



POWER ELECTRONICS



DIRECT CURRENT DIRECT CURRENT CONVERSION

Dc - dc converters are widely used in dc power supplies and in some applications of dc motor drive.

Often, the input to this type of converters is a dc non-regulated voltage, obtained by rectifying the mains voltage and, consequently, fluctuating due to changes in the amplitude of the line voltage.

The result of the conversion is a controlled dc output at the desired voltage level.

LIST OF EXPERIMENTS

DCA 203.1 CHOPPERS

- Main SCR
- MOSFET
- IGBT
- Step-down converter with SCR with turn-off circuit. PWM control.
- Step-down converter with IGBT. PWM control.
- Speed control of a dc motor
- Step-down converter with MOSFET. PWM control.
- Step-down converter with MOSFET. PFM control.
- Step-down converter with MOSFET. TPC control .
- Step-up converter with IGBT. PWM control.
- Step-up converter with IGBT. TPC control.
- Inverting converter with IGBT. PWM control.

DCA 203.2 SWITCHABLE POWER SUPPLY

- Flyback converter with IGBT. PWM control.
- Forward converter with IGBT. PWM control.
- Asymmetric half-bridge forward converter with IGBT. PWM control.

Code	Description	DCA 203.1	DCA 203.2	Total quantities
DL 2602	SILICON DIODE	1	4	4
DL 2608	MOSFET	1		1
DL 2609	IGBT	1	2	2
DL 2611	BRIDGE THREE PHASE RECTIFIER	1	1	1
DL 2612	SCR WITH TURN OFF CIRCUIT	1		1
DL 2613	DC POWER SUPPLY	1	1	1
DL 2614	VOLTAGE REFERENCE GENERATOR	1	1	1
DL 2619	PWM/PFM/TPC CONTROL UNIT	1	1	1
DL 2626	MAINS TRANSFORMER	1	1	1
DL 2627	CAPACITORS	1	1	1
DL 2628	SUPER FAST FUSES	1	1	1
DL 2629	SWITCHING TRANSFORMER		1	1
DL 2630	CURRENT TRANSFORMER	1		1
DL 2635	LOAD	1	1	1
DL 2640	EMI FILTER		1	1
DL 2642	ISOLATION AMPLIFIER	1	1	1
DL 2643	SUPPORT WITH 3 SHUNTS 1 OHM	1	1	1
DL 2644	SUPPORT WITH 3 SHUNTS 0,1 OHM		1	1
DL 2025DT	TACHOMETER	1		1
DL 2109T33	TRUE RMS METER	2	2	2
DL 10200A1	SHUNT EXCITATION DC MOTOR	1		1
DL 10400	BASE	1		1
DL 2100-3M	FRAME	2	2	2
DL 1001-1	WORKING BENCH	1	1	1
DL 1155POW	CONNECTING LEADS	1	1	1
DL 2100TA	Accessory: STORAGE CABINET	1	1	1
DL 2600TT	For the Countries where the 3-phase mains supply is different from 380V: THREE PHASE TRANSFORMER	1	1	1