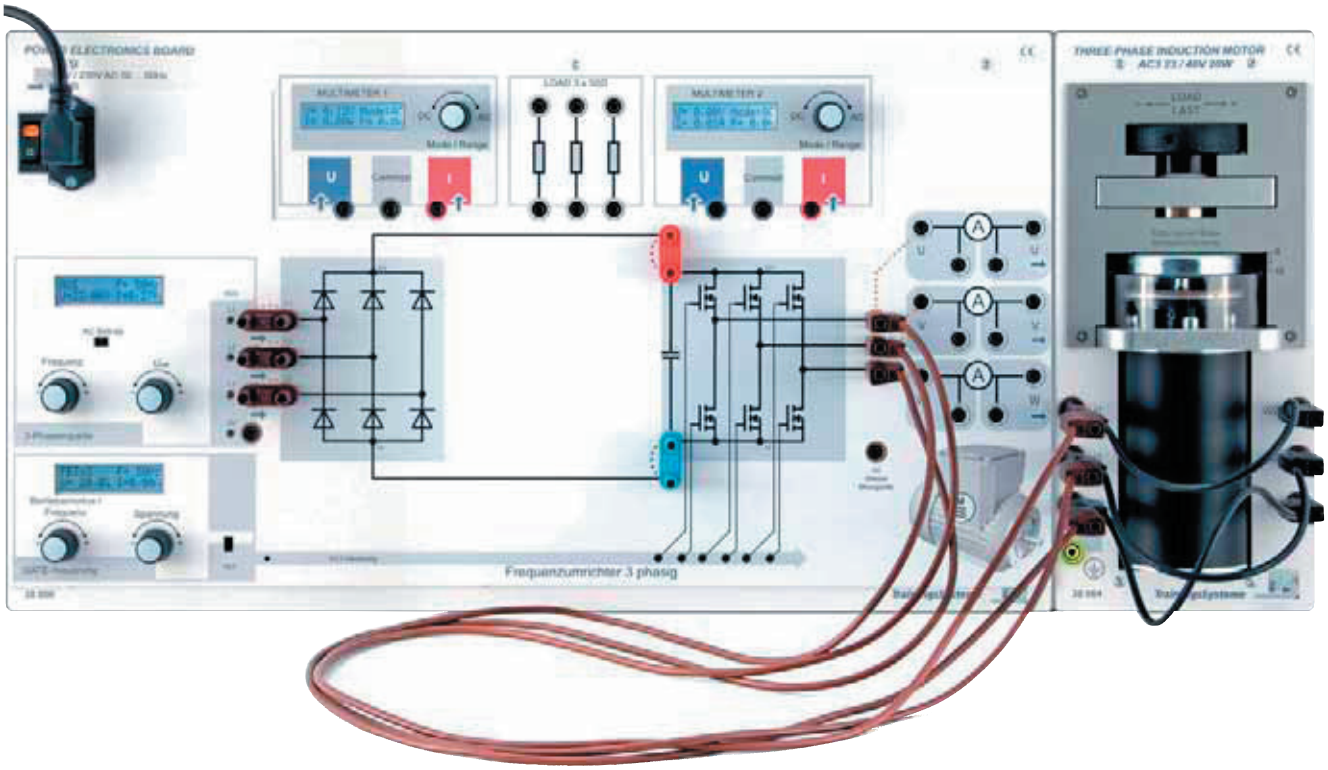
DIDACTIC GMBH
ELABO Training Systems

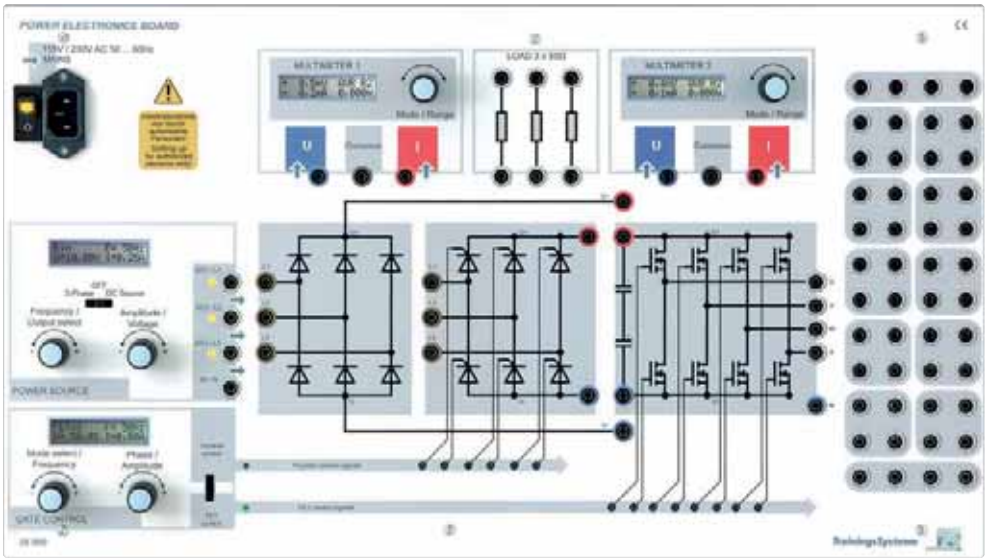


POWER ELECTRONICS

System for Training Purposes and Practical Experiments
over the Entire Power Electronics Sector

POWER ELECTRONICS TRAINING SYSTEM TP 56.2

Training and Practical Experiments over the Entire Power Electronics Sector



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Lerning Objectives

⟩ Becoming acquainted, understanding and applying power electronics components and their functions in rectifiers and inverters: resistance, diode, coil, transistor, IGBT, thyristor, MOSFET, optocoupler, power electronics components, rectifier single, rectifier 3-phase, Siebelko full-wave rectifier, rectifier with thyristors, PWM at MOSFET half bridge, inverter, controlling of smaller motors

Technical Data

Power Electronics Board

⟩ Short circuit proof, feedback-protected DC 60 V, AC 40 V, 60 W

⟩ 3-Channel-DC-Source
- per Output -40 V…+40 V, settable
- max. current per Output 1,5 A
- common ground 0 V

⟩ Alternating current source with setting range
- Phase voltage from…23 V_{eff}
- Max. current per phase...2 A_{eff}
- Common neutral point 0 V
- Frequency settable

The Power Electronics Training System can be used for training purposes and practical experiments over the entire power electronics sector. The system combines the latest technology with ease of use.
In addition to imparting the basic principles of the functions of power electronic components and modules, the system enables investigations of modern drive solutions consisting of frequency converters and motors in a safe low-voltage range.

No.	Designation	Order no.
1	Power Electronics Board	35000
2	TC® – Fundamentals for use of the Power Electronics Board	35001-ENG
3	Set of plug-in components Power Electronics	35002
o.A.	Set Masks Power Electronics	ETS35000-Z05
4	Supplementary set of plug-in components for basic experiments in power electronics (optional)	35007
5	Direct current motor DC 24 V, 34 W, perm. excited	35003
6	3-phase asynchronous motor AC3 23/40 V, 20 W	35004
7	3-phase synchronous motor AC3 23/40 V, 10 W	35005
8	Set of ring binders	91903
o.A.	Fundamentals and components of power electronics – Practical Experiments	35011CD-ENG
9	Fundamentals and components of power electronics – Practical Experiments, with solutions	35010CD-ENG
o.A.	Rectifying circuits in power electronics Practical Experiments	35013CD-ENG
10	Rectifying circuits in power electronics Practical Experiments, with solutions	35012CD-ENG
11	PC Measurement Interface (optional)	90272
12	TC® – Use of the PC Measurement Interface (optional)	90273-ENG
o.A.	Set of safety bridging plugs for PC Measurement Interfaces	90024

Direct and Alternating Current Motors

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6

7

Technical Data

DC Motor (5)

- Nominal voltage 24 V DC
- Nominal rotation speed 3000 U/min

3-Phase Asynchronous Motor (6)

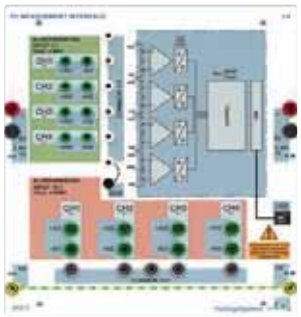
- Star / delta AC3 40/23 V 50 Hz
- Nominal rotation speed 1250 U/min at 50 Hz

3-Phase Synchronous Motor (7)

- Star / delta AC3 40 / 23 V 50Hz
- Nominal rotation speed 1250 U/min at 50 Hz

For all motors: Eddy current break on 4mm safety sockets for applying load to the motor as well as inputs/outputs.

Supplementary Measuring Equipment



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PC Measurement Interface

- A 4-channel measuring instrument with differential intputs. It allows safe measuring of voltages and deduced magnitudes up to 600V AC.
- Display and evaluation of the measuring results on a connected PC by means of a software.

Set of Plug-in Components

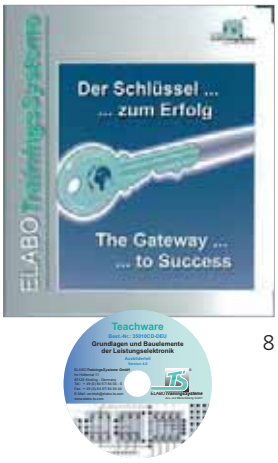
Power Electronics (3)

- For experimenting on fundamentals in power electronics, including storage board for the plug-in components and safety bridging plugs, front panel imprinted with the circuit symbols of the components for plug-in modules and safety bridging plugs.

Supplementary Set for Power Electronics Experiments (optional) (4)

- For experimenting on fundamentals in power electronics to supplement set 32203.

Courseware



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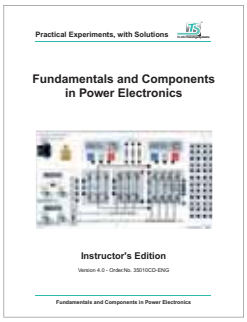
Printed and digital!



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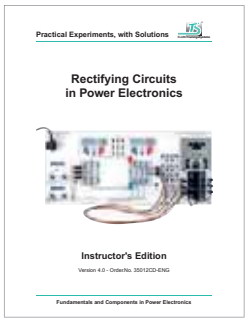
Manual

- Fundamentals and components of power electronics
  - Practical Experiments, with Solutions
- Practical Experiments



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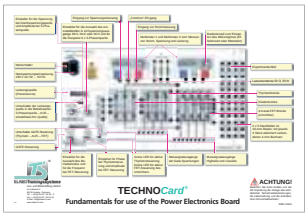
Manual

- Rectifying circuits in power electronics –
  - Practical Experiments, with Solutions
- Practical Experiments

TECHNOCards®



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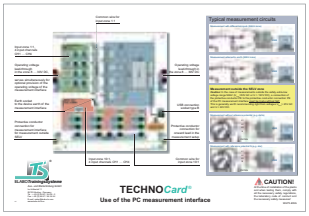

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Name, Position

Company / Institution / Government agency

Street, Post Box

ZIP Code, City, Country

Telephone

Telefax

E-Mail

YOUR INQUIRY

Fax

ELABO*TrainingsSysteme*
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We would like to be contacted:

e By telephone e By e-mail e Please send us an offer:

Qty.	Description / Title	Part No.
	Power Electronics Board	35000
	TECHNOCard® – Fundamentals for use of the Power Electronics Board	35001-ENG
	Set of plug-in components for basic experiments in power electronics	35002
	Supplementary set of plug-in components for basic experiments in power electronics (optional)	35007
	Set of power electronics masks (printed in multi-color front panel design according to color codes)	ETS35000-Z05
	Direct current motor DC 24 V, 34 W, permanently excited	35003
	3-phase asynchronous motor AC3 23/40 V, 20 W	35004
	3-phase synchronous motor AC3 23/40 V, 10 W	35005
	Set of 4mm safety connecting leads for power electronics	90032
	Set of 4mm safety sockets for power electronics (19 mm spacing)	90033
	2mm safety connecting lead, 60 cm, black	91160
	mm safety connecting lead, 60 cm, green	91161
	Set of ring binders	91903
	Fundamentals and components of power electronics – Practical Experiments	35011CD-ENG
	Fundamentals and components of power electronics –Practical Experiments, with solutions	35010CD-ENG
	Set of ring binders	91903
	Rectifying circuits in power electronics – Practical Experiments	35013CD-ENG
	Rectifying circuits in power electronics – Practical Experiments, with solutions	35012CD-ENG
	PC Measurement Interface (optional)	90272
	TECHNOCard® – Use of the PC Measurement Interface (optional)	90273-ENG
	Set of safety bridging plugs for PC Measurement Interfaces	90024