



3 Phase Evaluation Boards

Fully assembled IGBT converters for fast entry into the technology

Purpose of the evaluation board

CONCEPT has developed this range of evaluation boards to allow every developer and designer to quickly enter the world of IGBT technology with a design and protection concept that has been tried and tested on an industrial scale.

The evaluation boards are fully assembled and tested converter circuits for rated powers of 1 kW to over 1000 kW.

These power sections permit every developer, irrespective of whether he is a greenhorn or a fully-professional power-electronics buff, to put safe and reliable power stages into operation within a matter of hours.

Here are only some of the many advantages for the user:

- ▶ The evaluation boards are based on CONCEPT's many years of experience with modern power semiconductors and guide the user to a safe and immediately useable concept that has been tried and tested in industry.
- ▶ The evaluation boards can be used to assemble reliable and safe prototypes of current converters and put them into operation in record time.
- ▶ The evaluation boards and the associated documentation allow developers to take over the technological benefits of the boards into their own equipment design program without the need for costly experimenting. Total product development times are dramatically reduced (time to market).
- ▶ The concept is guaranteed to be fully operational with IGBTs from all manufacturers, both for low and high clock frequencies, and allows simple fast matching to powers of any size.
- ▶ The evaluation boards as well as the drivers used in them are reasonably priced, industrially tested and available at short notice.
- ▶ The evaluation boards have proved their worth both in industry and for training purposes.
- ▶ In brief: A lot of time and money can be saved in the development phase!

Standard or customer-specific evaluation boards?

This price list contains the standard range of evaluation boards from CONCEPT. This range comprises a selection of the most frequently used boards.

Customer-specific evaluation boards can also be supplied. You can obtain a quotation for a customer-specific evaluation board by filling in the form on page 7 of this price list.

The boards from the standard range can usually be supplied somewhat more quickly than customer-specific boards, some of them immediately from stock. Please feel free to address any queries to us.

IGBT converters for customer-specific evaluation boards are available in the range from 1 kW to over 1 MW.

Scope of delivery of the evaluation boards

All evaluation boards are fully operational converter circuits and contain all necessary components in the power section such as IGBTs, link circuit capacitors, symmetric and discharge resistors, copper rails etc., but always without heat sinks.

The standard range of evaluation boards is designed for a maximum link-circuit voltage of 800VDC.

All evaluation boards are extensively tested before delivery.

The evaluation boards are supplied with a driver card that contains intelligent IGBT drivers of the IHD series from CONCEPT. These contain the fully assembled and electrically-isolated driving circuits for all IGBTs, the required over-current and short-circuit protection functions and an electrically-isolated status acknowledgement function. Further information on these can be obtained from the data sheet IHD215/280/680.

All evaluation boards come with documentation containing accurate circuit diagrams, the assembly plans of the power section and the driver card. A specification sheet is also supplied with the boards for standard half-bridge modules. It contains technical data on the IGBT module, as well as the driving and operating points for the protection functions.

The user may calculate the losses as a function of the voltage and current shape, switching frequency etc. from the IGBT specifications given in the data sheet, or may avail himself of the relevant service offer from CONCEPT.

Evaluation boards with standard half-bridge modules

Description

The evaluation boards for standard half-bridge modules are fully assembled three-phase converter circuits and are supplied with documentation containing accurate circuit diagrams, plus the assembly plans of the power section and the driver card. A specification sheet is also supplied which contains technical data on the IGBT module, the drive function and the operating points of the protection functions.

These boards can also be supplied as H-bridges (full bridges) upon request.

The evaluation boards are usually equipped with EUPEC (Siemens) IGBT modules. However, boards with IGBTs from other manufacturers can also be supplied if required.

Price List of Evaluation Boards with Half-Bridge Modules

<i>Type Number / Brief Description</i>	<i>CHF</i>	<i>DEM</i>	<i>USD</i>
TPEB-1-50 (ca 20kW) 6 x 50A/1200V (3 Half-bridge modules)	2190.-	2600.-	1750.-
TPEB-1-75 (ca 30kW) 6 x 75A/1200V (3 Half-bridge modules)	2490.-	2960.-	1990.-
TPEB-1-100 (ca 40kW) 6 x 100A/1200V (3 Half-bridge modules)	2790.-	3320.-	2230.-
TPEB-2-150 (ca 60kW) 6 x 150A/1200V (3 Half-bridge modules)	3290.-	3910.-	2630.-
TPEB-2-200 (ca 80kW) 6 x 200A/1200V (3 Half-bridge modules)	3690.-	4390.-	2950.-

Evaluation Boards with Econopack 3 Modules

Description

These boards contain six-pack IGBT modules from the Econopack 3 series from EUPEC (Siemens) and are assembled with a driver card containing intelligent drivers from CONCEPT's IHD range. An extensive German/English description is supplied. This also contains comprehensive instructions for testing the evaluation boards and putting them into operation, as well as hints on protecting IGBTs and connecting them in parallel, plus accurate circuit diagrams, assembly plans and parts lists of the power sections and driver card.

Price List of Evaluation Boards with Econopack 3 Modules

<i>Type Number / Brief Description</i>	<i>CHF</i>	<i>DEM</i>	<i>USD</i>
TPEB-4-0 6 x 100A/1200V (1 Econopack 3)	1990	2340	1590
TPEB-4-1 6 x 75A/1200V (1 Econopack 3)	1890	2220	1510
TPEB-5-0 6 x 200A/1200V (2 Econopack parallel)	2850	3350	2280
TPEB-5-1 6 x 150A/1200V (2 Econopack parallel)	2590	3050	2070
TPEB-6-0 6 x 300A/1200V (3 Econopack parallel)	3490	4100	2790
TPEB-6-1 6 x 225A/1200V (3 Econopack parallel)	3250	3820	2600

Product Information and Price List

Fax Reply Form for Customer-Specific Evaluation Boards

Please send us your offer for the following customer-specific evaluation board:

Please use a photocopier to enlarge to A4 size. Check the relevant box [X]. Please complete the form and fax it to CONCEPT or to your local CONCEPT distribution partner! If possible, please include a description or a sketch.

Quantity of desired boards: _____ pcs.

Circuit Topology

- 3-phase bridge
- H-bridge (full bridge)
- Half bridge
- Other: _____

Electrical Characteristics

- DC-link voltage: min: _____ V nominal: _____ V max: _____ V
- Current per phase: nominal: _____ A (eff) max: _____ A (eff)
- Total output power: _____ kVA max: _____ kVA
- Switching frequency: _____ kHz
- Other specifications: _____

Application

- Motor drive system
- Switching power supply
- Other: _____

My address:

Forename, Surname

Department/Function

Company

Telephone

Fax

E-Mail

Our business activities are in the sector of

Fax Reply Form for Intelligent Drivers and Services

Please use a photocopier to enlarge to A4 size. Check the relevant box [X]. Please complete the form and fax it to CONCEPT or to your local CONCEPT distribution partner!

Intelligent Drivers

- Overview of intelligent drivers
- Documentation about specific drivers _____

We would be interested in the following services:

- Troubleshooting and support for technical problems
- Customer-specific power stacks

My address:

Forename, Surname
 Department/Function
 Company

Telephone

Fax

E-Mail

Our business activities are in the sector of

Product Information and Price List

Validity of the price list

All prices are final sales prices in the listed currencies (CHF = Swiss francs, DEM = German marks, USD = US dollars) ex-works, exclusive of postage, packaging, insurance etc.

Concept reserves the right to make any technical modifications. Any errors and omissions, intermediary sales or currency fluctuations are excepted.

The general conditions of delivery and payment of CT-CONCEPT Technologie AG apply exclusively.

The price list is valid from 1st February 1999 and supersedes all previous prices.

Delivery dates

Normally ex-stock or within 1-2 weeks. Please feel free to ask!

Manufacturer

Your Distribution Partner

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Version from 07.02.99