

Current State	fsm_in_reset	fsm_in_sensors (lsb : entrance, msb: exit)	fsm_in_pcount	Next State
X	1	X	X	fsm_empty_state
fsm_empty_state	1	X	"0"	fsm_empty_state
fsm_empty_state	0	"01"	"0"	fsm_inc_dec_state
fsm_empty_state	0	"10"	"0"	fsm_empty_state
fsm_empty_state	0	"11" or "00"	"0"	fsm_empty_state
fsm_inc_dec_state	1	X	X	fsm_empty_state
fsm_inc_dec_state	0	"01"	"1" to "5"	fsm_inc_dec_state
fsm_inc_dec_state	0	"01"	"6" or "7"	fsm_full_state
fsm_inc_dec_state	0	"10"	"1" or "0"	fsm_empty_state
fsm_inc_dec_state	0	"10"	"2" to "5"	fsm_inc_dec_state
fsm_inc_dec_state	0	"00" or "11"	"1" to "6"	fsm_inc_dec_state
fsm_full_state	1	X	X	fsm_empty_state
fsm_full_state	0	"01"	"7"	fsm_full_state
fsm_full_state	0	"10"	"7"	fsm_inc_dec_state
fsm_full_state	0	"11" or "00"	"7"	fsm_inc_dec_state