

Answer on question #58572, Physics / Electric Circuits

Question the spark of a man-made 10MV lightning had an energy output of 0.125MW.s. How many coulombs of charge followed

Solution Energy W is related to charge q as

$$W = qU$$

in our case $U = 10^7$ V, $W = 0.125 \cdot 10^6$ J. Hence

$$q = \frac{W}{U} = 80 \text{ C}$$