

Title (en)
SYSTEM AND METHOD FOR AUTOMATIC RECTIFICATION OF SHORT CIRCUITS IN AN ENERGY BUS

Title (de)
SYSTEM UND VERFAHREN ZUR AUTOMATISCHEN KURZSCHLUSSBESEITIGUNG IN EINEM ENERGIEBUS

Title (fr)
SYSTÈME ET PROCÉDÉ D'ÉLIMINATION DE COURT-CIRCUIT DANS UN BUS D'ALIMENTATION

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Abstract (en)
[origin: WO2016206843A1] The invention relates to a system (Sys) and to a method for automatically eliminating a short circuit in an energy bus (EB), by means of which energy bus decentralized functional units (E) arranged in an industrial installation are supplied with electrical energy, wherein: a) a superordinate control system (STW) is provided, which exchanges information with the decentralized functional units (E) by means of data telegrams via a data bus (CB, NB1, NB2), b) network node units (SND, SND1 to SND7) are arranged sequentially between two feed points (PS1, PS2, Sp_L, Sp_R) of an energy bus (EB) having a ring-like structure, which network node units provide the decentralized functional units (E) with the access to the energy bus (EB) and optionally also to the data bus (CB), c) the network node units (SND) have a controllable switching module (S), which comprises a first switch (S1) and a second switch (S2), wherein each switch (S1, S2) can be used to switch access to one of the two feed points (PS1, PS2, Sp_L, Sp_R), d) an evaluating module (CPU) is provided, which evaluates the measured voltage and/or the measured current within a network node unit (SND) and/or among adjacent network node units (SDN) and/or in at least one of the two feed points, to check for a short circuit of the energy bus (EB), wherein, if a short circuit is detected, a time-staggered switch-off of at least some of the network node units (SND) from the energy bus (EB) can be performed by opening the first or the second switch; and e) a switch-off instant for each network node unit (SND) is provided in accordance with a current direction prevailing in the network node unit (SND) and the position of the network node unit (SND) in the energy bus (EB).

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