












































































CFR Series



The CFR's microprocessor design provides efficiency ratings up to 92%.
Complete input to output isolation provides the industry's best surge and lightning protection.
Features RS-232 communication port and are SNMP and modem compatible.
Optional External Battery Packs greatly extend available backup time.

Uninterruptible Power Supplies Designed to meet or exceed the safety standards established by UL, CSA, CE and VDE. The Alpha CFR UPS is one of the safest, most reliable and versatile Uninterruptible Power Systems available. Input current waveform correction eliminates overheating effects of non-linear load current harmonics. Input power-factor correction brings low power-factor loads to near unity, reducing electric utility costs. The CFR Series sets the standard for the effective powering of non-linear or actively regulated loads, while providing superior surge and noise rejection. Power ratings of 600VA to 15KVA available.








































































































Nominal Specifications

Model Number	CFR 600XT CFR 600XTE	CFR 1000 CFR 1000M CFR 1000E	CFR 1500C	CFR 1500 CFR 1500 E CFR 1500 NT CFR 1500 M	CFR 2000	CFR 2500 CFR 2500NT CFR 2500M CFR 2500E
Output Power Rating	600VA 450W	1000VA 750W	1500VA 1125W	1500VA 1125W	2000VA 1340W	2500VA 1675W
60Hz Models (CFR, CFR-NT & CFR-M)						
Input Voltage (VAC) Nominal	120	120	120	120 / 208 / 240	120 / 208 / 240	120 / 208 / 240
Output Voltage (VAC) Nominal	120	120	120	120 / 208 / 240	120 / 208 / 240	120 / 208 / 240
50Hz Models (CFR-E)						
Input/Output Voltage (VAC) Nominal	230	230	N/A	230	230	230
Typical Efficiency - AC/AC 100% Load	88%	90%	90%	90%	90%	90%
Typical Heat Output - Line Mode	209 BTU/h	284 BTU/h	427 BTU/h	427 BTU/h	398 BTU/h	636 BTU/h
Mechanical						
Width (mm / Inches)	216 / 8.5	216 / 8.5	216 / 8.5	216 / 8.5	216 / 8.5	216 / 8.5
Height (mm / Inches)	254 / 10	254 / 10	394 / 15.5	533 / 21	533 / 21	533 / 21
Depth (mm / Inches)	508 / 20	508 / 20	533 / 21	571 / 22.5	571 / 22.5	571 / 22.5
60Hz Weight (kg / Lbs)	32 / 70	42 / 92	67 / 147	69 / 151	78 / 171	84 / 185
50Hz Weight (kg / Lbs)	34 / 76	42 / 93	N/A	74 / 163	82 / 181	86 / 190
Internal Battery Run Time*	25 Min.	12 Min.	18 Min.	18 Min.	15 Min.	10 Min.
Maximum Battery Charger Current	3A	3A	3A	3A	3A	3A
Extended Battery Run Time Options*						
A. External Battery Pack (EBP) Total Run Time**	EBP 24A 1 Hour	EBP 24A 32 Min.	EBP 48A 1 Hour 39 Min.	EBP 48A 1 Hour 39 Min.	EBP 48A 1 Hour 10 Min.	EBP 48A 52 Min.
B. External Battery Pack (EBP) Total Run Time**	EBP 24C 5 Hours	EBP 24C 2 Hours 12 Min.	EBP 48E 3 Hours 45 Min.	EBP 48E 3 Hours 45 Min.	EBP 48E 2 Hours 48 Min.	EBP 48E 2 Hours 10 Min.
C. External Battery Pack (EBP) Total Run Time**	EBP 24E 9 Hours 25 Min.	EBP 24E 5 Hours 12 Min.				
60Hz Power Connector Options						
Input: CFR, CFR-C, CFR-M, CFR-RM Models	5-15P 	5-15P 	5-15P 	5-15P  L5-15P  T. B. 	5-20P  L5-20P  T. B. 	5-30P  L5-30P  L6-30P  T. B. 
CFR-NT Models	N/A	N/A	N/A	L6-30 	L6-30 	L6-30 
Output: CFR, CFR-C, CFR-M, CFR-RM Models	5-15R  L5-15R 	5-15R  L5-15R 	5-15R 	5-15R  5-20R  6-20R  L5-15R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  T. B. 	5-15R  5-20R  6-20R  L5-15R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  T. B. 	5-15R  5-20R  6-20R  L5-15R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  T. B. 
CFR-NT Models	N/A	N/A	N/A	5-15R  2-L6-30R 	5-15R  2-L6-30R 	5-15R  2-L6-30R 
50Hz Power Connector Options						
Input / Output: CFR-E Models	British  Schuko  Australian 	British  Schuko  Australian 	N/A	British  Schuko  Australian 	British  Schuko  Australian 	British  Schuko  Australian  T. B. 
Output Power Connector Configuration Options	1) Any 2 single or 2 duplex receptacles			1) Any combination of 3 or less duplex receptacles 2) Any combination of 2 or less single receptacles 3) Any duplex receptacle with any single receptacle 4) Single terminal block		

* Battery run times are calculated at typical loads (80%) and will vary according to battery age, loads, temperature and other factors.

** Total run time include the internal batteries and the External Battery Pack (EBP).

Nominal Specifications

	CFR 3000 CFR 3000NT CFR 3000E	CFR 5000 CFR 5000NT	CFR 7500 CFR 7500NT	CFR 10K CFR 10K NT	CFR 15K CFR 15K NT
Model Number					
Output Power Rating	3000VA 2000W	5000VA 3750W	7500VA 5000W	10KVA 6700W	15KVA 10KW
60Hz Models (CFR, CFR-NT & CFR-M)					
Input Voltage (VAC) Nominal	120 / 208 / 240	120 / 208 / 240	208 / 240	208 / 240	208 / 240
Output Voltage (VAC) Nominal	120 / 208 / 240	120 / 208 / 240	120 / 208 / 240	120 / 208 / 240	120 / 208 / 240
50Hz Models (CFR-E)					
Input/Output Voltage (VAC) Nominal	230	230	230	230	230
Typical Efficiency - AC/AC 100% Load	90%	90%	92%	92%	92%
Typical Heat Output - Line Mode	758 BTU/h	1425 BTU/h	1487 BTU/h	1988 BTU/h	2967 BTU/h
Mechanical					
Width (mm / Inches)	216 / 8.5	305 / 12	559 / 22	559 / 22	559 / 22
Height (mm / Inches)	533 / 21	569 / 22.5	762 / 30	762 / 30	762 / 30
Depth (mm / Inches)	749 / 29.5	747 / 29.4	813 / 32	813 / 32	813 / 32
60Hz Weight (kg / Lbs)	128 / 283	170 / 375	289 / 638	305 / 673	295 / 650
50Hz Weight (kg / Lbs)	142 / 313	173 / 381	293 / 644	323 / 710	313 / 688
Internal Battery Run Time*	27 Min.	12 Min.	10 Min.	6 Min.	EBP Required
Maximum Battery Charger Current	3A	8A	6A	6A	6A
Extended Battery Run Time Options*					
A. External Battery Pack (EBP) Total Run Time**	EBP 48A 1 Hour 15 Min.	EBP 48M 1 Hour 15 Min.	EBP 144Y 30 Min.	EBP 144Y 20 Min.	2-EBP 144Y 12 Min.
B. External Battery Pack (EBP) Total Run Time**	EBP 48E 2 Hours 30 Min.	EBP 1275-48B 3 Hours 44 Min.	EBP 144E 2 Hours 16 Min.	EBP 144E 1 Hour 36 Min.	EBP 144E 50 Min.
60Hz Power Connector Options					
Input: CFR, CFR-C, CFR-M, CFR-RM Models	5-30P  L5-30P  L6-30P  Terminal Block 	5-50P  CS6361  L6-30P***  Terminal Block 	Terminal Block  Terminal Block  Terminal Block 	Terminal Block  Terminal Block  Terminal Block 	Terminal Block  Terminal Block  Terminal Block 
CFR-NT Models	L6-30 	L6-30 	Terminal Block  Terminal Block 	Terminal Block  Terminal Block 	Terminal Block  Terminal Block 
Output: CFR, CFR-C, CFR-M, CFR-RM Models	5-15R  5-20R  6-20R  L5-15R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R 	5-15R  5-20R  6-20R  L5-15R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R 	5-15R  5-20R  6-20R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  Terminal Block 	5-15R  5-20R  6-20R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  Terminal Block 	5-15R  5-20R  6-20R  L5-20R  L5-30R  L6-20R  5-30R  L6-30R  Terminal Block 
CFR-NT Models	5-15R  2-L6-30R 	5-15R  3-L6-30R 	5-15R  2-L6-30R  Terminal Block 	5-15R  2-L6-30R  Terminal Block 	5-15R  2-L6-30R  Terminal Block 
50Hz Power Connector Options					
Input / Output: CFR-E Models	British  Schuko  Australian  Terminal Block 	British  Schuko  Australian  Terminal Block 	British  Schuko  Australian  Terminal Block 	British  Schuko  Australian  Terminal Block 	British  Schuko  Australian  Terminal Block 
Output Power Connector Configuration Options	1) Any combination of single or duplex receptacles, up to 3 on CFR 3000, 4 on the CFR 5000 2) Single terminal block on CFR 3000 3) Single terminal block with any combination of 2 or less single or duplex receptacles on CFR 5000 *** 208 or 240 input only		1) Any combination of 3 or less duplex receptacles 2) Any combination of 2 or less single receptacles		

* Battery run times are calculated at typical loads (80%) and will vary according to battery age, loads, temperature and other factors.

** Total run time include the internal batteries and the External Battery Pack (EBP).

Common Specifications

Operating Input Voltage Range:	-23% to +10%
Input Frequency Operating Range:	± 1.4Hz
Input Power Factor:	0.95 to 0.99
Input Current THD:	5% Typical
Output Waveform:	True Sinewave
Output Voltage Regulation:	± 1%
Typical Output Voltage THD:	<5% 600VA to 5KVA <3% 7.5KVA to 15KVA
Inverter Frequency Stability:	± 0.1%
Spike Attenuation:	2000 to 1
Lightning & Surge Protection:	ANSI C62.41-1980 (IEEE 587)
Operating Temperature:	0 to 40°C or 32 to 104°F
Audible Noise:	≤ 40 dBA Typical
Internal Battery Recharge Time:	≤ 5 Hrs (to 80% of capacity)

Application Specific Models

CFR-NT	Specifically designed to be compatible with Northern Telecom Meridian telephone switches and other telephony products.
CFR-M	Designed for medical or dental equipment power protection. Meets or exceeds the requirements of UL 544 and CSA 22.2 #125.
CFR-E	50Hz configuration

Communications

All Alpha CFR products feature RS-232 communication ports and are SNMP and modem compatible. The following is a list of optional communication, monitoring and control products:

AlphaNet C™ Alpha's Network Power Management Software allows a CFR UPS user to monitor power quality and perform an orderly unattended shutdown of UPS powered systems.

AlphaNet CS™ SNMP Agent Furnishes real time UPS/power status to the Network Power Management Software.

SmartSocket+ Power management device allows switching of individual power receptacles under program control, including timed power-on and power-off.

Intelligent Interface Device (I2D) Front panel LCD readout provides vital UPS system information at the touch of a key.

EBP Options

Alpha's plug-in External Battery Packs provide extended backup for all CFR models. All battery packs are shipped fully assembled and include interconnecting cables. Longer run times are obtained by cascading additional battery cabinets.

Available for:
CFR 600, 1000



Battery Pack 24 volt
Width (mm / Inches)
Height (mm / Inches)
Depth (mm / Inches)
Weight (kg / Lbs)
Capacity (Ah)

EBP 24A
216 / 8.5
114 / 4.5
394 / 15.5
18 / 39
17



EBP 24C
216 / 8.5
267 / 10.5
610 / 24.0
58 / 127
66



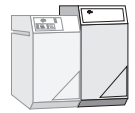
EBP 24E
216 / 8.5
546 / 21.5
711 / 28.0
141 / 312
176

Available for:
CFR 5000



Battery Pack 48volt
Width (mm / Inches)
Height (mm / Inches)
Depth (mm / Inches)
Weight (kg / Lbs)
Capacity (Ah)

EBP 48M
216 / 8.5
546 / 21.5
711 / 28.0
141 / 312
88



EBP 1275-48B
660 / 22.0
770 / 30.3
800 / 31.5
411 / 905
264

Available for:
CFR 1500, 2500, 3000



Battery Pack 48 volt
Width (mm / Inches)
Height (mm / Inches)
Depth (mm / Inches)
Weight (kg / Lbs)
Capacity (Ah)

EBP 48A
216 / 8.5
267 / 10.5
610 / 24.0
58 / 127
33



EBP 48E
216 / 8.5
546 / 21.5
711 / 28.0
141 / 312
88

Available for:
CFR 7500, 10K, 15K



Battery Pack 144 volt
Width (mm / Inches)
Height (mm / Inches)
Depth (mm / Inches)
Weight (kg / Lbs)
Capacity (Ah)

EBP 1233-144
216 / 8.5
546 / 21.5
864 / 34.0
159 / 350
33



EBP 144E
560 / 22.0
770 / 30.3
800 / 31.5
411 / 905
88