

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

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On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)

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Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; U.S. Air Force Glossary of Standardized Terms, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

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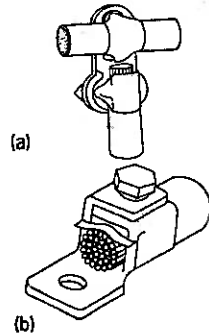
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ELECTRIC CONNECTOR



Types of electric connectors.
(a) T connector. (b) Terminal connector.

currents. 2. An arrangement of one or more complete, closed paths for electron flow. { i'lek-trik 'sər-kət }

electric circuit theory See circuit theory. { i'lek-trik 'sər-kət 'thē-ə-rē }

electric clock [HOROL] 1. Any clock that is operated by electric power. 2. Specifically, a clock driven by an alternating-current motor whose current has a definite frequency, controlled at the generator. { i'lek-trik 'klāk }

electric coil See coil. { i'lek-trik 'kōil }

electric comparator [ELEC] A comparator in which movement results in a change in some electrical quantity, which is then amplified by electrical means. { i'lek-trik kəm'pār-əd-ər }

electric condenser See capacitor. { i'lek-trik kən'den-sər }

electric conductor See conductor. { i'lek-trik kən'dak-tər }

electric connection [ELEC] A direct wire path for current between two points in a circuit. { i'lek-trik kə'nek-shən }

electric connector [ELEC] A device that joins electric conductors mechanically and electrically to other conductors and to the terminals of apparatus and equipment. { i'lek-trik kə'nek-tər }

electric constant [ELEC] The permittivity of empty space, equal to 1 in centimeter-gram-second electrostatic units and to $10^7/4\pi c^2$ farads per meter or, numerically, to 8.854×10^{-12} farad per meter in International System units, where c is the speed of light in meters per second. Symbolized ϵ_0 . { i'lek-trik 'kän-stənt }

electric contact [ELEC] A physical contact that permits current flow between conducting parts. Also known as contact. { i'lek-trik 'kän,təkt }

electric contactor See contactor. { i'lek-trik 'kän,tək-tər }

electric control [ELEC] The control of a machine or device by switches, relays, or rheostats, as contrasted with electronic control by electron tubes or by devices that do the work of electron tubes. { i'lek-trik kən'trōl }

electric controller [ELEC] A device that governs in some predetermined manner the electric power delivered to apparatus. { i'lek-trik kən'trōl-ər }

electric converter See synchronous converter. { i'lek-trik kən'vərd-ər }

electric corona See corona discharge. { i'lek-trik kə'rō-nə }

electric coupling [MECH ENG] Magnetic-field coupling between the shafts of a driver and a driven machine. { i'lek-trik 'kəp-līj }

electric current See current. { i'lek-trik 'kə-rənt }

electric current density See current density. { i'lek-trik 'kə-rənt ,den-səd-ē }

electric current meter See ammeter. { i'lek-trik 'kə-rənt ,mēd-ər }

electric cutout See cutout. { i'lek-trik 'kəd-əut }

electric delay line [ELECTR] A delay line using properties of lumped or distributed capacitive and inductive elements; can be used for signal storage by recirculating information-carrying wave patterns. { i'lek-trik di'lə ,līn }

electric desalting [CHEM ENG] A process to remove impurities such as inorganic salts from crude oil by settling out in an electrostatic field. { i'lek-trik dē'səlt-īn }

electric detonator [ENG] A detonator ignited by a fuse wire which serves to touch off the primer. { i'lek-trik 'det-ən-əd-ər }

electric dipole [ELEC] A localized distribution of positive and negative electricity, without net charge, whose mean positions of positive and negative charges do not coincide. { i'lek-trik 'di,pōl }

electric dipole moment [ELEC] A quantity characteristic of a charge distribution, equal to the vector sum over the electric charges of the product of the charge and the position vector of the charge. { i'lek-trik 'di,pōl ,mō-mənt }

electric dipole transition [ATOM PHYS] A transition of an atom or nucleus from one energy state to another, in which electric dipole radiation is emitted or absorbed. { i'lek-trik 'di,pōl tran'zish-ən }

electric discharge See discharge. { i'lek-trik 'dis-čhārij }

electric-discharge lamp See discharge lamp. { i'lek-trik 'dis-čhārij ,lāmp }

electric-discharge tube See discharge tube. { i'lek-trik 'dis-čhārij ,tūb }

electric displacement [ELEC] The electric field intensity multiplied by the permittivity. Symbolized D . Also known

as dielectric displacement; dielectric flux; electric displacement density; electric induction. { i'lek-trik dis'plās-mənt ,ēl-ēk-trik 'dis-plās-mənt ,den-səd-ē }

electric displacement density See electric displacement. { i'lek-trik dis'plās-mənt ,den-səd-ē }

electric distribution system See distribution system. { i'lek-trik dis'trib-yū-shən ,sis-təm }

electric double layer [PHYS CHEM] A type which are fixed to the surface of the number of mobile ions of the opposite charge situated through the neighboring region of system the movement of liquid causes mobile counterions with respect to the solid surface. Also known as double layer. { i'lek-trik 'dubl-ē ,lā-ər }

electric doublet See dipole. { i'lek-trik 'dubl-ē }

electric drive [MECH ENG] A mechanism motion from one shaft to another and control of the shafts by electrical means. { i'lek-trik 'drīv }

electric eel [VERT ZOO] *Electrophorus*, cypriniform electric fish of the family *Trichopterus*. { i'lek-trik 'ēl }

electric energy [ELECTROMAG] 1. charges by virtue of their position in Energy of electric currents by virtue magnetic field. { i'lek-trik 'en-ər-jē }

electric energy measurement [ELEC] the integral, with respect to time, of the circuit. { i'lek-trik 'en-ər-jē ,mez-ər-ment }

electric energy meter [ELEC] A device integral, with respect to time, of the power. { i'lek-trik 'en-ər-jē ,mēd-ər }

electric engine [AERO ENG] A rocket propellant is accelerated by some electric as electric propulsion system; electric engine. { i'lek-trik 'en-jən }

electric eye See cathode-ray tuning indicator. { i'lek-trik 'ī }

electric fence [ENG] A fence consisting of lengths of wire energized with high-voltage and giving a warning shock when touched. { i'lek-trik 'fens }

electric field [ELEC] 1. One of the nature, causing a charged body to be by other charged bodies; associated with wave or a changing magnetic field. 2. force per unit test charge. { i'lek-trik 'fīld }

electric-field effect See Stark effect. { i'lek-trik 'fīld 'ef-ekt }

electric-field intensity See electric-field intensity. { i'lek-trik 'fīld 'īn-tēn-səd-ē }

electric-field strength See electric-field strength. { i'lek-trik 'fīld 'streŋkth }

electric-field vector [ELEC] The force per unit charge at a point in a field. Also known as electric-field strength; electric vector. { i'lek-trik 'fīld 'vek-tər }

electric filter [ELECTR] 1. A network of inductances and capacitances which passing currents of desired frequencies while rejecting all other frequencies. Also known as filter. { i'lek-trik 'fīltər }

electric firing mechanism [ORD] a firing magneto, battery, or alternating current source with an electric primer; one side of an insulated wire to the primer, and the other to the frame of the weapon. { i'lek-trik 'fīr-īŋ ,mek-ə-nīz-əm }

electric fish [VERT ZOO] Any of a group of fish producing electric discharges from an electric organ. { i'lek-trik 'fīsh }

electric flowmeter [ELEC] Fluid-flowmeter relying on an inductance or impedance resistance rod elements to sense flow rate. { i'lek-trik 'flō ,mēd-ər }

electric flux [ELEC] 1. The integral component of the electric displacement vector over a surface; equal to the number of electric lines of force passing through the surface. 2. The electric lines of force. { i'lek-trik 'flaks }

electric flux density See electric displacement. { i'lek-trik 'flaks ,den-səd-ē }