



ALTERNATE CURRENT - ALTERNATE CURRENT CONVERSION

The electrical power in alternate current is controlled by means of thyristors.

The main fields of application of the control of alternate current are in the control of temperature, lighting and induction motors.

The main types of control are: phase control, on-off control and proportional time control.

LIST OF EXPERIMENTS

DCA 202.1 THYRISTORS AND CONTROLLED AC/AC CONVERTERS

Thyristor

- TRIAC

Single-phase controllers

- Single-phase ac controller W1C, ohmic load
- Single-phase ac controller W1C, inductive load
- Single-phase ac controller W1C, ohmic-inductive load
- Single-phase ac controller W1, ohmic load
- Single-phase ac controller W1, ohmic-inductive load
- Half-controlled single-phase controller W1H, ohmic load

Three-phase controllers

- Fully controlled three-phase controller W3C, star ohmic load without neutral
- Fully controlled three-phase controller W3H, star ohmic load without neutral
- Three-phase controller W3C2, star ohmic load without neutral

DCA 202.2 LIGHT DIMMER FAULT SIMULATOR

Phase control for the regulation of lighting with fault simulation.

Double time-constant standard light dimmer circuit consisting of triac, diac, two control potentiometers, resistors and capacitors.

A total of 20 faults can be switched on using switches located behind a cover.

Typical faults: interruptions, short-circuit, faulty components and faulty design.

Examples of exercises:

- Fault-free dimmer
- DIAC shorted
- DIAC with high resistance
- The gate of TRIAC works like a diode
- Control circuit break
- Assembly or component fault
- Trimmer shorted
- Auxiliary RC circuit not included
- Variable resistance R shorted
- TRIAC shorted



POWER ELECTRONICS



Code	Description	DCA 202.1	DCA 202.2	Total quantities
DL 2603	GROUP OF DIODES	1		1
DL 2605	GROUP OF SCR	1		1
DL 2607	TRIAC	1		1
DL 2613	DC POWER SUPPLY	1		1
DL 2614	VOLTAGE REFERENCE GENERATOR	1		1
DL 2616	TWO PULSE CONTROL UNIT	1		1
DL 2617	SIX PULSE CONTROL UNIT	1		1
DL 2626	MAINS TRANSFORMER	1	1	1
DL 2628	SUPER-FAST FUSES	1		1
DL 2635	LOAD	1		1
DL 2636	SOCKETS WITH LAMPS		1	1
DL 2639	PHASE CONTROL FAULT SIMULATOR		1	1
DL 2642	ISOLATION AMPLIFIER	opt.	opt.	opt.
DL 2643	SUPPORT WITH 3 SHUNTS 1 OHM	1		1
DL 2109T26	POWER METER	1		1
DL 2109T33	TRUE RMS METER	2		2
DL 2109T3PV	MOVING IRON VOLTMETER	1		1
	STORAGE OSCILLOSCOPE	1	1	1
	TESTER		1	1
DL 2100-3M	FRAME	2	1	2
DL 2100TA	STORAGE CABINET	1	1	1
DL 1001-1	WORKING BENCH	1	1	1
DL 1155POW	CONNECTING LEADS	1	1	1
	For the Countries where the 3-phase mains supply is different from 380V:			
DL 2600ATT	THREE PHASE TRANSFORMER	1	1	1