

The TRAFFICLIGHT state machine is in fact a combinatorial systems "decoding" states of LIGHT state machines to produce signals which switch on/off the red and yellow flashing light.

The used ..\_LightOn, ..\_LightOff, ..\_FlashEnable and ..\_FlashDisable names represent complex conditions - OR expressions of LIGHT states (see Input Name Dictionary). In these complex expressions the set of states: Coming, Approaching, ApprPresent, Present, AllPresent LeavePresent is represented only by a state Coming. This simplification can be done as this sequence of states is always entered via the state Coming (see state transition diagram).

Always	Di_Light_On   Left_1_LightOn   Right_1_LightOn   Left_2_LightOn   Right_2_LightOn	Do_Light_On
Always	Di_Light_Off & Left_1_LightOff & Right_1_LightOff & Left_2_LightOff & Right_2_LightOff	Do_Light_Off
Always	Left_1_FlashEnable & Right_1_FlashEnable & Left_2_FlashEnable & Right_2_FlashEnable	Flash_Cmd_Enable
Always	Left_1_FlashDisable   Right_1_FlashDisable   Left_2_FlashDisable   Right_2_FlashDisable	Flash_Cmd_Disable