

**THE ART OF
CONTROL**

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COMMISSIONING UNIT FOR DAC-4

CU/DAC-4

**FOR COMMISSIONING, TESTING, TROUBLE SHOOTING
FOR ALL SYSTEMS WHERE DAC-4 BOARDS ARE USED**

- For commissioning, maintenance, tests etc of machines, systems, equipment, valves or for laboratory use
- Universal usable for all versions DAC-4 *1



- Integrated wide range power supply
- Basically all functions of DAC-4 can be tested by means of switches, potentiometers and I/O connections at front and rear
- Versions in 24 V or 12 V available

*1: DAC-4 must be ordered separately!

1 Applications and usage

CU/DAC-4 are generally used for:

For all systems where DAC-4 boards are used

- for commissioning
- for testing
- for maintenance of all systems, machines, installations, equipment applications etc.
- during trouble shooting
- in laboratories

- used in conjunction with one DAC-4

- Basically all digital and analogue I/O signals of DAC-4 are accessible through 4 mm jacks at rear of unit
- Most of the signals can also be generated (or simulated) at the unit itself
- Digital signals are applied by means of toggle switches (for selection of set points, direction, enable signal etc.)
- For analog signals potentiometers and switches are used in order to apply signals to set point and feedback inputs
- Additionally the 24 V supply voltage and the reference voltage of +/- 10 V is available at jacks
- 2 x 3 jacks at rear for connection of solenoid A and B
- Mains cable for European countries included. Other on request
- Optional available for 12 V systems
- The DAC-4 is not included in the delivery. Please order separately.

2 Features

- Compact and light unit; easy to transport, rugged design
- 19" Rack 42TE built into a standard metal housing with carriage handles
- Wide range power supply included for easy world wide usage
- Unit is tested for safety of the insulation and effectiveness of the PE connection

3 Main technical data

Feature	Range, characteristics
Supply voltage	Wide range power supply. Schroff type: MAX 124; 13100-105 Nominal/operational: 100 - 240 V AC / 90 - 254 V; 50 / 60 Hz Mains/line current @ 90 VAC: 1.6 A Efficiency: 75 % Current at switch-on (@ 230 VAC): < 20 A Output parameters: max. output W (50° C): 100 / 80 W Output voltage: 24 V Output current: 4.2 / 3.2 A (< 50° C) / : 3.2 / 2.6 A (70° C) Short-circuit protection Mains/line fuse (high breaking slow): 4 A / 250 VAC, 5 x 20 mm EN60127-2/V Ambient temperature operation/storage: 0 + 70° C / - 20 ... + 85° C Detailed data sheet and CE declaration on request or download from: http://www.pentairprotect.de/de/emea/13100-105-3 . <u>Version with 12 V output voltage on request!</u>
Card slot	For 1 DAC-4 board. 10 TE wide with two rails and connector DIN 41 612, 48 pol. form F
Front elements	1 x switch power on/off; 1 x switch selection direction; 1 x switch enable 8 x switch digital inputs set point, reset ramp and digital inputs general 2 x switch analogue command selection; 2 x switch analogue feedback selection 2 x 10-turn potentiom. analogue command; 1 x 10-turn potentiom. analogue feedback
Rear elements	1 x Main in receptable (IEC 60320-1 / C13) combined with fuse; 1 x mains on/off switch 1 x separate fuse 14 x groups of 4 mm jacks for all kinds of analogue and digital I/O signals (35 jacks total) 1 x 3.5 mm jack for analogue command (tip and sleeve connector)
Housing	Compact housing with two handles Housing configuration: ventilated (IP20) Material: complete metal Dimensions approx.: (w x h x d) 235 (247) x 132 x 256 (300) mm (42 TE / 3 HE) Weight: 3.2 kg (without cables and DAC-4)
Unit tested	In accordance with VDE 0701-1/9 and BGV A3

4 Safety and other remarks



Only authorized and trained personal should perform work at and with this unit

Before connecting the unit to mains supply make sure that nothing is damaged!

Warning: Do not connect the unit if the mains cord or the unit itself is damaged or if the protective earth connection is not effective!



Disconnect mains before opening the unit!

Attention: Danger of electrical shock!

The mains supply cord must be equipped with protective earth (PE green/yellow)!

The mains input is including a fuse and is on the rear side (F1: 2.5 A T for 220/240 V AC)

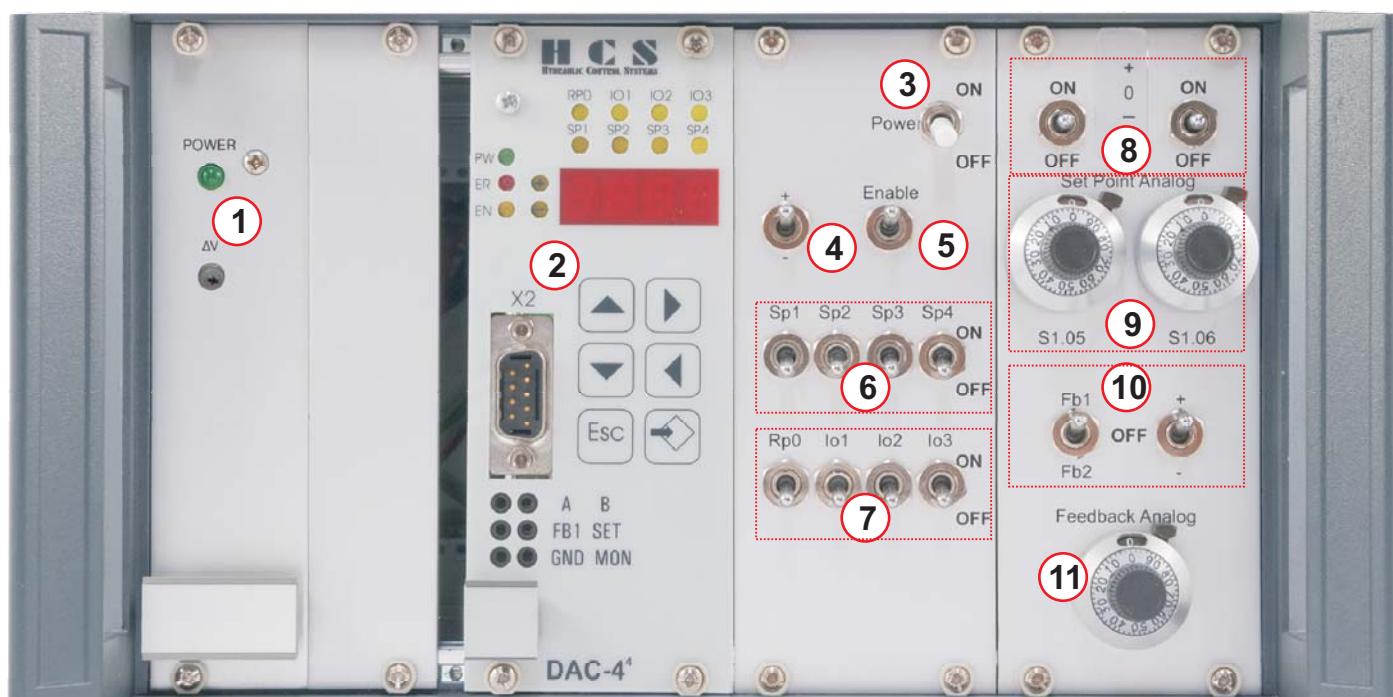
An additional fuse is placed above the mains connector. This fuse is protecting the secondary circuit (F2: 2,5 A T)



Some output signals are only present when a DAC-4 board is inserted.

5 Front view

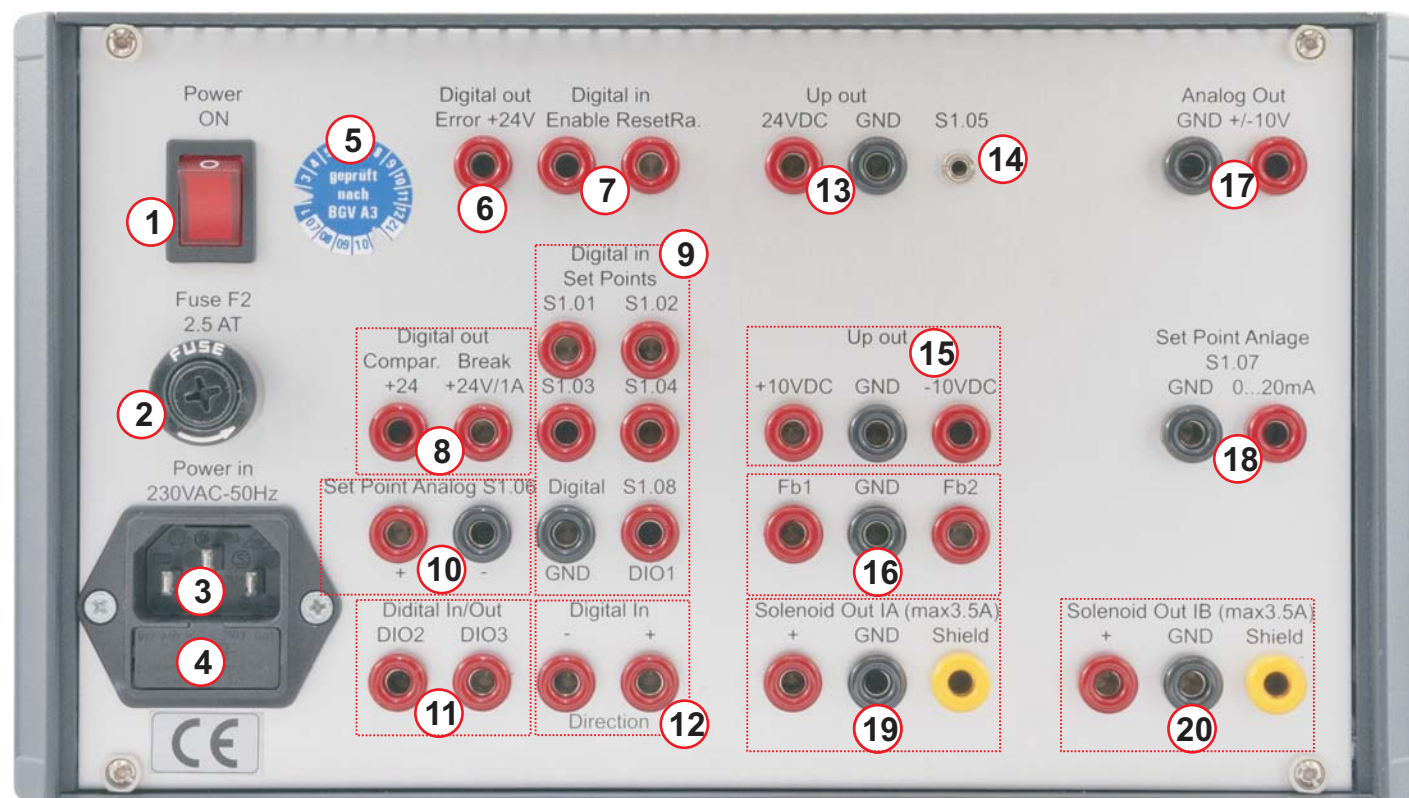
Front control elements of CU/DAC-4:



#	Feature, element
1	Wide range power supply. Schroff type: MAX 124; 13100-105 Details see previous page!
2	DAC-4 board; all versions possible. Please order separately.
3	Power on/off for DAC-4
4	Digital input „Direction +“ / „Direction -“
5	Digital input „Enable“
6	Digital inputs „Set point 1 - 4“ („Sp1“, „Sp2“, „Sp3“, „Sp4“)
7	Digital inputs „Reset Ramp“ (Rp0); Digital „I/O 1 - 3“ („Io1“, „Io2“, „Io3“)
8	Selection switches for analogue command input „S1.05“ and „S1.06“
9	10 turn potentiometers for analogue command input „S1.05“ and „S1.06“
10	Selection switches for analogue feedback input „Fb1“ and „Fb2“
11	10 turn potentiometer for analogue feedback input „Fb1“ / „Fb2“

6 Rear view

Rear connection elements of CU/DAC-4:



#	Feature, element
1	Mains on/off switch (illuminated)
2	Secondary fuse F2 (2.5 A T)
3	Mains in receptable
4	Primary fuse (2.5 A M)
5	Label for performed BGV A3 test
6	Digital output „Error“ (24 V)
7	Digital inputs „Enable“ and Reset Ramp“
8	Digital outputs „Comparator“ and „Break“ (24 V)
9	Digital inputs „Set point 1 - 4“ („S1.01“, „S1.02“, „S1.03“, „S1.04“, „S1.08“, „DIO1“)
10	Analogue input set point „S1.06“
11	Digital I/O „DIO2“, „DIO3“
12	Digital inputs „Direction +“, „Direction -“
13	Supply out 24 V DC
14	Analogue input set point „S1.05“; 3 mm jack
15	Reference voltage out „+ 10 V DC“, „-10 V DC“
16	Analogue input feedback 1 and 2 „Fb1“, „Fb2“
17	Analogue output „+/- 10 V“
18	Analogue input set point current „S1.07“
19	Solenoid output A „IA“
20	Solenoid output B „IB“

7 Accessories and Options

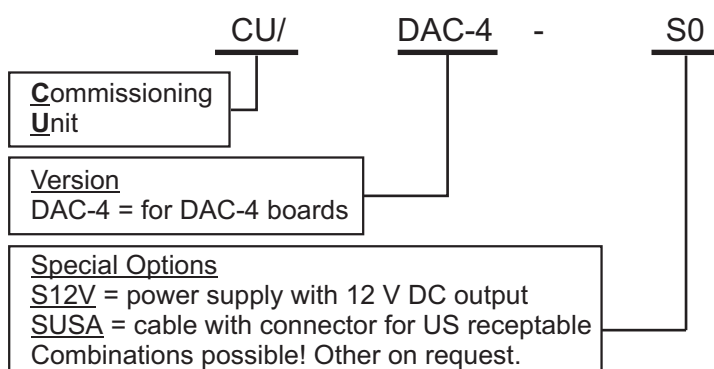
Name	Description
DAC-4	Please order separately. Refer to DAC-4 data sheet for details
HCSTool	Software for parameterization, operation, monitoring, storage and documentation of adjustments. In English, French and German on CD (free download available). Please follow this link in order to download the most recent version of HCSTool: http://www.h-c-s-gmbh.de/download/
DAC-4-PC-2xDS9F	Interface cable for communication between PC and DAC-4 for direct usage at RS232 interface; 2 x Sub-D 9-pole connector female
USB-RS232-DS9F	As above but w. USB-adaptor. 1 x connector Sub-D 9-pole, w. 2,5 or 10 m cable
EKB-04	EKB-04 Handheld keypad and display unit for parameter setting and copying

Not to scale!

DAC - all versions *1			
			
HCSTool	Interface Cable	Interface Cable	EKB-4
			

*1: CU/DAC can not be used for DAC-4 with PROFIBUS interface!

8 Ordering code



Ordering code example:

Version with 12 V power supply and standard european mains cable

CU/DAC-4-S12V

CU/DAC-4

Revision: R01

Data Sheet

14/03/2015

9 Our partners and distributors

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9 Our partners and distributors

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