

Emerg-Power Systems FTC3R and 3FTC3R

Outdoor uninterruptible emergency lighting inverter system 3KVA-8KVA



Features

- 98% efficient at full load
- PWM/IGBT technology
- Self-testing/self-diagnostic
- Standard input circuit breaker
- Standard internal bypass switch
- RS232 communication port
- Standard seismic zone 4 brackets
- Standard summary dry contacts
- Automatic event and alarm log
- NEMA 3R cabinet for outdoors
- 90 min. standard run time
- Generator compatibility
- Available in Y or Δ input configuration
- Custom voltages available
- Automatic event, test and alarm log
- LCD display
- One size cabinet
- Maintenance free standard 5 year batteries
- Temperature controlled cooling fans

UL listed to UL 924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.



Electrical/ Mechanical characteristics⁴ -(data provided for standard Lead Calcium batteries)^{1,4}

Power rating ¹ KVA= W	Effic. at full load %	Heat loss (BTU)	Batt. VDC	Batt. A	No. of Batt. ²	UPS cabinet dimensions			UPS cab. weight lbs	Batt. cab. weight lbs	Total system weight lbs
						W"	H"	D"			
3 (1PH)	98	255	120	37	10	48	76	30	535 lbs	888 lbs	1633 lbs
4 (1PH)	98	340	144	40	12	48	76	30	535 lbs	1110 lbs	1855 lbs
5 (1PH)	98	408	180	40	15	48	76	30	535 lbs	1480 lbs	2247 lbs
6.5 (1PH)	98	544	240	39	20	48	76	30	639 lbs	1776 lbs	2835 lbs
8 (1PH)	98	680	144	82	24	48	76	30	639 lbs	2220 lbs	3279 lbs
4 (3PH)	98	326	144	39	12	48	76	30	639 lbs	2960 lbs	4063 lbs
5 (3PH)	98	408	180	39	15	48	76	30	1250 lbs	4440 lbs	6390 lbs
6.5 (3PH)	98	544	240	39	20	48	76	30	1250 lbs	6080 lbs	8630 lbs
8 (3PH)	98	680	144	81	24	48	76	30	1450 lbs	7400 lbs	10150 lbs

¹Factory installed floor mount brackets; add 2.5" to each side (total 53")

²Standard batteries are 5 year life expectancy. Batteries are installed in the same cabinet with electronics

³UL rated for 90 min. run time for temperatures: 50°F to 104°F (10°C to 40°C) or -4°F to 104°F (-20°C to 40°C) with optional heater

⁴NEMA type 3R, freestanding, two-door powder coat cold rolled steel cabinet standard. Stainless steel enclosure is optional

How to order

Input voltage ¹	Battery type	VA/W rating ²	System type	Output voltage ³	Run time ⁴	Input breaker	RS232 Port	Internal bypass switch	Output breakers ⁵	Options ⁶	
120, 1PH	SG= Sealed lead-calcium	3000	FTC3R= single phase	120	90	ICB	RS232	MBYB	-OCBxxxx= No trip alarm ⁵	10Y= 10 yr sealed batteries 12HR= 12 hr fast recharge	HTR= heater INVON= inverter on dry contacts
208, 1PH		4000		208					-OCAxxxx= With trip alarm ⁵	NOFF= normally off output ⁷	MOD= external modem
240, 1PH		5000		277						EMBP= external bypass switch ⁸	FAX= fax modem
277, 1PH		6500		120/208						RMP= remote metering panel	BPR= bypass relays
120/208, 3PH		8000	3FTC3R= 3 phase	277/480						RSAP= remote summary alarm panel	SS= stainless steel enclosure
277/480, 3PH											

Example: 120SG4000-FTC3R-120-90-ICB-RS232-MBYB-OCB0420-10Y

¹1PH are input voltages available for 1 phase systems. 3PH are input voltages available for 3phase systems.

²Not available in 3 phase version

³1PH are input voltages available for 1 phase systems. 3PH are input voltages available for 3 phase systems.

⁴Other run times available

⁵Max. 14 unsupervised single pole positions or 8 with trip alarm. For more output breakers please consult factory. See page 183 for output breaker option details

⁶See page 183 for options description Summary alarm dry contacts and seismic brackets are standard.

⁷Normally off loads cannot exceed 20% of total KVA rating with any combination of H.I.D. loads

⁸Not available in 3 phase version.

Emerg-Power Systems

Options details

Integrated output circuit breakers:

-OCB	12	20			
Trip alarm OCB - No breaker trip alarm	Number of circuit breakers Combination of 1 pole, 2 pole and 3 pole breakers available.	Breaker rating (Amps) *Various ratings available	Number of poles Blank - 1 pole -2P - 2 poles -3P - 3poles	Breaker voltage Blank- matches system output voltage	
OCA - With breaker trip alarm	*For max. number of circuit breakers available please consult factory			-120VAC -240VAC -480VAC	-208VAC -277VAC
					Operation mode Blank: Normally-on -NOFF: Normally-off

Distribution circuit breakers are for output load protection. Protection for the normally on and/or for the normally off loads. All circuit breakers are rated for 10,000 AIC. If ordered, an audible and visual alarm activates when an output distribution circuit breaker is open or has tripped

(-20YR) 20 year old sealed lead calcium batteries

Maintenance free battery requires no addition of water over the life of the battery. The battery cells are housed in protective, modular steel trays. Life expectancy is designed for 20-years at 77°F (25°C).

(-12HR) 12 hour fast recharge

Battery charger upgrade option which decreases the time required to return a fully discharged battery to the fully charged state. The normal 24 hour recharge cycle is reduced to a 12 hour period.

(-MBYP) Internal maintenance bypass switch

Internally mounted device permits maintenance personnel to easily bypass the protected equipment directly to the AC utility power. The manual make beforebreak switch isolates the system to perform routine maintenance or servicing without interruption of utility power to the connected load.

(-EMBP) External maintenance bypass switch

The external maintenance bypass switch is mounted in a 20"H x 16"W x 9"D NEMA 1 separate enclosure, used to completely isolate the inverter system from the connected load and AC utility input. This option allows the system to be safely powered down for maintenance or service. The option may not be used on systems with more than one single pole output circuit breaker which must be sized for the total system output current.

(-RMP) Remote meter panel

The panel allows monitoring of parameters and control from remote locations up to 150 feet away from the inverter system. Also, the remote panel provides a complete touch pad interface allowing the user to monitor, control and program the inverter system.

(-RSAP) Remote summary alarm panel

Wall mountable box provides visual and audible alarms with silent switch. The panel consists of LED indicators and built-in audible alarm and may be located up to 1,000 feet away from the inverter system.

(-DCS) Summary alarm dry contacts

Form C dry contacts for remote monitoring purposes. Rated at 5 amps max. (250VAC/30VDC), the contacts will change state when any of the following alarms: are tripped High/Low Battery Charger Voltage, High/Low AC Input Voltage, Near Low Battery Voltage, Low Battery Voltage, Load Reduction Fault, High Ambient Temperature, Inverter Fault, Output Fault, Output Overload or Optional circuit breaker.

(-INVON) Inverter on dry contacts

Form C dry contacts that will change state when the system transfers to battery operation

(-VTD) Time delay, 15 minutes (for normally off circuits)

After a return of AC utility power, delays retransfer of the inverter for up to 15 min. and continues to supply emergency power to the normally off circuits.

(-NOFF) Normally off output

This output circuit is dedicated for the "emergency only" equipment. Emergency only equipment operates during power outages and when the system is on battery back up. This option leaves the normally off load circuits off during normal utility power conditions. A 1-pole circuit breaker is provided. For 3 phase systems, 3 pole normally off circuits are available as well.

(-MOD) External modem

External modem device is designed to boost the signal level of the RS-232 diagnostic interface to remote monitoring locations located more than 100 feet away from the system.

(-FAX) Internal fax modem

The internal fax modem enables the system to send a fax automatically to several pre-programmed numbers when one of the following conditions occurs: utility failure, output failure or any alarm. The Fax Modem option requires a user supplied dedicated phone line.

(-BPR) Bypass relays

Internal bypass relays will allow overriding circuits that can be switched on/off, so in case of a power failure the emergency circuits will be supplied from the inverter system whatever the position of the switching device. Please consult factory for more details.

(-SEIS) Seismic mounting kit

The seismic mounting kit option is designed to prevent system movement during seismic events. Heavy-duty brackets are provided to secure system cabinetry to floor surfaces. Meets Zone 4 requirements.

(-ZONEM) Zone monitoring

Allows voltage monitoring of different circuits than the standard AC utility input. When the voltage of one of these circuits drops, the inverter system will go into battery back-up operation mode. Number and voltage of the monitored circuits to be specified.

(-RS232) Diagnostic interface

A microprocessor-based data acquisition system designed to monitor all the system parameters remotely. Monitors alarm log, event log and automatic test log. User can command the system to perform a battery test and review all system parameters. Access is through a DB9 connector and transmits at 9600 baud.

(-BATM) Battery cycle warranty monitor

Device providing battery monitoring at string level or cell level. Please consult factory for more details.