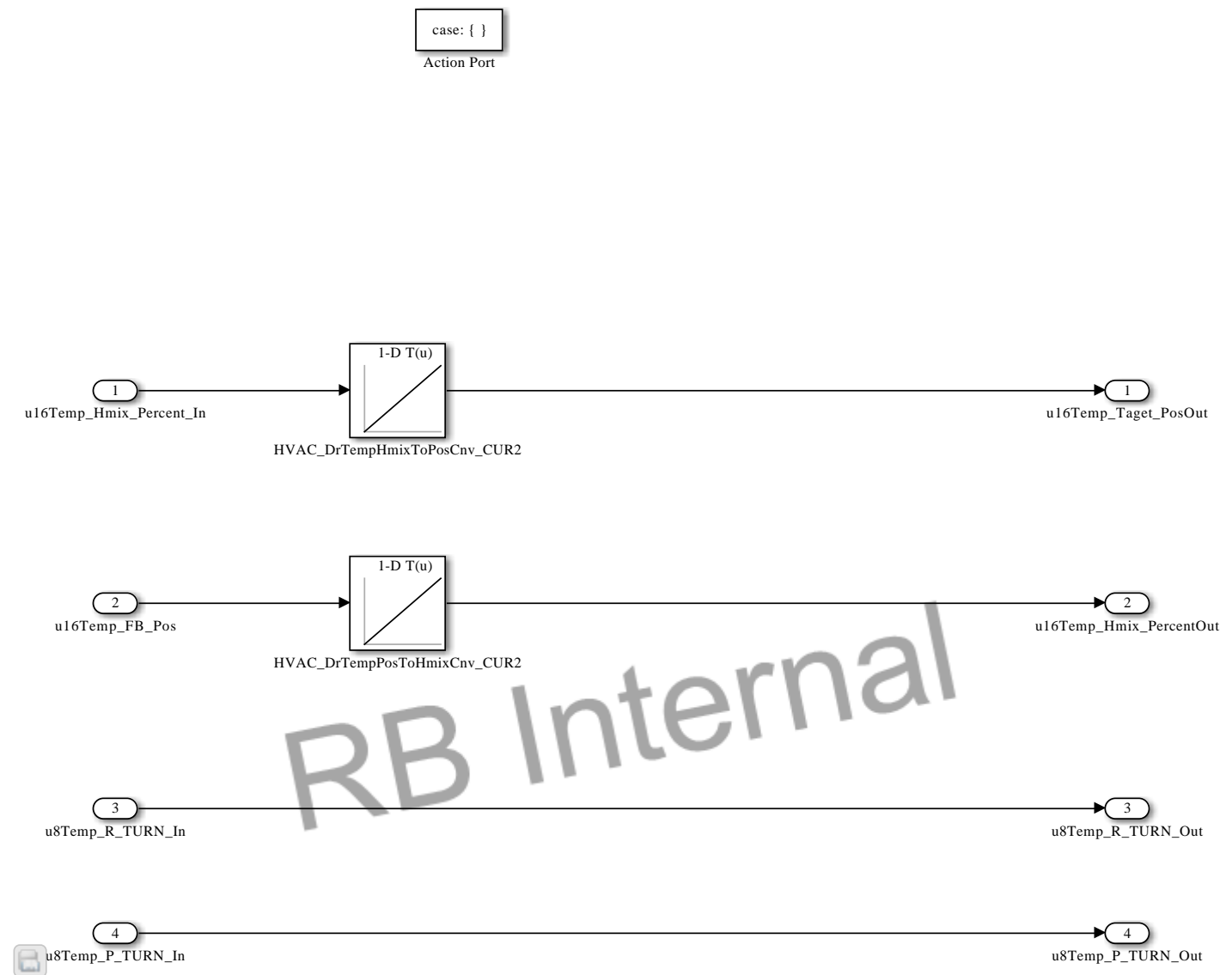

Figure 35 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runna-ble_10ms_sys_Dr_Temp_Moto_Subsystem]
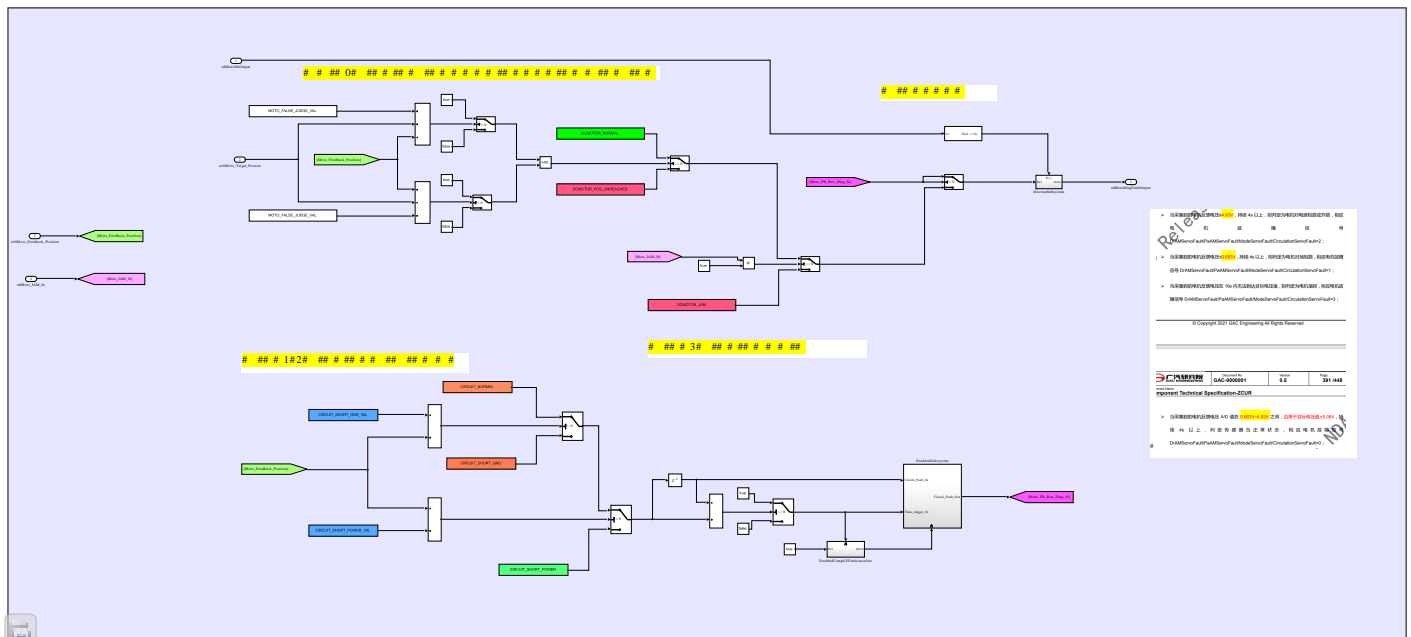
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Figure 36 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate]
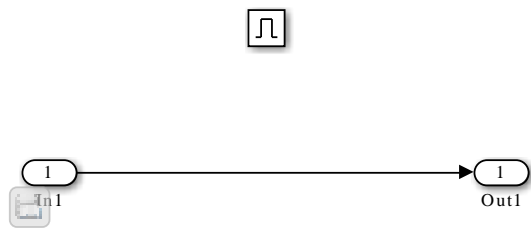
Figure 37 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledSubsystem]
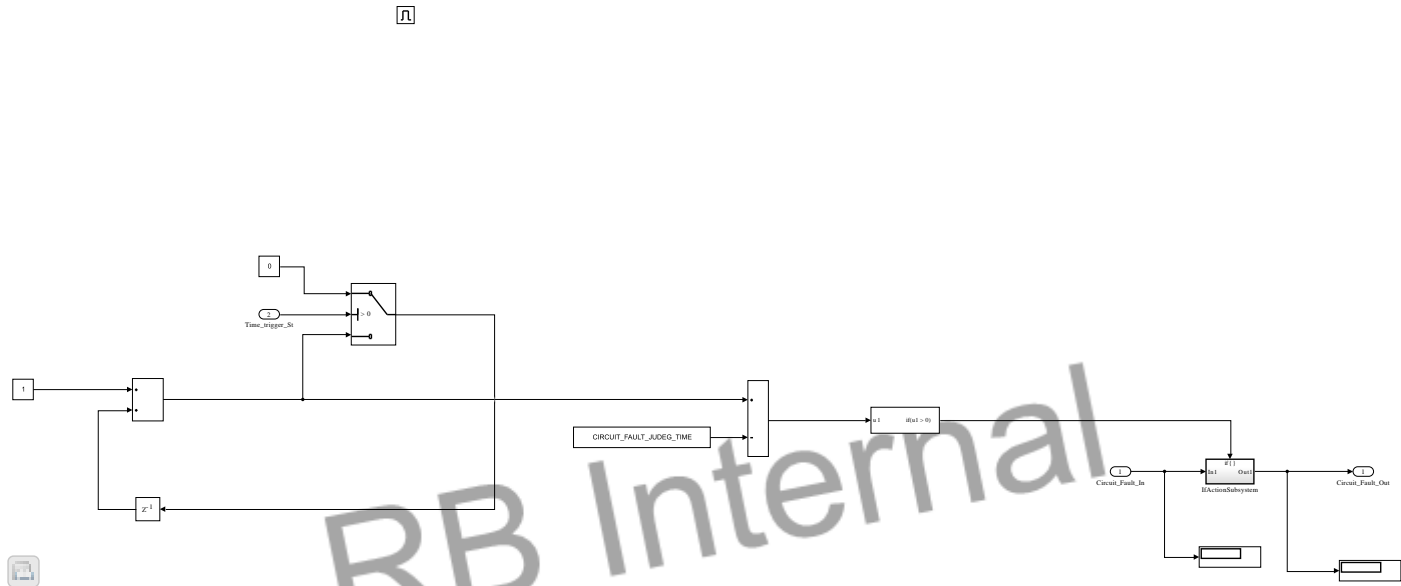
Figure 38 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem]
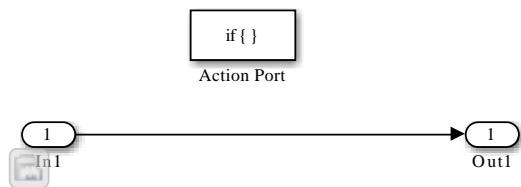
Figure 39 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem_IfActionSubsystem]
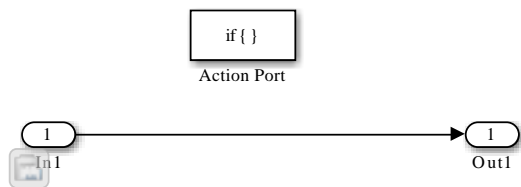
Figure   40   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem2   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem2]
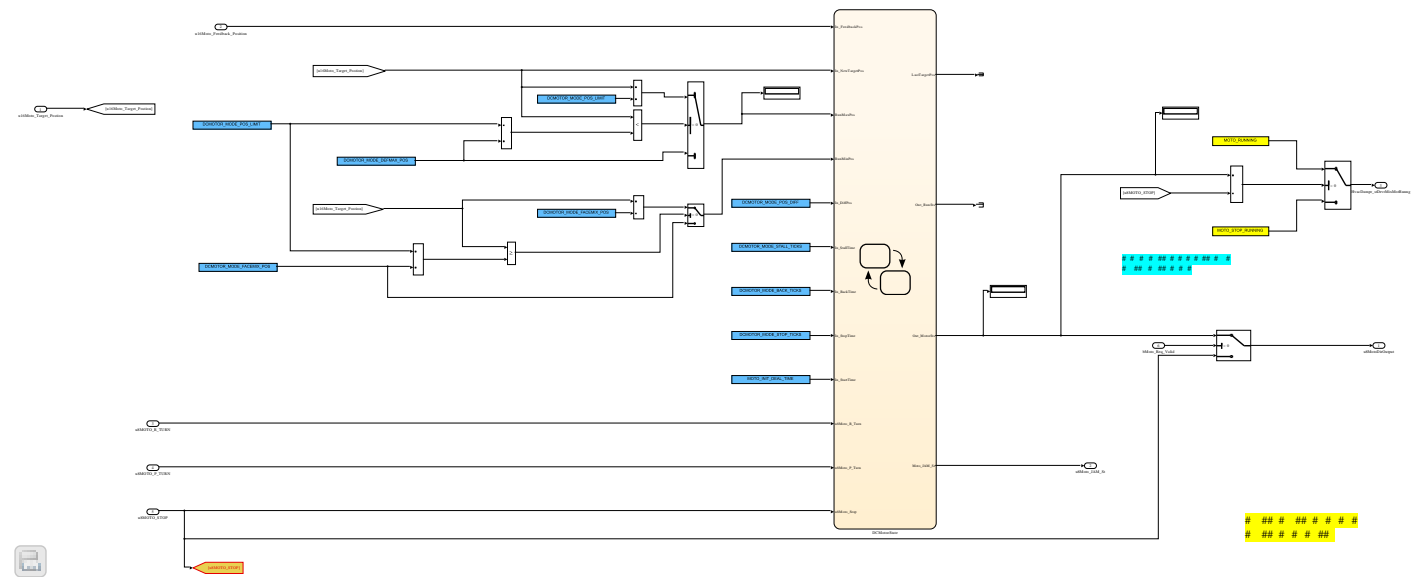

Figure 41 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_Subsystem2_DCMotorState]

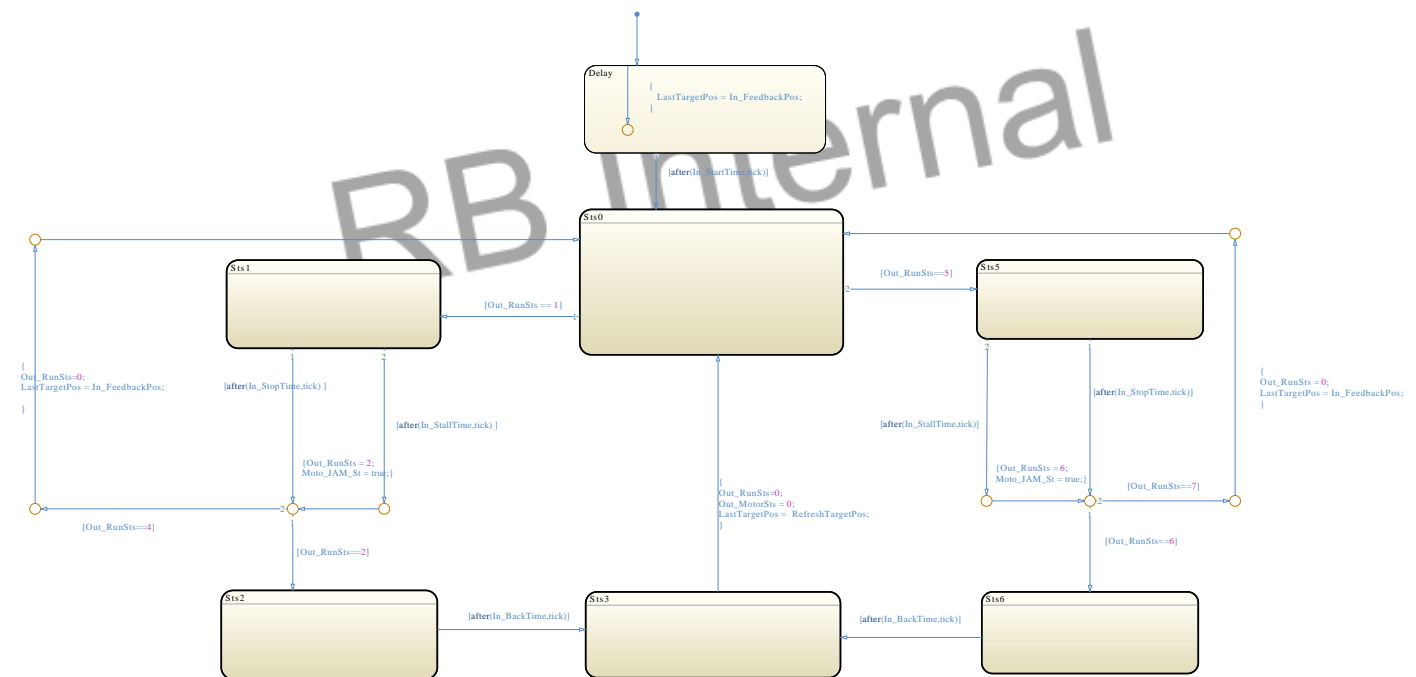Figure 42 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_TempHmixPercent_To_CanSig_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Dr_Temp_Moto_TempHmixPercent_To_CanSig_Calculate]

Figure 43 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto]

Figure 44 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem]

Figure 45 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem_Mode_Act_Fb1 [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem_Mode_Act_Fb1]
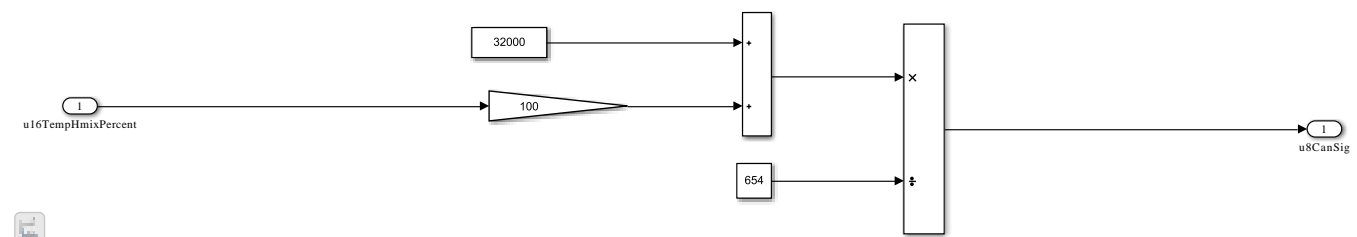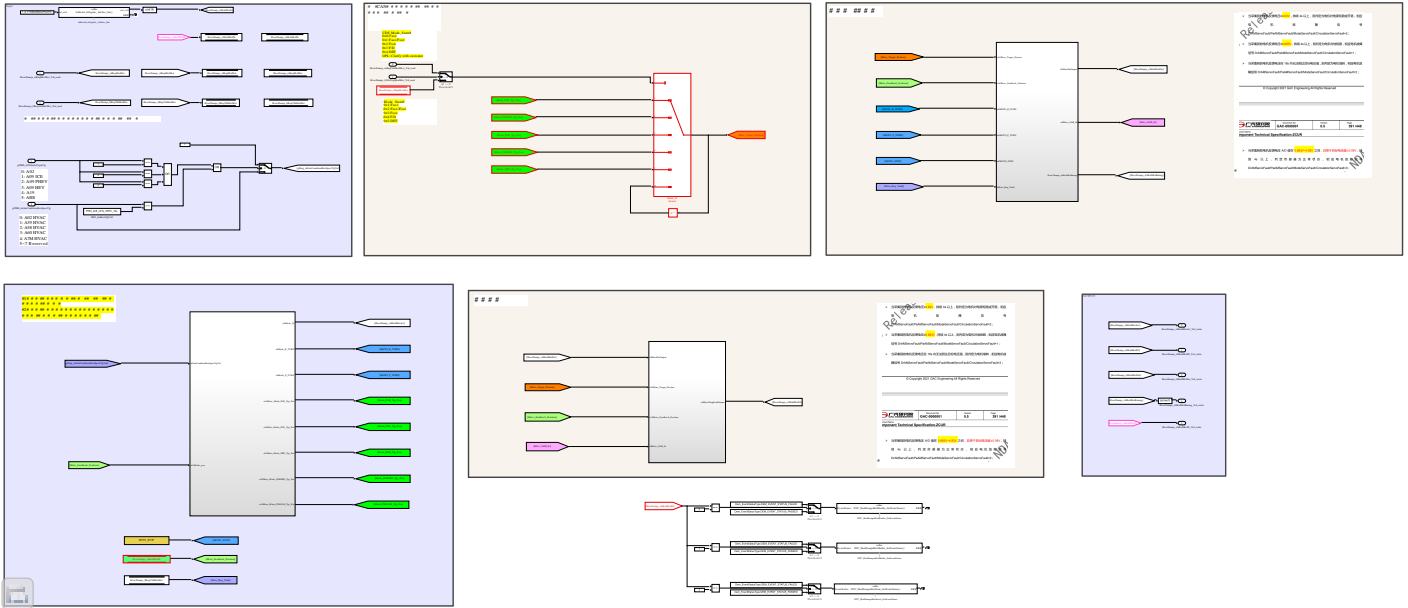
Figure   46   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runna-
ble_10ms_sys_Mode_Moto_Subsystem1]

Figure 47 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_Hvac-
Dampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledCompLPFaultcauculate]

Figure   48   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledSubsystem   [HvacDampr_Ctrl_HvacDam-
pr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledSubsystem]

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Figure 49 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledSubsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_EnabledSubsystem_IfActionSubsystem]

Figure 50 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem1_IfActionSubsystem]
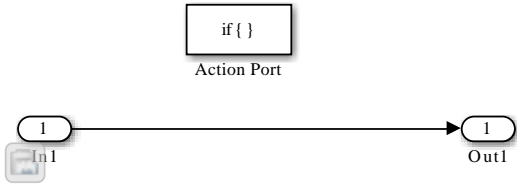
Figure 51 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem2 [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem2]
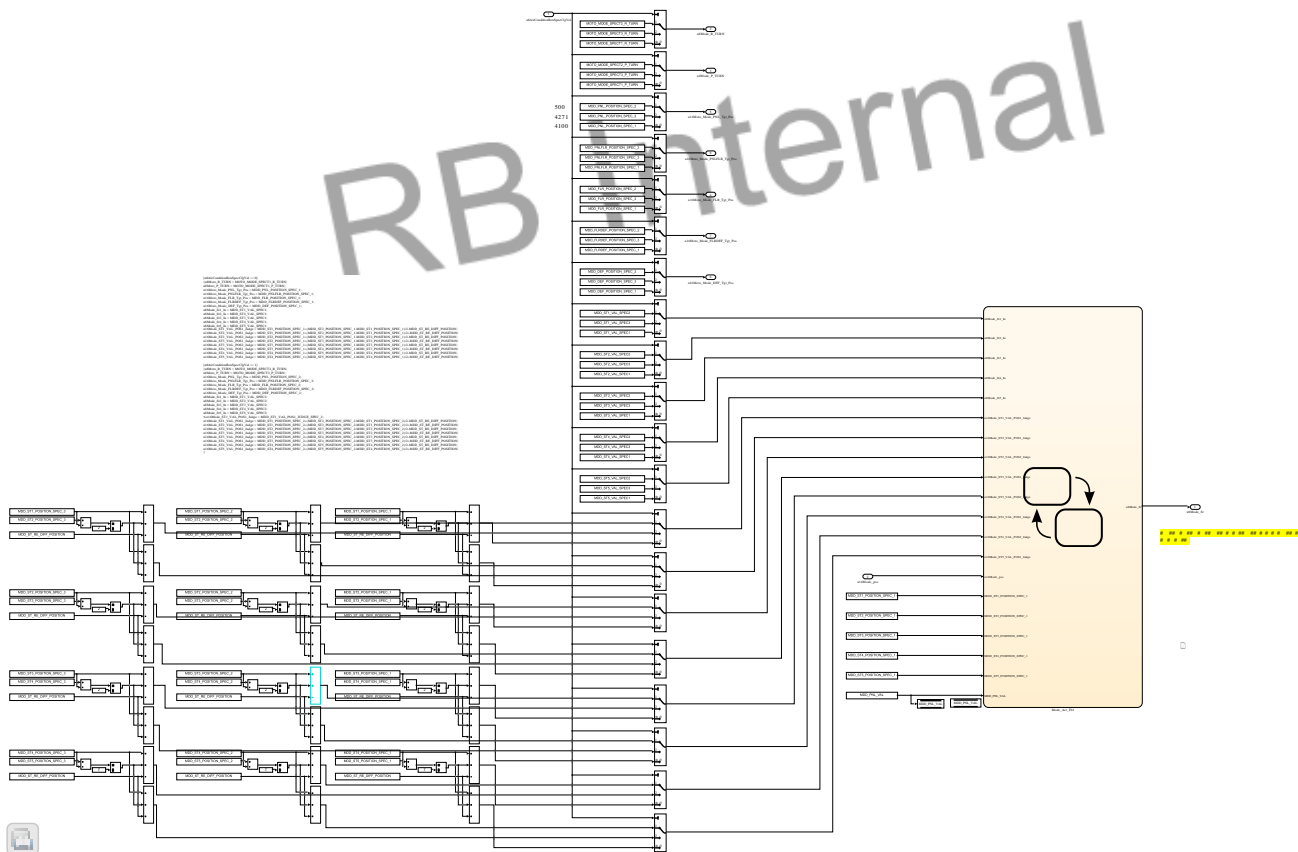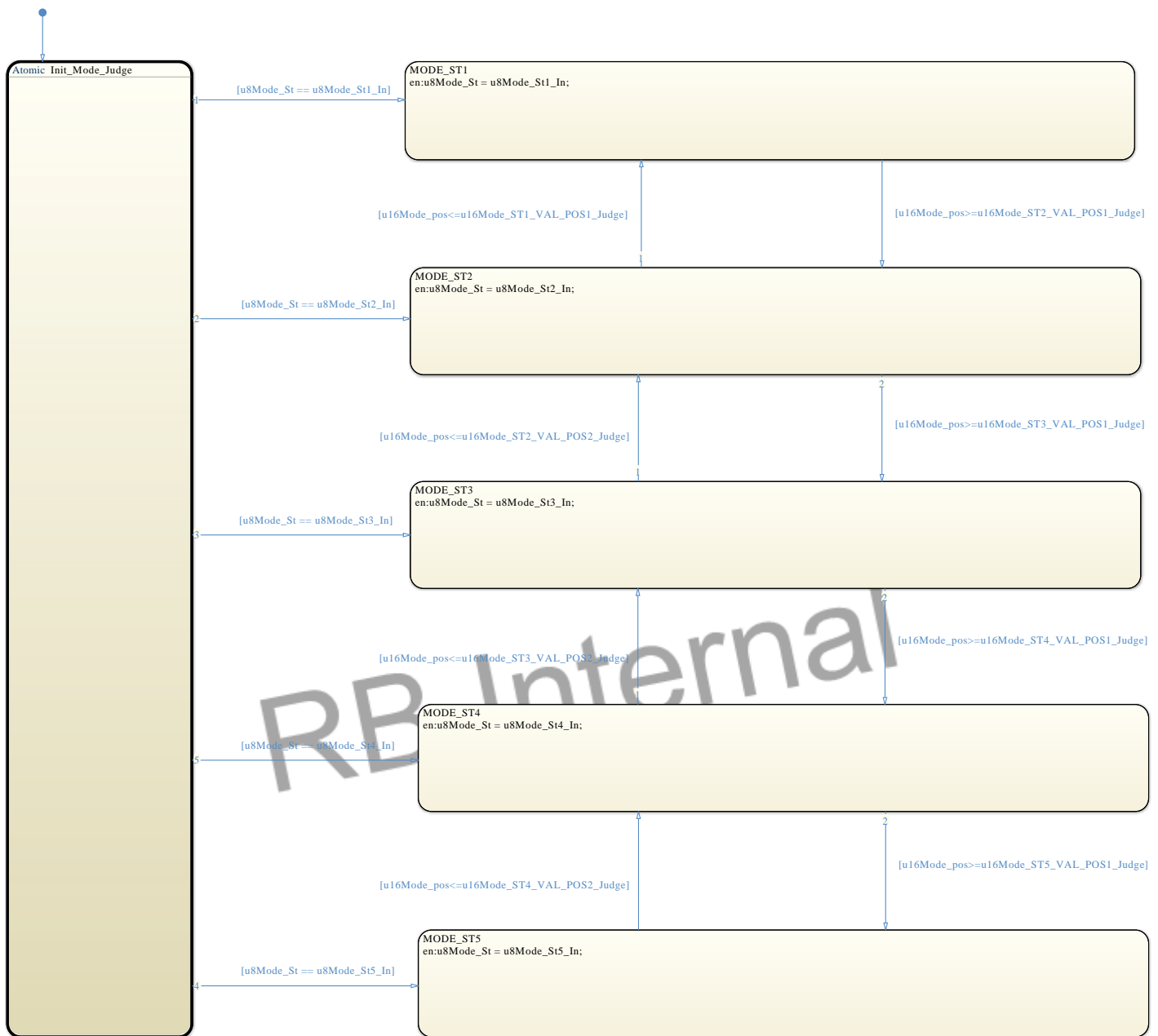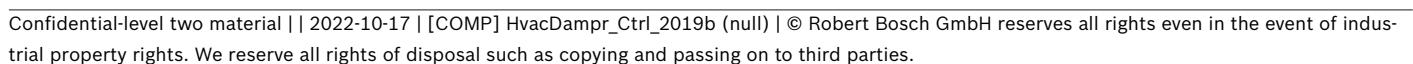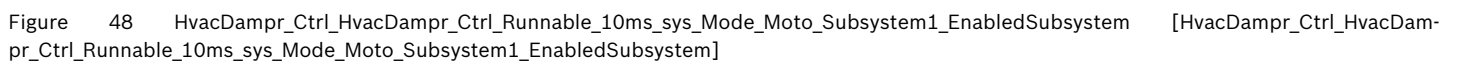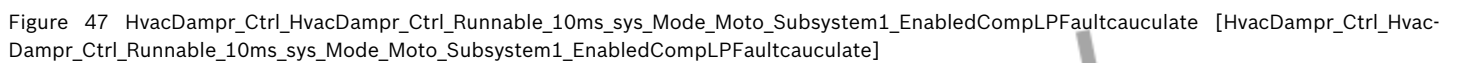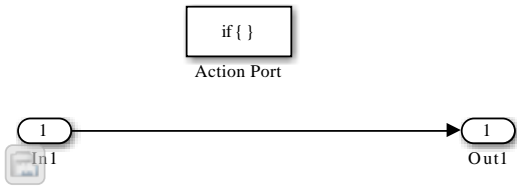
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Figure 52 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Mode_Moto_Subsystem2_DCMotorState]

Figure 53 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto]

Figure 54 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_CanSig_To_TempHmix_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_CanSig_To_TempHmix_Calculate]

Figure   55   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal]

Figure   56 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A02_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A02_TEMP_Pos_Action]

Figure 57 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A08_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A08_TEMP_Pos_Action]
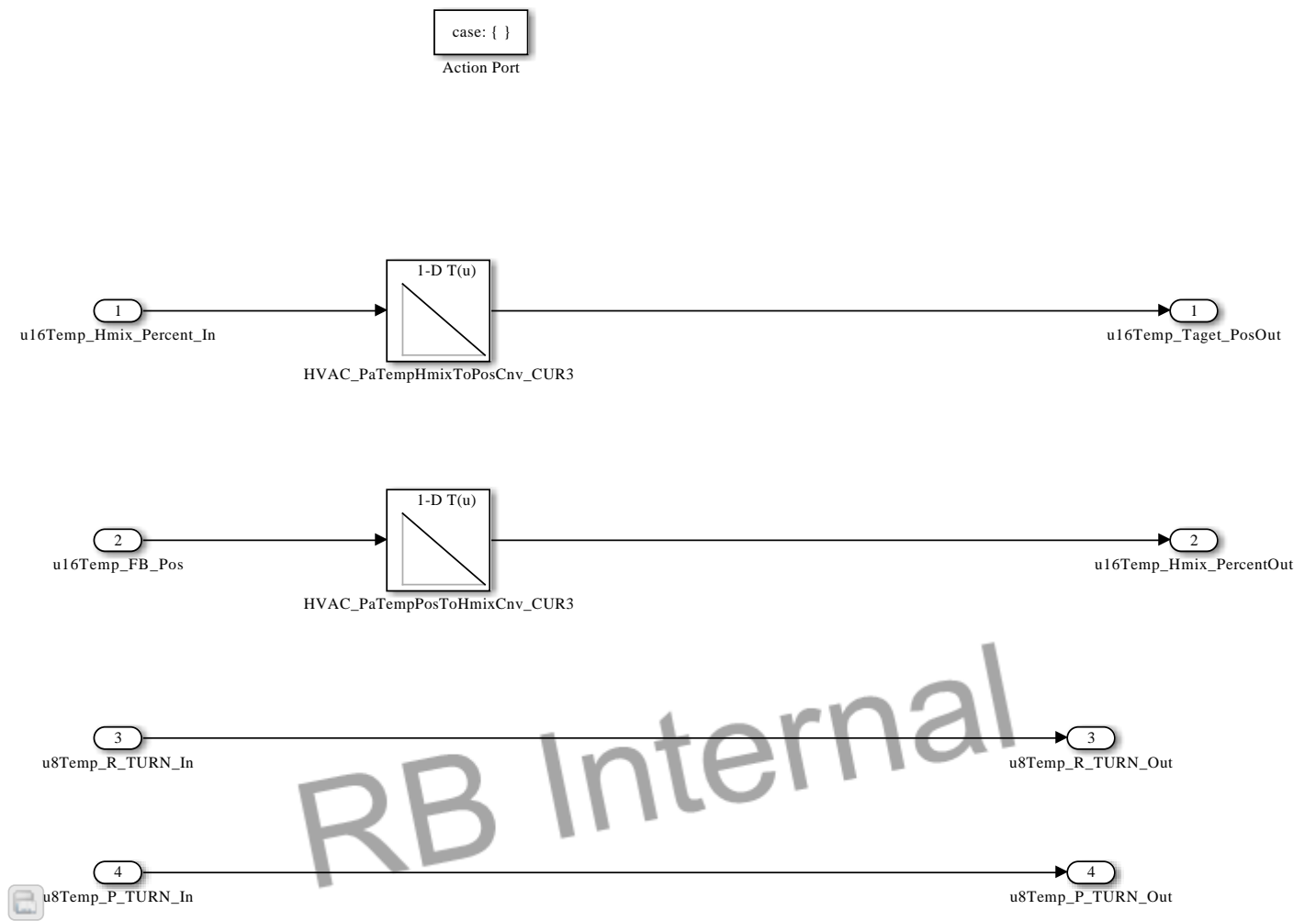
Figure 58 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A29_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_PA_TEMP_Hmix_To_PostionVal_A29_TEMP_Pos_Action]

Figure 59 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem]
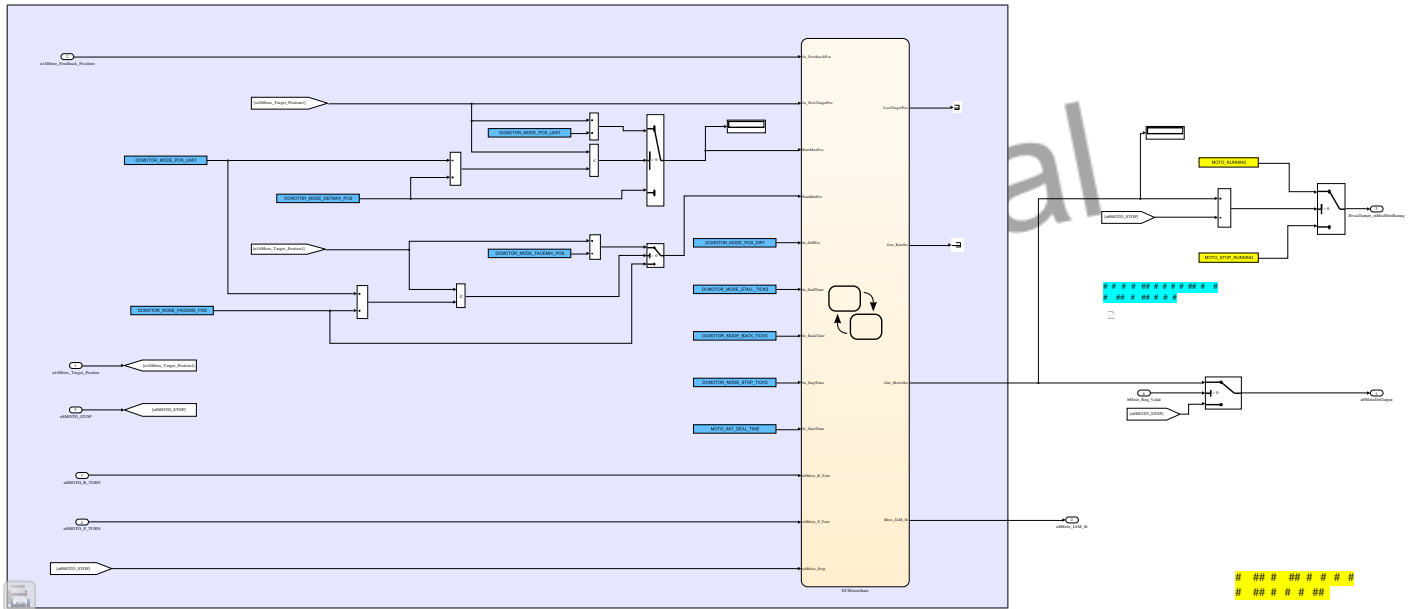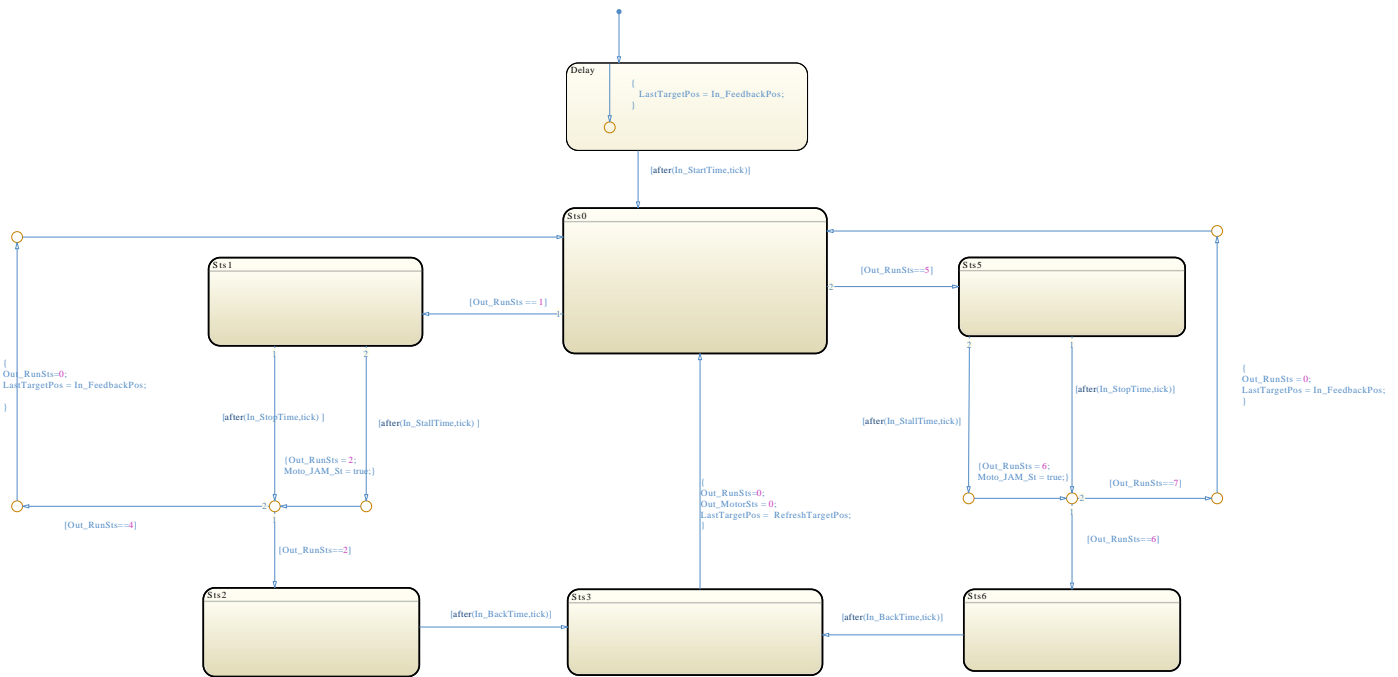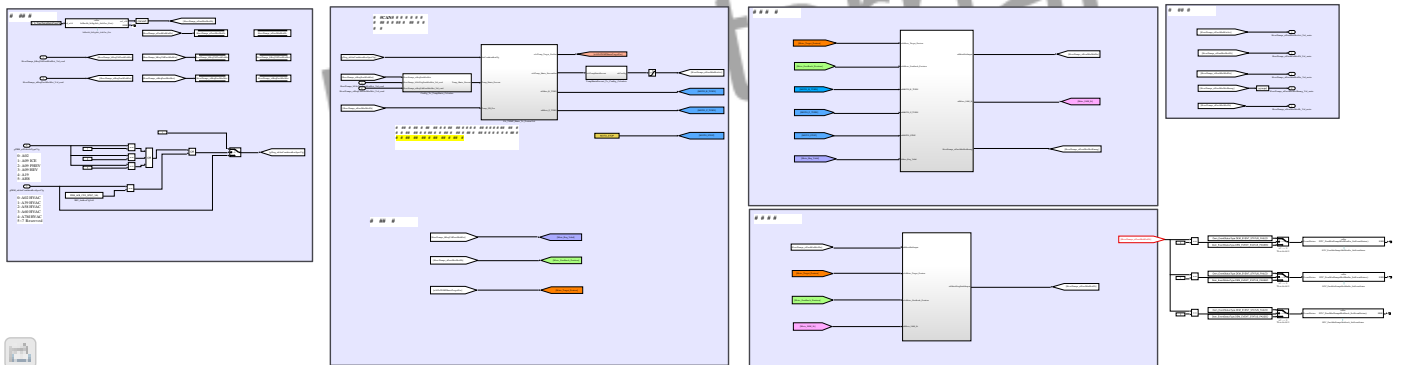
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Figure 60 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_Hvac-Dampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate]
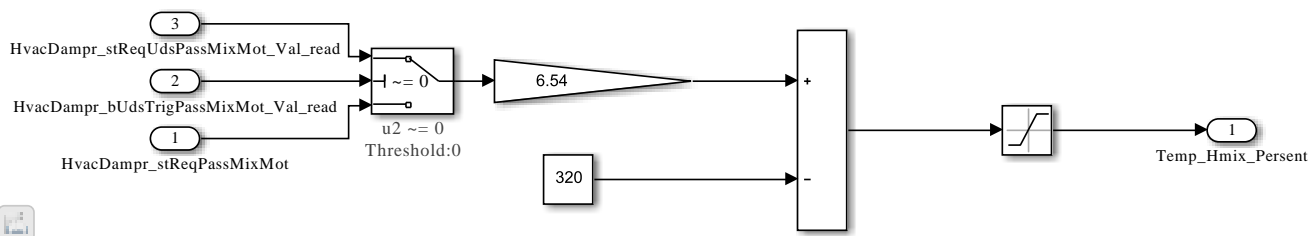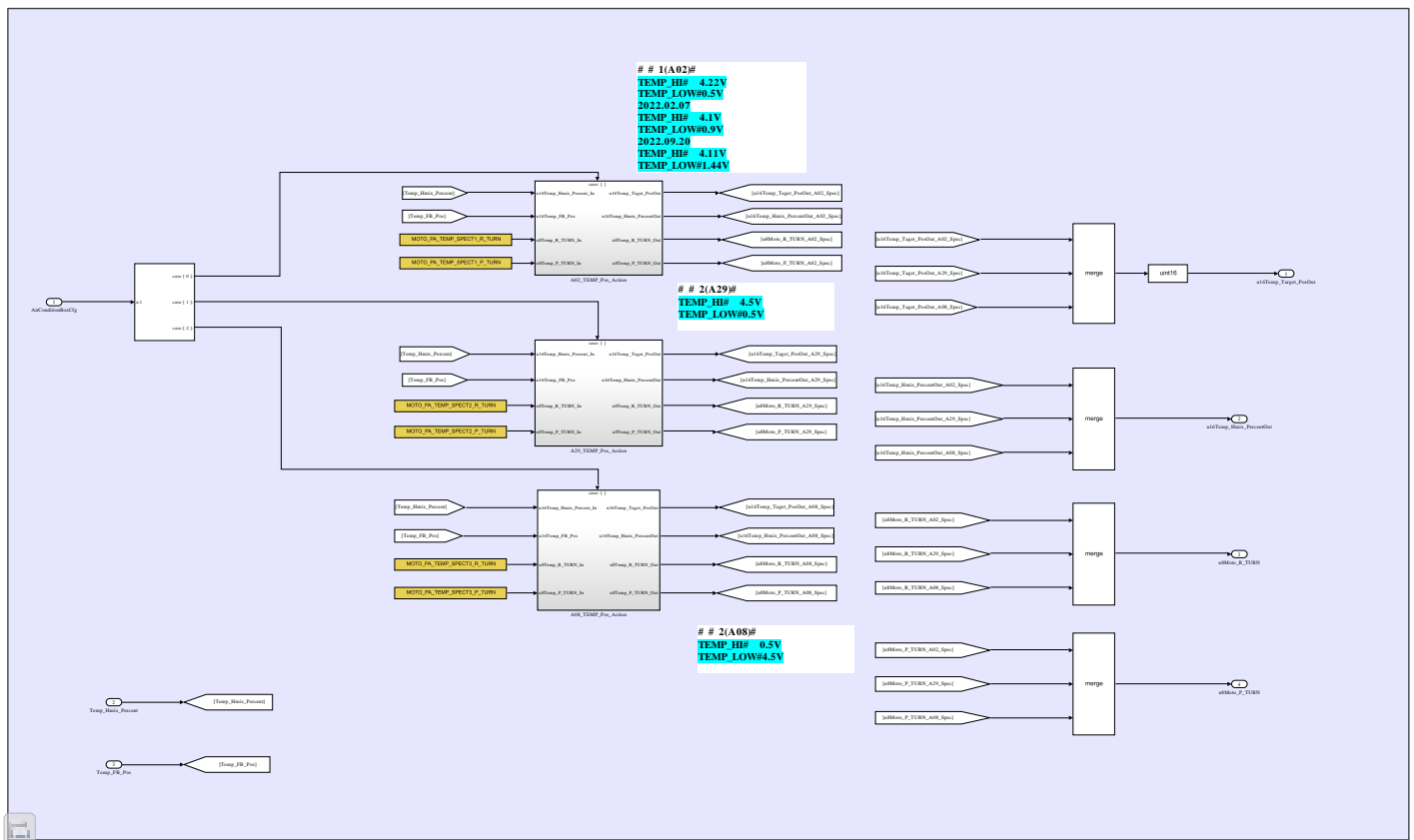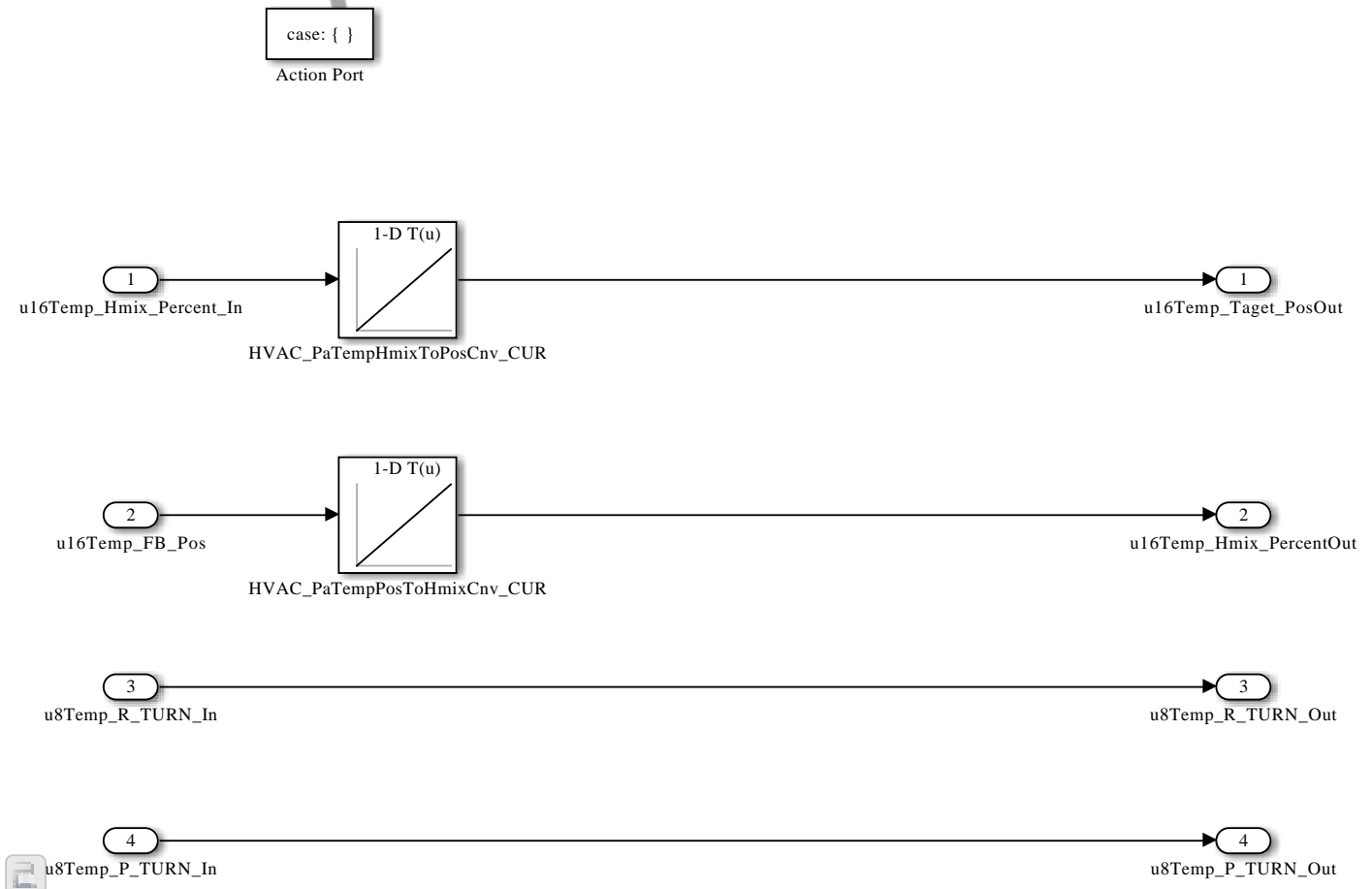

Figure   61   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledSubsystem   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledSubsystem]

Figure   62   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem]

Figure   63   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_IfActionSubsystem   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem_IfActionSubsystem]

Figure   64   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem2   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem2]

Figure 65 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_Subsystem2_DCMotorState]

Figure 66 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_TempHmixPercent_To_CanSig_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Pa_Temp_Moto_TempHmixPercent_To_CanSig_Calculate]

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Figure 67 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto]
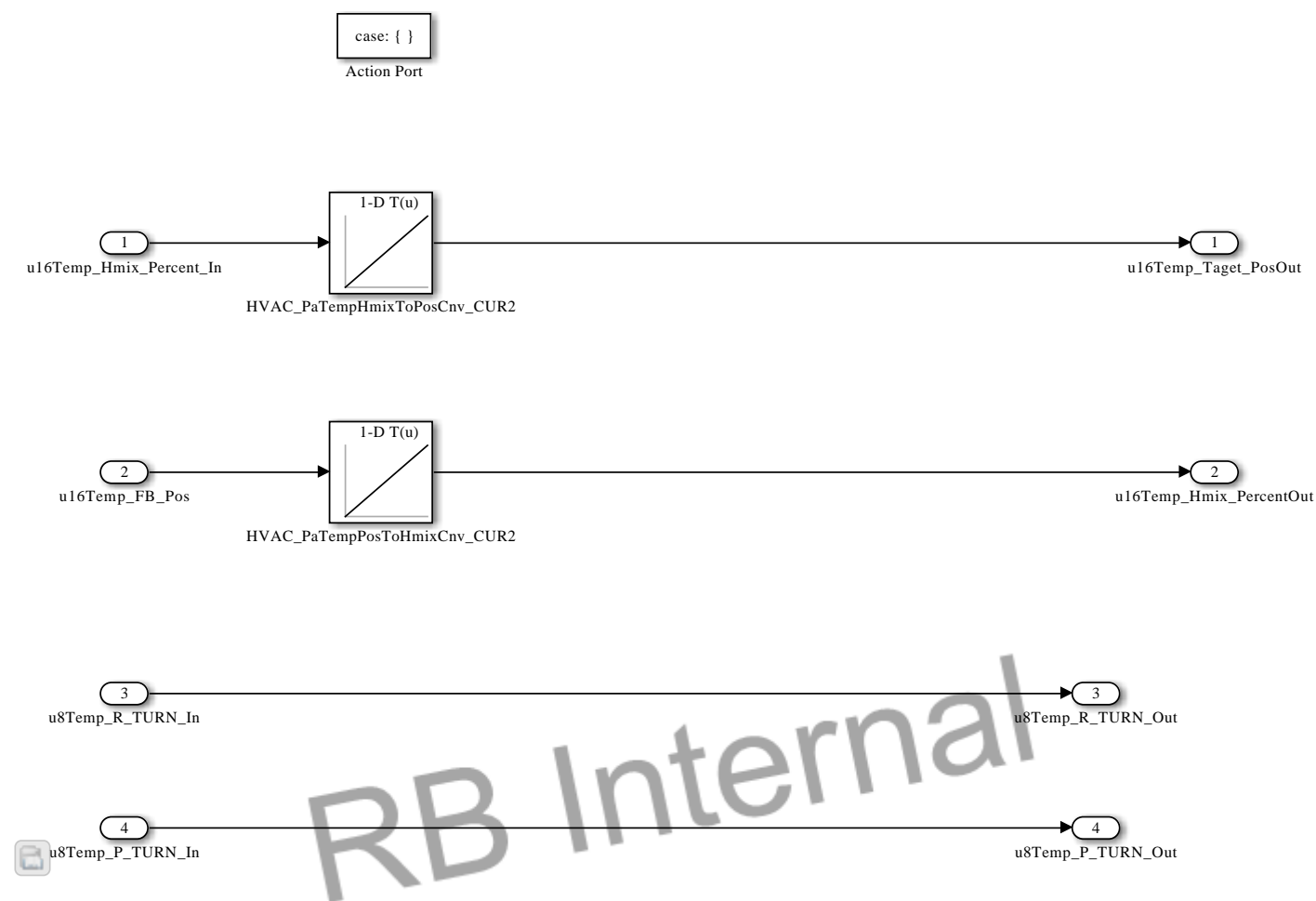

Figure 68 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem]
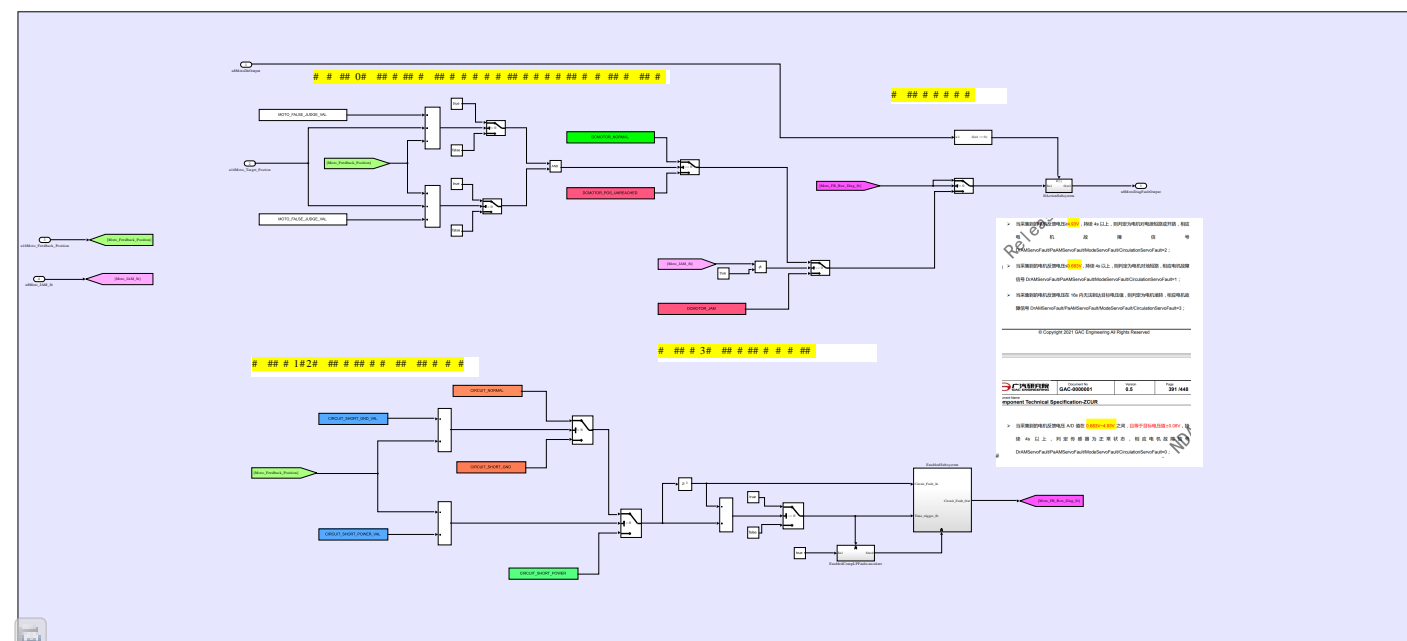
![BOSCH]

Figure   69   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem_Re_Mode_Act_Fb1   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem_Re_Mode_Act_Fb1]

Figure   70   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1]

Figure 71 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledCompLPFaultcauculate]
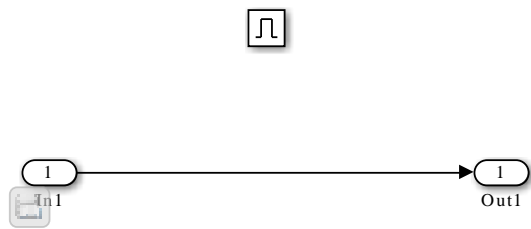

Figure   72   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledSubsystem   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledSubsystem]
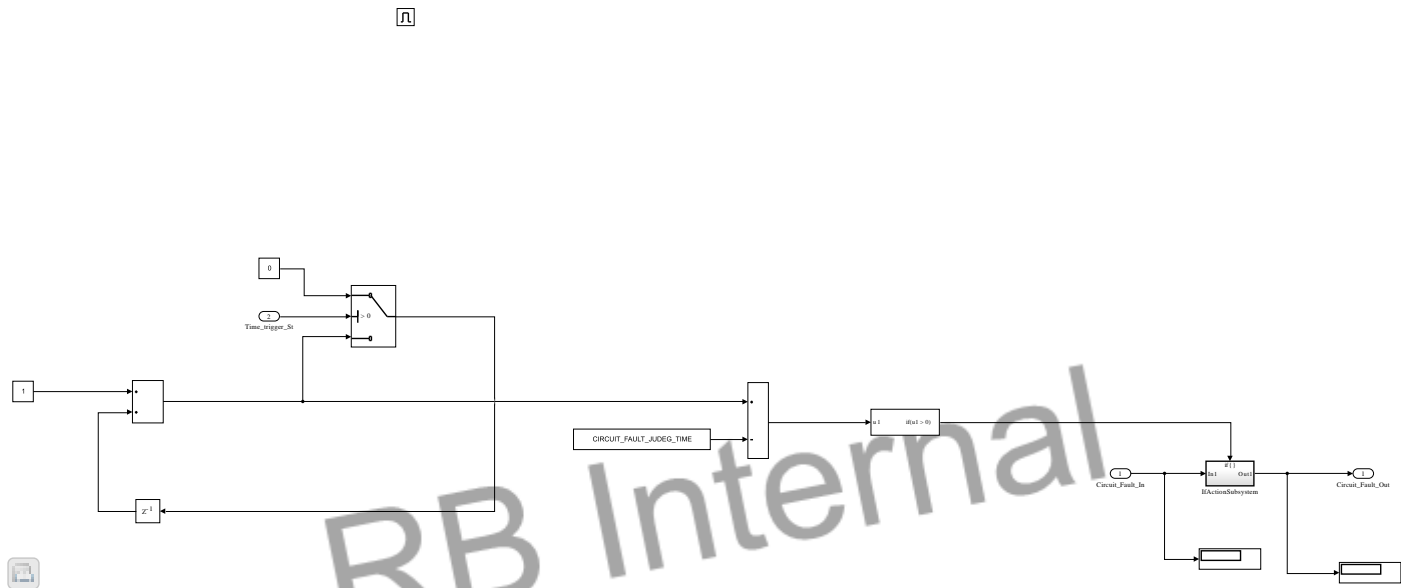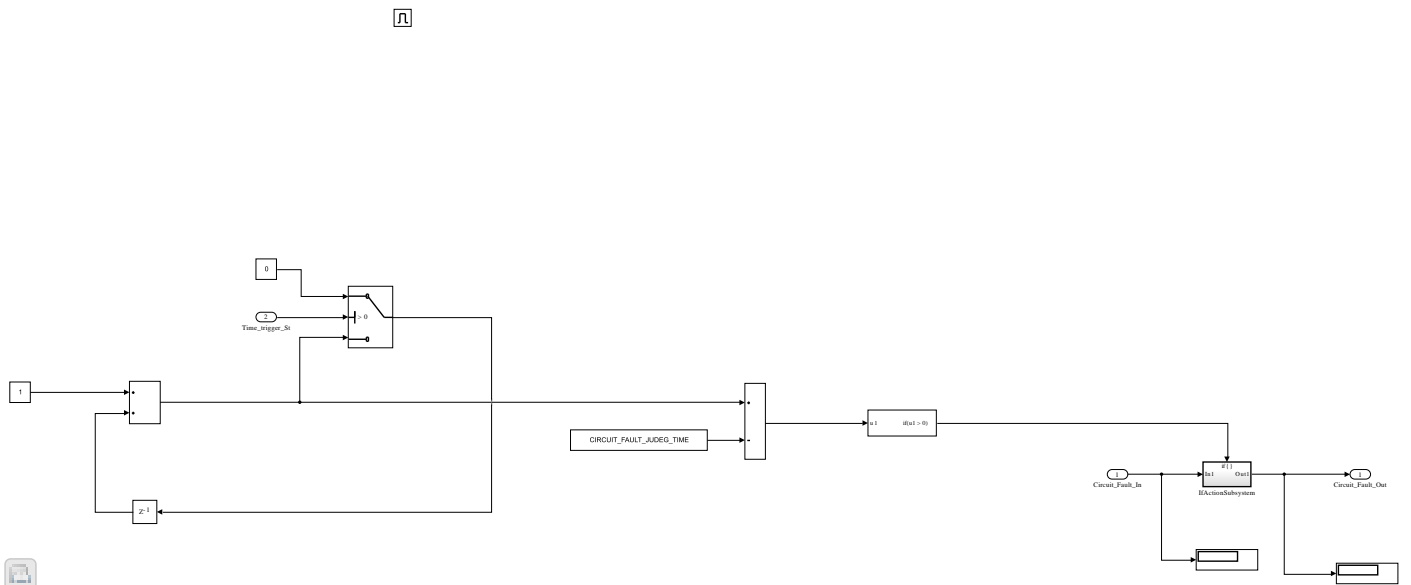
Figure 73 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledSubsystem_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_EnabledSubsystem_IfActionSubsystem]
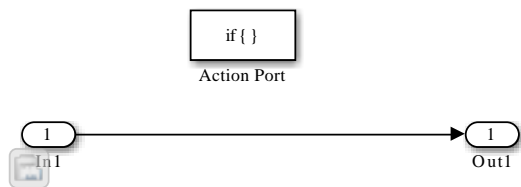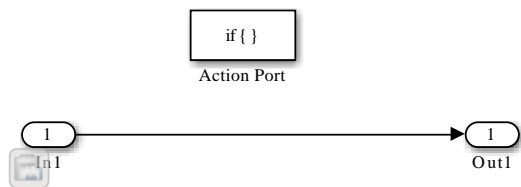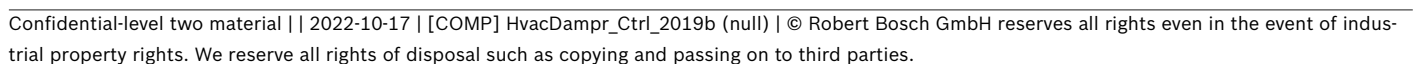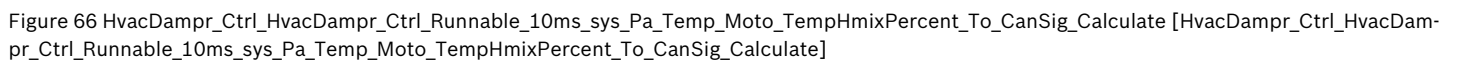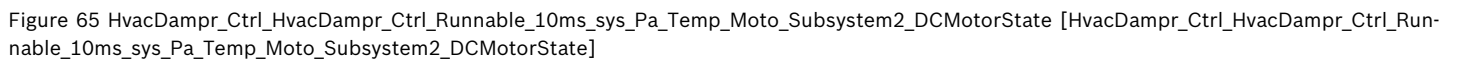

Figure 74 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_IfActionSubsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem1_IfActionSubsystem]

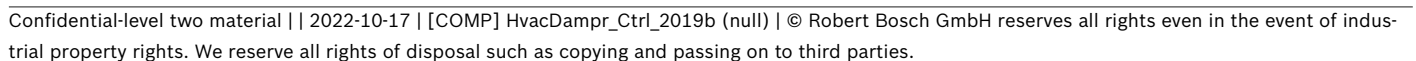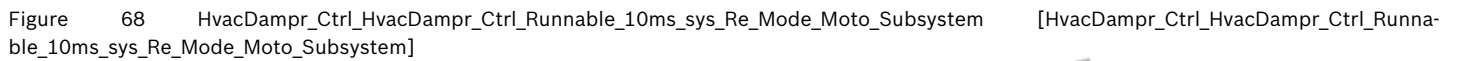

Figure 75 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem2 [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem2]

Figure 76 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Mode_Moto_Subsystem2_DCMotorState]
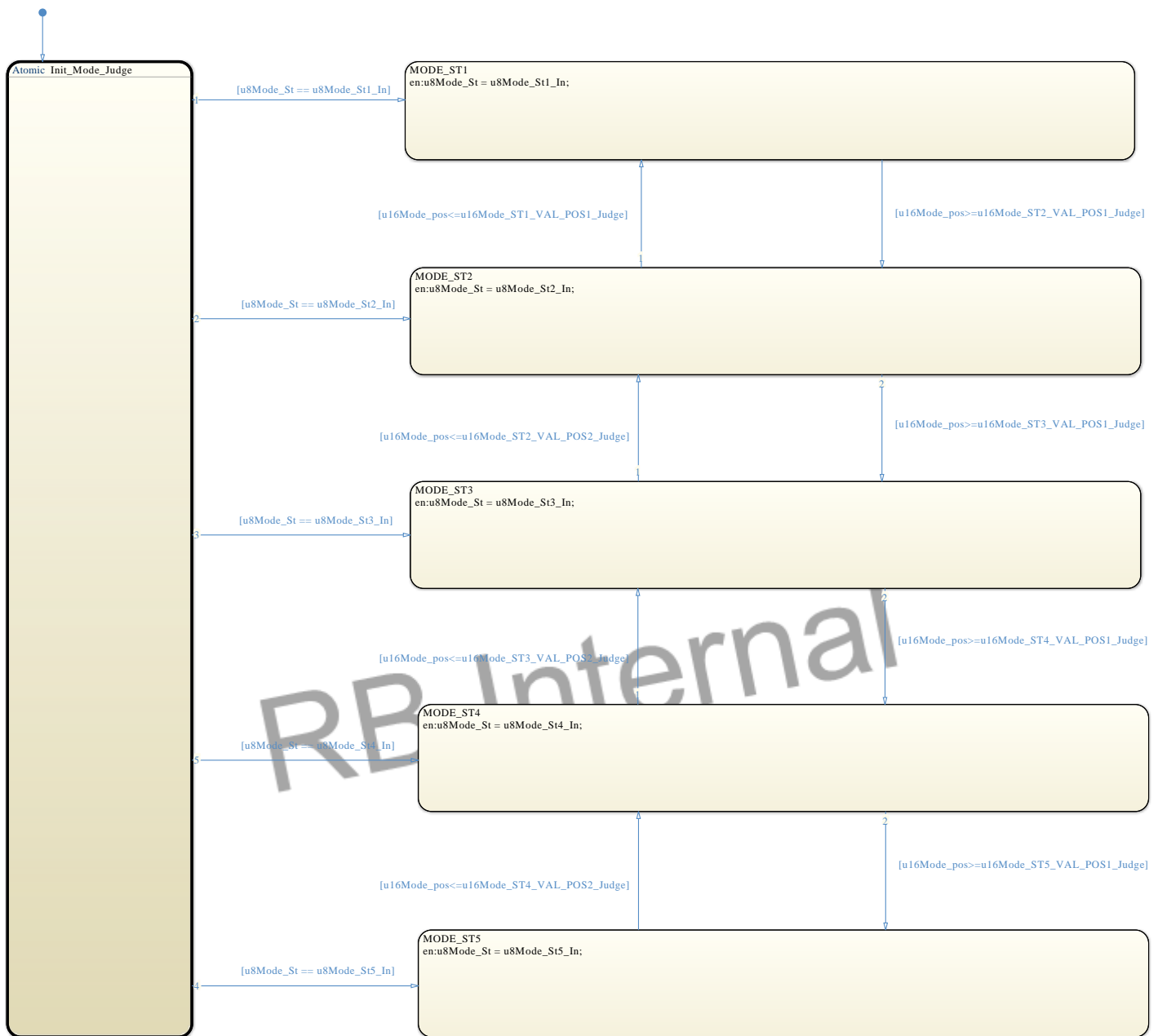

Figure 77 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto]

Figure 78 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_CanSig_To_TempHmix_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_CanSig_To_TempHmix_Calculate]

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Figure 79 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal]
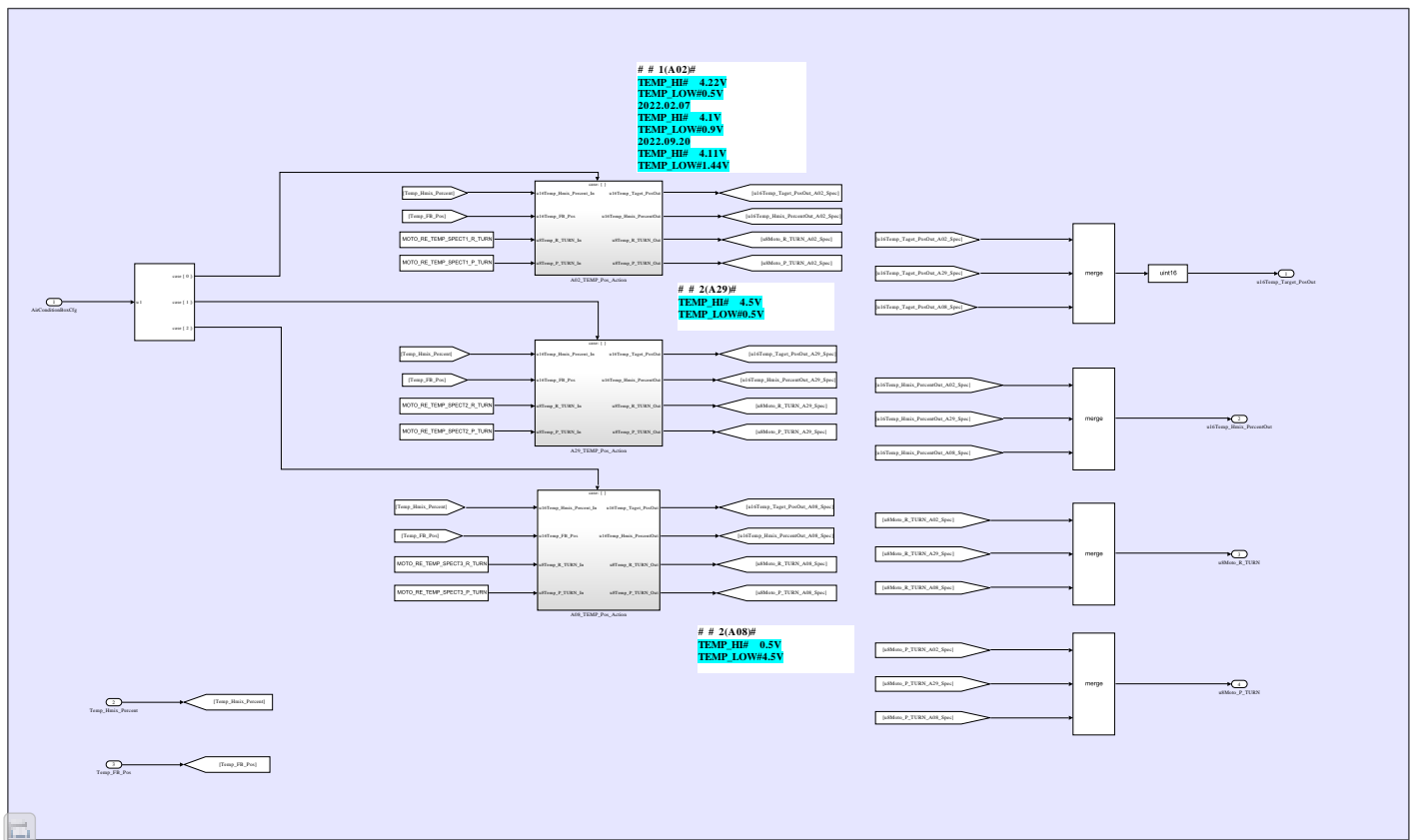
Figure 80 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A02_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A02_TEMP_Pos_Action]
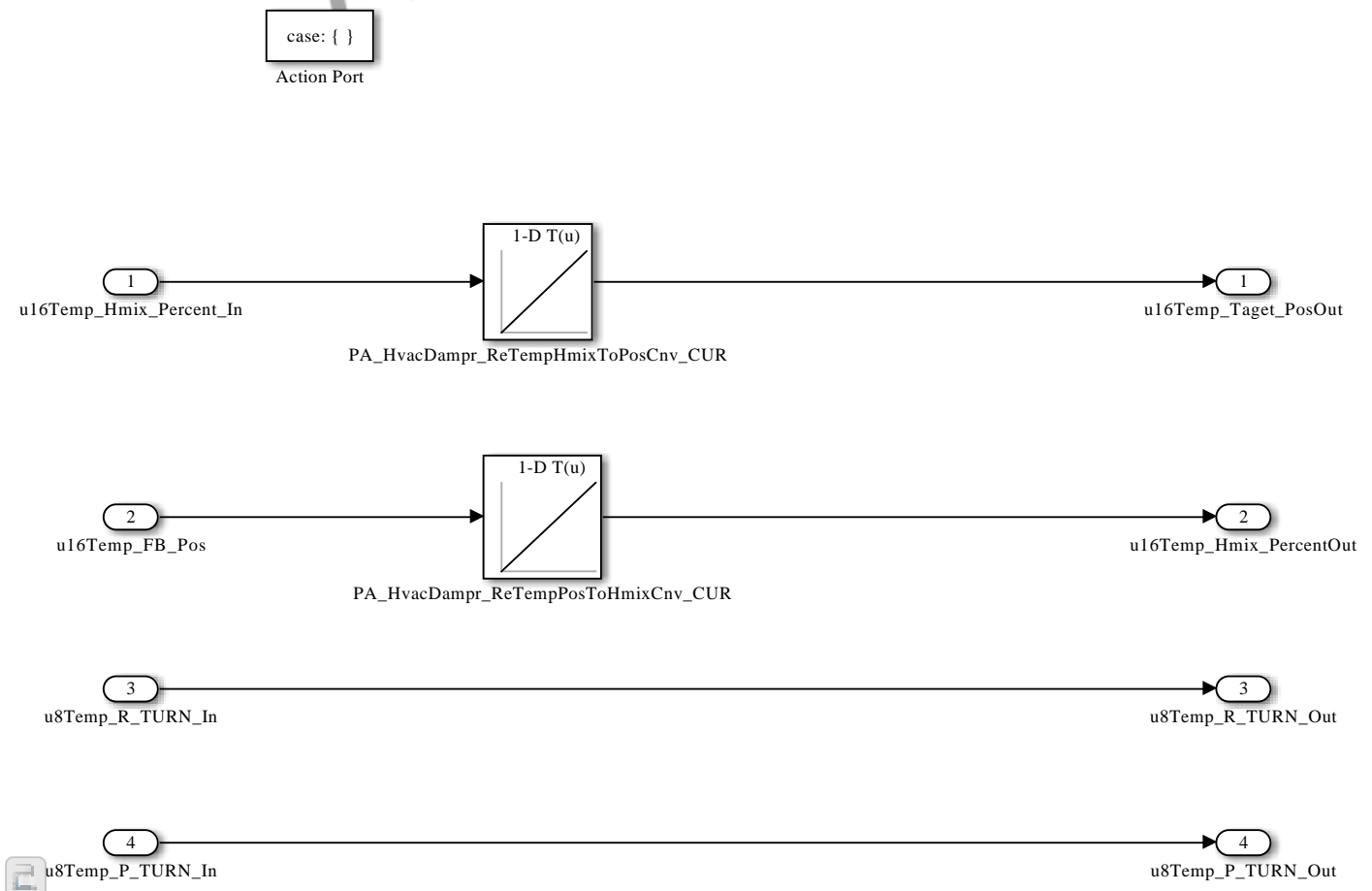
Figure 81 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A08_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A08_TEMP_Pos_Action]

case: { }

Action Port

1-D T(u)

1   u16Temp_Hmix_Percent_In

PA_HvacDampr_ReTempHmixToPosCnv3_CUR

1   u16Temp_Taget_PosOut

1-D T(u)

2   u16Temp_FB_Pos

PA_HvacDampr_ReTempPosToHmixCnv3_CUR

2   u16Temp_Hmix_PercentOut

3   u8Temp_R_TURN_In

3   u8Temp_R_TURN_Out

4   u8Temp_P_TURN_In

4   u8Temp_P_TURN_Out

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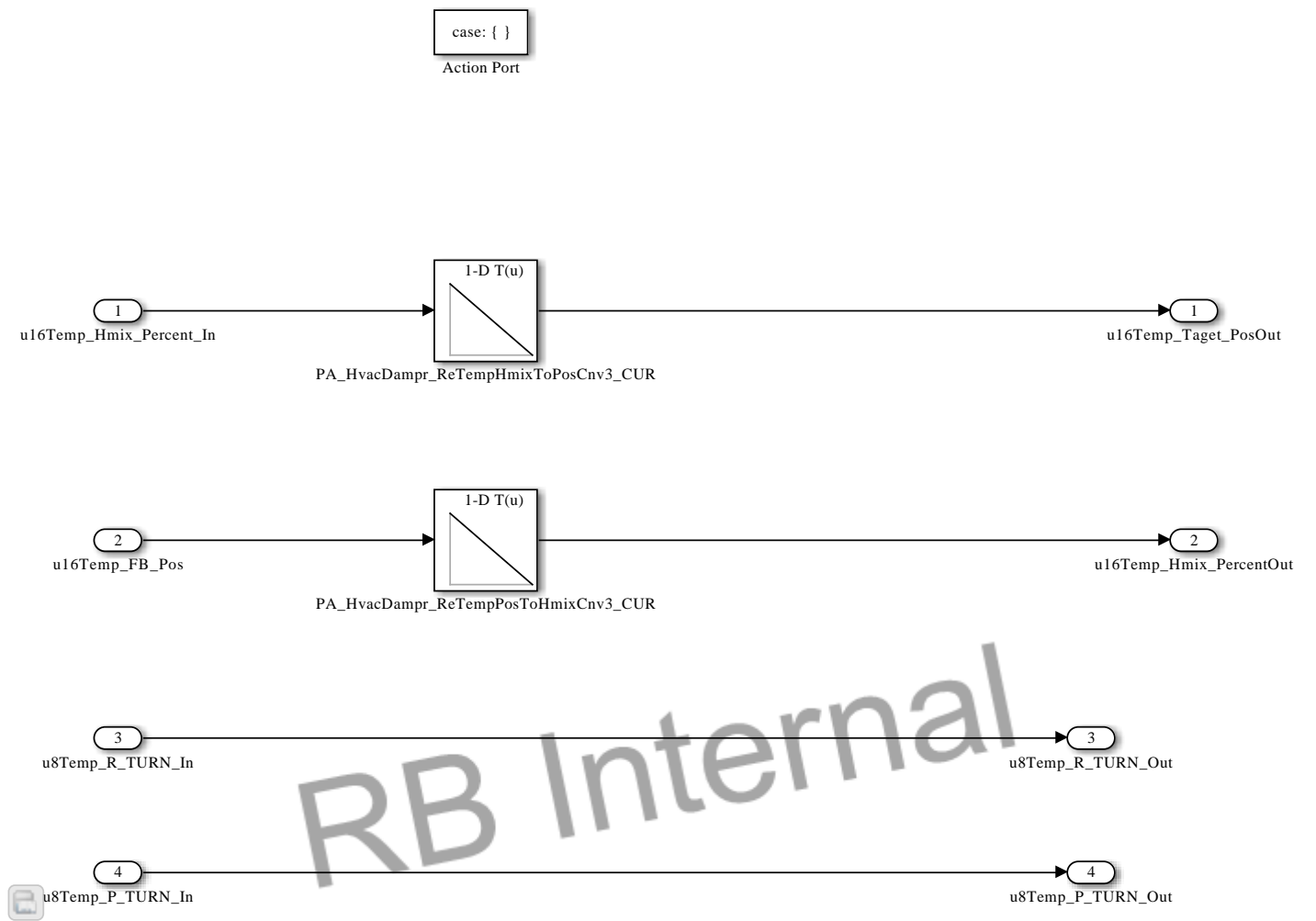
Figure 82 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A29_TEMP_Pos_Action [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_RE_TEMP_Hmix_To_PostionVal_A29_TEMP_Pos_Action]

Figure 83 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem]
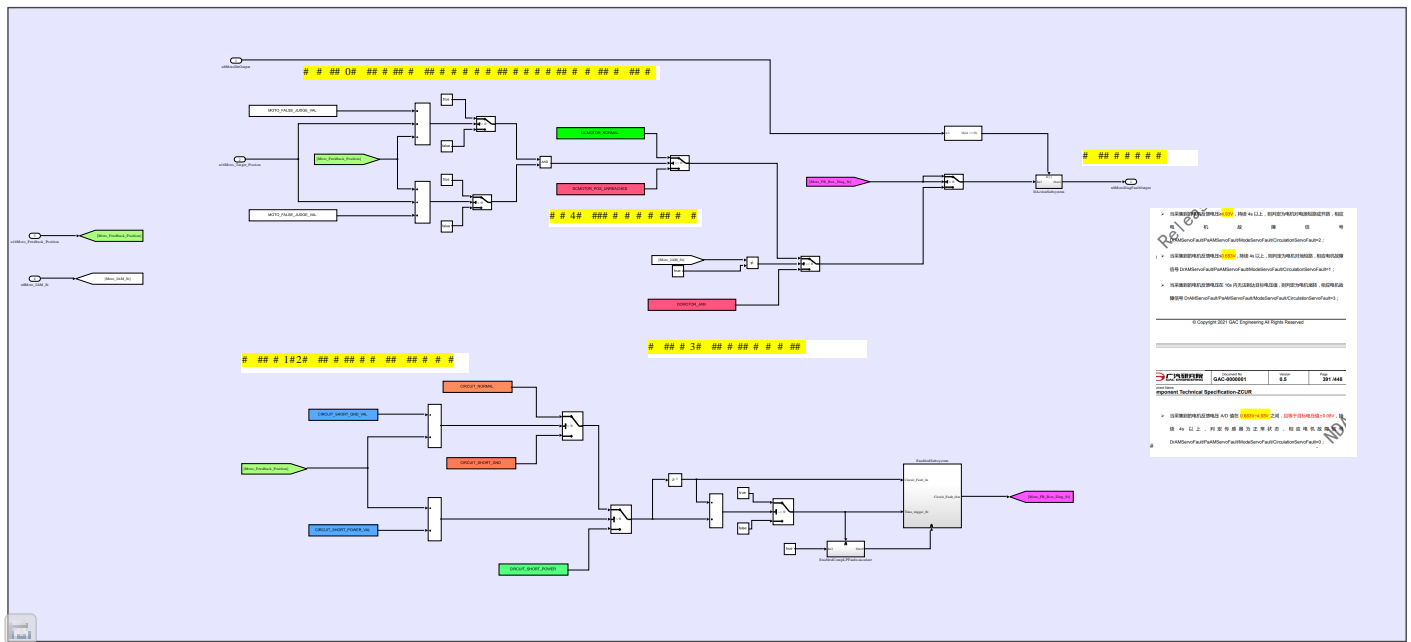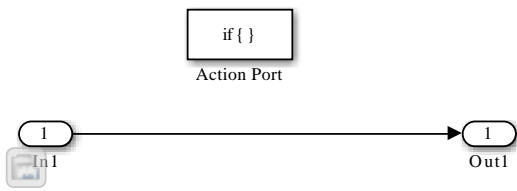
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Figure 84 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate [HvacDampr_Ctrl_Hvac-
Dampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledCompLPFaultcauculate]

Figure   85   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledSubsystem   [HvacDampr_Ctrl_HvacDam-
pr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledSubsystem]

Figure   86   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem   [HvacDam-
pr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_EnabledSubsystem_IfActionSubsystem]

Figure   87   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_IfActionSubsystem   [HvacDampr_Ctrl_HvacDam-
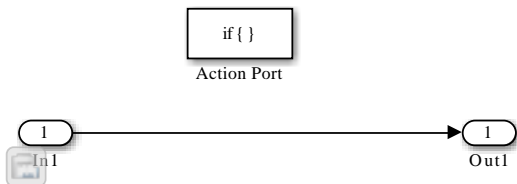pr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem_IfActionSubsystem]

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Figure   88   HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem2   [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem2]
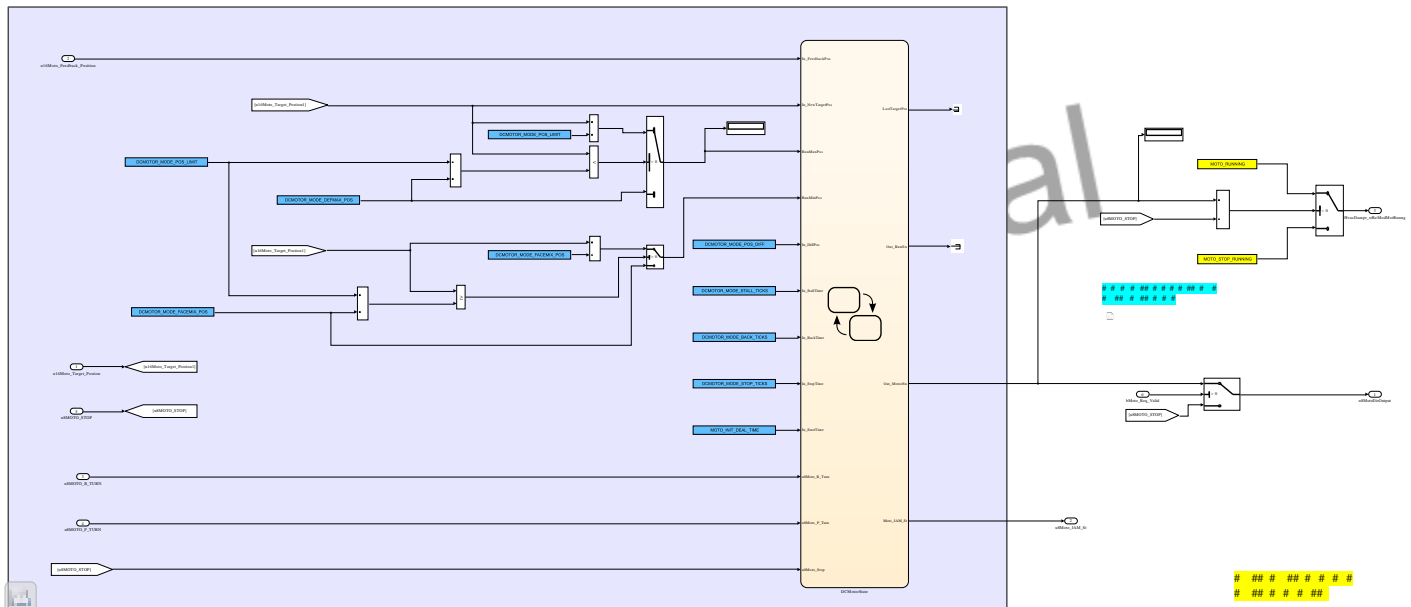

Figure 89 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem2_DCMotorState [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_Subsystem2_DCMotorState]
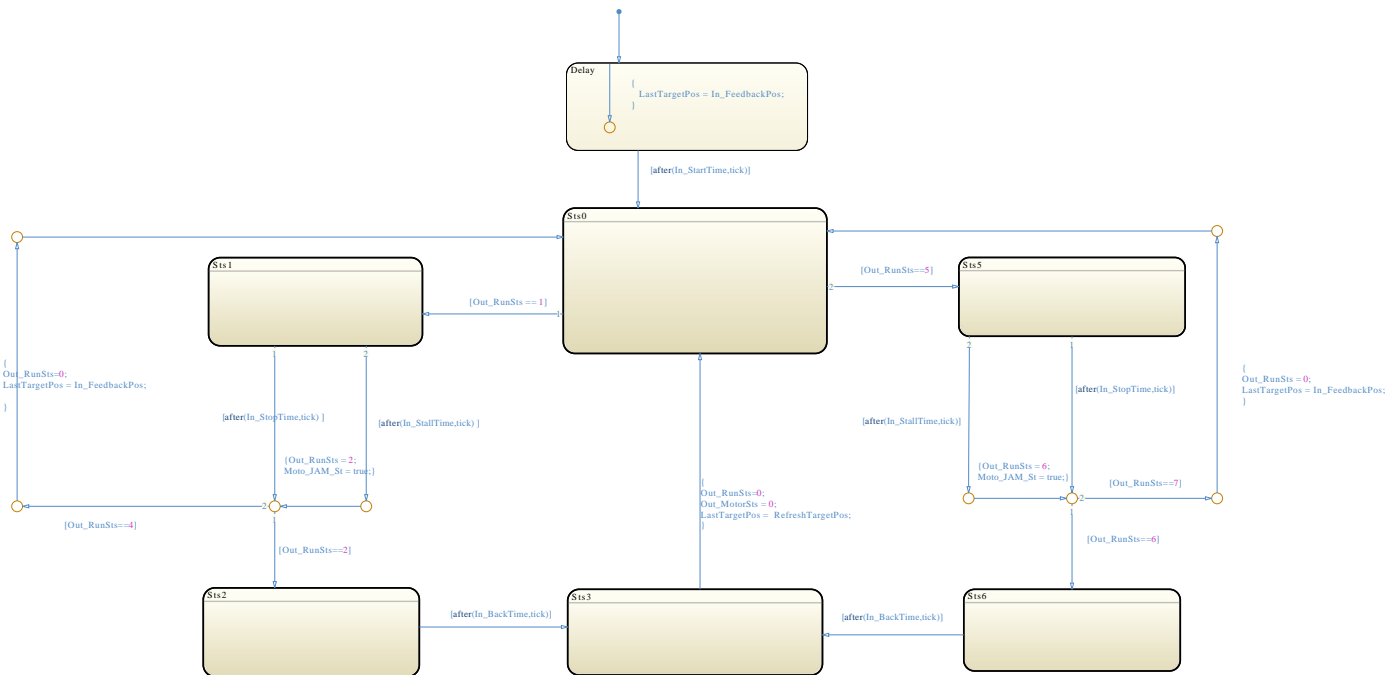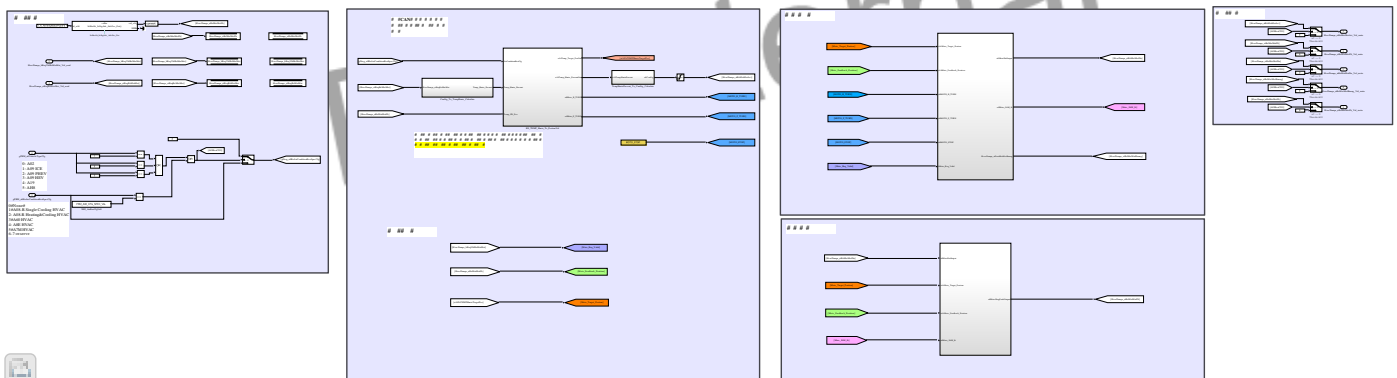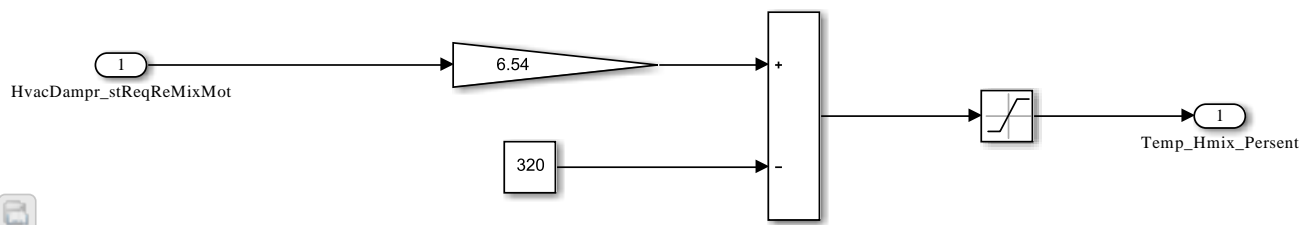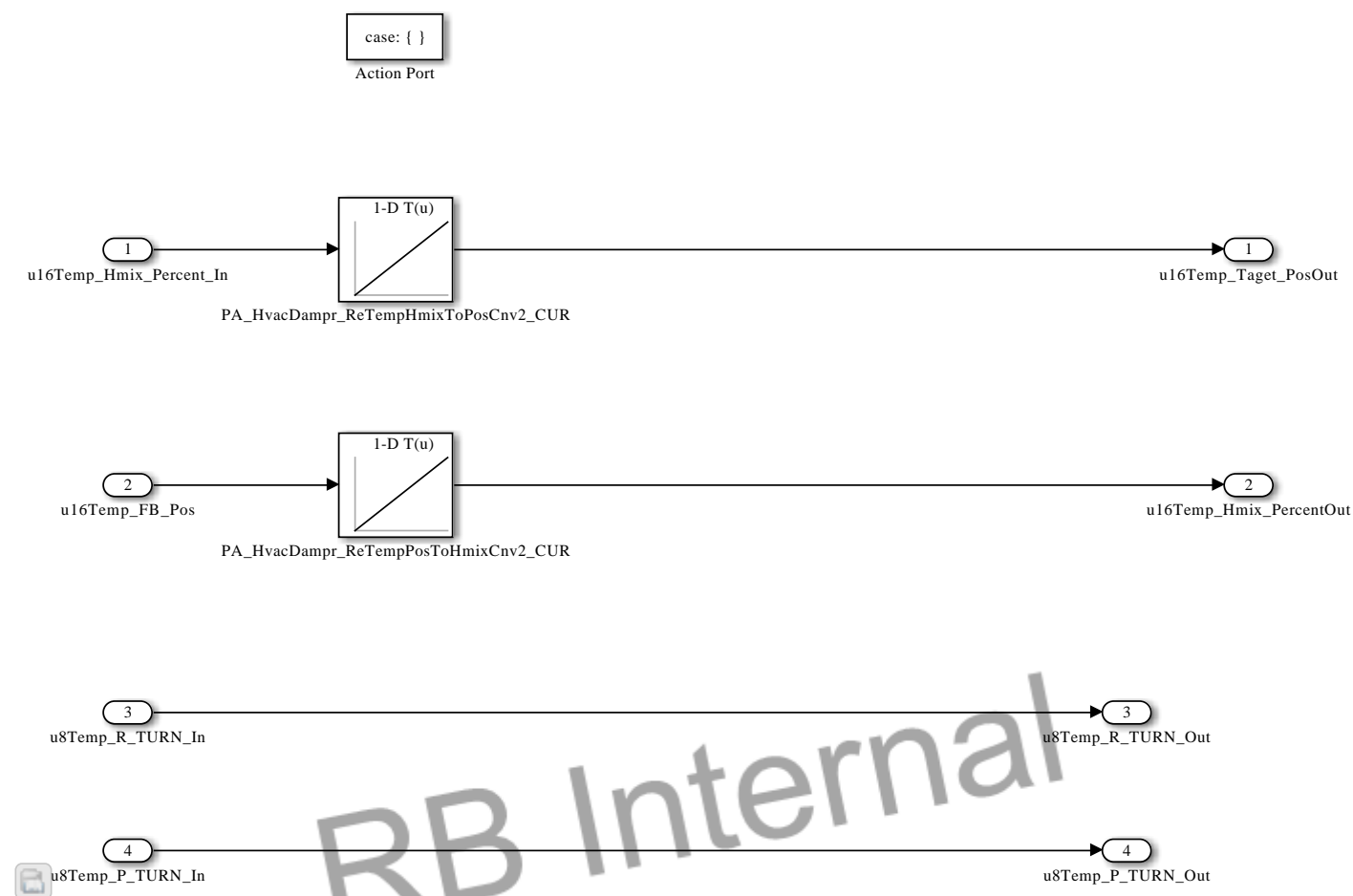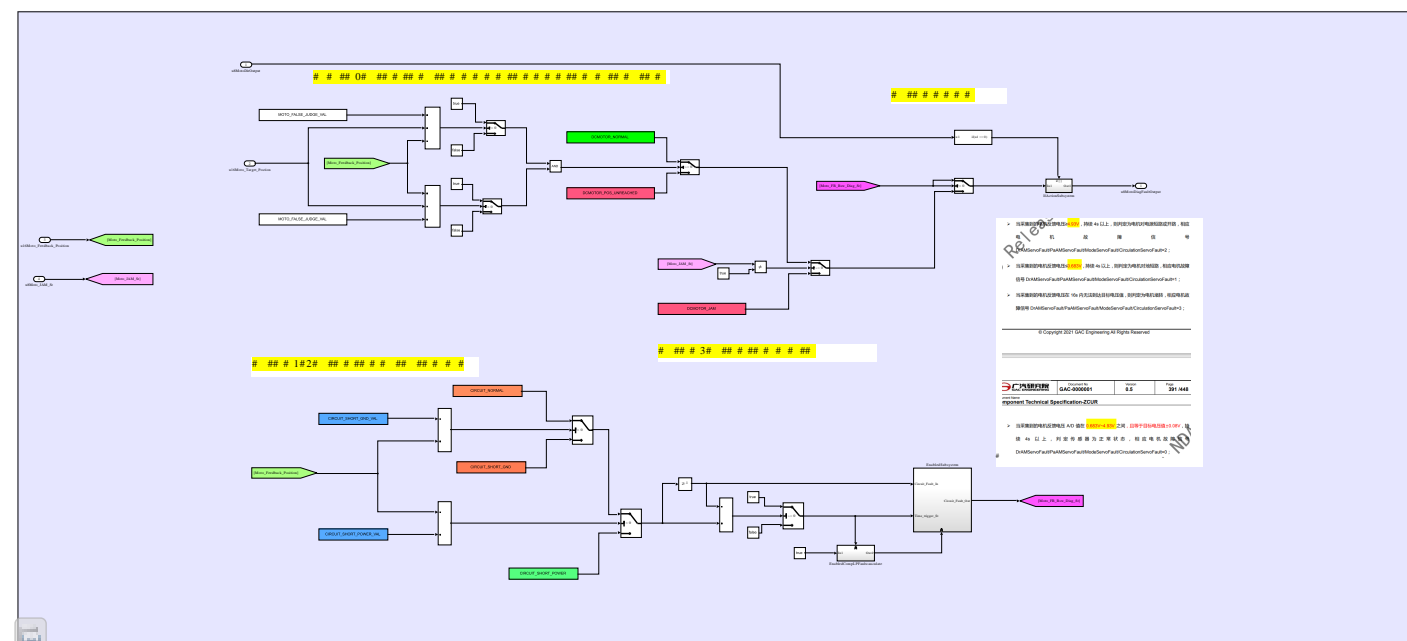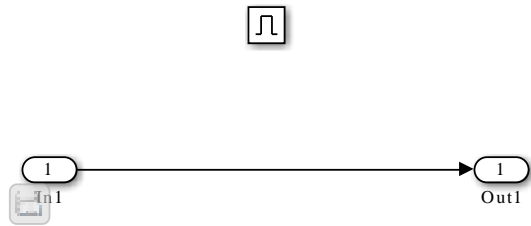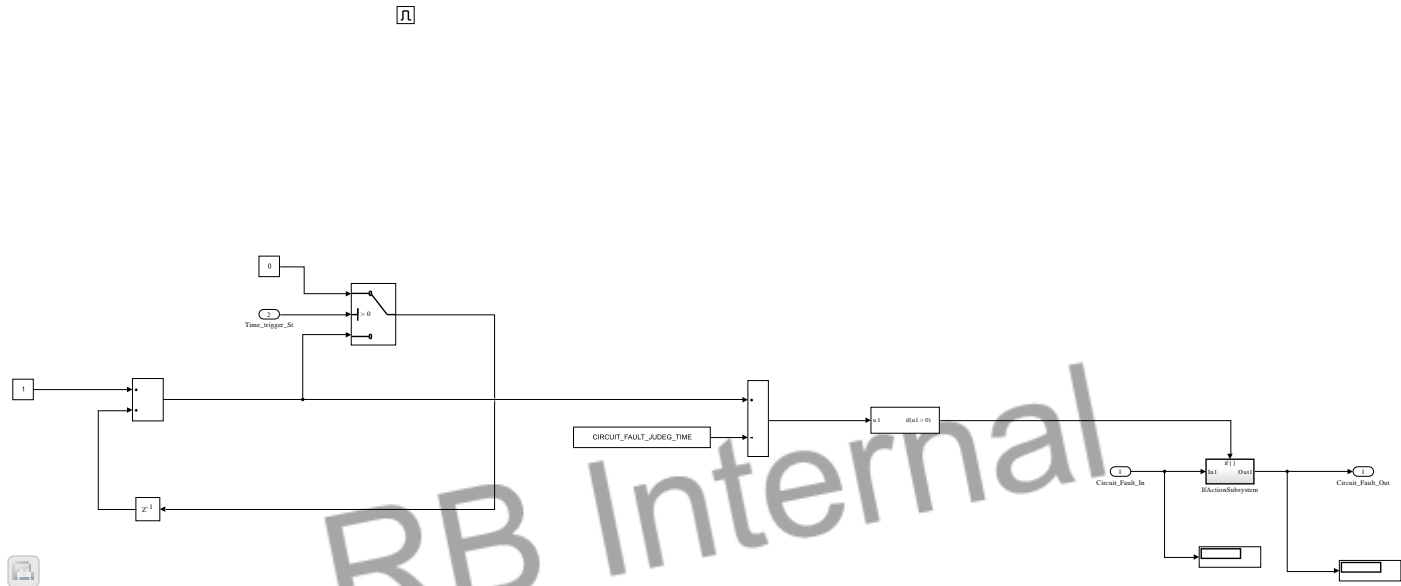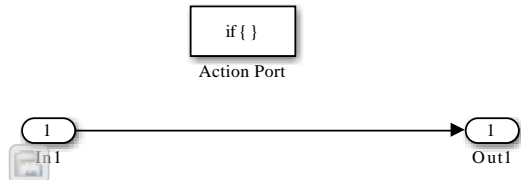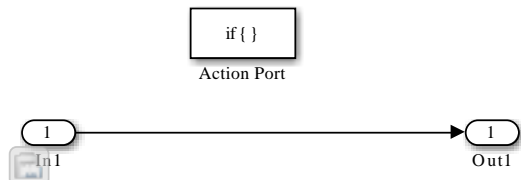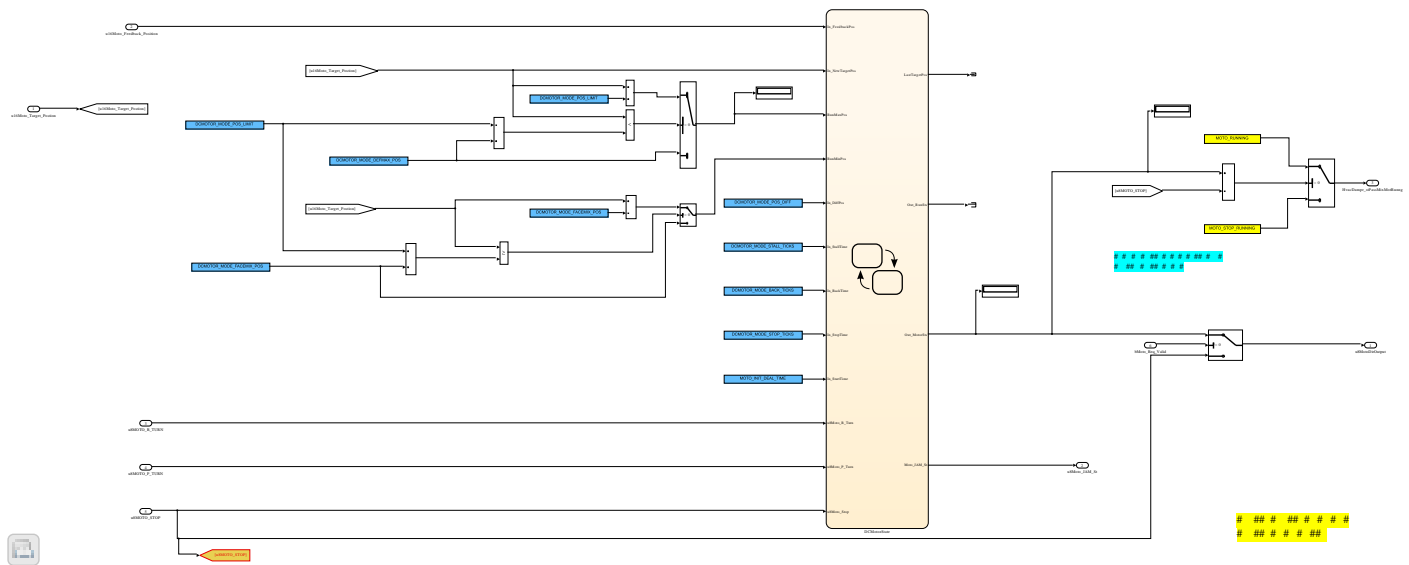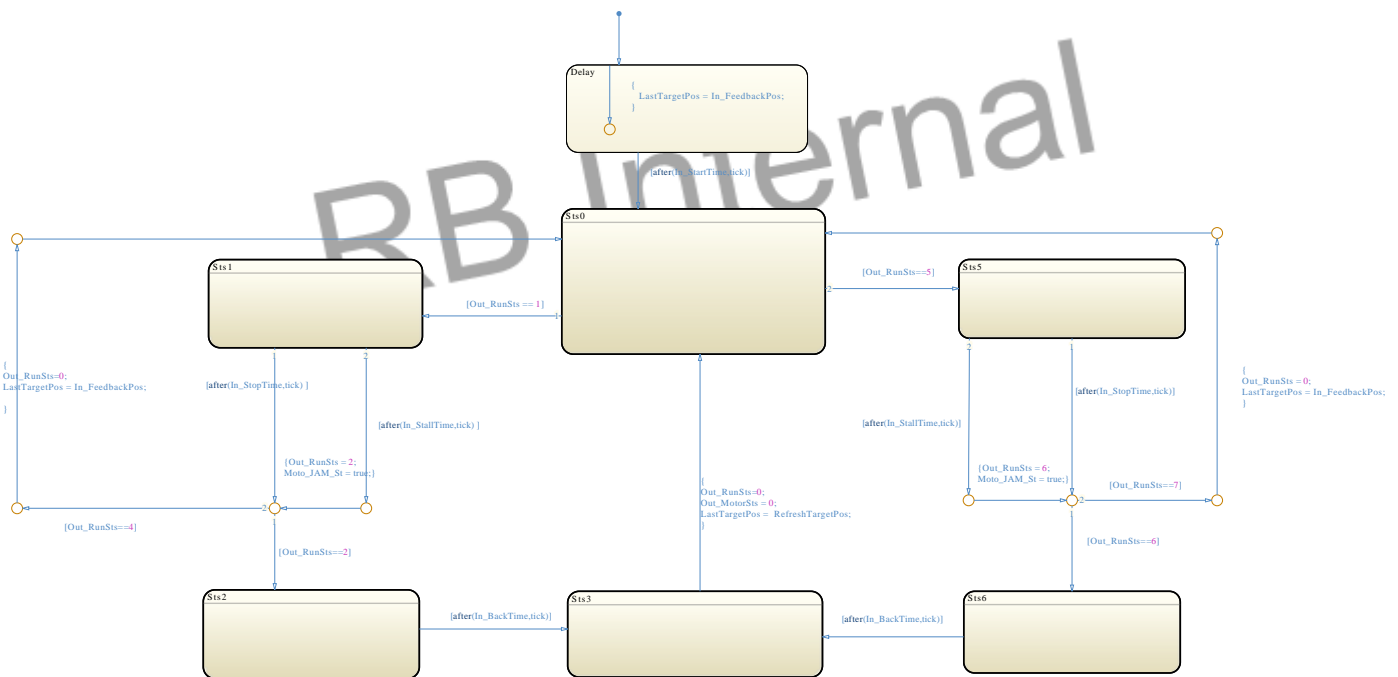

Figure 90 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_TempHmixPercent_To_CanSig_Calculate [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_10ms_sys_Re_Temp_Moto_TempHmixPercent_To_CanSig_Calculate]

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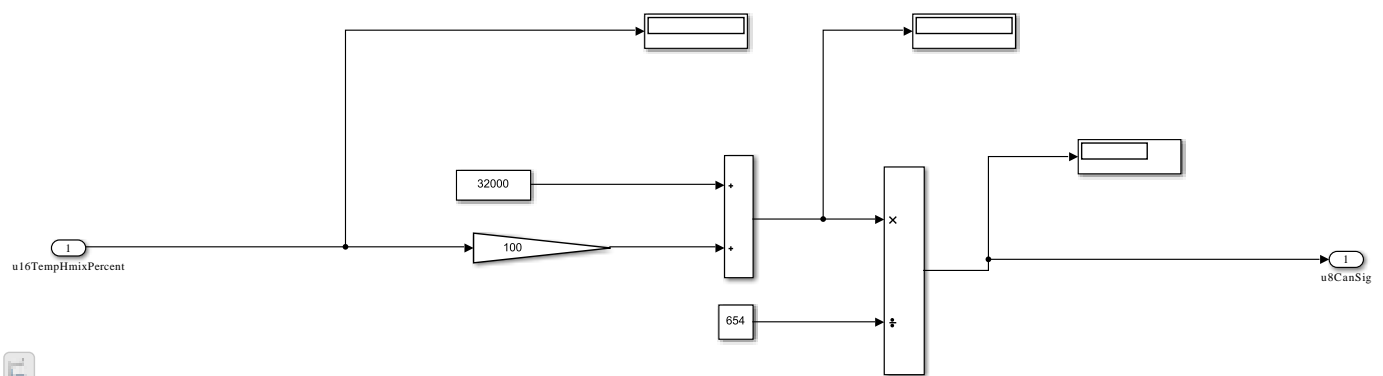
Figure 91 HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_Init [HvacDampr_Ctrl_HvacDampr_Ctrl_Runnable_Init]

Event Listener

Table 1 Data Types for port interfaces [PortInterfaceDataTypes]

Port	AccessMode	Interface	DE	Datatype
gCFG_u8ReHVACBoxTyp	ExplicitReceive	gCFG_u8ReHVACBoxTyp	Val	uint8
gPRM_bHotpumpCfg	ExplicitReceive	gPRM_bHotpumpCfg	Val	boolean
gPRM_u8AirConditionBoxS-pecCfg	ExplicitReceive	gPRM_u8AirConditionBoxS-pecCfg	Val	uint8
gPRM_u8ReAirCondition-BoxSpecCfg	ExplicitReceive	gPRM_u8ReAirCondition-BoxSpecCfg	Val	uint8
gPRM_u8VehicleTypeCfg	ExplicitReceive	gPRM_u8VehicleTypeCfg	Val	uint8
HvacDampr_bReqVldDrvr-MixMot	ExplicitReceive	HvacDampr_bReqVldDrvr-MixMot	Val	boolean
HvacDampr_bReqVldDrvrR-crltnMot	ExplicitReceive	HvacDampr_bReqVldDrvrR-crltnMot	Val	boolean
HvacDampr_bReqVldMot-Mot	ExplicitReceive	HvacDampr_bReqVldMot-Mot	Val	boolean
HvacDampr_bReqVldPass-MixMot	ExplicitReceive	HvacDampr_bReqVldPass-MixMot	Val	boolean
HvacDampr_bReqVldPassR-crltnMot	ExplicitReceive	HvacDampr_bReqVldPassR-crltnMot	Val	boolean
HvacDampr_bReqVldRcrltn-Mot	ExplicitReceive	HvacDampr_bReqVldRcrltn-Mot	Val	boolean
HvacDampr_bReqVldReMix-Mot	ExplicitReceive	HvacDampr_bReqVldReMix-Mot	Val	boolean
HvacDampr_bReqVldReMot-Mot	ExplicitReceive	HvacDampr_bReqVldReMot-Mot	Val	boolean
HvacDampr_bUdsTrigDrvrR-crltnMot	ExplicitReceive	HvacDampr_bUdsTrigDrvrR-crltnMot	Val	boolean
HvacDampr_bUdsTrigMod-Mot	ExplicitReceive	HvacDampr_bUdsTrigMod-Mot	Val	boolean
HvacDampr_bUdsTrigPass-MixMot	ExplicitReceive	HvacDampr_bUdsTrigPass-MixMot	Val	boolean
HvacDampr_bUdsTrigPassR-crltnMot	ExplicitReceive	HvacDampr_bUdsTrigPassR-crltnMot	Val	boolean
HvacDampr_bUdsTrigPsgr-MixMot	ExplicitReceive	HvacDampr_bUdsTrigPsgr-MixMot	Val	boolean
HvacDampr_bUdsTrigRcrltn-Mot	ExplicitReceive	HvacDampr_bUdsTrigRcrltn-Mot	Val	boolean
HvacDampr_stReqDrvrMix-Mot	ExplicitReceive	HvacDampr_stReqDrvrMix-Mot	Val	uint8
HvacDampr_stReqDrvrR-crltnMot	ExplicitReceive	HvacDampr_stReqDrvrR-crltnMot	Val	uint8
HvacDampr_stReqMotMot	ExplicitReceive	HvacDampr_stReqMotMot	Val	uint8
HvacDampr_stReqPassMix-Mot	ExplicitReceive	HvacDampr_stReqPassMix-Mot	Val	uint8
HvacDampr_stReqPassR-crltnMot	ExplicitReceive	HvacDampr_stReqPassR-crltnMot	Val	uint8
HvacDampr_stReqRcrltnMot	ExplicitReceive	HvacDampr_stReqRcrltnMot	Val	uint8
HvacDampr_stReqReMixMot	ExplicitReceive	HvacDampr_stReqReMixMot	Val	uint8
HvacDampr_stReqReMot-Mot	ExplicitReceive	HvacDampr_stReqReMot-Mot	Val	uint8
HvacDampr_stReqUdsDrvrR-crltnMot	ExplicitReceive	HvacDampr_stReqUdsDrvrR-crltnMot	Val	uint8

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Port	AccessMode	Interface	DE	Datatype
HvacDampr_stReqUdsMod-Mot	ExplicitReceive	HvacDampr_stReqUdsMod-Mot	Val	uint8
HvacDampr_stReqUdsPass-MixMot	ExplicitReceive	HvacDampr_stReqUdsPass-MixMot	Val	uint8
HvacDampr_stReqUdsPas-sRcrltnMot	ExplicitReceive	HvacDampr_stReqUdsPas-sRcrltnMot	Val	uint8
HvacDampr_stReqUdsPsgr-MixMot	ExplicitReceive	HvacDampr_stReqUdsPsgr-MixMot	Val	uint8
HvacDampr_stReqUdsR-crltnMot	ExplicitReceive	HvacDampr_stReqUdsR-crltnMot	Val	uint8
HvacDampr_stDrvrMixMo-tAct	ExplicitSend	HvacDampr_stDrvrMixMo-tAct	Val	uint8
HvacDampr_stDrvrMixMot-Dir	ExplicitSend	HvacDampr_stDrvrMixMot-Dir	Val	uint8
HvacDampr_stDrvrMixMot-Flt	ExplicitSend	HvacDampr_stDrvrMixMot-Flt	Val	uint8
HvacDampr_stDrvrMixMo-tRunng	ExplicitSend	HvacDampr_stDrvrMixMo-tRunng	Val	uint8
HvacDampr_stDrvrRcrltnMo-tAct	ExplicitSend	HvacDampr_stDrvrRcrltnMo-tAct	Val	uint8
HvacDampr_stDrvrRcrltn-MotDir	ExplicitSend	HvacDampr_stDrvrRcrltn-MotDir	Val	uint8
HvacDampr_stDrvrRcrltn-MotFlt	ExplicitSend	HvacDampr_stDrvrRcrltn-MotFlt	Val	uint8
HvacDampr_stDrvrRcrltnMo-tRunng	ExplicitSend	HvacDampr_stDrvrRcrltnMo-tRunng	Val	uint8
HvacDampr_stModMotAct	ExplicitSend	HvacDampr_stModMotAct	Val	uint8
HvacDampr_stModMotDir	ExplicitSend	HvacDampr_stModMotDir	Val	uint8
HvacDampr_stModMotFlt	ExplicitSend	HvacDampr_stModMotFlt	Val	uint8
HvacDampr_stModMo-tRunng	ExplicitSend	HvacDampr_stModMo-tRunng	Val	uint8
HvacDampr_stPassMixMo-tAct	ExplicitSend	HvacDampr_stPassMixMo-tAct	Val	uint8
HvacDampr_stPassMixMot-Dir	ExplicitSend	HvacDampr_stPassMixMot-Dir	Val	uint8
HvacDampr_stPassMixMot-Flt	ExplicitSend	HvacDampr_stPassMixMot-Flt	Val	uint8
HvacDampr_stPassMixMo-tRunng	ExplicitSend	HvacDampr_stPassMixMo-tRunng	Val	uint8
HvacDampr_stPassRcrltn-MotAct	ExplicitSend	HvacDampr_stPassRcrltn-MotAct	Val	uint8
HvacDampr_stPassRcrltn-MotDir	ExplicitSend	HvacDampr_stPassRcrltn-MotDir	Val	uint8
HvacDampr_stPassRcrltn-MotFlt	ExplicitSend	HvacDampr_stPassRcrltn-MotFlt	Val	uint8
HvacDampr_stPassRcrltn-MotRunng	ExplicitSend	HvacDampr_stPassRcrltn-MotRunng	Val	uint8
HvacDampr_stRcrltnMotAct	ExplicitSend	HvacDampr_stRcrltnMotAct	Val	uint8
HvacDampr_stRcrltnMotDir	ExplicitSend	HvacDampr_stRcrltnMotDir	Val	uint8
HvacDampr_stRcrltnMotFlt	ExplicitSend	HvacDampr_stRcrltnMotFlt	Val	uint8
HvacDampr_stRcrltnMo-tRunng	ExplicitSend	HvacDampr_stRcrltnMo-tRunng	Val	uint8
HvacDampr_stReMixMotAct	ExplicitSend	HvacDampr_stReMixMotAct	Val	uint8
HvacDampr_stReMixMotDir	ExplicitSend	HvacDampr_stReMixMotDir	Val	uint8
HvacDampr_stReMixMotFlt	ExplicitSend	HvacDampr_stReMixMotFlt	Val	uint8

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Port	AccessMode	Interface	DE	Datatype
HvacDampr_stReMixMo-tRunng	ExplicitSend	HvacDampr_stReMixMo-tRunng	Val	uint8
HvacDampr_stReModMotAct	ExplicitSend	HvacDampr_stReModMotAct	Val	uint8
HvacDampr_stReModMotDir	ExplicitSend	HvacDampr_stReModMotDir	Val	uint8
HvacDampr_stReModMotFlt	ExplicitSend	HvacDampr_stReModMotFlt	Val	uint8
HvacDampr_stReModMo-tRunng	ExplicitSend	HvacDampr_stReModMo-tRunng	Val	uint8
HvacDampr_uDrvrMixMotFb	ExplicitSend	HvacDampr_uDrvrMixMotFb	Val	uint16
HvacDampr_uDrvrRcrltnMot-Fb	ExplicitSend	HvacDampr_uDrvrRcrltnMot-Fb	Val	uint16
HvacDampr_uModMotFb	ExplicitSend	HvacDampr_uModMotFb	Val	uint16
HvacDampr_uPassMixMotFb	ExplicitSend	HvacDampr_uPassMixMotFb	Val	uint16
HvacDampr_uPassRcrltn-MotFb	ExplicitSend	HvacDampr_uPassRcrltn-MotFb	Val	uint16
HvacDampr_uRcrltnMotFb	ExplicitSend	HvacDampr_uRcrltnMotFb	Val	uint16
HvacDampr_uReMixMotFb	ExplicitSend	HvacDampr_uReMixMotFb	Val	uint16
HvacDampr_uReModMotFb	ExplicitSend	HvacDampr_uReModMotFb	Val	uint16

3 Conversion forms

Table 2 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 3 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 4 Version Information

Program Module	Version
Product	AEEE-Pro 2020.2.0