

Courses

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| Applications | Electric machines DC machines SO4204-7S Three-phase machines SO4204-7T Synchronous and slip-ring rotor machines SO4204-7U Stepping motor SO4204-7W Linear motor SO4204-7X Three-phase transformer SO4204-7Y BLDC motor SO4204-7Z | Power electronics Self-commutated static converters single-phase/3-phase Frequency inverters SO4204-7M Line-commutated static converters single-phase/3-phase SO4204-7N Frequency converter SO4204-7P Requires SO4204-7M and SO4204-7T Active power factor correction PFC SO4204-7Q | Communication technology Quadripoles and filters SO4204-9A Coaxial lines SO4204-9D Fibre optics SO4204-9E 4-wire lines SO4204-9F Pulse modulation PAM/PCM SO4204-9J Pulse modulation PTM SO4204-9K Modem methods ASK, PSK, FSK SO4204-9L AM/FM Modulation/Demodulation SO4204-9M Supplement to SO4204-9M AM transmitters and receivers SO4204-9N | TCP/IP SO4204-9Q Supplement to SO4204-9Q Client integration SO4204-9R Fundamentals of microwave technology SO4204-9U Supplement to SO4204-9U Waveguide components SO4204-9V Fundamentals of antenna technology SO4204-9W Supplement to SO4204-9W Complex antenna systems SO4204-9X Microstrip SO4204-9Y | Introduction to DSP SO4204-6P Supplement to SO4204-6P Applied DSP SO4204-6Q Automatic control technology Practical introduction to closed-loop SO4204-8E Analysis of control loops SO4204-8F Supplement to SO4204-8F Controlled systems, controller design & optimisation SO4204-8G Supplement to SO4204-8G WINFACT software SO6001-5Q | Measurement technology Meas. of electrical variables U, I, P SO4204-8A Meas. of non-electrical variables temperature, pressure, force SO4204-8B Meas. of non-electrical variables displacement, angle, speed SO4204-8C RLC measurements SO4204-8D | Microcomputer technology Fundamentals Computer technology SO4204-6H Supplement to SO4204-6H Applications and programming SO4204-6J Automation technology Compact automation: PLC and bus technology SO4204-8N Sensors for automation SO4204-8U Electropneumatics SO4204-8V | Mechatronics Transfer system with DC drive SO4204-8K Selection subsystem SO4204-8M Assembly subsystem SO4204-8O Process subsystem SO4204-8P Testing subsystem SO4204-8Q Handling subsystem SO4204-8R In preparation Storage subsystem SO4204-8S | Automotive technology Basics of DC and AC technology SO4204-7A Basics of electronics and digital technology SO4204-7B Pulse generation and ignition systems SO4204-7C Three-phase generator/alternator SO4204-7D LIN bus SO4204-7E Automotive sensors SO4204-7F In preparation On-board diagnosis OBD II SO4204-7G Optical waveguides SO4204-7H | PWM in motor vehicles SO4204-7J CAN SO4204-7K Airbag SO4204-6Z Brake systems SO4204-6R Suspension systems SO4204-6S Steering systems SO4204-6T Gearbox and drive train SO4204-6U |
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Fundamentals

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| Electrical engineering DC technology SO4204-4D AC technology SO4204-4F Three-phase technology SO4204-4H Magnetism/electromagnetism SO4204-4A Measurements with the multimeter SO4204-4B Electrical network analysis SO4204-4C EMC SO4204-4K | Electronics Semiconductor components SO4204-5A Transistor multivibrators SO4204-5D Transistor and amplifier technology SO4204-5H Field-effect transistors SO4204-5K | Operational amplifiers SO4204-5A Power semiconductors SO4204-5P Power supply circuits SO4204-5R Switched-mode power supplies SO4204-5S | Electronic circuit design In preparation Circuit design and simulation using NI Multisim SO4204-5U In preparation PCB design using NI Ultiboard SO4204-5V In preparation Prototype assembly and testing SO4204-5W |
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| Project work | Breadboard with set of cables SO4203-2C Proto printed circuit board, solderable SO4201-2L Circuit simulation software NI Multisim SO2002-2A | Component kits DC technology SO4204-1A AC technology SO4204-1D Rectification SO4204-1G Transistor switch SO4204-1K Three-phase technology SO4204-1N Electronic components SO4204-2A Transistor circuits SO4204-2D Operational amplifiers SO4204-2G Signal generation SO4204-2K Digital technology SO4204-2P DC motor SO4204-2Q |
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Basics

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| Basic equipment UniTrain-I Interface SO4203-2A UniTrain-I Experimenter SO4203-2B UniTrain-I measurement accessories - Set of shunts - Connection cables - Connecting plugs SO4203-2J UniTrain-I storage case SO4203-2Y | Essential supplements Extended power supply SO4203-2D UniTrain-I Experimenter SO4203-2B Probe 10:1/1:1 LM9036 Digital multimeter up to 10 MHz, RLC measurement bridge LM2006 | Optional measurement equipment Digital multimeter LM2321 To make use of the IR-interface we recommend an additional experimenter UniTrain-I experimenter SO4203-2B |
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