Altech Corp.®

Serving the Automation & Control Industry since 1984

Certified System ™
ISO 9001
QMI-SAI Global

DC-UPS Ultra-Capacitor Back-up Systems

Altech Corp.®

Since 1984, Altech Corporation has grown to become a leading supplier of automation and industrial control components. Headquartered in Flemington, NJ, Altech has an experienced staff of engineering, manufacturing and sales personnel to provide the highest quality products with superior service. This is the Altech Commitment!

With experienced Product Engineers and Customer Service personnel, Altech provides solutions to your most pressing application challenges. All with one thought in mind - ***to ensure that we solve your problem the first time!***

Altech's Commitment

Altech's Automation and Control components meet applicable national and international standards, such as UL, NEC, CSA, IEC and VDE. Altech provides these products with superior customer service and delivery through a ISO 9001 Quality Management system, which stresses continuous process improvement. We perform these services with honesty and integrity. All Altech employees are trained in this Quality Management System and are dedicated to achieve these goals. Altech's quality system has been ISO approved since 1999.

INTRODUCTION

Altech Corp.® has partnered with J.Scheider Elektrotechnik to bring you their state of the art DC-UPS back up systems. Working in conjunction with a complimentary power supply, ultra capacitor modules and battery back up modules reliably supply energy in peak power demand conditions as well as power outage scenarios. DC-UPS from Altech Corp.® help to ensure the safe and continued operation of critical and necessary functions and help to minimize operational loss in the event of a power failure. In line with Altech's commitment to its customers, J. Schneider creates quality products whose service life and function is thoroughly superior to that of its counterparts in the DC-UPS field.

SOME OF THE MANY APPLICATIONS:

- Data Centers
- Industrial PC
- Textile Machinery
- Assembly Production
- Electronic Automation
- Molding Machines
- Automotive Industry
- Packaging
- Feeding Systems
- Steel Production
- Wind Turbines
- Disability Assistance
- Tunneling Machines
- Telecommunications and Control
- Ship Building
- Safety Engineering
- Building Technology
- Automation
- Rail Vehicles
- Water Supply
- Machinery Construction
- Power Supply
- Stations Control Technology
- Switchgear Production
- Photovoltaik

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C-TEC / AC-C-TEC / CTEC-P / CEM

Ultra Capacitor based technologies provide an attractive yet efficient platform for both simple and complex applications.

DC-UPS systems are an absolute must in a world of uncertainties. DC-UPS helps to prolong the operation of machinery and controlled processes in the event of power outages or in case of power dips and sags.

Altech Corporation offers a wide variety of products for DC-UPS systems starting at 2 A and up to 40 A along with monitoring / setup software, and comprehensive support

KEY FEATURES

- Works primarily in an online parallel configuration
- Controlled shut down functions
- Up to 40 A low discharge protection through load rejection
- Ultra Capacitors have 15 years of life
- Quick back up recharges due to the nature of Ultra Capacitors
- DIN rail mount

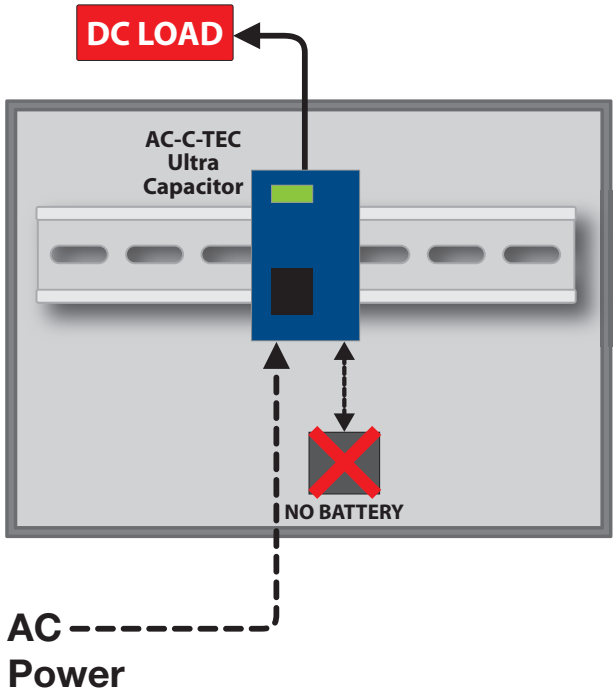
The DC Back-Ups from Altech Corp.® utilize Ultra Capacitors as an innovative way to store energy within a compact design. In the event of a main power supply interruption, the energy stored in the Ultra Capacitors is released. The load is energized from the buffer module, until it‘s depleted.

Back up times depend on the state of the charge of the Ultra Capacitors and the load in which they are supplying. Compared with standard buffer modules, Ultra Capacitor units are capable of prolonged back-up times (up to 55 minutes) and fast discharges. Capacitors excel at controlled shutdown functions and allowing for the protection of computer systems. Back-up times are dependent on the load and amount of Capacitors within the unit. Back up times can be calculated to better serve the requirements of required functions.

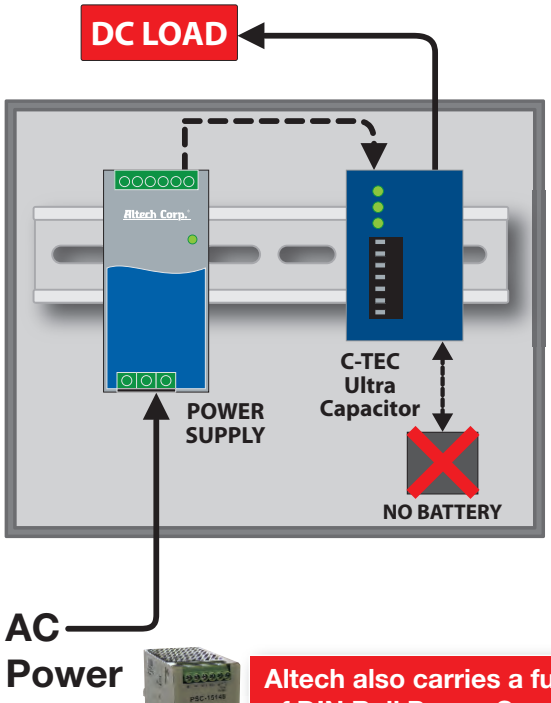
DC Power Solutions

12, 24 and 48V DC

DC BACK UP with AC Input
(Power Supply built in)



DC BACK UP with DC Input
(Power Supply required)



Altech also carries a full line of DIN Rail Power Supplies and Accessories. See Preview on pages 60-61.

BACK UP TIME CALCULATION

Back up time = energy/ (voltage x current)
A table of back up times has been added for your convenience (pg. 32)

BENEFITS OF CAPACITOR TECHNOLOGIES

- Environmentally safe
- Free of toxic chemicals
- Virtually maintenance free
- Wide operating temperatures
- Long operational life (15 years or longer!)
- Compact and convection cooled
- Seamless switch overs
- No need to replace or maintain batteries
- Cost effective over time
- Resists shock and vibrations
- Quick buffer times

Through the innovative use of Ultra-Capacitors, CTEC presents itself as an attractive backup option for a variety of applications. In the event of a power interruption, the energy of the enclosed Ultra-Capacitors is released and power is supplied for a determined amount of time. Capacitor based technology comes in variety of configurations all of which serve a broad spectrum of functions.

CTEC

Capacitor driven back up UPS.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Energy Content
12V DC	C-TEC1203-1	NCPA0727G10002	12 V DC	12 V DC	3 A	1 KJ
	C-TEC1205-5[1]	NCPA0608G01001	12 V DC	12 V DC	5 A	5 KJ
	C-TEC1208-20[2]	NCPA0607G01001	12 V DC	12 V DC	8 A	20 KJ
	C-TEC1210-1[3]	NCPA0609G01002	12 V DC	12 V DC	10 A	1 KJ
	C-TEC1210-10[4]	NCPA0606G01001	12 V DC	12 V DC	10 A	10 KJ
24V DC	C-TEC2403-05	NCPA0727G01001	24 V DC	24 V DC	3 A	0.5 KJ
	C-TEC2403-1	NCPA0727G01002	24 V DC	24 V DC	3 A	1 kJ
	C-TEC2405-5[1]	NCPA0608G01001	24 V DC	24 V DC	5 A	5 KJ
	C-TEC2408-20[2]	NCPA0607G01001	24 V DC	24 V DC	8 A	20 KJ
	C-TEC2410-1[3]	NCPA0609G01002	24 V DC	24 V DC	10 A	1 KJ
	C-TEC2410-10[4]	NCPA0606G01001	24 V DC	24 V DC	10 A	10 KJ
	C-TEC2420-8	NCPA0747G01003	24 V DC	24 V DC	20 A	8 KJ

Used in conjunction with a separate power supply (reference the Altech power supply catalog).
Part numbers with note 1, 2, 3, or 4 each use the same module consecutively.

C-TEC P

Unlike its C-TEC counterpart, C-TEC P's are capable producing an output spike for applications requiring a temporary surge of power.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Energy Content
12V DC	C-TEC1225 P	NCPA1301G30001	12 V DC	12 V DC	25 A	0.5 KJ
24V DC	C-TEC2425 P	NCPA1301G10001	24 V DC	24 V DC	25 A	1.2 KJ
	C-TEC2440 P	NCPA1034G01001	24 V DC	24 V DC	40 A	4 KJ
48V DC	C-TEC4815 P	NCPA1301G20001	48 V DC	48 V DC	15 A	1 KJ

Used in conjunction with a separate power supply (reference the Altech power supply catalog).

AC-C-TEC, AC-C-TE

AC-C-TEC modules improve on C-TEC design by incorporating a built in power supply (AC input) for maximum convenience and ease.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Energy Content
12V DC	AC-C-TEC1203-1	NCPA0724G10002	115-230 V AC	12 V DC	3 A	1 KJ
24V DC	AC-C-TEC2403-05	NCPA0724G01001	115-230 V AC	24 V DC	3 A	0.5 KJ
	AC-C-TEC2403-1	NCPA0724G01017	115-230 V AC	24 V DC	3 A	1 KJ
	AC-C-TEC2403-1-400	NCPA0724G01020	3 X 400 V AC	24 V DC	3 A	1 KJ
	AC-C-TEC2410-10	NCPA1430G01001	100-240 V AC	24 V DC	10 A	10 KJ
	AC-C-TEC2420-8	NCPA0746G01003	3 X 400 V AC	24 V DC	20 A	8 KJ

CEM (Capacitor Extension Module)

Designed to give existing capacitor modules extended buffer times allowing for applications with increased power demands.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Energy Content
24V DC	CEM-1	NCBA0739G01001	24 V DC	0 V…26.4 V DC	3 A	1
	CEM-2	NCBA0739G01002	24 V DC	0 V…26.4 V DC	3 A	2 KJ
	CEM-8	NCBA0748G10003	24 V DC	0 V…26.4 V DC	20 A	8 KJ
	CEM-16	NCBA0748G10001	24 V DC	0 V…26.4 V DC	20 A	16 KJ
12V DC	CEM-12-1	NCBA0739G10003	12 V DC	0 V…13.2 V DC	3 A	0.6 KJ
	CEM-12-2	NCBA0739G1004	12 V DC	0 V…13.2 V DC	3 A	1.23 KJ

Unusable by itself, designed to increase back up times of capacitor modules.

DC UPS
APPLICATIONS

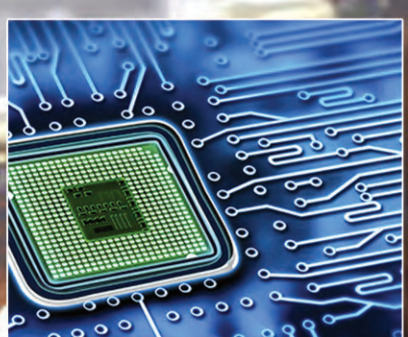
Textile Machinery

Industrial PC

Data Centers

Molding Machinery

Automotive Industry



Electronic Automation

Feeding Systems

Packaging

Steel Production

Wind Turbines

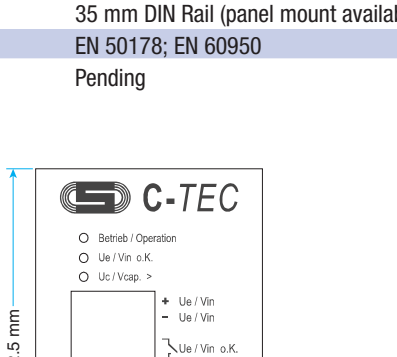
Tunneling Machines

C-TEC1203-1

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Pending

c UL us
PENDING

Part No.	C-TEC1203-1
Model Number	NCPA0727G10002
INPUT	
NOMINAL INPUT VOLTAGE	12 V DC -15% + 25%
NOMINAL FREQUENCY	47-63 Hz
MAX NOMINAL INPUT CURRENT	3.1 A
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12.3 V DC +2 % -4 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.5 V DC ± 2 %
NOMINAL OUTPUT CURRENT	2 A DC (with nominal capacity); 3 A DC (with reduced capacity)
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.4 Kg. (0.88lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	Pending



Mounting depth:
116mm

C-TEC1210-1 & C-TEC2410-1

- 12V DC and 24V DC outputs in one module
- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- UL Listed
- USB Interface

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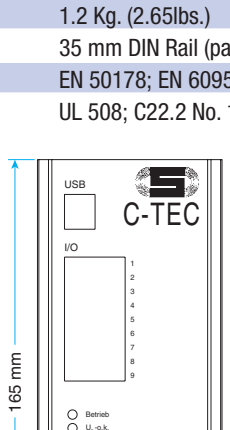
USB

Part No.	C-TEC1210-1	C-TEC2410-1
Model Number	NCPA0609G01002	NCPA0609G01002
INPUT		
NOMINAL INPUT VOLTAGE	12 V DC ± 12.5%	24 V DC ± 12.5 %
NOMINAL FREQUENCY	–	–
MAX NOMINAL INPUT CURRENT	10 A	10 A
OUTPUT		
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12 V	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.7 V ± 4%	22.6 V ± 2%
NOMINAL OUTPUT CURRENT	10 A DC	10 A DC
EFFICIENCY	>90%	>90%
GENERAL DATA		
BUFFER TIME	DEPENDENT ON THE LOAD	
ENERGY CONTENT	1 KJ	
DEGREE OF PROTECTION	IP20	
OPERATING TEMP.	-40 to 60 °C	
STORAGE TEMP.	-40 to 60 °C	
RELATIVE HUMIDITY	95 % non-condensing	
MAX ALTITUDE (without derating)	2000 m. above sea-level	
DIMENSIONS	165 mm x 70 mm x 138 mm (6.49in. x 2.75in. x 5.43in.)	
WEIGHT	1.2 Kg. (2.65lbs.)	
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)	
NORMS AND REGULATIONS	EN 50178; EN 60950	
UL LISTING	UL 508; C22.2 No. 107.1-01	



Mounting depth:
138 mm

C-TEC1210-10 & C-TEC2410-10

- 12V DC and 24V DC outputs in one module
- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed
- USB Interface

c UL us
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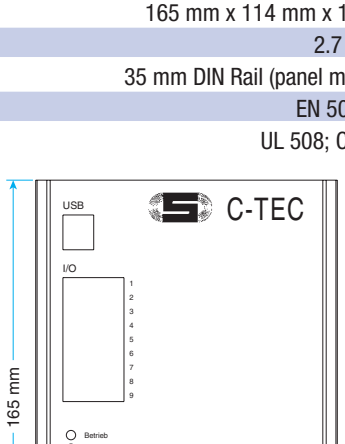
USB

Part No.	C-TEC1210-10	C-TEC2410-10
Model Number	NCPA0606G01001	NCPA0606G01001
INPUT		
NOMINAL INPUT VOLTAGE	12 V DC ± 12.5%	24 V DC ± 12.5 %
MIN. NOMINAL INPUT VOLTAGE FOR LOADING OPERATION	–	–
MAX NOMINAL INPUT CURRENT	10 A DC	10 A
OUTPUT		
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12 V	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.7 V ± 4%	23.5 V ± 2%
NOMINAL OUTPUT CURRENT	10 A DC	10 A DC
EFFICIENCY	>90%	>90%
GENERAL DATA		
BUFFER TIME	DEPENDENT ON THE LOAD	
ENERGY CONTENT	10 KJ	
DEGREE OF PROTECTION	IP20	
OPERATING TEMP.	-40 to 60 °C	
STORAGE TEMP.	-40 to 60 °C	
RELATIVE HUMIDITY	95 % non-condensing	
MAX ALTITUDE (without derating)	2000 m. above sea-level	
DIMENSIONS	165 mm x 114 mm x 145 mm (6.5in. x 4.49in. x 5.7in.)	
WEIGHT	2.7 Kg. (5.95lbs.)	
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)	
NORMS AND REGULATIONS	EN 50178; EN 60950	
UL LISTING	UL 508; C22.2 No. 107.1-01.	



Mounting depth:
145 mm

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C-TEC2403-05

DIN MOUNT 35mm CE RoHS COMPLIANT

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

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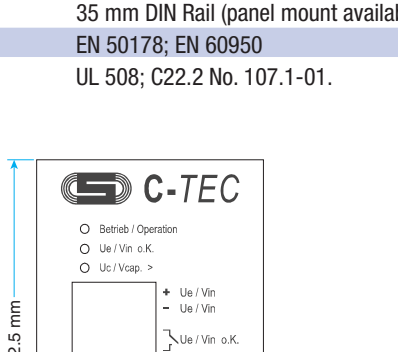
Part No.	**C-TEC2403-05**
Model Number	C-TEC2403-05
INPUT	NCPA0727G01001
NOMINAL INPUT VOLTAGE	24 V DC ± 12.5%
MIN. NOMINAL INPUT VOLTAGE FOR LOADING OPERATION	23.4 V DC
MAX NOMINAL INPUT CURRENT	3 A
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.5 V DC 2 %
NOMINAL OUTPUT CURRENT	3 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	.5 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 x 60 x 116 mm (3.64in. x 2.36in. x 4.57in.)
WEIGHT	.5 Kg. (1.1lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	UL 508; C22.2 No. 107.1-01.



C-TEC2403-1

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
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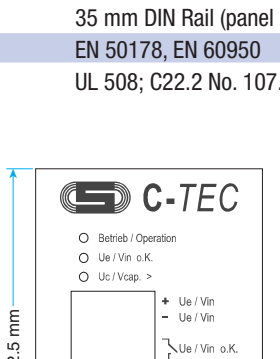
Part No.	C-TEC2403-1
Model Number	NCPA0727G01002
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC ± 12.5%
MIN. NOMINAL INPUT VOLTAGE FOR LOADING OPERATION	23.5 V
MAX NOMINAL INPUT CURRENT	3 A
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23 V DC ±2%
NOMINAL OUTPUT CURRENT	3 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	95 mm x 60 mm x 116mm (3.74in. x 2.36in. x 4.57in.)
WEIGHT	.58 Kg. (1.28lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178, EN 60950
UL LISTING	UL 508; C22.2 No. 107.1-01



Mounting depth:
116mm

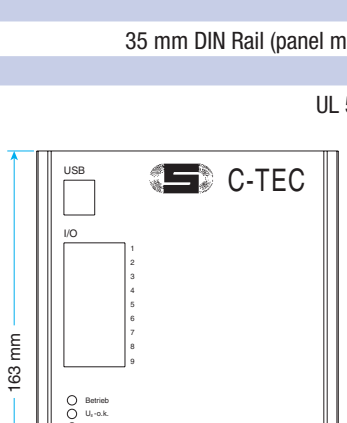
C-TEC1205-5 & C-TEC2405-5

- 12V DC and 24V DC outputs in one module
- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed
- USB Interface

E237077

USB

Part No.	C-TEC1205-5	C-TEC2405-5
Model Number	NCPA0608G01001	NCPA0608G01001
INPUT		
NOMINAL INPUT VOLTAGE	12 V DC ± 12.5%	24 V DC ± 12.5 %
MIN. NOMINAL INPUT VOLTAGE FOR LOADING OPERATION	–	–
MAX NOMINAL INPUT CURRENT	5 A	5 A
OUTPUT		
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12 V	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.7 V ± 4%	23.5 V ± 2%
NOMINAL OUTPUT CURRENT	5 A DC	5 A DC
EFFICIENCY	>90%	>90%
GENERAL DATA		
BUFFER TIME	DEPENDENT ON THE LOAD	
ENERGY CONTENT	5 KJ	
DEGREE OF PROTECTION	IP20	
OPERATING TEMP.	-40 to 60 °C	
STORAGE TEMP.	-40 to 60 °C	
RELATIVE HUMIDITY	95 % non-condensing	
MAX ALTITUDE (without derating)	2000 m. above sea-level	
DIMENSIONS	163 mm x 114 mm x 145mm (6.4in. x 4.48in. x 5.7in.)	
WEIGHT	1.7 Kg (3.74lbs.)	
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)	
NORMS AND REGULATIONS	EN 50178; EN 60950	
UL LISTING	UL 508; C22.2 No. 107.1-01.	



Mounting depth:
145 mm

C-TEC2408-20 & C-TEC1208-20

- 12V DC and 24V DC outputs in one module
- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed
- USB Interface

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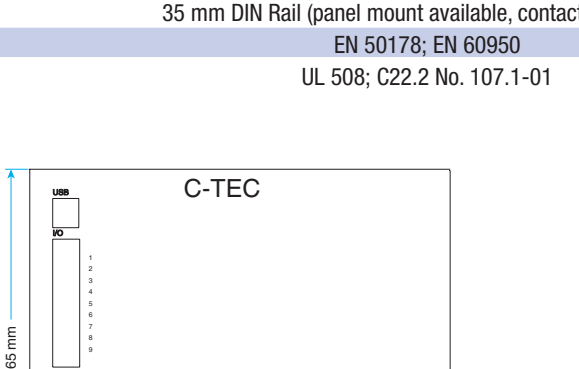
USB

Part No.	C-TEC1208-20	C-TEC2408-20
Model Number	NCPA0607G01001	NCPA0607G01001
INPUT		
NOMINAL INPUT VOLTAGE	24 V DC ± 12.5 %	24 V DC ± 12.5 %
MAX NOMINAL INPUT CURRENT	8 A	8 A
OUTPUT		
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12 V	24 V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.7 V ± 4%	23.5 V ± 2%
NOMINAL OUTPUT CURRENT	8 A DC	8 A DC
EFFICIENCY	>90%	>90%
GENERAL DATA		
BUFFER TIME	DEPENDENT ON THE LOAD	
ENERGY CONTENT	20 KJ	
DEGREE OF PROTECTION	IP20	
OPERATING TEMP.	-40 to 60 °C	
STORAGE TEMP.	-40 to 60 °C	
RELATIVE HUMIDITY	95 % non-condensing	
MAX ALTITUDE (without derating)	2000 m. above sea-level	
DIMENSIONS	165 mm x 184 mm x 145 mm (6.5in. x 7.24in. x 5.7in)	
WEIGHT	3.4 Kg. (7.49lbs.)	
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)	
NORMS AND REGULATIONS	EN 50178; EN 60950	
UL LISTING	UL 508; C22.2 No. 107.1-01	



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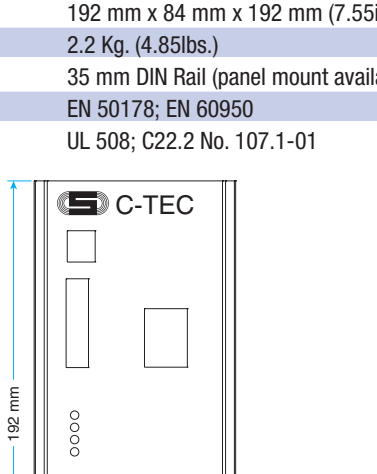
C-TEC2420-8

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed
- USB Interface

c UL us
E237077

USB

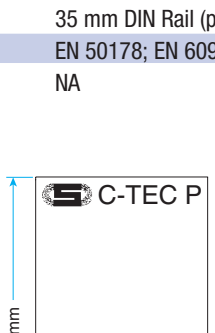
Part No.	C-TEC2420-8
Model Number	NCPA0747G01003
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC - 2.5 % + 20%
MAX NOMINAL INPUT CURRENT	20 A
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24 V - 0.5%
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.2 V DC
NOMINAL OUTPUT CURRENT	20 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	8 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	192 mm x 84 mm x 192 mm (7.55in. x3.3in. x 7.55in.)
WEIGHT	2.2 Kg. (4.85lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	UL 508; C22.2 No. 107.1-01



C-TEC1225 P

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time

Part No.	**C-TEC1225 P**
Model Number	NCPA1301G30001
INPUT	
NOMINAL INPUT VOLTAGE	12 V DC ±10%
MIN NOMINAL INPUT VOLTAGE FOR CHARGING MODE	11.3 V DC
MAX NOMINAL INPUT CURRENT	28.5 A DC
MAX CHARGING CURRENT	3.5 A DC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12 V DC ±10%
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	12 V-10 V DC ± 2 %
NOMINAL OUTPUT CURRENT	25 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	.5 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	123 mm x 65 mm x 145 mm (4.84in. x 2.55in. x 5.7in.)
WEIGHT	.7Kg. (1.54lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	NA



Mounting depth:
145mm

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C-TEC-P Specifications

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
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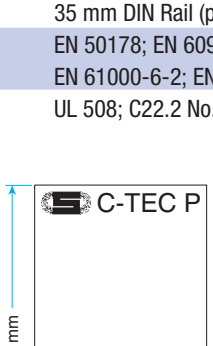
Part No.	C-TEC2425 P
Model Number	NCPA1301G10001
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC ±10 %
MIN NOMINAL INPUT VOLTAGE FOR CHARGING MODE	22 V DC
MAX NOMINAL INPUT CURRENT	28 A DC
MAX CHARGING CURRENT	3 A DC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24 V DC ±10 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	24.5 V-19 V DC ± 2 %
NOMINAL OUTPUT CURRENT	25 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1.2 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	123 mm x 65 mm x 145 mm (4.84in. x 2.55in. x 5.7in.)
WEIGHT	.8Kg. (1.76lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 61000-6-4 EN 61000-6-2; EN 60068-2-6; EN 600068-2-27
UL LISTING	UL 508; C22.2 No. 107.1-01



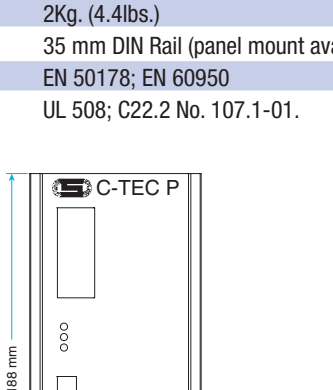
Mounting depth:
145mm

C-TEC2440 P

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	**C-TEC2440 P**
Model Number	NCPA1034G01001
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC ± 10 %
MIN NOMINAL INPUT VOLTAGE FOR CHARGING MODE	23 V DC
MAX NOMINAL INPUT CURRENT	40 A DC
MAX CHARGING CURRENT	6.8 A DC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24 V DC ± 10 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	19-25.5 V DC
NOMINAL OUTPUT CURRENT	40 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	4KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	188 mm x 84 mm x 194mm (7.4in. x 3.3in. x 7.64in.)
WEIGHT	2Kg. (4.4lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	UL 508; C22.2 No. 107.1-01.



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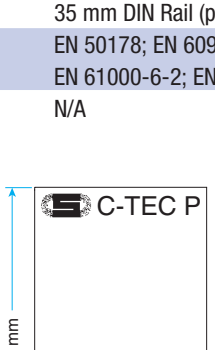
C-TEC-P Specifications

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Microcontroller based charging and discharging of the Ultra Capacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time

Part No.	**C-TEC4815 P**
Model Number	NCPA1301G20001
INPUT	
NOMINAL INPUT VOLTAGE	48 V DC ±10 %
MIN NOMINAL INPUT VOLTAGE FOR CHARGING MODE	44 V DC
MAX NOMINAL INPUT CURRENT	18 A DC
MAX CHARGING CURRENT	3 A DC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	48 V DC ±10 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	49 V-38 V DC ± 2 %
NOMINAL OUTPUT CURRENT	15 A DC
EFFICIENCY	>90%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1.2 KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	123 mm x 65 mm x 145 mm (4.84in. x 2.55in. x 5.7in.)
WEIGHT	.8Kg. (1.76lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 61000-6-4; EN 61000-6-2; EN 60068-2-6; EN 600068-2-27
UL LISTING	N/A



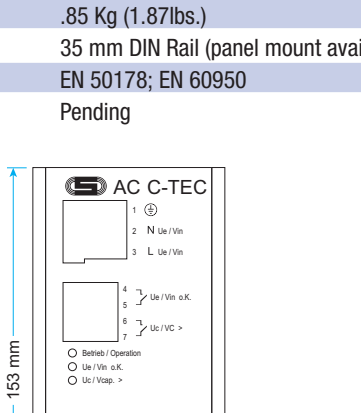
Mounting depth:
145mm

AC-C-TEC1203-1

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- Reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultracapacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	**AC-C-TEC1203-1**
Model Number	NCPA0724G10002
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC ± 15%
NOMINAL FREQUENCY	47-63 Hz
MAX NOMINAL INPUT CURRENT	0.84 A - 115 V AC; 0.42 A - 230 V AC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	12.3 V DC +2 % -4 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	11.5 V DC +2 % -4 %
NOMINAL OUTPUT CURRENT	2 A DC (with nominal capacity); 3 A DC (with reduced capacity)
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	152.5 mm x 72 mm x 130mm (6in. x 2.83in. x 5.11in.)
WEIGHT	.85 Kg (1.87lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	Pending

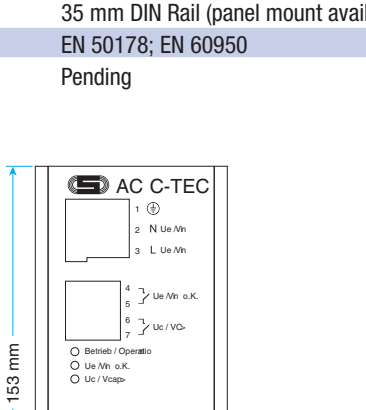


AC-C-TEC2403-05

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- Reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultracapacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	**AC-C-TEC2403-05**
Model Number	NCPA0724G01001
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC ± 15%
NOMINAL FREQUENCY	47-63 Hz
MAX NOMINAL INPUT CURRENT	0.84 A - 115 V AC; 0.42 A - 230 V AC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24.3 V DC ±2 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.5 V DC ±2 %
NOMINAL OUTPUT CURRENT	2 A DC (with nominal capacity); 3 A DC (with reduced capacity)
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	.5KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	152.5 mm x 72 mm x 130mm (6in. x 2.83in. x 5.11in.)
WEIGHT	.85 Kg (1.87lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	Pending

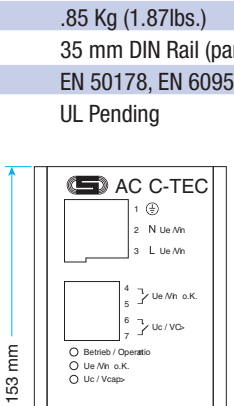


AC-C-TEC2403-1

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- Reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultracapacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	**AC-C-TEC2403-1**
Model Number	NCPA0724G01017
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC ± 15%
NOMINAL FREQUENCY	47-63 Hz
MAX NOMINAL INPUT CURRENT	0.84 A - 115 V AC; 0.42 A - 230 V AC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24.3 V DC ±2 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.5 V DC ±2 %
NOMINAL OUTPUT CURRENT	2 A DC (with nominal capacity); 3 A DC (with reduced capacity)
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	152.5 mm x 72 mm x 130mm (6in. x 2.83in. x 5.11in.)
WEIGHT	.85 Kg (1.87lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178, EN 60950
UL LISTING	UL Pending



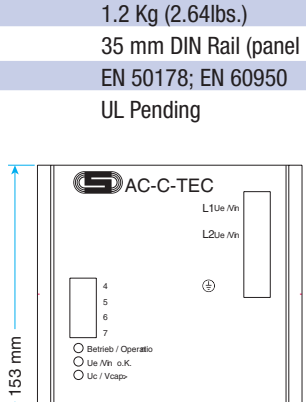
Mounting depth:
130 mm

AC-C-TEC2403-1-400

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- Reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultracapacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Pending

c UL us
PENDING

Part No.	**AC-C-TEC2403-1-400**
Model Number	NCPA0724G01020
INPUT	
NOMINAL INPUT VOLTAGE	400 V ± 15 %
NOMINAL FREQUENCY	
MAX NOMINAL INPUT CURRENT	0.84 A – 115 V AC; 0.42 A – 230 V AC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24.3 V DC ±2 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.5 V DC ±2 %
NOMINAL OUTPUT CURRENT	2 A DC (with nominal capacity); 3 A DC (with reduced capacity)
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON THE LOAD
ENERGY CONTENT	1KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	152.5 mm x 100 mm x 130 mm (6in. x 2.83in. x 5.11in.)
WEIGHT	1.2 Kg (2.64lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950
UL LISTING	UL Pending



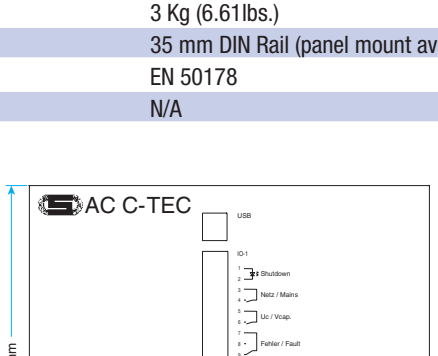
Mounting depth:
130 mm

AC-C-TEC2410-10

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- Reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultra-capacitors
- Control of operation and status of charge with potential-free contacts and LED
- Wide temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- USB interface

USB

Part No.	AC-C-TEC2410-10
Model Number	NCPA1430G01001
INPUT	
NOMINAL INPUT VOLTAGE	85 V - 265 V AC; 90 V - 250 V DC
NOMINAL FREQUENCY	50 Hz - 60 Hz ± 6 %
MAX INRUSH CURRENT	1.76 A; 1.11 A @ 230 V AC; 2.35 @ 110 V AC
MAX NOMINAL INPUT CURRENT	1.11 A @ 230 V AC; 2.35 A @ 110 V AC
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24.1 V DC ± 2 %
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.5 V DC ± 5 %
NOMINAL OUTPUT CURRENT	10 A DC
CURRENT LIMITATION	10.3 A DC ± 0.1 A; switch off after 1.5 sec.
EFFICIENCY	>90%
GENERAL DATA	
ENERGY CONTENT	10KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-25 to 60 °C
RELATIVE HUMIDITY	95 % non condensating
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	163 mm x 189 mm x 138mm (6.41in. x 7.44in x 5.43in.)
WEIGHT	3 Kg (6.61lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178
UL LISTING	N/A



Mounting depth:
138 mm

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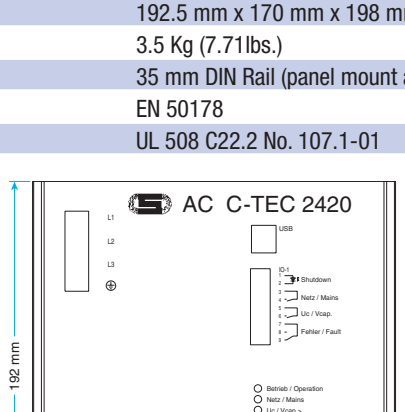
AC-C-TEC2420-8

- Integrated power supply
- Maintenance-free due to durable ultra capacitors
- Long operational lifetime
- reduced wiring time due to integrated energy storage and power supply
- Microcontroller based charging and discharging of the ultracapacitors
- Input voltage-signal via potential-free contact and LED
- Short overload possible
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL listed
- USB interface

c UL us
E237077

USB

Part No.	AC-C-TEC2420-8
Model Number	NCPA0746G01003
INPUT	
NOMINAL INPUT VOLTAGE	3 x 340 – 550 V AC ± 15 %
NOMINAL FREQUENCY	45-66 Hz
MAX INRUSH CURRENT	32 A for 10.5 ms
MAX NOMINAL INPUT CURRENT	0.95 A – (Ue 400 V AC)
OUTPUT	
NOMINAL OUTPUT VOLTAGE IN MAINS OPERATION	24.8 V DC ± .5V
NOMINAL OUTPUT VOLTAGE IN BUFFER OPERATION	23.2 V DC
NOMINAL OUTPUT CURRENT	20 A DC
CURRENT LIMITATION	
EFFICIENCY	90%
GENERAL DATA	
ENERGY CONTENT	8KJ
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-40 to 60 °C
STORAGE TEMP.	-25 to 70 °C
RELATIVE HUMIDITY	95 % non condensating
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	192.5 mm x 170 mm x 198 mm (7.58in. x 6.64in. x 7.8in.)
WEIGHT	3.5 Kg (7.71lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178
UL LISTING	UL 508 C22.2 No. 107.1-01

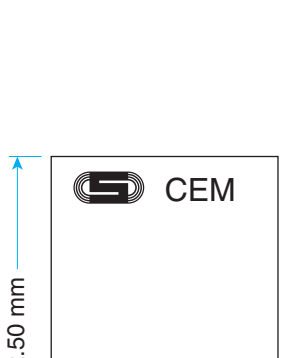


CEM-1

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	CEM-1
Model Number	NCBA0739G01001
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC
VOLTAGE RANGE	0-26.4 V DC
GENERAL DATA	
ENERGY CONTENT	1 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20; 3 AT; (PTC internal)
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.85 Kg. (1.87lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01



Mounting depth:
116 mm

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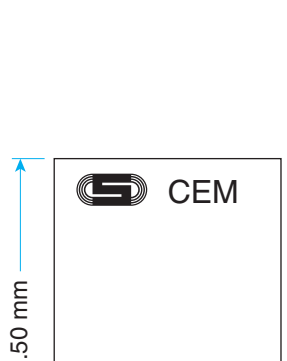
CEM-2

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

E237077

Part No.	**CEM-2**
Model Number	NCBA0739G01002
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC
VOLTAGE RANGE	0-26.4 V DC
GENERAL DATA	
ENERGY CONTENT	2 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20; 3 AT; (PTC internal)
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	1 Kg. (2.2lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01



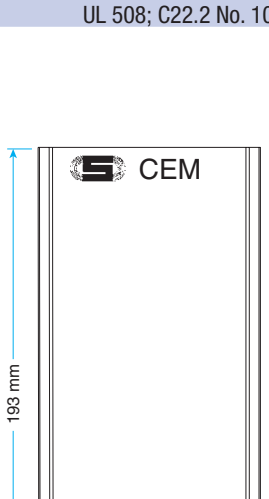
Mounting depth:
116 mm

CEM-8

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	**CEM-8**
Model Number	NCBA0748G10003
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC
VOLTAGE RANGE	0-26.4 V DC
GENERAL DATA	
ENERGY CONTENT	8 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20; internal
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	193 mm x 82 mm x 193 mm (7.59in. x 3.22in. x 7.59in.)
WEIGHT	2.1 Kg. (4.62lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01.



Mounting depth:
193 mm

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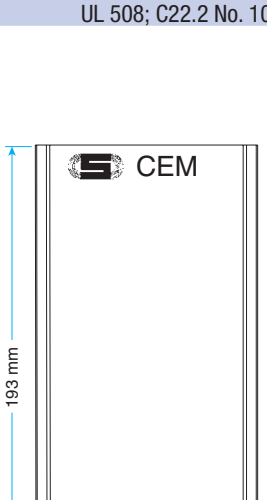
CEM Specifications

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	**CEM-16**
Model Number	NCBA0748G10001
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC
VOLTAGE RANGE	0-26.4 V DC
GENERAL DATA	
ENERGY CONTENT	16 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20; internal
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	193 mm x 84 mm x 193 mm (7.59in. x 3.30in. x 7.59in.)
WEIGHT	2.1 Kg. (4.62lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01.



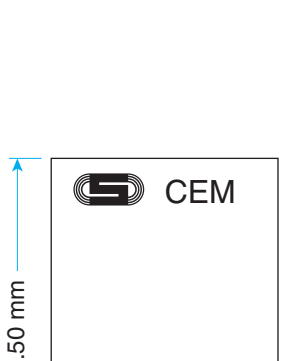
Mounting depth:
193 mm

CEM-12-1

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	CEM-12-1
Model Number	NCBA0739G10003
INPUT	
NOMINAL INPUT VOLTAGE	12 V DC
VOLTAGE RANGE	0-13.2 VDC
GENERAL DATA	
ENERGY CONTENT	.6 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.53in.)
WEIGHT	.7 Kg. (1.54lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01



Mounting depth:
116 mm

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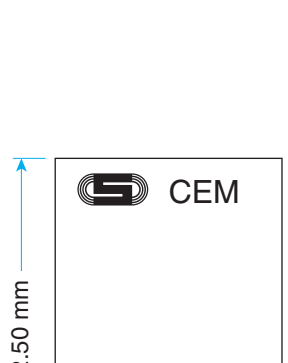
CEM Specifications

- Maintenance-free due to durable ultra capacitors
- Reduces wiring time due to integrated energy storage
- Vibration secured wiring via spring loaded plugs
- Wide working temperature range
- Seamless switch over
- Long operational life
- Compact and convection cooled
- Environmentally safe and free of toxic chemicals
- Cost effective over time
- UL Listed

E237077

Part No.	**CEM-12-2**
Model Number	NCBA0739G1004
INPUT	
NOMINAL INPUT VOLTAGE	12 V DC
VOLTAGE RANGE	0-13.2 VDC
GENERAL DATA	
ENERGY CONTENT	1.2 KJ
BUFFER TIME	DEPENDENT ON THE LOAD
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	- 40 to 60 °C
STORAGE TEMP.	- 40 to 60 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.53in.)
WEIGHT	.95 Kg. (2.09lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
UL LISTING	UL 508; C22.2 No. 107.1-01



Mounting depth:
116 mm

How to Pick a Capacitor Module

1. Choose your output voltage (12, 24 or 48V DC)
2. Pick you required back up current. All suitable modules are listed below the Amperage in the form of back up time in seconds. Altech suggests a time 50% larger than your required back up time.

Estimated Back Up Times

		DC-UPS Part No.	Output Voltage	Required Back Up Current (A) 0.5	1	1.5	2	3	5	8	10	15	20	30	40
				Time (seconds)											
DC Input	12V DC	C-TEC1203-1	12	150	75	50	37	25							
		C-TEC1205-5	12	750	375	250	187	125	75						
		C-TEC1208-20	12	3300	1650	1100	830	550	330	200					
		C-TEC1210-1	12	150	75	50	37	25	16	10					
		C-TEC1210-10	12	1650	825	550	415	275	165	100	80				
		C-TEC1225P	12	110	55	35	27	18	10	6	5	3	2	1.5	
	24V DC	C-TEC2403-05	24	40	20	12	10	6							
		C-TEC2403-1	24	75	37	25	19	12							
		C-TEC2403-1-400	24	75	37	25	19	12							
		C-TEC2405-5	24	375	187	125	94	62	37						
		C-TEC2408-20	24	1500	750	500	375	250	150	94					
		C-TEC2410-1	24	75	37	25	18	12	7	4	3				
		C-TEC2410-10	24	750	375	250	187	125	75	45	37				
		C-TEC2420-8	24	600	300	200	150	100	60	37	30	20	15		
		C-TEC2425P	24	115	60	40	30	19	10	6	5	3	2		
		C-TEC2440P	24	333	167	111	83	55	33	21	17	11	8	5	4
	48V DC	C-TEC4815P		50	25	17	12	8	4.5	3	2	1.5			
AC Input	12V DC	AC-C-TECH1203-1		150	75	50	37	25							
	24V DC	AC-C-TEC2403-05		37	18	12	10	6							
		AC-C-TEC2403-1-400		75	37	25	19	12							
		AC-C-TECH2403-1		75	37	25	19	12							
		AC-C-TEC2410-10		750	375	250	187	125	75	45	37				
		AC-C-TEC2420-8		600	300	200	150	100	60	37	30	20	15		
		Part No.													
Extension Modules		*CEM12-1		100	50	30	25	15							
		*CEM12-2		200	100	60	50	30	5						
		*CEM1		75	37	25	19	12	8						
		*CEM2		150	75	50	40	24	16						
		*CEM8		600	300	200	150	100	60	37	30	20	15		
		*CEM16		1200	600	400	300	200	120	75	60	40	30		

* Please add CEM back up times for extended calculations.
For example C-TEC2403-1 @ 0.5A + CEM1 @ 0.5A = 150 sec. total back up time.

Backup Time can be calculated by the following formula:
WS(KJ) / W = Back Up Time

C-TECxx = DC UPS with ultra-capacitors (V DC input)
AC-TECxx = DC UPS with ultra capacitors (V AC input)
CEM = capacitor extension module for C-TEC and AC-TEC

Part Number Structure: C-TECxx

Example C-TEC 1203-1
C-TEC: capacitor back up, DC input
12: input and output 12 V DC
3: 3A output current
1: kJ energy

Part Number Structure: AC-C-TECxx

Example AC-TEC 2420-8
AC-TEC: capacitor back up unit, AC input
24: output 24 V DC
20: 20A output current
8: 8 kj energy

Part Number Structure: CEMxx

Example CEM16
CEM - capacitor extension unit
16 - 16 kj energy

Estimated Charging Time

		DC-UPS Part No.	Extension Part No,	Charging Current (A) 3	5	8	10	15	20
				Time (seconds)					
DC Input	12V DC	C-TEC1203-1		23					
		C-TEC1205-5		120	70				
		C-TEC1208-20		450	270	170			
		C-TEC1210-1			16	10	8		
		C-TEC1210-10			140	85	70		
		C-TEC1225P			130	80	65	45	35
	24V DC	C-TEC2403-05		6					
		C-TEC2403-1-400		12					
		C-TEC2403-1		12					
		C-TEC2405-5		58	35				
		C-TEC2408-20		226	136	85			
		C-TEC2410-1			8	5	4		
		C-TEC2410-10			68	42	34		
		C-TEC2420-8			60	37	30	20	15
		C-TEC2425P		68	42	34	23	18	
		C-TEC2440P		110	68	55	36	28	
	48V DC	C-TEC4815P		40	25	20	14		
AC Input	12V DC	AC-TECH1203-1		23					
	24V DC	AC-TECH2403-05		6					
		AC-TECH2403-1		12					
		AC-TECH2403-1-400			12				
		AC-TEC2410-10			68	42	34		
		AC-TEC2420-8			60	37	30	20	15

	Part No.						
Extension Modules	CEM12-1	7					
	CEM12-2	14					
	CEM1	12					
	CEM2	25					
	CEM8		60	37	30	20	
	CEM16		120	75	60	40	30

Recharging time

The ultra-capacitor devices can be charged extremely fast. The table above shows the charging time which are necessary for the recharging of the capacitor units. “Charging current” means the current which is free and available.

Example: A power supply with 10 A max current connected to the C-TEC 2410-10. 3A would supply the load and 7A will be available to charge the unit.

AKKUTEC / AKKUTEC VdS

Battery back-up modules are an absolute must in many modern industrial applications. **However, an AKKUTEC paired with a battery module is the best back up solution for large power loads over extended periods of time.** An AKKUTEC will ensure the prolonged operation of machinery and controlled processes.

Altech Corporation offers a wide variety of products for DC-UPS systems starting 2 A and up to 40 A along with monitoring / setup software, and comprehensive support.

KEY FEATURES

- Works primarily in an online parallel configuration
- Controlled shut down functions
- Micro-controller battery management
- Several operating modes
- Protection against wrong battery polarization
- Battery monitoring and testing
- Deep discharge protection
- DIN rail mount and panel mount.*

The AKKUTEC back-up system from J.Schneider utilizes a separate battery module in such a way that power is always available. In the event of a main power interruption, the AKKUTEC system seamlessly taps into the stored power of the battery. The load is energized by the AKKUTEC until the battery dips below a certain voltage. This feature ensures the battery remains undamaged and effective for future use.

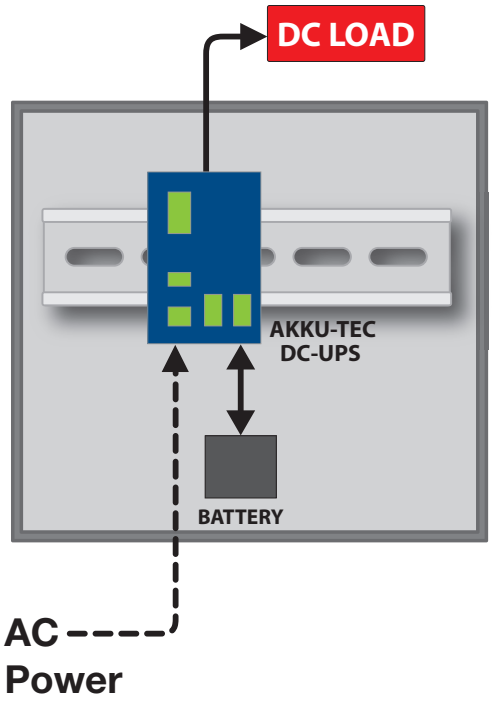
Back up times with the AKKUTEC module are largely dependent on the size of a battery and the load in which they are powering. However, through AKKUTEC's battery management systems and charging techniques, long back up times are achievable and buffer charge times are relatively small. The back-up time for an AKKUTEC and a battery ranges all the way to 96 hours depending on the load and is recommended for applications with larger power demands.

*Panel mount standard on only four modules.

DC Power Solutions

12, 24 and 48V DC

DC BACK UP with AC Input
(Power Supply with battery built in)



BACK UP TIME CALCULATION

Back up times can be determined by pairing certain AKKUTEC modules with a variety of battery sizes. A table of back up times and battery sizes have been added for your convenience (pg. 53)

BENEFITS OF AKKUTEC

- All in one Battery maintenance
- Extended battery life
- Internal Battery testing
- Virtually maintenance free
- Wide operating temperatures
- Compact and convection cooled
- Resists shock and vibrations
- Superior battery and power management
- Seamless switch overs
- Simple installation
- Cost effective over time

AKKUTEC

The AKKUTEC is a battery buffered DC power supply that works in a stand-by parallel mode with lead-acid batteries. A load is maintained through the AKKUTEC with a safe and continuous DC power supply in the event of main power failure through the attached battery.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Max Charging Current
12V DC	AKKUTEC1203	NBPAQ33G1M13	115/230 V AC +/- 15%	12 V DC	3 A	2.85 A
	AKKUTEC1208	NBPA0616G01006	115-230 V AC -0.05	12 V DC	8 A	8 A
24V DC	AKKUTEC2402	NBPAQ33G1M01	97-264 V AC	24 V DC	2 A	2.1 A
	AKKUTEC2403	NBPAQ33G1M10	230 V AC 0.05	24 V DC	3 A	2.86 A
	AKKUTEC2403DC	NBUA0523G01003	24 V DC	24 V DC	3 A	2.1 A
	AKKUTEC2405	NBPA0616G01101	184-264 V AC	24 V DC	5 A	5.5 A
	AKKUTEC2410	NBPAN33G1M01	230 V AC	24 V DC	10 A	11.5 A
	AKKUTEC2420-1	NBPA0347G01001	230 V AC -0.05	24 V DC	20 A	22 A
	AKKUTEC2420-3	NBPA0313G01002	3 X 400 V AC, 500 V AC -0.05	24 V DC	20 A	22 A
	AKKUTEC2440	NBPAP33G1M01	3 X 400 V AC, 500 V AC -0.05	24 V DC	40 A	44 A
48V DC	AKKUTEC4801	NBPAQ33G1M19	115-230 V AC +/- 15%	48 V DC	1 A	1.1 A
	AKKUTEC4803	NBPA0616G01005	115-230 V AC+/- 15%	48 V DC	3 A	3.3 A
	AKKUTEC4810	NBPA0347G01007	230 V AC +/- 15%	48 V DC	10 A	11 A

AKKUTEC VdS

VdS certified AKKUTEC modules. VdS certifications have an excellent reputation with manufacturers, service providers and correspond with the highest testing standards.

	Part No.	Model No.	Input Voltage	Output Voltage	Output Current	Max Charging Current
24V DC	AKKUTEC2403 VdS	NBPA0844G01002	115-230 V AC (95 V...265 V AC)	24 V DC	3A	3A
	AKKUTEC2412 VdS	NBPA0812G01002	230 V DC -0.05	24 V DC	12A	12A

DC UPS
APPLICATIONS

Ship Building

Safety Engineering

Rail Vehicles

Water Supply

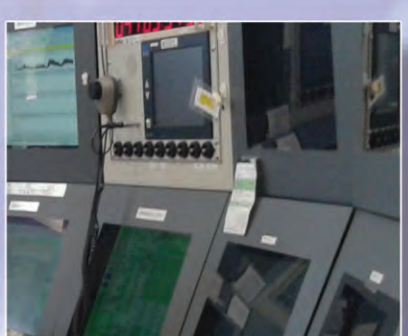
Building Technology

Automation

Machinery Construction

Switchgear Production

Power Supply



Stations Control Technology

Photovoltaics

AKKUTEC1203

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	AKKUTEC1203
Model Number	NBPAQ33G1M13
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC +/- 15 %
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	12 V DC
OUTPUT	
MAX CHARGING CURRENT	2.85 A
NOMINAL OUTPUT VOLTAGE	12 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	9.9 V DC-13.5 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	9.9 V DC-13.2 V DC
MAX NOMINAL OUTPUT CURRENT	2.85 A DC
EFFICIENCY	83%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.55Kg. (1.21lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 50082-1; EN 55011; EN 61000-4-2
UL LISTING	UL PENDING

Mounting depth:
116 mm

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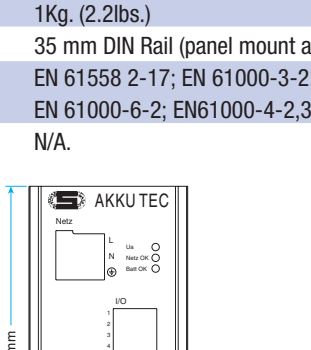
AKKUTEC1208

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- USB Interface

USB

Part No.	AKKUTEC1208
Model Number	NBPA0616G01006
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC +/- 15 %
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	12 V DC
OUTPUT	
MAX CHARGING CURRENT	8 A
NOMINAL OUTPUT VOLTAGE	12 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	NA
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	NA
MAX NOMINAL OUTPUT CURRENT	8 A DC
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	160 mm x 75 mm x 150mm (6.29in. x 2.95in. x 5.9in.)
WEIGHT	1Kg. (2.2lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 61558 2-17; EN 61000-3-2,3; EN 55011 EN 61000-6-2; EN61000-4-2,3,4,5,6,11; EN 50178 / EN 60950
UL LISTING	N/A.



AKKUTEC2402

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	AKKUTEC2402
Model Number	NBPAQ33G1M01
INPUT	
NOMINAL INPUT VOLTAGE	115-230 V AC +/- 15 %
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	24 V DC
OUTPUT	
MAX CHARGING CURRENT	2.1 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC-27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	19.8 V DC-26.8 V DC
MAX NOMINAL OUTPUT CURRENT	2 A at 100% ED
EFFICIENCY	N/A
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 45 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.55Kg. (1.21lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 61000-6-4; EN 61000-6-2; EN 50082-1; EN 55011
UL LISTING	UL 508; C22.2 No. 107.1-01

Mounting depth:
116 mm

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AKKUTEC2403

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time

Part No.	**AKKUTEC2403**
Model Number	NBPAQ33G1M10
INPUT	
NOMINAL INPUT VOLTAGE	230 V AC +15% -10%
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	24 V DC
OUTPUT	
MAX CHARGING CURRENT	2.85 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC-27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	19.8 V DC-26.8 V DC
MAX NOMINAL OUTPUT CURRENT	2.85 A DC
EFFICIENCY	87%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 45 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.55Kg. (1.21lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 55011; EN 50082-1; EN 61000-4-2
UL LISTING	N/A

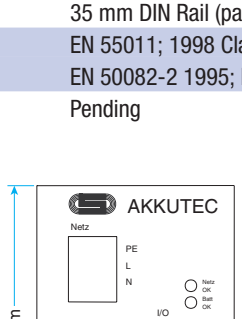
Mounting depth:
116 mm

AKKUTEC2403DC

- DC Input
- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	AKKUTEC2403DC
Model Number	NBUA0523G01003
INPUT	
NOMINAL INPUT VOLTAGE	24 V DC
SYSTEM VOLTAGE	24 V
NOMINAL INPUT CURRENT	3.7 A
OUTPUT	
MAX CHARGING CURRENT	2.1 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	2.85 A DC
EFFICIENCY	85%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.55Kg. (1.21lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 55011; 1998 Class B; EN 61000-3-2; EN 61000-3-3 Class A EN 50082-2 1995; EN 50178; EN 60950
UL LISTING	Pending



Mounting depth:
116 mm

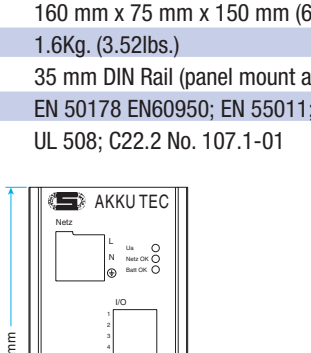
AKKUTEC2405

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- USB Interface
- UL Listed

c UL us
E178172

USB

Part No.	AKKUTEC2405
Model Number	NBPA0616G01101
INPUT	
NOMINAL INPUT VOLTAGE	115 - 230 V AC -15% +10%
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	24 V DC
NOMINAL INPUT CURRENT	
OUTPUT	
MAX CHARGING CURRENT	5.5 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	5 A DC
EFFICIENCY	88%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	N/A
MAX ALTITUDE (without derating)	N/A
DIMENSIONS	160 mm x 75 mm x 150 mm (6.29in. x 2.95in. x 5.9in.)
WEIGHT	1.6Kg. (3.52lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178 EN60950; EN 55011; EN 50082-1; EN 61000-4-2
UL LISTING	UL 508; C22.2 No. 107.1-01



AKKUTEC2410

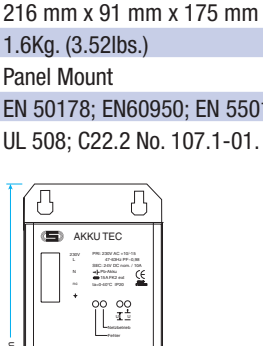
PANEL MOUNT

RoHS COMPLIANT

- Battery charger with I/U-charging characteristics
- Active power factor correction (PFC)
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Listed

c UL us
E178172

Part No.	AKKUTEC2410
Model Number	NBPAN33G1M01
INPUT	
NOMINAL INPUT VOLTAGE	230 V AC -15 % +10 %
NOMINAL FREQUENCY	50/60 Hz
SYSTEM VOLTAGE	24 V DC
NOMINAL INPUT CURRENT	1.4 A AC
OUTPUT	
MAX CHARGING CURRENT	11.5 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	10 A DC
EFFICIENCY	
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	N/A
MAX ALTITUDE (without derating)	N/A
DIMENSIONS	216 mm x 91 mm x 175 mm (8.5in. x 3.58in. x 6.88in.)
WEIGHT	1.6Kg. (3.52lbs.)
MOUNTING	Panel Mount
NORMS AND REGULATIONS	EN 50178; EN60950; EN 55011; EN 50082-1
UL LISTING	UL 508; C22.2 No. 107.1-01.



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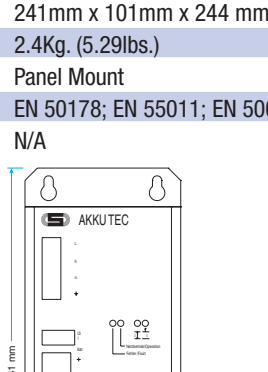
AKKUTEC2420

PANEL MOUNT

- Battery charger with I/U-charging characteristics
- Active power factor correction (PFC)
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time

Part No.	**AKKUTEC2420**
Model Number	NBPA0347G01001
INPUT	
NOMINAL INPUT VOLTAGE	230 V AC -15 % +10 %
NOMINAL FREQUENCY	50/60 Hz
SYSTEM VOLTAGE	24 V DC
NOMINAL INPUT CURRENT	2.7 A
OUTPUT	
MAX CHARGING CURRENT	22 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	20 A DC
EFFICIENCY	88.80%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	Max. 95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	241mm x 101mm x 244 mm (9.48in. x 3.97in. x 9.6in.)
WEIGHT	2.4Kg. (5.29lbs.)
MOUNTING	Panel Mount
NORMS AND REGULATIONS	EN 50178; EN 55011; EN 50082-1
UL LISTING	N/A



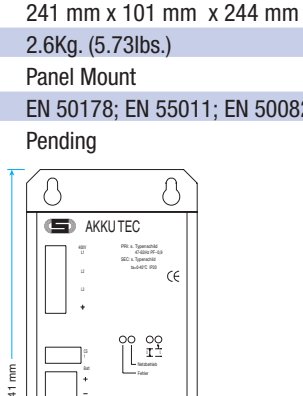
AKKUTEC2420-3

PANEL MOUNT

- Battery charger with I/U-charging characteristics
- Active power factor correction (PFC)
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Pending

c UL US
PENDING

Part No.	**AKKUTEC2420-3**
Model Number	NBPA0313G01002
INPUT	
NOMINAL INPUT VOLTAGE	3 x 400 V -500 V AC -15 % / + 10 %
NOMINAL FREQUENCY	45-65 Hz
SYSTEM VOLTAGE	24 V DC
OUTPUT	
MAX CHARGING CURRENT	22 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	20 A DC
EFFICIENCY	N/A
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	N/A
MAX ALTITUDE (without derating)	N/A
DIMENSIONS	241 mm x 101 mm x 244 mm (9.48in. x 3.97in. x 9.6in.)
WEIGHT	2.6Kg. (5.73lbs.)
MOUNTING	Panel Mount
NORMS AND REGULATIONS	EN 50178; EN 55011; EN 50082-2; EN 61000-3-2
UL LISTING	Pending



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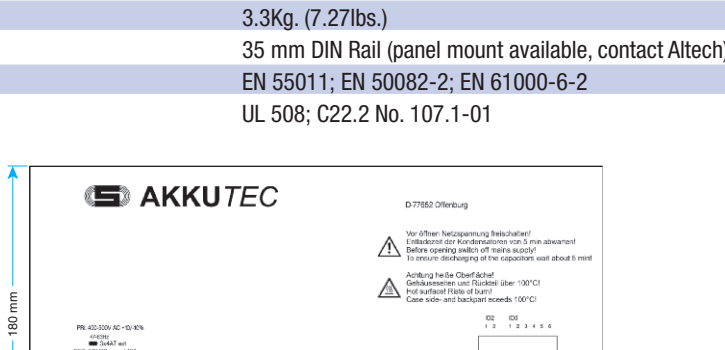
AKKUTEC2440

- Primary switched power supply with I/U-charging characteristics
- Active power factor correction (PFC)
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	AKKUTEC2440
Model Number	NBPAP33G1M01
INPUT	
NOMINAL INPUT VOLTAGE	3 x 400 V -500 V AC -15 % / + 10 %
NOMINAL FREQUENCY	45- 65 Hz
SYSTEM VOLTAGE	24 V DC
OUTPUT	
MAX CHARGING CURRENT	44 A
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	19.8 V DC - 27.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	19.8 V DC - 26.8 V DC
MAX NOMINAL OUTPUT CURRENT	40 A DC
EFFICIENCY	91.50%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	N/A
MAX ALTITUDE (without derating)	N/A
DIMENSIONS	180 mm x 290 mm x 147 mm (7.08in. x 11.41in. x 5.78in.)
WEIGHT	3.3Kg. (7.27lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 55011; EN 50082-2; EN 61000-6-2
UL LISTING	UL 508; C22.2 No. 107.1-01



Mounting depth:
147 mm

AKKUTEC4801

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Listed

c UL us
E237077

Part No.	AKKUTEC4801
Model Number	NBPAQ33G1M19
INPUT	
NOMINAL INPUT VOLTAGE	115- 230 V AC ±15 %
NOMINAL FREQUENCY	47- 63 Hz
SYSTEM VOLTAGE	48 V DC
OUTPUT	
MAX CHARGING CURRENT	1.1 A
NOMINAL OUTPUT VOLTAGE	48 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	39.6 V DC-55.6 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	39.6 V DC-53.6 V DC
MAX NOMINAL OUTPUT CURRENT	1.1 A DC
EFFICIENCY	87%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	92.5 mm x 60 mm x 116 mm (3.64in. x 2.36in. x 4.56in.)
WEIGHT	.55Kg. (1.21lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178; EN 60950; EN 55011; EN 50082-2; EN 61000-6-2
UL LISTING	UL 508; C22.2 No. 107.1-01

Mounting depth:
116 mm

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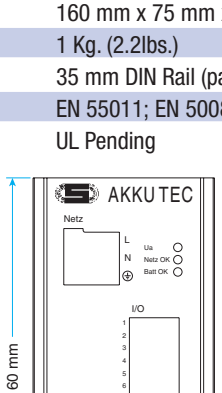
AKKUTEC4803

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- USB Interface
- UL Pending

c UL us PENDING

USB

Part No.	**AKKUTEC4803**
Model Number	NBPA0616G01005
INPUT	
NOMINAL INPUT VOLTAGE	115 ... 230 V AC -15 % +10 %
NOMINAL FREQUENCY	47- 63 Hz
SYSTEM VOLTAGE	48 V DC
OUTPUT	
MAX CHARGING CURRENT	3.3 A
NOMINAL OUTPUT VOLTAGE	48 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	39.6 V DC-55.6 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	39.6 V DC-53.6 V DC
MAX NOMINAL OUTPUT CURRENT	–
EFFICIENCY	–
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 to 40 °C
STORAGE TEMP.	0 to 50 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	160 mm x 75 mm x 150 mm (6.29in. x 2.95in. x 5.9in.)
WEIGHT	1 Kg. (2.2lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 55011; EN 50082-1; EN 61000-4-2; EN 50178; EN 60950
UL LISTING	UL Pending



Mounting depths:
150 mm

AKKUTEC4810

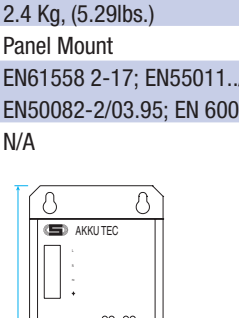
PANEL MOUNT

CE

RoHS COMPLIANT

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time

Part No.	**AKKUTEC4810**
Model Number	NBPA0347G01007
INPUT	
NOMINAL INPUT VOLTAGE	230 V AC -15%+10%
NOMINAL FREQUENCY	47-63 Hz
SYSTEM VOLTAGE	48 V DC
MAX NOMINAL INPUT CURRENT	–
OUTPUT	
MA X CHARGING CURRENT	11 A
NOMINAL OUTPUT VOLTAGE	48 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	39.6 V DC – 52.8 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	39.6 V DC- 57.2 V DC
MAX NOMINAL OUTPUT CURRENT	10 A
EFFICIENCY	–
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	0 °C to 40 °C
STORAGE TEMP.	0 °C to 50 °C
RELATIVE HUMIDITY	95% non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	100.5mm x 240.5mm x 244mm 3.95in. x 9.46in. x 9.60in.
WEIGHT	2.4 Kg, (5.29lbs.)
MOUNTING	Panel Mount
NORMS AND REGULATIONS	EN61558 2-17; EN55011../..1998; EN 61000-3-2 EN61000-3-3 EN50082-2/03.95; EN 60068-2-6; EN 50178
UL LISTING	N/A



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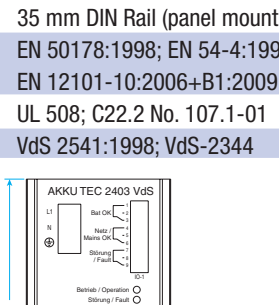
AKKUTEC2403 VdS

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- UL Listed
- VdS certified

c UL us
E237077

VdS

Part No.	AKKUTEC2403 VdS
Model Number	NBPA0844G01002
INPUT	
NOMINAL INPUT VOLTAGE	110/230 V AC (95 V- 265 V AC)
NOMINAL FREQUENCY	47- 63 Hz
SYSTEM VOLTAGE	–
MAX NOMINAL INPUT CURRENT	.5 A
OUTPUT	
MA X CHARGING CURRENT	3 A
NOMINAL OUTPUT VOLTAGE	24 V DC (21.6-28.3 V ±0.4 %)
OUTPUT VOLTAGE WITH TEMP. SENSOR	26.4 V DC - 28.6 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	26.4 V DC
MAX NOMINAL OUTPUT CURRENT	3 A
EFFICIENCY	85%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-10 °C to 50 °C
STORAGE TEMP.	-10 °C to 50 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	153 mm x 72 mm x 125 mm (6in. x 2.83in. x 4.92in.)
WEIGHT	1 Kg. (2.2lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178:1998; EN 54-4:1997+A1:2002+A2:2006 EN 12101-10:2006+B1:2009; EN 61000-6-4; EN 61000-6-2
UL LISTING	UL 508; C22.2 No. 107.1-01
VdS APPROVALS	VdS 2541:1998; VdS-2344



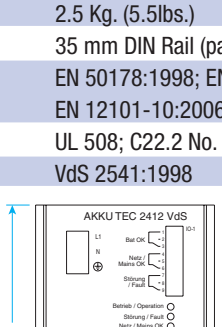
AKKUTEC2412 VdS

- Battery charger with I/U-charging characteristics
- Battery management by micro-controller
- Battery voltage tracking of the charging voltage by external sensor module (optional)
- The AKKUTEC is virtually maintenance free
- Internal battery testing and extended battery life
- Wide operating temperatures
- Compact and convection cooled
- Resists shocks and vibrations
- Seamless switch overs
- Simple installation
- Cost effective over time
- VdS certified
- UL Listed

c UL us
E178172

VdS

Part No.	AKKUTEC2412 VdS
Model Number	NBPA0812G01002
INPUT	
NOMINAL INPUT VOLTAGE	230 V AC ± 15 %
NOMINAL FREQUENCY	47- 63 Hz
SYSTEM VOLTAGE	24V DC
MAX NOMINAL INPUT CURRENT	1.8 A (at 12 A output)
OUTPUT	
MA X CHARGING CURRENT	–
NOMINAL OUTPUT VOLTAGE	24 V DC
OUTPUT VOLTAGE WITH TEMP. SENSOR	20.46 V DC -28.3 V DC
OUTPUT VOLTAGE WITHOUT TEMP. SENSOR	26.46 V DC
MAX NOMINAL OUTPUT CURRENT	12 A
EFFICIENCY	89%
GENERAL DATA	
BUFFER TIME	DEPENDENT ON BATTERY AND THE LOAD
BATTERY TYPE	Pb-Akku
DEGREE OF PROTECTION	IP20
OPERATING TEMP.	-10 °C to 50 °C
STORAGE TEMP.	-10 °C to 50 °C
RELATIVE HUMIDITY	95 % non-condensing
MAX ALTITUDE (without derating)	2000 m. above sea-level
DIMENSIONS	155 mm x 95 mm x 183.5 mm (8.98in. x 3.74in. x 7.22in.)
WEIGHT	2.5 Kg. (5.5lbs.)
MOUNTING	35 mm DIN Rail (panel mount available, contact Altech)
NORMS AND REGULATIONS	EN 50178:1998; EN 54-4:1997+A1:2002+A2:2006 EN 12101-10:2006+B1:2009; EN 61000-6-4; EN 61000-6-2
UL LISTING	UL 508; C22.2 No. 107.1-01.
VdS APPROVALS	VdS 2541:1998



Mounting depth:
183.5 mm

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Examples of different AKKUTEC modules paired with different battery sizes.

Back Up Time: Available Current vs. Estimated Back Up Time in Minutes

			Required Back Up Current (A)										
DC-UPS Part No.	**No. of 12V Batteries**	**Battery Size**	**0.5**	**1**	**2**	**3**	**5**	**8**	**10**	**12**	**15**	**20**	**40**
			Time (minutes)										
AKKUTEC 1203	1	7.2 AH	360	180	90	60							
AKKUTEC 1203	1	12 AH	600	300	150	100							
AKKUTEC 1208	1	12 AH	600	300	150	100	60	37					
AKKUTEC 1208	1	20 AH	1000	500	250	166	100	62					
AKKUTEC 1210	1	12 AH	600	300	150	100	60	37	36				
AKKUTEC 1210	1	20 AH	1000	500	250	166	100	62	50				
AKKUTEC 2402	2	1.2 AH	60	30	15								
AKKUTEC 2402	2	2.4 AH	120	60	30								
AKKUTEC 2402	2	7.2 AH	360	180	90								
AKKUTEC 2403	2	2.4 AH	120	60	30	20							
AKKUTEC 2403	2	7.2 AH	360	180	90	60							
AKKUTEC 2403	2	12 AH	600	300	150	100							
AKKUTEC 2405	2	2.4 AH	120	60	30	20	12						
AKKUTEC 2405	2	7.2 AH	360	180	90	60	36						
AKKUTEC 2405	2	12 AH	600	300	150	100	60						
AKKUTEC 2410	2	7.2 AH	360	180	90	60	36	22	18				
AKKUTEC 2410	2	12 AH	600	300	150	100	60	37	36				
AKKUTEC 2410	2	20 AH	1000	500	250	333	100	62	50				
AKKUTEC 2412 VdS	2	7.2 AH	360	180	90	60	36	22	18	15			
AKKUTEC 2412 VdS	2	12 AH	600	300	150	100	60	37	36	25			
AKKUTEC 2412 VdS	2	20 AH	1000	500	250	333	100	62	50	41			
AKKUTEC 2420	2	12AH	600	300	150	100	60	37	36	25	20	15	
AKKUTEC 2420	2	20AH	1000	500	250	166	100	62	50	41	33	25	
AKKUTEC 2420	2	40AH	2000	1000	500	333	200	125	100	83	65	50	
AKKUTEC 2440	2	12AH	600	300	150	100	60	37	36	25	20	15	
AKKUTEC 2440	2	20AH	1000	500	250	166	100	62	50	41	33	25	13
AKKUTEC 2440	2	40AH	2000	1000	500	333	200	125	100	83	65	50	25
AKKUTEC 2440	2	100AH	5000	2500	1250	833	500	312	250	208	200	150	75
AKKUTEC 4801	4	2.4 AH	120	60									
AKKUTEC 4801	4	7.2 AH	360	180									
AKKUTEC 4803	4	7.2 AH	360	180	90	60							
AKKUTEC 4803	4	12 AH	600	300	150	100							
AKKUTEC 4810	4	12 AH	600	300	150	100	60	37	36				
AKKUTEC 4810	4	20 AH	1000	500	250	166	100	62	50				

* Battery performance may vary by battery, manufacturer and type.

Software

A multitude of DC-UPS and AKKUTEC systems come with a variety of online control software. These programs allow for increased adaptability making the UPS system tailored to its application. This customization ensures maximum efficiency and seamless operation.

TEC Control

Shut-Down Software- TECControl for DC-UPS and AKKUTEC systems.
The TEC Control software continuously monitors both a computer network and the status of the available UPS energy storage system.

In case of mains failure, the Industrial PC shuts itself down through the TECControl after a preset time. In this time, the UPS and the Industrial PC will then be switched off in a safe and controlled manner. The UPS system will provide the power for the controlled shutdown. This prevents damage to computer systems and the devices they may operate and prevents the loss of critical data or work. Once mains power is restored, the UPS releases the output voltage. The system will then restart automatically.

- Works with a variety of Windows operating systems.

Usable with:

- AC C-TEC 2403
- AC C-TEC 2420
- AKKUTEC 1208
- AKKUTEC 2403
- AKKUTEC 2405
- AKKUTEC 4803
- AKKUTEC 4810
- AKKUTEC 2410
- AKKUTEC 2420
- AKKUTEC 2420-3
- AKKUTEC 2440
- C-TEC 2403
- C-TEC 2405
- C-TEC 2408
- C-TEC 2410
- C-TEC 2420

paraTEC

Software that allows the user to customize specific functions in the C-TEC or AKKUTEC module to meet special requirements.

- ParaTEC software allows the user to make adjustments to their DC UPS system.
- Real time system monitoring (Voltage, Current, Errors, Etc.)
- Works with Windows XP and 7 Operating Systems

Usable with:

- AKKUTEC 1208
- AKKUTEC 2405
- AC C-TEC 2420
- AKKUTEC 4803
- CTEC 2405
- C-TEC 2410
- CTEC 2408
- C-TEC 2420

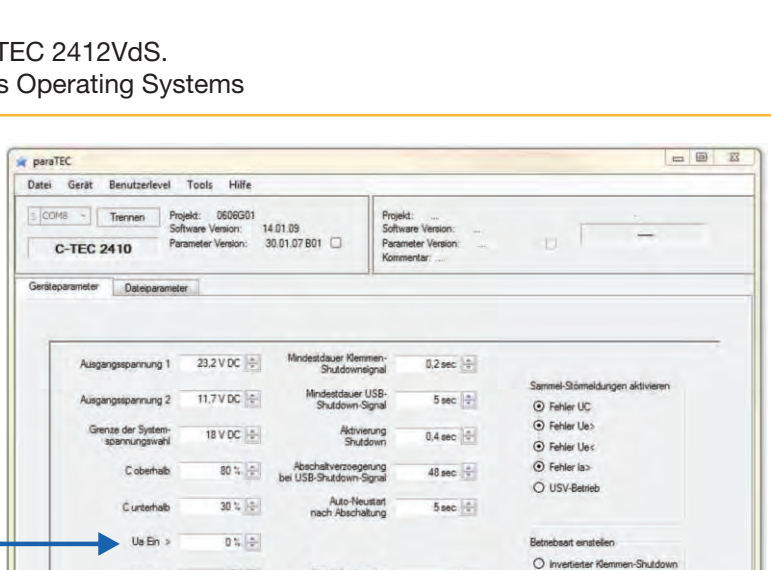
paraTEC VdS

- paraTEC software for the AKKUTEC 2412VdS.
- Works with a variety of Windows Operating Systems

ParaTEC Software

The software is used to set up or change the characteristics of the C-TEC units.

It is possible to adjust C-TEC devices in the way that the release of input and load is effected only if the total capacity is available.



(Part information and corresponding hardware on page 56)

AKKUTEC Temperature Sensors

These sensors are for use in battery voltage tracking. The life span of batteries is indicated at a temperature of 20°C. Temperatures over 20°C lead to a drastic reduction of the working life of typical sealed lead acid batteries. Through the temperature-sensor, charging voltage is adjusted to ensure that battery isn't over charged or heated up.

- Battery measurement every minute
- Announcement via LED and potential free contacts at exceeding the limit temperature
- Possible to display the temperature on the control and indicator panel (optional)
- Connected at IO clamp 1 and 2

Part No.
MTIAL33G5M01

Usable with:
- AKKUTEC 2410 • AKKUTEC 2420 • AKKUTEC 2440
- AKKUTEC 1210 • AKKUTEC 4810

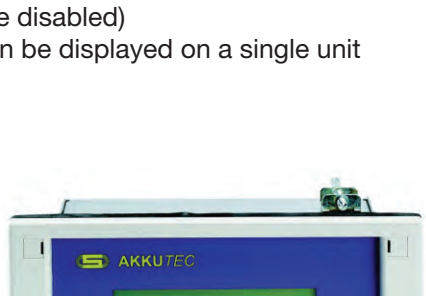
Part No.
MTIAQ33G3M01

Usable with:
- AKKUTEC 2402 • AKKUTEC 2403 • AKKUTEC 2405 • AKKUTEC 2412
- AKKUTEC 1203 • AKKUTEC 1208 • AKKUTEC 4801 • AKKUTEC 4803
- AKKUTEC 4803 VdS

AKKUTEC Display/Control Panel

Part No.
PBDEL33G4M01

- Clear two-line, 20-digit, backlit alphanumeric LCD display
- Separate settings for contrast and brightness
- Power supply and data transmission by 2-wire bus cable to reduce wiring-up work to a minimum
- Parameters for charging and monitoring functions can be both displayed and entered
- Status messages shown in plain language
- Beeper to draw attention to warnings and faults (can be disabled)
- Operating parameters of redundant systems as well can be displayed on a single unit
- Easy-to-follow operator prompts
- 3-key setting processes
- Function levels protected by passwords
- Suitable for mounting in doors of electrical cabinets (IP54 protection)



Usable with:
- AKKUTEC 2410-2440

Accessories

Fuse Boards

Fuse boards designed for the distribution and protection of the 12/24V outputs of the AKKUTEC series or any other DC source.

Part No.	Type	Description
NBP20849G02003	FB 2405-5	fuse board designed for FKS-fuses with max. 6,3 A, equipped with 5 fuses à 1 A / extension for IP31 cabinet 3 A
NBP20848G02005	FB 2410-10	fuse board designed for FKS-fuses with max. 15 A, equipped with 10 fuses à 1 A / extension for IP31 cabinet 12 A
NBP20902G02004	FB 2405-5 P	fuse board designed for FKS-fuses with max. 6,3 A, equipped with 5 fuses à 1 A / base for IP54 cabinet, snap-on mounting for supporting rail
NBP20901G02003	FB 2410-10 P	fuse board designed for FKS-fuses with max. 15 A, equipped with 10 fuses à 1 A / base for IP54 cabinet, snap-on mounting for supporting rail

Accessories

PSXX-0441601003	paraTEC License	control software for a number of DC-UPS modules
PSXX-0441G01002	TEC-Control License	shutdown software for all AKKUTEC, C-TEC and AC C-TEC equipment as license
PSXX-0441G01001	TEC-Control CD	shutdown software for all AKKUTEC, C-TEC and AC C-TEC equipment as CD. Works with a number of modules and is compatible with several Windows operating systems.
PSDP-0324G01004	Module Cable A	Interface for AKKUTEC 2402/2403, AKKUTEC 2405 and all C-TEC devices*
n.n.	AKKUTEC Cable B	9 Pol Sub D 1 : 1 for AKKUTEC 2403 DC*
PSDP-0324G01002	AKKUTEC Cable C 1	Interface cable for AKKUTEC 2410 - 2440 1,2 M*
PSDP-0324G01003	AKKUTEC Cable C 2	Interface cable for AKKUTEC 2410 - 2440 5 M*
PSDP-0324G01005	AKKUTEC Cable C 3	Interface cable for AKKUTEC 2410- 2440 10 M*
3019.25	MODULE USB cable	for C-TEC, AC C-TEC, USB 5.0 cable, A to B with ferrite, 0,5 m length*
RBSM0429G01001	AKKUTEC IPC switch module	for AKKUTEC 2410/2420/2402/2403
PBDEL33G4M01	AKKUTEC Display/Control Panel	for AKKUTEC 2410-2440-monitor and control AKKUTEC functions
MTIAL33G5M01	AKKUTEC Temperature sensor	for AKKUTEC --helps to maintain optimal battery performance through temperature and battery monitoring
MTIAQ33G3M01	AKKUTEC Temperature sensor	for AKKUTEC --helps to maintain optimal battery performance through temperature and battery monitoring
59610.1	KGEK002S003M92	decoupling module 2 x 25 A 100 V
59610.2	KGEK006S001M92	decoupling module 2 x 50 A 45 V

* For use with TEC Control and paraTEC software.

Index

For Extreme Cold Conditions

we have the POWER.

-40°C to +70°C
(-40°F to +158°F)

Other Features:

- Multiple overload/ short circuit protection modes
- Efficiency above 88%
- Small size
- DIN rail mountable
- Cooling by free air convection
- EN60950-1
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- Higher energy vs. electrolytic capacitors
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- Up to 10,000 Ws energy plus extension modules
- Up to 40A system is available

All-In-One DC-UPS

- Power supply, battery charger, battery care and backup module
- Battery based system
- Three charging modes
- Available in 12, 24 and 48 V DC
- Operating temperature range -40°C to +70°C
- Adjustable charging current up to 35A
- Easy battery diagnosis and fault identification
- Solutions for large installations are available

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PSC Compact Class 2 Series

- Compact Design and Lightweight
- Class 2, UL 1310 Recognized
- Brown-out protection
- 10W to 480W rated power
- Universal single phase input

PS Industrial Series

- Robust Metal housing
- UL 508 listed
- Built in active PFC function
- 75W to 960W rated power
- Single and three phase universal input

PSA Flex Series (1 Phase)

- Flex power , solid metal housing
- UL 508 listed
- 120W to 600W rated power
- High efficiency with Boost Power
- Single phase input

PS-C and W Series

- Narrow design, small metal housing
- UL 508 listed
- 150% pick load capacity
- 120W to 480W rated power
- Single and two phase wide input

PSB Flex Series (2 & 3 Phase)

- Flex power , solid metal housing
- UL 508 listed
- 120W to 600W rated power
- High efficiency with Boost Power
- Two and Three phase input

CBI DC UPS System

- Fully automated battery care module
- Three charging modes
- 12, 24, 36 and 48V DC single outputs
- 110-230-277 / 230-400-500VAC input
- System start from battery function

PS-S Slim line Series

- Slim Line Design, plastic housing
- UL 508 listed
- DC OK contact
- 10W to 100W rated power
- Universal single phase input

CB Battery Chargers

- Intelligent battery chargers
- Suitable for most common battery types
- Adjustable charging current
- 2 VDC and 24VDC single output
- 110-220-277 VAC input

PS Low Profile Series

- Low profile Design, plastic housing
- UL 60950-1 Recognized
- Isolation Class II
- 10W to 100W rated power
- Universal single phase input

Accessories

- Redundancy diode module
- UPS controller module
- Battery holders and enclosures
- Ultra capacitor modules

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Terms & Conditions

TITLE - Title to the products of ALTECH shall remain with ALTECH until payment is made in full by Customer. Such reservation of title is for the purpose of securing the purchase price and shall not relieve Customer of the duty to inspect the products upon receipt, to notify ALTECH of any deficiencies or defects, and to exercise due care in the use, installation, operation, and maintenance of the products when on the premise of the Customer or under the control of the Customer. Notwithstanding any reservation of title by ALTECH, risk of loss shall pass to customer at any time of shipment.

SHIPMENT AND DELIVERY - All orders for destination in the mainland United States (less Hawaii, Alaska and non-continental United States possessions) will be shipped F.O.B. Flemington, N.J. All destination, shipping and other charges shall be paid by the Customer in accordance with ALTECH's then current shipping and billing practices.

Delivery dates given in the acceptance of any order are approximate. ALTECH shall not be liable for delays in delivery or in performance due to causes beyond its reasonable control including acts of God, acts of Customer, acts of civil or military authority, fires, strikes or other labor disturbances, war, riot or delays in transportation. In the event of such delay, the date of delivery or performance shall be extended for a period equal to the time lost by reason of the delay.

PRICE - PRICES in any ALTECH publication are subject to change without prior notification. Catalog prices are based on prices published in the current price list. All written quotations are valid for thirty (30) days from the date of quotation. Customer shall pay all sales, use, excise or similar taxes whenever ALTECH must itself pay and/or collect such tax from Customer arising out of the sale.

PAYMENT - Customer agrees to make payment within thirty (30) days of date of the invoice from ALTECH. Customer agrees to pay a late payment charge of one and one-half percent (1.5% per month, or the maximum late payment charge permitted by applicable law, whichever is less, on any unpaid amount for each calendar month (or fraction thereof) that such payment is in default. Orders amounting to less than $100.00 will be billed at $100.00 plus freight. Full carton purchases are required. In the event of referral to an attorney for collection, reasonable attorney's fees for collection of the overdue amount shall be paid by Customer. In the event payment is not received within 30 days from the date of invoice, any discount shall be cancelled and the full list price will be due.

LIMITED WARRANTY - ALTECH warrants to Customer that the equipment purchases shall be free from defects in material and workmanship under normal use and service for a period of one year from shipment.

Written notice as an explanation of the circumstances of any claim that the equipment has proved defective in material or workmanship shall be given promptly by the Customer to ALTECH.

ALTECH will not be liable for any misuse, improper operations, improper installation, improper maintenance, alteration, modification, accident or unusual degradation of the equipment or parts due to an unsuitable installation environment.

No representation of other affirmation of facts, including but not limited to statements regarding capacity, suitability for use or performance of the equipment, shall be or be deemed to be a warranty or representation by ALTECH for any purpose, nor give rise to any liability or obligation of ALTECH whatsoever.

Customer's sole and exclusive remedy in the event of breach of warranty, as set forth herein, is expressly limited to (1) the correction of the defect by adjustment, repair, modification, or replacement, or (2) issuance of a credit or refund of the purchase price for the defective equipment at ALTECH's election and sole expense.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY EXTENDS ONLY TO THE CUSTOMER FROM ALTECH OR ITS AUTHORIZED DISTRIBUTOR.

LIMITATION OF LIABILITY - IN NO EVENT, SHALL ALTECH BE LIABLE FOR LOSS OF PROFITS, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER SIMILAR DAMAGES ARISING OUT OF ANY BREACH OF THIS AGREEMENT OR OBLIGATIONS UNDER THE AGREEMENT.

ALTECH SHALL NOT BE LIABLE FOR ANY DAMAGES CAUSED BY DELAY IN SHIPMENT, INSTALLATION OR FURNISHING OF EQUIPMENT OR SERVICES UNDER THIS AGREEMENT.

No action arising out of any claimed breach of this Agreement may be brought by either party more than two (2) years after the cause of action has accrued.

PATENT INDEMNITY - ALTECH shall defend or settle any suit or proceeding brought against Customer based on a claim that any equipment made to ALTECH design and furnished hereunder constitutes an infringement of any existing United States patent, provided (ALTECH) is notified promptly in writing and is given complete authorization and information required for the defense, and ALTECH shall pay all damages and costs awarded against Customer, but shall not be responsible for any costs, expense or compromise incurred or made by Customer without ALTECH's prior written consent. If any equipment is in ALTECH's opinion likely to or does become the subject of a claim for patent infringement, ALTECH may at its option and expense procure for Customer the right to continue using the device, modify it to become non-infringing, but in the event ALTECH is not reasonably able to modify, substitute, or otherwise procure for Customer the right to continue using it, ALTECH will remove such equipment and refund to Customer the amount paid in excess of a reasonable rental for past use.

ALTECH shall not be liable for any infringement or claim based upon use of the equipment in combination with other equipment not supplied by ALTECH or with modifications made by Customer.

The foregoing states the entire liability of ALTECH to Customer arising from patent infringement.

SELLER'S REMEDIES - Should Customer fail to make any payment within ten (10) days of its due date, or fail to perform any other of the Customer's obligation hereunder upon thirty (30) days written notice, or should Customer be or become insolvent or be a party to any bankruptcy receivership proceeding prior to full payment of all amounts payable hereunder, ALTECH may: (a) with or without demand or notice to customer declare the entire amount unpaid immediately due and payable; (b) enter upon the premises where the equipment may be found and remove it (Customer shall assemble the equipment and make it available to ALTECH at a place reasonably convenient to both parties and shall permit and assist ALTECH in effecting the retaking and removal of the equipment); and (c) sell any or all the equipment as permitted under applicable law, applying the proceeds of the sale to payment of the expenses of retaking, repairing and selling the equipment, reasonable attorney fees and to the satisfaction of all indebtedness then due and unpaid under this Agreement. Any surplus shall be paid to Customer and any deficiency shall be paid to ALTECH by Customer.

The remedies provided herein shall be cumulative and in addition to all other remedies provided by law or equity or under the Uniform Commercial Code.

GOVERNING LAW - This agreement will be governed by the Laws of the State of New Jersey.

GENERAL - This Agreement shall only become effective and binding when either (a) it has been accepted and executed by an authorized representative of ALTECH, or (b) the equipment has been shipped to Customer, with or without acceptance in writing hereon. Notice of acceptance is hereby waived by Customer. Customer hereby acknowledges receipt of a true and complete copy hereof.

No addition to or modification of any of the Terms and Conditions of Sale as they appear herein shall be binding upon ALTECH unless signed in writing by duly authorized representative of ALTECH in Flemington, N.J.

Typographical and clerical errors in quotations, orders and acknowledgments are subject to correction.

This Agreement is not assignable without the prior written consent of ALTECH. Any attempt to assign any of the rights, duties or obligations of this Agreement without such consent is void.

If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability, of the remaining provisions shall not in any way be affected or impaired thereby.

ALTECH is not responsible for failure to fulfill its obligation under this Agreement due to causes beyond its control, or except as agreed herein.

THE CUSTOMER ACKNOWLEDGES THAT HE HAS READ THE AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS. FURTHERMORE, THE CUSTOMER AGREES THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN THE PARTIES, WHICH SUPERSEDES ALL PROPOSALS OR PRIOR AGREEMENTS, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, AND ALL OTHER COMMUNICATIONS BETWEEN THE PARTIES RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

Circuit Protection Devices

Altech the market leader in UL508 Manual Motor Controllers/ Miniature Circuit Breakers now introduces UL489 Miniature Circuit Breakers and UL1077 Supplementary Protectors. The UL489 versions are DIN rail mounted, 17.5mm wide, thermal magnetic, 240V, 480Y/277V AC, 50/60Hz, 125 and 250 VDC models, with short circuit interrupt capacity of 10kA, a positive trip indicator, and are line/load reversible. The UL1077 versions are DIN rail mounted, 17.5mm wide, thermal magnetic, 480Y/277V AC, 50/60Hz, a short circuit withstand capacity 10kA, have a positive trip indicator.

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Industrial Enclosures

Altech offers a broad selection of non-metallic and aluminum Industrial Enclosures to meet your diverse design requirements. Sizes range from 1.97 x 2.05 x 1.38 to 35.43 x 11.81 x 5.59 inches. Materials include polycarbonate, polystyrene, polypropylene, ABS or aluminum. Polycarbonate and aluminum series have been recently expanded. Protection up to IP67 (NEMA 4, 4X). Smooth sidewalls or sidewalls with knockouts. Enclosures can be mounted directly onto a panel, frame or other mounting surfaces. EMI / RFI Coating is available. Competitive cover printing is available. Hinge Kits. Customization available.

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Supports up to 48 I/Os (32 digital inputs & 16 digital outputs). DST Feature Available. Backlit LCD Screen for display & modification of preselected parameters of functional blocks, viewing I/O status and programming on the device. PC software for programming, online & offline simulation, documentation & printing. Designed for use in automation for commercial & Industrial sectors. Modbus Communication. UL 508 (UL File No. E352868), IEC 61000-3-2 and IEC 61000-4-2-1~11. 250 lines of ladder programming. 16 soft text messages, Time Switches, Compare Counters, Timers, Counters & 12 analog functions.

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Altech offers a NEW Terminal Block catalog with the most competitively priced blocks in the industry. We feature screw and spring clamp models for DIN rail and panel mount applications. This advanced line of wire termination products will increase your design options and help to get the job done more efficiently. Our line of blocks include feed-through (single, double or triple level), distribution, ground, fuse, disconnect, thermocouple, surge suppressor and indicator. A wide variety of accessories, tools and ferrules are available.

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Motor Disconnect Switches

Altech's line of Motor Disconnect Switches are UL 508 listed as Manual Motor Controllers for AC Motor Starting Across-the-line and AC General use. This new 16 page catalog includes the 3 different handle designs, which are all available in gray/black or yellow/red housings. Electrical ratings are 25-150A / 600V. The switches are non-fused DIN Rail mountable. Neat features include: snap-on auxiliary switches, door mounting kit and a retrofit 30A fuse holder. Also featured are Enclosed Motor Disconnect Switches & Fused Enclosed Motor Disconnect Switch (30A) in plastic or stainless housings.

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Power Supplies

Altech DIN RAIL mountable power supplies have Universal AC input. They are suitable for industrial and automation applications. UL508 Listed or UL Recognized. Single and Three phases up to 960W. Outputs of 5V, 12V, 15V, 24V and 48V. Class 2 devices are available. Installed on DIN rail TS35/ 7.5 or 15. Protections of Short circuit / Overload / Overvoltage / Over temperature. Cooling by free air convection. All-In-One DC-UPS, battery based. Ultra Capacitor DC-UPS, no battery required. Worldwide approvals. 3 year warranty.

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