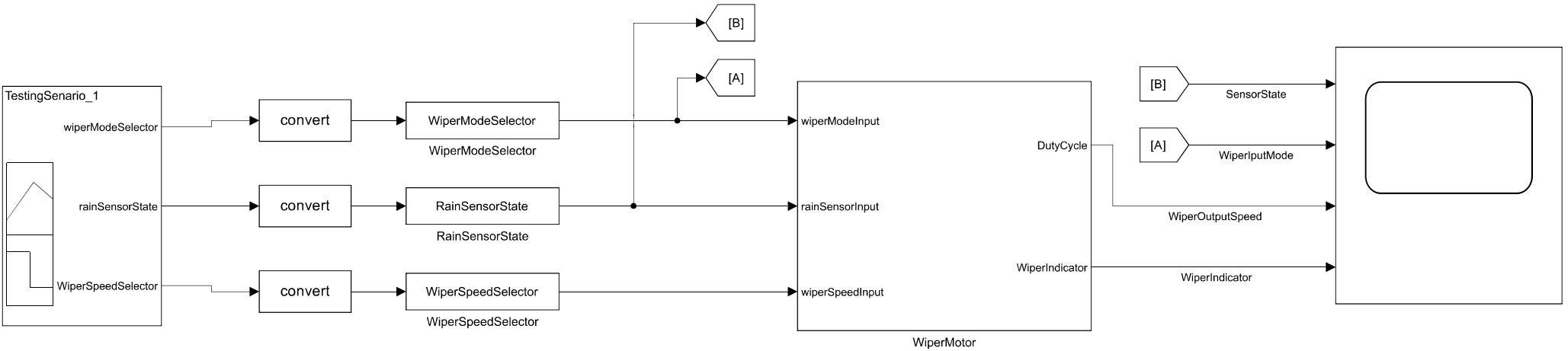
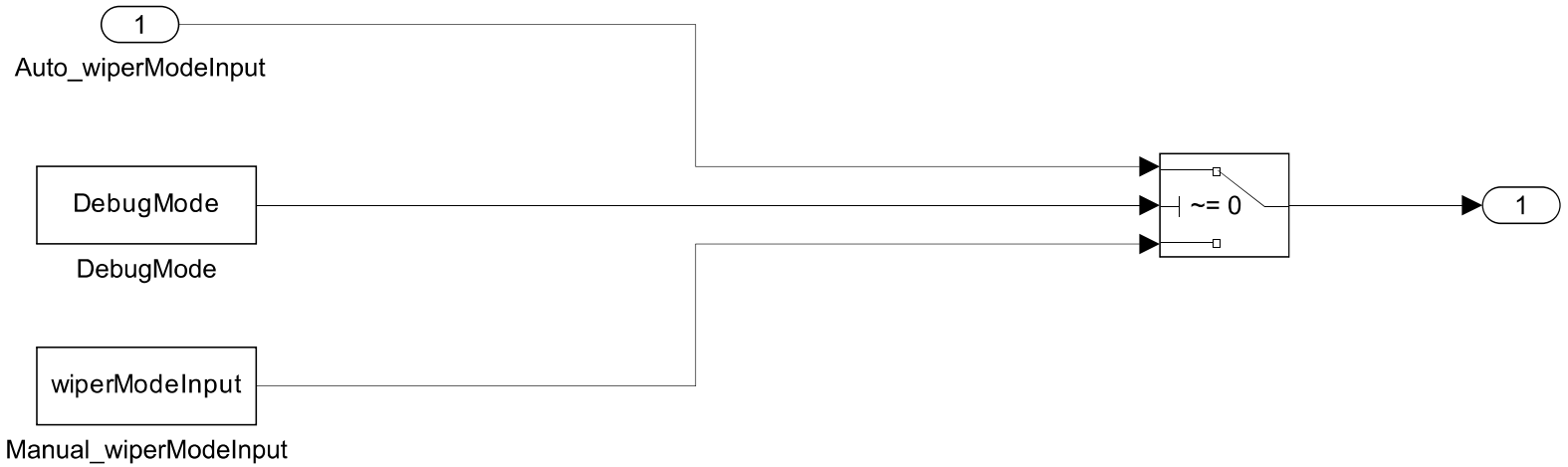
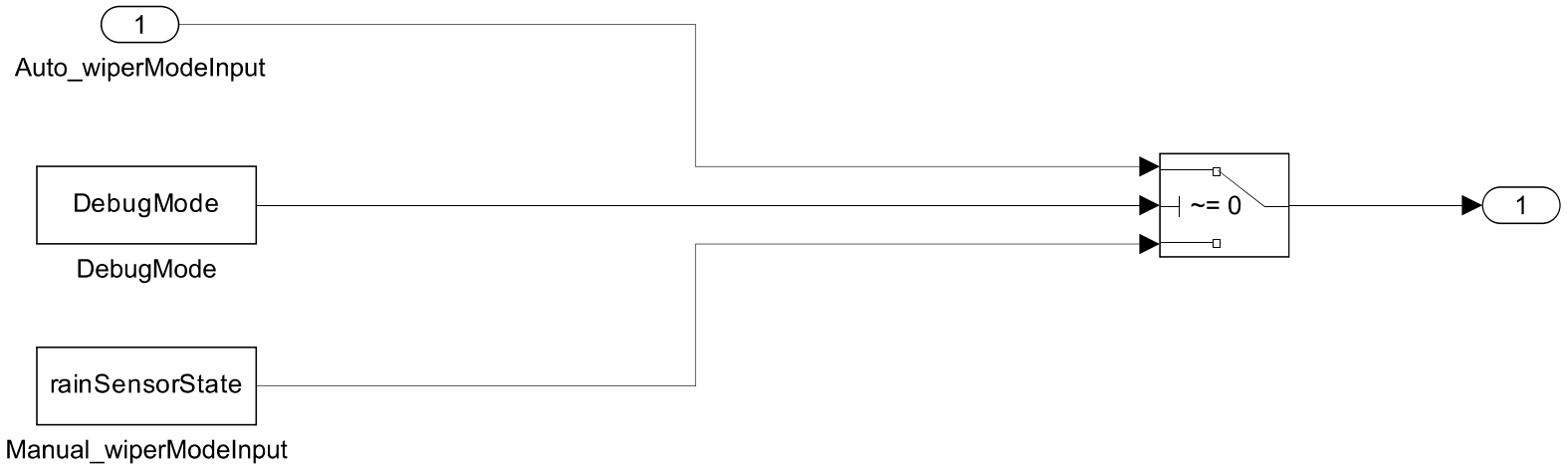
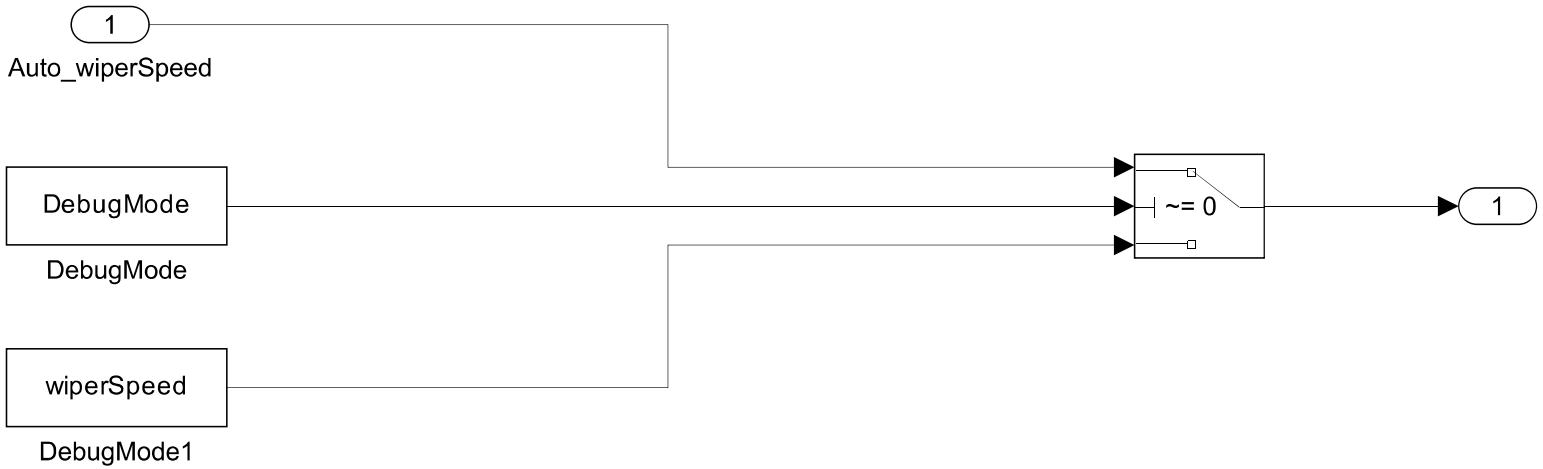
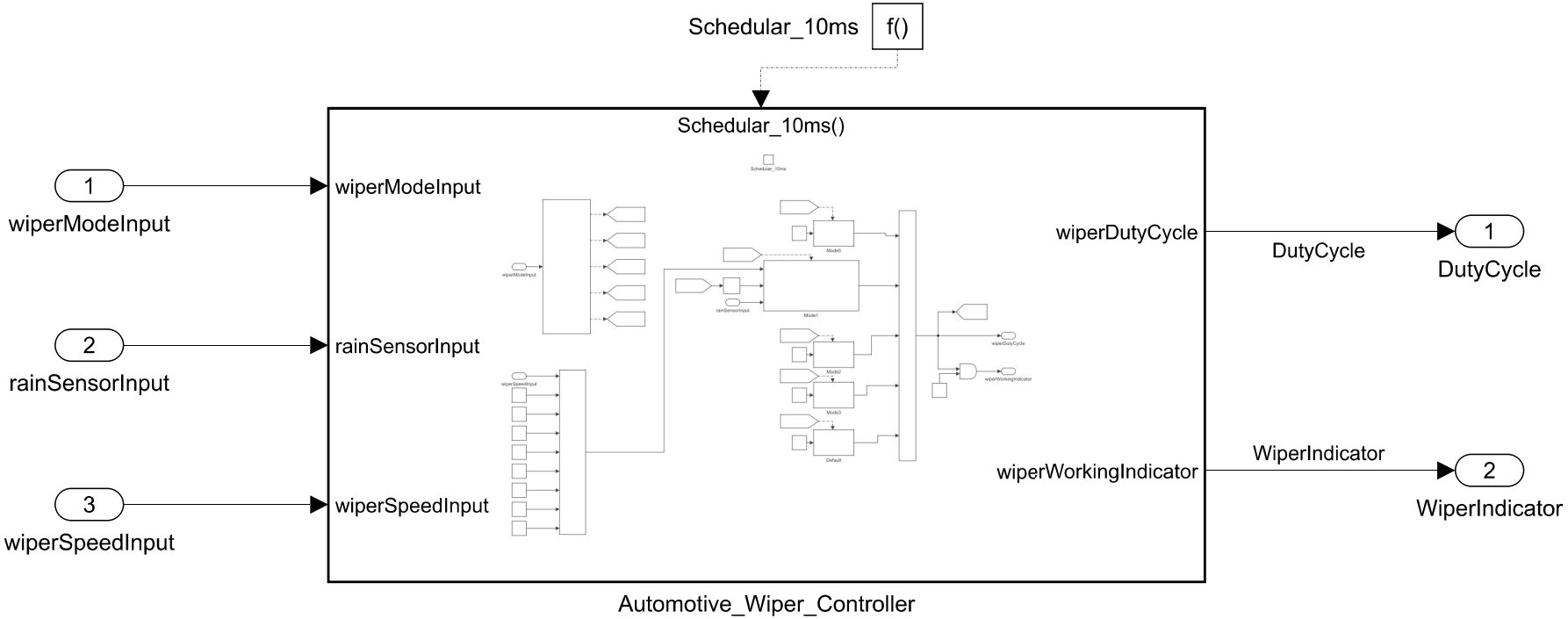
Automotive Wiper Controller

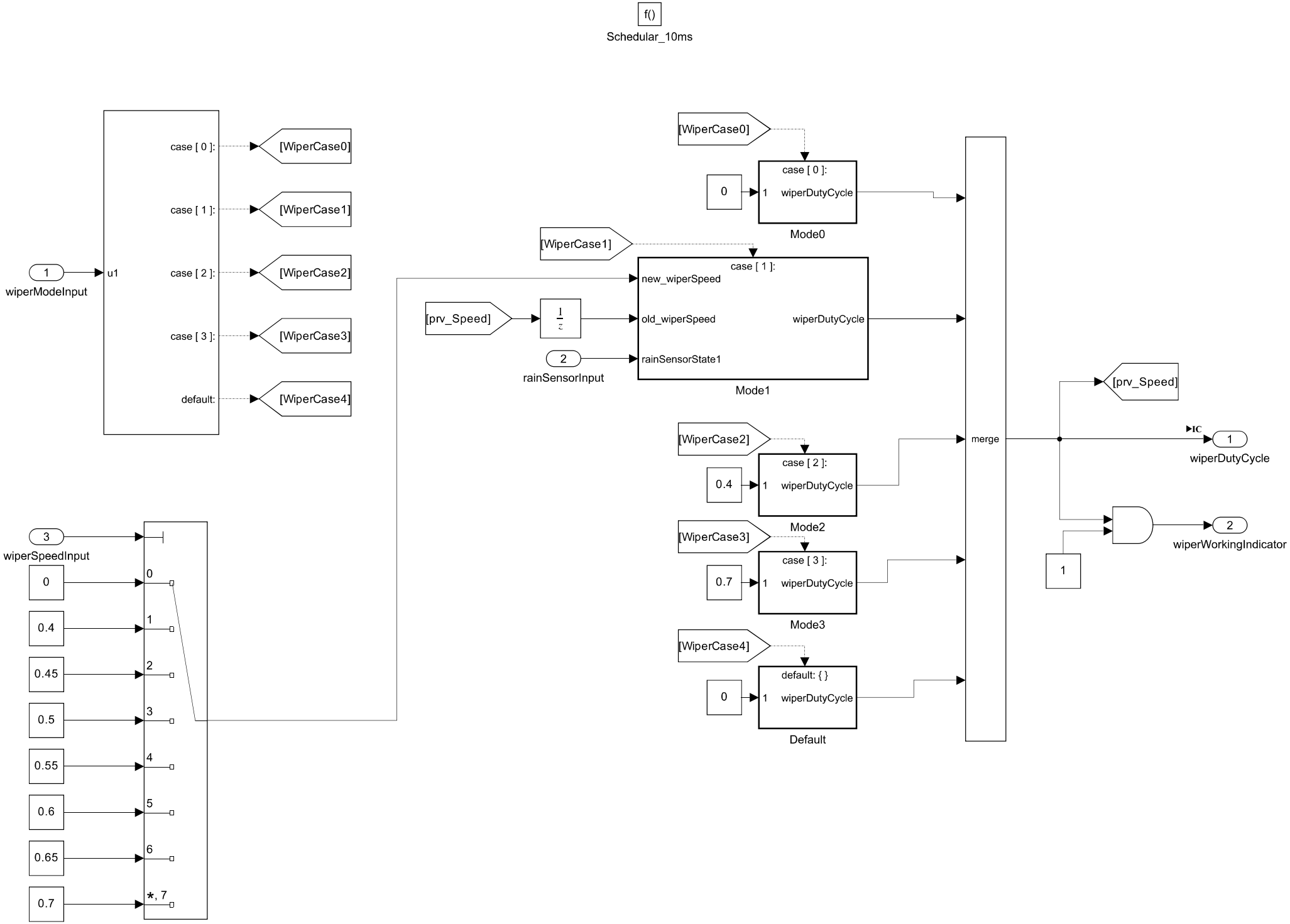


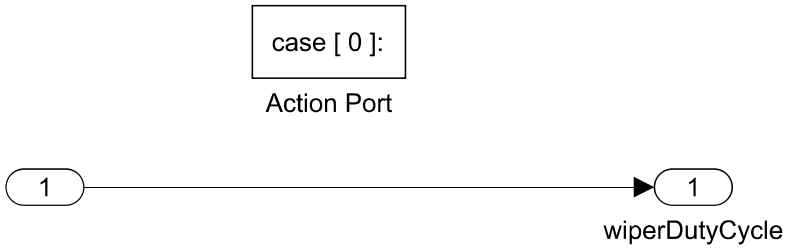

1
Auto_wiperModeInput
DebugMode
DebugMode
wiperModeInput
Manual_wiperModeInput
~= 0
1

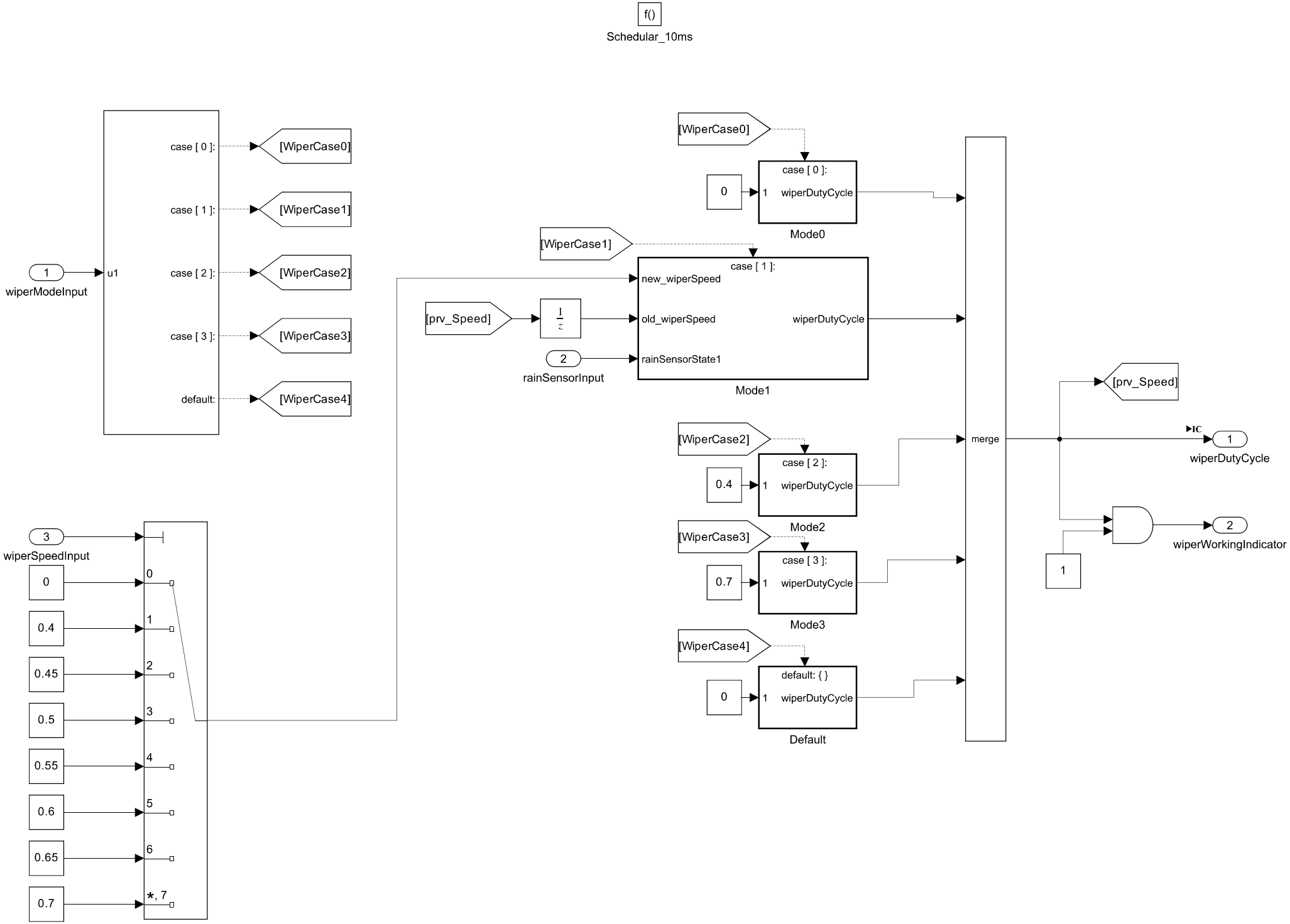

1
Auto_wiperModeInput
DebugMode
DebugMode
rainSensorState
Manual_wiperModeInput
~= 0
1

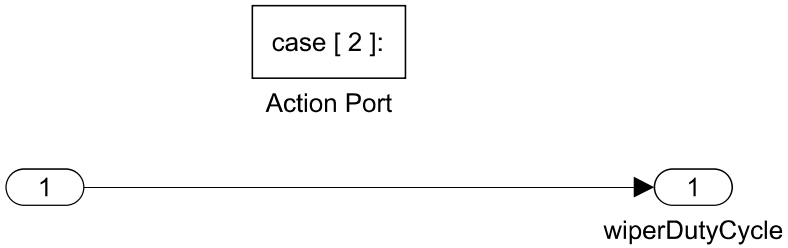

1
Auto_wiperSpeed
DebugMode
DebugMode
wiperSpeed
DebugMode1
~= 0
1

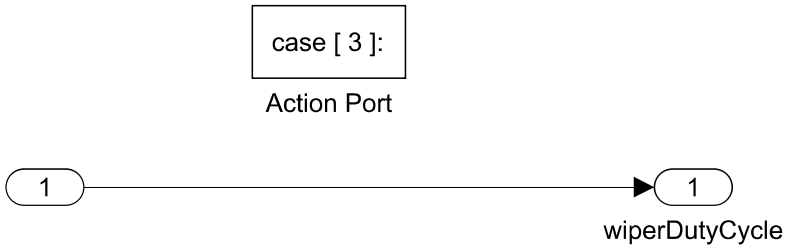

Schedular_10ms
f()
Schedular_10ms()
1
wiperModeInput
2
rainSensorInput
3
wiperSpeedInput
wiperModeInput
rainSensorInput
wiperSpeedInput
wiperDutyCycle
wiperWorkingIndicator
DutyCycle
1
DutyCycle
WiperIndicator
2
WiperIndicator
Automotive_Wiper_Controller

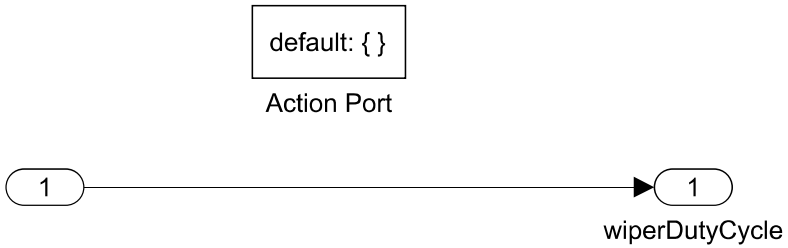

f()
Schedular_10ms
1
wiperModeInput
u1
case [0]:
case [1]:
case [2]:
case [3]:
default:
[WiperCase0]
[WiperCase1]
[WiperCase2]
[WiperCase3]
[WiperCase4]
3
wiperSpeedInput
0
0.4
0.45
0.5
0.55
0.6
0.65
0.7
*, 7
[WiperCase0]
0
case [0]:
1 wiperDutyCycle
Mode0
[WiperCase1]
case [1]:
new_wiperSpeed
[prv_Speed]
1/z
old_wiperSpeed
wiperDutyCycle
2
rainSensorInput
rainSensorState1
Mode1
[WiperCase2]
0.4
case [2]:
1 wiperDutyCycle
Mode2
[WiperCase3]
0.7
case [3]:
1 wiperDutyCycle
Mode3
[WiperCase4]
0
default: { }
1 wiperDutyCycle
Default
merge
[prv_Speed]
IC
1
wiperDutyCycle
2
wiperWorkingIndicator
1


case [0]:
Action Port
1
1
wiperDutyCycle


f()
Schedular_10ms
1
wiperModeInput
u1
case [0]:
case [1]:
case [2]:
case [3]:
default:
[WiperCase0]
[WiperCase1]
[WiperCase2]
[WiperCase3]
[WiperCase4]
3
wiperSpeedInput
0
0.4
0.45
0.5
0.55
0.6
0.65
0.7
*, 7
[WiperCase0]
0
case [0]:
1 wiperDutyCycle
Mode0
[WiperCase1]
case [1]:
new_wiperSpeed
[prv_Speed]
1/z
old_wiperSpeed
wiperDutyCycle
2
rainSensorInput
rainSensorState1
Mode1
[WiperCase2]
0.4
case [2]:
1 wiperDutyCycle
Mode2
[WiperCase3]
0.7
case [3]:
1 wiperDutyCycle
Mode3
[WiperCase4]
0
default: { }
1 wiperDutyCycle
Default
merge
[prv_Speed]
IC
1
wiperDutyCycle
2
wiperWorkingIndicator
1


case [2]:
Action Port
1
1
wiperDutyCycle


case [3]:
Action Port
1
1
wiperDutyCycle


default: { }
Action Port
1
1
wiperDutyCycle