inputs: up, down: pure **output:** count: $\{0, \dots, M\}$

$$up \land \neg down \qquad up \land \neg down \qquad up \land \neg down$$

$$0 \qquad 1 \qquad \dots \qquad M \\ / 1 \qquad down \land \neg up \qquad down \land \neg up$$