Substation DC bus voltage



Overview

Nominal DC voltages commonly selected for power applications include 24 V, 48 V, 125 V, and 250 V, with use depending on device ratings, distance, and fault-tolerance requirements (for example, 125 Vdc for trip/close circuits and 48 Vdc for communications). IEEE design practice addresses. This technical article explains six most common bus configurations used for distribution, transmission, or switching substations at voltages up to 345 kV. Presented single line diagrams and layouts are generalized since they depend on the type and voltage (s) of the substations. One typical example for a 125 V system is shown in figure 1 below. When evaluating a battery's ability to meet the design criteria, the minimum and maximum acceptable operating voltage of critical equipment determines the “voltage window ection for com-plete loss of auxiliary dc control power. Click any substation for its voltage, connected line count, and operational status.

Article Content

Substation Components—Part 6: Station Batteries and DC Supply

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