

File: g:\VSS_Projects\work\sjensen\DPA\HDL_project\src\Relay_driver.v

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1  *****
2  ****//
3  // file : c:\projects\nmc\DPA\hdl\DPAinterface\src\Relay_driver.v
4  // created Tue Oct 30 07:42:01 2001
5  // by ITF2V generator version 1.0
6  *****
7  ****//
8
9  //{{ Section below this comment is automatically maintained
10 // and may be overwritten
11 //{module {Relay_driver}}
12 module Relay_driver ( Close ,New_position ,Open ,Position ,Pulse ,
13   Pulse_end ,Pulse_request ,Update ,clk ,reset );
14   input New_position ;
15   wire New_position ;
16   input Pulse ;
17   wire Pulse ;
18   input Pulse_end ;
19   wire Pulse_end ;
20   input Update ;
21   wire Update ;
22   input clk ;
23   wire clk ;
24   input reset ;
25   wire reset ;
26
27   output Close ;
28   wire Close ;
29   output Open ;
30   wire Open ;
31   output Position ;
32   reg Position ;
33   output Pulse_request ;
34   wire Pulse_request ;
35
36   //}} End of automatically maintained section
37
38   // -- Enter your statements here -- //
39   //when there is a difference in New_position and Position and
40   Update is try then request a pulse;
41   assign Pulse_request = (Position ^ New_position) & Update;
42   //Open/close goes try when a requested pulse is true and the pulse
43   is being generated selected by New_position
44   assign Open = Pulse & Pulse_request & New_position;
45   assign Close = Pulse & Pulse_request & !New_position;
46
47   always @ (posedge reset or posedge clk)
48   begin
49     if (reset) Position <= 1'b0; //at reset set to zero state!
50     else if ((Pulse_end)&&(Update)) Position <= New_position;
51     //at the end of the pulse update the reported position
52     else Position <= Position;
53   end
```

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52  endmodule
53
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