

**THE ART OF  
CONTROL**

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## EXTERNAL KEYPAD AND DISPLAY UNIT

# EKB-04

### FOR DAC, DMA AND OTHER

- ◆ Used for Parameterisation of digital amplifiers and controller board and modules series DAC-4 and DMA-2 (other on request)
- ◆ Handheld keypad and display unit
- ◆ Online-change of single parameters or Up-/Download of parameter sets
- ◆ Compact design
- ◆ LCD with two lines
- ◆ Copy function to transfer parameters
- ◆ Accumulator for flexible and independent use
- ◆ Automatic standby mode
- ◆ No PC required for parameter changes
- ◆ Connection to PC possible via USB port
- ◆ Simple operation
- ◆ No additional software required



## 1 Introduction

The keypad and display units EKB-04 feature leading edge technology. This electronic device meets the industrial standards for EMC. This ensures a high interference security and low interference emission.

The performance characteristics are possible through the use of the most current microprocessor technology. System features are essentially determined by the software and provide reserve capacity for further developments and adaptations

## 2 Features

- Handheld keypad and display unit
- Online-change of single parameters or Up-/Download of complete parameter sets
- Compact design
- LCD with two lines
- Copy function to transfer parameters from one amplifier to another amplifier of the same type and software version
- Accumulator for flexible and independent usage
- Automatic standby mode to save accumulator time
- No PC required for parameter changes in field applications
- Connection to PC possible via USB port
- Simple operation
- No additional software required

## 3 General applications

EKB-04 is used for Parameterisation of digital amplifiers and controller board and modules series:

- DAC-4
- DMA-2
- Spezial boards and customer specific applications (on request)

## 4 Technical data

Feature	Range, description
Power supply	24 V DC ca. 100 mA (via power supply from mains); 9 V (accumulator supply) Attention: only use the included or power supply or accumulator! Do <b>not</b> use 9 V batteries!
Ambient temperature	0 °C ... 50 °C
Storage temperature	- 20 °C ... 60 °C
Display	Monochrome; two lines with 8 characters each with back light Contrast and back light adjustable
Keypad	On/Off, Function key, Enter, ESC, Up, Down, Left, Right
<b>Connection</b>	
Power supply	To power supply: Female jack size 2,1 x 5,5 x 12 To accumulator: E-Block connection in accumulator tray
RS232-interface (RJ45)	For connection with amplifier/controller board or to the PC
USB-interface	USB B for connection with PC (Communication via <b>HCSTool</b> *1)
<b>EMC</b>	
EMC	EN 55011 Class B, EN 61000-6-1
<b>Housing</b>	
Dimensions (L x B x H) / Weight	165 x 90 x 30 mm / 245 g
Material	ABS (Acrylnitril-Butadien-Styrol); grey (RAL 7038) and. blue (RAL 5015)
Accumulator tray	On back side of unit, to be opened with out tool; form: E-Block
<b>Charger and power supply</b>	
Make / version	Deutronic / ESC15-24
Input voltage	100 – 240 VAC (range: 90 – 264 VAC), 47 – 67 Hz
Power consumption	0,5 A max
Inrush current during power on	30 A max. / 264 VAC
Output voltage	24 VDC
Current limitation	Hick-Up
Voltage deviation (load change).	± 2 %
Voltage deviation (input change)	± 1 %
Residual ripple	1 % peak/peak
Power cut out protection	10 ms typical / 115 VAC
Ambient temperature	0° C + 40° C
Storage temperature	- 20° C - + 85° C
Short circuit protection	Continuous (automatic re-start)
Isolation voltage	Input / Output 3 kV, routine tested in accordance with EN 60950
EMC	EN 55011 class B, EN 61000-6-1
Connector input	Euro connector
Connector output	Ca. 1,8 m 2-wire cable with male connector 2,1 x 5,5 x 12 mm
Dimensions (L x B x H) / weight	72 x 52 x 35 mm / 130 g

## 4 Technical data (continued)

<b>Accumulator</b>	
Male / version	Panasonic / NiMH Pro plus; 9 V/170 mAh
Operation time	Ca. 2 Std
Charge current	Ca. 20 mA; the accumulator is only charged when the unit is switched on
Time until fully charged	Ca. max. 8 Std.
<b>Connection cable RS232/RJ45</b>	
Make	HCS GmbH
Version	DMA-RS232-DS9F_RJ45_2m
HCS Article-no.	1 860 002 00
Connector side 1	RJ45 8-pole; connection between to DMA / EKB-04
Connector side 2	RJ45 8-pole; connection between to DMA / EKB-04
Connector 3 / adapter	From RJ45 8-pole to Sub-D 9-pole female (RS232) Connection between DMA / EKB and PC (adapter side at PC) or connection between DAC-4 and EKB (adapter side at DAC-4)
Cable length	Ca. 2 m
Weight	Ca. ca. 70 g (with adapter)
<b>USB connection cable</b>	
Make	Farnell (article-no. 8706760)
Version	Pro Signal USB2-102X_USB 2.0 A-B 2 m clear
HCS Article-no.	1 860 005 00
Connector 1	USB A Plug; connection to PC
Connector 2	USB B Plug; connection to EKB
Cable length	Ca. 2 m
Weight	Ca. 60 g

\*1: **HCSTool**: Software for parameterisation for WINDOWS OS. Please order separately.

## 5 Connection / communication possibilities

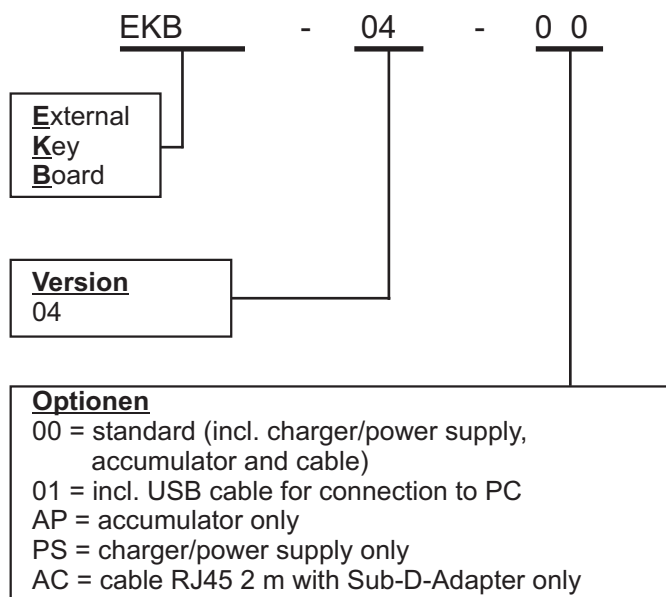
Connection HCS device PC (with HCSTool software)  
via RS232 -interface with RJ45 adapter (e.g. DMA)



Connection HCS device EKB via RS232 interface (e.g. DMA)



## 9 Ordering code



## 10 Our partners and distributors

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