Altech®

DC-UPS Ultra-Capacitor
AT A GLANCE

Order Catalog
PN- 815



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

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.

Benefits of Capacitor Technology

- Environmentally safe
- Free of toxic chemicals (gas is not emitted)
- Virtually maintenance free
- Wide operating temperatures (-40°C to 60°C)
- Long operational life (15 years or longer!)
- Compact and convection cooled
- No need to replace or maintain batteries
- Cost effective over time
- Resists shock and vibrations
- Quick buffer times

ADVANTAGES

- **12V DC, 24V DC and 48V DC**
- **Largest and most varied line**
- **Quickest charge and buffer times**
- **Only line offering built in power supply**
- **Online system (no switch over time)**

COMPETITORS

Manufacturer	Series
Phoenix	Quint 4 CAP
Weidmuller	CP DC Buffer
Siemens	SITOP UPS500
Puls	UC10

APPLICATIONS

- **Controlled shutdown**
- **Extreme / Isolated Environment**
- **Renewable Energy**
- **Industrial / Electrical Automation**
- **Remote Monitoring**
- **Telecommunication**
- **Agriculture**
- **Machinery**
- **Textiles**
- **Automotive**
- **Packaging**
- **Industrial PC**



CTEC

Capacitor driven back up UPS.

	Part No.	Model No.	Input Voltage	Output Voltage	Max Output Current	Energy Content	USB	*CEM
12V DC	C-TEC1203-1	NCPA0727G10002	12 V DC	12 V DC	3 A	1 KJ	–	✓
12/24 V DC	C-TEC2405-5	NCPA0608G01001	12/24 V DC	12/24 V DC	5 A	6 KJ	✓	–
	C-TEC2408-20	NCPA0607G01001	12/24 V DC	12/24 V DC	8 A	22 KJ	✓	–
	C-TEC2410-1	NCPA0609G01002	12/24 V DC	12/24 V DC	10 A	1 KJ	✓	–
	C-TEC2410-10	NCPA0606G01001	12/24 V DC	12/24 V DC	10 A	11 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-TEC2420-8	NCPA0747G01003	24 V DC	24 V DC	20 A	9 KJ	✓	✓

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



C-TEC P

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

	Part No.	Model No.	Input Voltage	Output Voltage	Max Output Current	Energy Content	USB	*CEM
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	5 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-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	Max Output Current	Energy Content	USB	*CEM
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	✓	–

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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	Max 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	9 KJ
	CEM-16	NCBA0748G10001	24 V DC	0 V…26.4 V DC	20 A	18 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. - only usable with modules marked CEM

Estimated Back Up Times

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 amperages in the form of backup time in seconds.
3. Compare your required back up time to the backup time provided in the chart for the most suitable module.

		DC-UPS Part No.	Output Voltage	Required Backup Current (A) Time (seconds) 0.5	1	1.5	2	3	5	8	10	15	20	30	40
DC Input	12V DC	C-TEC1203-1	12	160	80	50	40	25							
		C-TEC1205-5[1]	12	975	485	320	240	160	95						
		C-TEC1208-20[2]	12	3650	1825	1215	910	605	360	225					
		C-TEC1210-1[3]	12	160	80	50	40	25	16	10					
		C-TEC1210-10[4]	12	1820	910	605	450	300	180	110	90				
		C-TEC1225P	12	80	40	25	20	12	8	5	4	2	1	1.5	
	24V DC	C-TEC2403-05	24	40	20	12	10	7							
		C-TEC2403-1	24	80	40	25	20	13							
		C-TEC2403-1-400	24	80	40	25	20	13							
		C-TEC2405-5[1]	24	485	240	160	120	80	45						
		C-TEC2408-20[2]	24	1825	910	600	455	300	180	110					
		C-TEC2410-1[3]	24	80	40	25	20	13	8	5	4				
		C-TEC2410-10[4]	24	910	455	300	225	150	90	55	45				
		C-TEC2420-8	24	720	360	240	180	120	72	45	36	24	18		
		C-TEC2425P	24	100	50	33	25	16	10	6	5	3	2		
		C-TEC2440P	24	400	200	150	100	65	40	25	20	15	10	6	5
	48V DC	C-TEC4815P		40	20	12	10	6	4	3	2.5	1			
AC Input	12V DC	AC-C-TECH1203-1	24	160	80	50	40	25							
	24V DC	AC-C-TEC2403-05	24	40	20	12	10	7							
		AC-C-TEC2403-1-400	24	80	40	25	20	13							
		AC-C-TECH2403-1	24	80	40	25	20	13							
		AC-C-TEC2410-10	24	820	410	270	205	135	80	50	40				
		AC-C-TEC2420-8	24	600	300	200	150	100	60	37	30	20	15		
	Extension Modules	*CEM12-1	12	100	50	30	25	15							
		*CEM12-2	12	200	100	60	50	30							
		*CEM1	24	80	40	25	20	12	8						
		*CEM2	24	160	80	50	40	24	16						
		*CEM8	24	720	360	240	180	120	72	45	36	24	18		
		*CEM16	24	1480	740	490	370	245	148	92	74	48	37		

* Please add CEM back up times for extended calculations.
For example C-TEC2403-1 @ 0.5A + CEM1 @ 0.5A = 160 sec. total back up time.

Backup Time can be calculated by the following formula:
WS(KJ) / W = Back Up Time
EX. C-TEC2420-8 with a 3A load
WS(KJ) = 8,000 WS (8KJ)
W (Current 3A x Voltage 24V DC) = 72W
8000WS/72W =125 Second Back Up Time

[1,2,3,4] Part numbers with matching note 1, 2, 3, 4 each use the same module.

USB Modules (available software)
ParaTEC - allows customization of module for special requirements
TEC Control - allows for controlled and safe shutdown of load

- Custom machine and printing