Keyless entry for car

Have the system in ALARM state for some duration T
Extend functionality
(i) When Panic button pressed \((P=1)\), \(A=1\) for some time
(ii) System to move to LOCKED state (Alarm goes off)

Use binary counter \(T-1, T-2, \ldots, 0\)

1. What value should we load into the counter? \((T-1)\)
1. How do we load the value? LD signal.

Output $Z = 1$ to indicate done counting

$= 0$ otherwise

2. How do we generate the load signal? ($P = 1$)

Separate ckt. to force the FSM to stay in the Alarm state until time times out.

→ (i) Alarm state $s_1s_0 = 01$ go to Locked $s_1s_0 = 00$ ✓

→ (ii) Panic = 0

→ (iii) Counter has timed out $Z = 1$ /
\[
\begin{align*}
S_1 & \quad \text{Force } S_6 \text{ to } 0 \\
S_0 & \quad 0 \quad \text{Retain } S_6 \\
P & \\
Z &
\end{align*}
\]