



LU3FTC Three Phase Series

Fast transfer emergency
lighting inverter system
4.8KVA – 50KVA



FEATURES:

- 98% efficient at full load
- 2ms transfer time
- PWM/IGBT technology
- Self-testing/self-diagnostic
- User programmable with password protection
- Standard input circuit breaker
- Internal maintenance bypass (MBB)
- RS232 communication port
- Microprocessor controlled
- 30 min. standard run time
- Generator compatibility
- Available in Y or Δ input configuration
- Custom voltages available
- Automatic event, test and alarm log
- LCD display
- Reduced footprint
- Maintenance-free VRLA batteries
- Forced air cooling during emergency mode only
- cUL Listed to CSA 22.2.141-15. Meets NFPA101

LU3FTC SERIES 30 MINUTE RUN TIME

| Partial model number | Power rating (kW) 30 min. | Voltage in-out VAC | Electronic cabinet dimensions (cm) | | | | Batteries | | Battery cabinet dimensions (cm) | | | | Total system weight (kg) | Total no. of cabinets | 347V XFM cabinet |
|----------------------|---------------------------|--------------------|------------------------------------|--------|--------|-------------|------------------|-------------|---------------------------------|--------|--------|-------------|--------------------------|-----------------------|------------------|
| | | | W (cm) | H (cm) | D (cm) | Weight (kg) | No. of batteries | Weight (kg) | W (cm) | H (cm) | D (cm) | Weight (kg) | | | |
| 1 | 4.8 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 12 | 198 | 44 | 157 | 64 | 129 | 570 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 329 | | | | | | | 656 | 2 | |
| 2 | 6.0 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 15 | 248 | 44 | 157 | 64 | 129 | 620 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 329 | | | | | | | 706 | 2 | |
| 3 | 8.0 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 20 | 330 | 44 | 157 | 64 | 129 | 702 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 329 | | | | | | | 788 | 2 | |
| 4 | 10.0 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 12 | 390 | 58 | 196 | 64 | 170 | 850 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 386 | | | | | | | 946 | 2 | |
| 5 | 12.5 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 15 | 488 | 58 | 196 | 64 | 170 | 948 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 396 | | | | | | | 1054 | 2 | |
| 6 | 16.7 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 20 | 650 | 58 | 196 | 64 | 170 | 1110 | 2 | Top cabinet |
| | | 347/600 | | 175 | | 396 | | | | | | | 1217 | 2 | |
| 7 | 24.0 | 120/208 or 277/480 | 112 | 183 | 79 | 567 | 40 | 1301 | 122 | 183 | 79 | 295 | 2163 | 2 | Side cabinet |
| | | 347/600 | 188 | | | 702 | | | | | | | 2297 | 3 | |
| 8 | 33.0 | 120/208 or 277/480 | 112 | 183 | 79 | 567 | 40 | 1301 | 122 | 183 | 79 | 295 | 2163 | 2 | Side cabinet |
| | | 347/600 | 188 | | | 719 | | | | | | | 2315 | 3 | |
| 9 | 40.0 | 120/208 or 277/480 | 112 | 183 | 79 | 662 | 60 | 1951 | 122 | 183 | 79 | 318 | 2931 | 2 | Side cabinet |
| | | 347/600 | 188 | | | 829 | | | | | | | 3098 | 3 | |
| 10 | 50.0 | 120/208 or 277/480 | 112 | 183 | 79 | 662 | 60 | 1951 | 122 | 183 | 79 | 318 | 2931 | 2 | Side cabinet |
| | | 347/600 | 188 | | | 829 | | | | | | | 3098 | 3 | |

LU3FTC

Three Phase Series

Fast transfer emergency lighting inverter system
4.8KVA – 50KVA



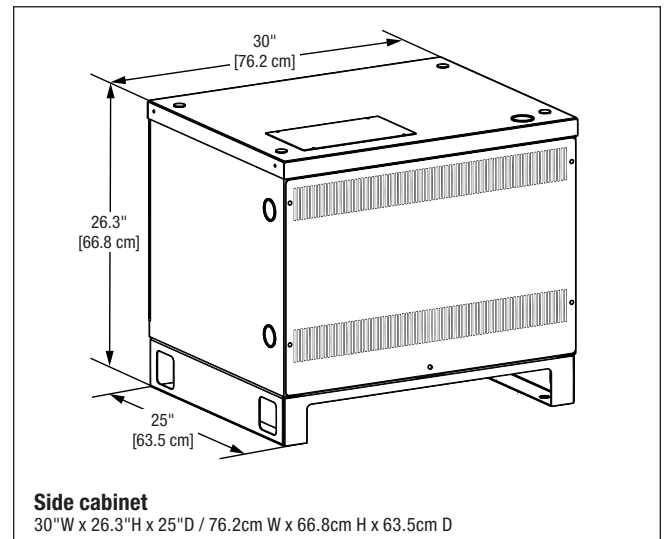
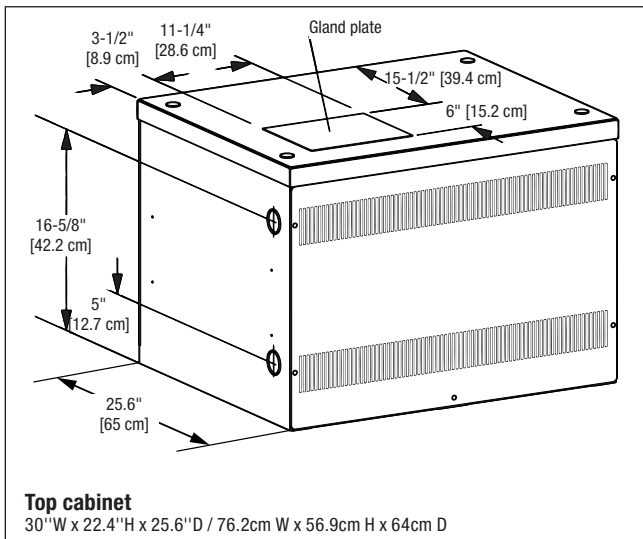
LU3FTC SERIES 60, 90 AND 120 MINUTE RUN TIME

| Partial model number | Power rating (kW) | | | Voltage in-out VAC | Electronic cabinet dimensions (cm) ¹ | | | | Batteries | | Battery cabinet dimensions (cm) ¹ | | | | Total system weight (kg) | Total no. of cabinets | 347V XFM cabinet |
|----------------------|-------------------|---------|----------|--------------------|---|--------|--------|-------------|------------------|-------------|--|--------|--------|-------------|--------------------------|-----------------------|------------------|
| | 60 min. | 90 min. | 120 min. | | W (cm) | H (cm) | D (cm) | Weight (kg) | No. of batteries | Weight (kg) | W (cm) | H (cm) | D (cm) | Weight (kg) | | | |
| 1 | 4.8 | 4.44 | 4.08 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 12 | 390 | 76 | 119 | 64 | 95 | 728 | 2 | Top cabinet |
| | | | | 347/600 | | 175 | | 329 | | | | | | | 814 | | |
| 2 | 6.0 | 5.55 | 5.10 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 15 | 488 | 76 | 119 | 64 | 95 | 826 | 2 | Top cabinet |
| | | | | 347/600 | | 175 | | 329 | | | | | | | 912 | | |
| 3 | 8.0 | 7.40 | 6.80 | 120/208 or 277/480 | 76 | 119 | 64 | 243 | 20 | 650 | 76 | 119 | 64 | 105 | 998 | 2 | Top cabinet |
| | | | | 347/600 | | 175 | | 329 | | | | | | | 1085 | | |
| 4 | 10.0 | 9.25 | 8.50 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 24 | 781 | 76 | 119 | 64 | 105 | 1176 | 2 | Top cabinet |
| | | | | 347/600 | | 175 | | 386 | | | | | | | 1272 | | |
| 5 | 12.5 | 11.6 | 10.6 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 30 | 976 | 152 | 119 | 64 | 191 | 1456 | 3 | Top cabinet |
| | | | | 347/600 | | 175 | | 396 | | | | | | | 1562 | | |
| 6 | 16.7 | 15.4 | 14.2 | 120/208 or 277/480 | 76 | 119 | 64 | 290 | 40 | 1301 | 152 | 119 | 64 | 210 | 1801 | 3 | Top cabinet |
| | | | | 347/600 | | 175 | | 396 | | | | | | | 1907 | | |
| 7 | 24.0 | 22.2 | 20.4 | 120/208 or 277/480 | 112 | 183 | 79 | 567 | 60 | 1951 | 122 | 183 | 79 | 318 | 2836 | 2 | Side cabinet |
| | | | | 347/600 | | | | 188 | | | | | | | 702 | | |
| 8 | 33.0 | 30.5 | 28.1 | 120/208 or 277/480 | 112 | 183 | 79 | 567 | 80 | 2602 | 244 | 183 | 79 | 590 | 3758 | 3 | Side cabinet |
| | | | | 347/600 | | | | 188 | | | | | | | 719 | | |
| 9 | 40.0 | 37.0 | 34.0 | 120/208 or 277/480 | 112 | 183 | 79 | 662 | 100 | 3252 | 244 | 183 | 79 | 590 | 4504 | 3 | Side cabinet |
| | | | | 347/600 | | | | 188 | | | | | | | 829 | | |
| 10 | 50.0 | 46.3 | 42.5 | 120/208 or 277/480 | 112 | 183 | 79 | 662 | 120 | 3903 | 244 | 183 | 79 | 635 | 5200 | 3 | Side cabinet |
| | | | | 347/600 | | | | 188 | | | | | | | 829 | | |

¹The cabinet dimensions above include the side cabinet

DIMENSIONS

Dimensions are approximate and subject to change.





LU3FTC Three Phase Series

System specifications



SYSTEM SPECIFICATIONS

General

| | |
|----------------------|---|
| DESIGN | Standby PWM inverter type utilizing IGBT technology with 2ms transfer time |
| CONTROL | Microprocessor controlled, 2 x 20-character display with touch pad controls & functions |
| METERING | Input and output voltage, battery voltage, battery and output current, output VA, temperature, inverter wattage |
| COMMUNICATION | RS-232 port (DB9) |

Electrical input

| | |
|----------------------------|---|
| VOLTAGE | 120/208, 277/480 or 347/600VAC, 3 phase 4-wire +10% - 15%. Contact factory for all other voltages |
| INPUT POWER WALK-IN | Limiting inrush current to less than 125%, 10 times for 1 line cycle |
| INPUT FREQUENCY | 60Hz, +/-3%, 50Hz available upon request |
| PROTECTION | Input circuit breaker |
| HARMONIC DISTORTION | <10% |
| POWER FACTOR | 0.5 lag/lead |

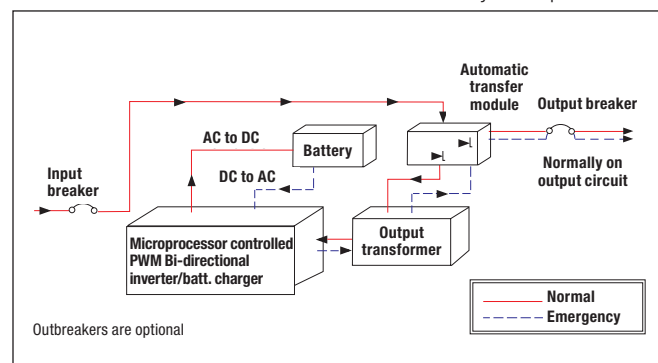
Electrical output

| | |
|----------------------------|---|
| VOLTAGE | 120/208, 277/480 or 347/600VAC, 3-phase 4 wire Contact factory for all other voltages |
| STATIC VOLTAGE | Load current change +/-4%, battery discharge +/-4% |
| DYNAMIC VOLTAGE | +/-3% for +/-25% load step change +/-6% load step change, recovery within 3 cycles |
| HARMONIC DISTORTION | <3% THD for linear load |
| OUTPUT FREQUENCY | 60Hz +/- 0.05Hz during emergency mode |
| LOAD POWER FACTOR | 0.5 lag to 0.5 lead |
| OVERLOAD CAPABILITY | to 115% continuous rating - 150% for 2.5 seconds, 250% for 3 line cycles |
| PROTECTION | Optional distribution circuit breaker |
| CREST FACTOR | 2.8 |

Environmental conditions

| | |
|------------------------------|---|
| STORAGE/TRANSPORT | <ul style="list-style-type: none"> -4°F to 158°F (-20°C to 70°C) without batteries max. 3 months at 104°F (40°C) -0°F to 104°F (-18°C to 40°C) with batteries |
| OPERATING TEMPERATURE | System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is between 68° F and 86°F (20°C to 30°C). Battery performance can be affected by temperature |
| ALTITUDE | <10,000 feet (above sea level) without de-rating |
| RELATIVE HUMIDITY | 0 to 95% non-condensing |
| AUDIBLE NOISE | 50 dBA at 1m from surface in emergency mode |

SINGLE LINE DIAGRAM – Normally on output circuit



LU3FTC Three Phase Series

System specifications and ordering information



Cabinets

Modular design, freestanding NEMA type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design through hinged lockable doors requires only 39" front clearance and 12" top clearance. Cabinets are stackable up to 16.7kVA, if required to further reduce the footprint. Top and left side conduit entry with knockouts up to 16.7kVA. Left side only for 24kVA and up.

Inverter

Using IGBT/PWM technology the inverter converts the DC voltage supplied by the batteries to AC voltage of a precise stabilized amplitude and frequency, suitable for most sophisticated electrical equipment. True sinusoidal output waveform with very low distortion (less than 3% for linear loads). Overload capability of up to 150% for 2.5 seconds.

Charger

Fully automatic, temperature compensated, microprocessor controlled charger recharges fully discharged batteries in maximum 24 hours at nominal AC input voltage. AC input current limiting and over-voltage protection included.

Battery

System is provided standard with 10 year, maintenance-free, sealed valve regulated, front terminals lead-calcium batteries. 20 year sealed lead-calcium battery also available. 30 min. standard discharge time at full load under normal operating temperature. Low voltage disconnect protection included. No special ventilation required.

Self-diagnostic

Automatic self-tests consist of a 5 minute monthly and full run time annual function. The front-mounted control panel includes 5 LED indicators, a 2 line

20 character LCD display, a keypad to control and monitor the internal operation of the system. This allows the operator to easily "watch" system functions as they occur and check on virtually any aspect of the system's operation. Standard RS232 diagnostic interface.

Alarms

High/low battery charger voltage, high/low AC input voltage, near low battery, low battery, load reduction fault, output overload, high ambient temperature, inverter fault, output fault, optional output circuit breaker trip.

Optional features

Output circuit breakers, output trip alarms, 20 year sealed batteries, 12 hour fast recharge, internal/external maintenance bypass switch (BBM), battery cabinet fans, remote status panel, status monitoring contacts, load control interface for dimmer and switch bypass in emergency, remote summary alarm panel, summary alarm dry form C contact, inverter on dry contacts, normally-off output, seismic mounting, circuit breaker locks, battery temperature monitor, drip top (NEMA 2), output transfer delay, time delay, zone monitoring, BACnet IP or MS/TP, remote meter panel, MODBUS TCP/IP or RTU, serial to ethernet adapter.

Factory start-up

Includes one additional year of warranty. See warranty conditions.

Warranty (Full limited warranty conditions available upon request)

Limited manufacturer warranty is one year, parts and labor, for system electronics or two year with factory start-up program. Battery warranty is one year full plus 9 years pro-rata for a total of 10 years, under normal operating conditions. System must be put in service within 6 months from ship date in order to validate warranty.

ORDERING INFORMATION

| Input/output voltage ¹ | Battery type | W/KVA rating | System type | Run time | Output breaker config. | Output breaker voltage | Output breaker amp. ² |
|--|--|--|-------------|---|---|--|--|
| 1= 120/208-120/208 2= 277/480-277/480 3= 120/208-277/480 4= 277/480-120/208 5= 347/600-347/600 6= 120/208-347/600 7= 277/480-347/600 8= 347/600-120/208 9= 347/600-277/480 | SC= Standard G= Long-life 20 year sealed battery | 4800= 4.8 6000= 6.0 8000= 8.0 10000= 10 12500= 12.5 16700= 16.7 24000= 24.0 33000= 33.0 40000= 40.0 50000= 50.0 | LU3FTC | R30= 30 minutes R60= 60 minutes R90= 90 minutes R120= 120 minutes | B= Normally-on N= Normally-off | A= 120, 1 pole B= 208, 2 pole D= 277, 1 pole E= 120/208, 3 pole F= 277/480, 3 pole G= 480, 2 pole H= 347, 1 pole I= 347/600, 3 pole | 10= 10 16= 16 20= 20 25= 25 32= 32 40= 40 50= 50 63= 63 |
| ¹ Special voltages may change the size, weight or number of cabinets | | | | | | | ² Higher amp ratings available (contact factory) |
| Output breaker qty. | Options | | | Monitoring ⁴ | Warranty (1 yr. std.) | Accessories | |
| 01-42= Choose the number of output breakers between 01 and 42 ³ | A= Remote summary alarm panel (requires S option) BCF= Battery cabinet fans BTM= Battery temperature monitor BL= Breaker locks C= Status monitoring contacts DT= Drip top (NEMA 2) F= Fast charge I= Inverter on dry form C contact L= Load control interface (dimmer/switch bypass) M(BBM)= Internal maintenance bypass O= Output transfer delay P= Remote status panel (requires C option) S= Summary fault form C contacts T= Output trip alarm (supervised) V= Time delay 15 minutes Z= Seismic bracing/mounting ZM= Zone monitoring | | | BAC= Bacnet communication (MSTP) MOD= Modbus RTU BIP= BACnet IP MIP= Modbus TCP/IP R= Remote meter panel SEA= Serial to ethernet adapter | 2YW= Startup and same day training 2YT= Startup, same day training and full run test ⁵ 5YP= 5 year preventative maintenance plan (startup included) 5YW= 5 year extended electronics warranty TR= Training if required on day other than startup | Blank= No accessories EMBP= External maintenance bypass switch ⁶ SPARES= Spare fuses and circuit boards SPAREF= Spare fuse kit | |
| ³ Maximum output breakers quantity available: 4.8k to 16.7k systems 12 unsupervised (1 pole) or 8 supervised (1 pole). With the addition of a top enclosure, an additional 30 unsupervised (1 pole) or 20 supervised (1 pole). 24k to 50k systems 36 unsupervised (1 pole), or 30 supervised (1 pole). Combinations of 1, 2 and/or 3 pole breakers available (contact factory) | | | | ⁴ May only choose one monitoring option | ⁵ Load must be connected, additional day on-site required | ⁶ Cannot be purchased with internal output breaker option | |

EXAMPLE: 1SC4800LU3FTCR60BA1005SBAC