

Technisches Englisch

Elektrotechniker kommen in der Praxis vermehrt mit englischsprachigen Dokumentationen bzw. Plänen in Berührung. Auch verständigt man sich mit internationalen Handwerkern häufig in Englisch. Diese Seite erleichtert den Zugang zur englischen Sprache und vermittelt elektrotechnische Fachausdrücke.

Georg Simon Ohm

Relationship between V , I and R

Georg Simon Ohm, physicist and famous German inventor in the field of electrical engineering, was born in Erlangen on March 16, 1787. As a school teacher *Ohm* started his research with the recently invented electrochemical cell, the so called Voltaic Pile. Using equipment of his own creation, he found out that the current flow through a wire is proportional to its cross section area and inversely proportional to its length. Later he formulated his findings by stating: The distribution

of electromotive force has a definite relationship in connecting resistance, electromotive force and current strength. Thereby he devised the formula

$$I = \frac{V}{R}$$

So *Ohm* was able to define the fundamental relationship between voltage V , current I and resistance R in more detail. That discovery is of such importance that it presents the true beginning of electrical circuit analysis.

Ohm's life as a teacher

He was afraid that the purely experimental basis of his work would undermine the importance of his discovery. He tried to state his law theoretically as clearly as possible, but his mathematical proofs made him

Georg Simon Ohm
(1787–1854)
His findings represent the true beginning of electrical analysis.



an object of ridicule. In the years that followed, *Ohm* now lived in poverty, tutoring privately in Berlin. He did not receive credit for his findings until he was made director of the Polytechnic School of Nuremberg in 1833. In 1841, the Royal Society in London recognized the significance of his discovery and awards him the Copley medal. In 1849, at last, *Ohm's* life-long dream was realized when he was given a professorship of Experimental Physics at the University of Munich.

famous berühmt; **inventor** Erfinder; **electrical engineering** Elektrotechnik; **physicist** Physiker; **research** Forschung; **Voltaic Pile** Voltasche Säule: erste konstante Spannungssäule, erfunden von *Alessandro Volta* (1745-1827); **equipment** Gerät(e), Anlage(n); **creation** Herstellung, Schaffung; **current flow** Stromfluss; **cross section area** Durchmesserquerschnitt; **inversely** umgekehrt; **length** Länge; **findings** Erkenntnisse; **to state** angeben, feststellen; **distribution** Verteilung; **electromotive force** elektromotorische Kraft (EMK); **relationship** Beziehung; **voltage** Spannung; **to connect** verbinden; **resistance** Widerstand; **current strength** Stromstärke; **to devise** erarbeiten, ersinnen, entwickeln; **formula** Formel; **discovery** Entdeckung; **electrical load analysis** hier: Theoretische Elektrotechnik; **pure(ly)** rein; **to undermine** untergraben; **law** Gesetz; **proofs** Beweise; **ridicule** Spott; **poverty** Armut; **to recognize** anerkennen; **significance** Bedeutung; **to award** zuerkennen, auszeichnen. G. Möllerke