1. Record Nr.   UNINA9910337595203321

   Autore   Schon Klaus

   Titolo   High Voltage Measurement Techniques : Fundamentals, Measuring
                    Instruments, and Measuring Methods / / by Klaus Schon

   Pubbl/distr/stampa   Cham : , : Springer International Publishing : , : Imprint : Springer, ,
                        2019

   ISBN   3-030-21770-1

   Edizione   [1st ed. 2019.]

   Descrizione fisica   1 online resource (466 pages)

   Collana   Power Systems, , 1612-1287

   Disciplina   621.37
                    621.37.43

   Soggetti   Power electronics
                    Energy systems
                    Physical measurements
                    Measurement
                    Power Electronics, Electrical Machines and Networks
                    Energy Systems
                    Measurement Science and Instrumentation

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di contenuto   Introduction -- High Alternating Voltages and Currents -- High Direct
                       Voltages and Currents -- High Impulse Voltages -- High Impulse
                       Currents -- Electro-Optic und Magneto-Optic Sensors -- Digital
                       Recorders, Software and Calibrators -- Representation of Impulses in
                       the Time and Frequency Domain -- Transfer Behavior of Linear
                       Systems, Convolution and Deconvolution -- Calibration of the
                       Measuring Systems -- Capacitance and Dissipation Factor -- Basics of
                       Partial Discharge Measurement -- Evaluation of Uncertainties of
                       Measurement.

   Sommario/riassunto   This book conveys the theoretical and experimental basics of a well-
                        founded measurement technique in the areas of high DC, AC and surge
                        voltages as well as the corresponding high currents. Additional
                        chapters explain the acquisition of partial discharges and the electrical
                        measured variables. Equipment exposed to very high voltages and
                        currents is used for the transmission and distribution of electrical

energy. They are therefore tested for reliability before commissioning using standardized and future test and measurement procedures. Therefore, the book also covers procedures for calibrating measurement systems and determining measurement uncertainties, and the current state of measurement technology with electro-optical and magneto-optical sensors is discussed.