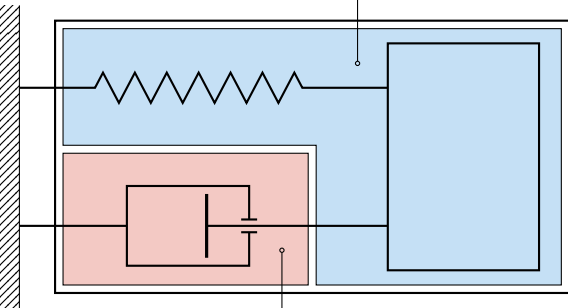


$$U_1 = \frac{p^2}{2m} + \frac{1}{2}kq^2$$



$$U_2 = U_2(S)$$