

# DCH-Series

## DC UPS DIN rail „DCH-Series“

**NEU / NEW**

**DIN rail power supply  
with UPS function  
12, 24, 48VDC  
40-500W**



### Reliability and availability in a small space.

The DCH series power supplies with UPS function are the most compact of its kind and impress with extraordinary overload behavior. They are characterized by a variety of applications and their robust IP 20 housing is the perfect solution for all DIN rail applications.

### Extra performance using Power Boost mode

By the power boost mode, the DCH offers 300% of the rated power for 4 seconds or 200% for 4 minutes. Thus, it can be used as a reliable overload protection and is ideally suitable for consumers with high inrush currents, such as electric motors.

### Wide input voltage range:

The DC UPS can be operated in an extremely wide input voltage range of 90 to 305 V.

### Reliable technology:

The components of the DCH series represent a highly reliable and efficient technology with an MTBF of > 300,000 h according to IEC61709.

### Effective technology:

Thanks to the use of advanced technology, the DCH series reaches an efficiency of more than 91%.

### Communication and control

Electrically isolated relay contacts are available to monitor the power supply.

### Further communication interfaces:

MODBUS for external display devices  
Integration and configuration via separate software  
Interface for parallel operation: redundancy or capacity expansion on certain models possible (see specifications).

### Optionally temperature-controlled charging:

External temperature sensor for optimal temperature-controlled charging voltage.

### One device for many battery types

Since the user can select several predefined charging curves via jumper, the DCH series is suitable for all types of batteries. Standard open and sealed AGM or lead-acid batteries can be used.

Ni-Cd and Li-ion batteries can be used optionally.

Recharging is done via automatic 4-step battery charge according to IUoU. A "boost" charge is selectable.

### Wide range of applications:

A variety of certifications (including UL 60950-1, CE) enables the global use of the DCH series as well as in areas where specific standards are required.

### Extensive diagnostics:

Errors are detected early through comprehensive measurements, such as: battery not connected, sulfated battery, short circuit, reverse polarity of the connections or suitability of the type of battery (voltage test).

### Features:

- Excellent overload behavior, up to 300%
- Parallel function for increased power
- Wide input voltage range of 90 - 305V
- High efficiency up to > 91%
- MTBF > 300,000 hours according to IEC 61709
- Short circuit and reverse polarity protection on output
- Dry contacts
- Suitable for open, sealed AGM / lead-acid batteries / optional Ni-Cd / Lilon batteries
- Permanent diagnosis of the battery status
- 4-step battery charge according to IUoU charging curve
- „Boost“ charge selectable
- Extensive battery monitoring:
  - Battery not connected
  - Sulphated battery
  - Battery short circuit
  - Suitability of the battery type (voltage test)
- Matching battery unit for DIN rail mounting
- Protection class IP20
- DIN rail mounting
- Extremely compact design
- 24 months warranty

# Specifications

Model		DCH1203A 12V, 3A	DCH1206A 12V, 6A	DCH1210A 12V, 10A	DCH1235AP 12V, 35A	
<b>Input</b>	Rated voltage [VAC]	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277	115 bzw. 230 - 277	
	Voltage range [VAC]	90 - 305	90 - 305	90 - 305	90 - 135 bzw. 180 - 305	
<b>Output (Normal mode)</b>	Rated voltage [VDC]	12	12	12	12	
	Rated current [A]	3	6	10	35	
	Power max. [W]	36	72	120	420	
	Efficiency (@ 50% I <sub>n</sub> )	≥89%	≥89%	≥89%	≥90%	
	Redundant operation or power enhancement available	No	No	No	Yes	
<b>Output (Battery mode/charging mode)</b>	Voltage range [VDC] @ I <sub>n</sub>	10 - 14.4	10 - 14.4	10 - 14.4	10 - 14.4	
	Peak current [A]	4 seconds	9	18	30	105
		4 minutes	6	12	20	70
	Deep discharge protection [VDC]	9.5 ± 0.5	9.5 ± 0.5	9.5 ± 0.5	9.5 ± 0.5	
	Charge current adjustment range	10-100% (max. I <sub>n</sub> )	10-100% (max. I <sub>n</sub> )	10-100% (max. I <sub>n</sub> )	10-100% (max. I <sub>n</sub> )	
<b>Communication</b>	Relay contacts	Messages: normal power or backup operation, discharged or defective battery				
	Aux Output (RJ 45)	No	No	No	Optional	
<b>Mechanical/environment</b>	Dimensions WxHxD [mm]	65x115x135	65x115x135	65x115x135	150x115x135	
	Weight [kg]	0.60	0.60	0.60	1.55	
	Operating temperature	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	
	Humidity (non condensing)	95%	95%	95%	95%	

Model		DCH2403A 24V, 3A	DCH2405A 24V, 5A	DCH2410AS 24V, 10A	DCH2420AP 24V, 20A	
<b>Input</b>	Rated voltage [VAC]	115 - 230 - 277	115 - 230 - 277	115 bzw. 230 - 277	115 bzw. 230 - 277	
	Voltage range [VAC]	90 - 305	90 - 305	90 - 135 bzw. 180 - 305	90 - 135 bzw. 180 - 305	
<b>Output (Normal mode)</b>	Rated voltage [VDC]	24	24	24	24	
	Rated current [A]	3	5	10	20	
	Power max. [W]	72	120	240	480	
	Efficiency (@ 50% I <sub>n</sub> )	≥89%	≥89%	≥83%	≥90%	
	Redundant operation or power enhancement available	No	No	No	Yes	
<b>Output (Battery mode/charging mode)</b>	Voltage range [VDC] @ I <sub>n</sub>	22 - 28.8	22 - 28.8	22 - 28.8	22 - 28.8	
	Peak current [A]	4 seconds	9	15	30	60
		4 minutes	6	10	20	40
	Deep discharge protection [VDC]	19.5 ± 0.5	19.5 ± 0.5	19.5 ± 0.5	19.5 ± 0.5	
	Charge current adjustment range	10-100%	10-100%	10-100%	10-100%	
<b>Communication</b>	Relay contacts	Messages: normal power or backup operation, discharged or defective battery				
	Aux Output (RJ 45)	No	No	No	Optional	
<b>Mechanical/environment</b>	Dimensions WxHxD [mm]	65x115x135	65x115x135	100x115x135	150x115x135	
	Weight [kg]	0.60	0.60	0.85	1.55	
	Operating temperature	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	
	Humidity (non condensing)	95%	95%	95%	95%	

Model		DCH4805AS 48V, 5A	DCH4810AP 48V, 10A	
<b>Input</b>	Rated voltage [VAC]	115 bzw. 230 - 277	115 bzw. 230 - 277	
	Voltage range [VAC]	90 - 135 bzw. 180 - 305	90 - 135 bzw. 180 - 305	
<b>Output (Normal mode)</b>	Rated voltage [VDC]	48	48	
	Rated current [A]	5	10	
	Power max. [W]	240	480	
	Efficiency (@ 50% I <sub>n</sub> )	≥83%	≥91%	
	Redundant operation or power enhancement available	No	Yes	
<b>Output (Battery mode/charging mode)</b>	Voltage range [VDC] @ I <sub>n</sub>	44 - 57.6	44 - 57.6	
	Peak current [A]	4 seconds	15	30
		4 minutes	10	20
	Deep discharge protection [VDC]	39 ± 1.0	39 ± 1.0	
	Charge current adjustment range	10-100%	10-100%	
<b>Communication</b>	Relay contacts	Messages: normal power or backup operation, discharged or defective battery		
	Aux Output (RJ 45)	No	Optional	
<b>Mechanical/environment</b>	Dimensions WxHxD [mm]	100x115x135	150x115x135	
	Weight [kg]	0.85	1.55	
	Operating temperature	-25 ~ +70°C	-25 ~ +70°C	
	Humidity (non condensing)	95%	95%	

## Standards and certifications

Conformity: IEC / EN 60335-2-29  
Chargers: EN60950 / UL 60950-1

EEC EMC Directive; 2006/95 / EC

DIN 41773 (charging cycle)

Emission standard for industrial environments: EN 61000-6-4

Immunity for industrial environments: EN 61000-6-2

Immunity to electrical fast transient (burst): EN 61000-4-4 / EC

Immunity to Surge (Surge): EN 61000-4-5