

FAST TRANSFER

EXT OUTDOOR
RATINGNEMA 3R
DRIP TIGHT

BAA



DESCRIPTION

The IOTA **IIS EXT Series** Inverter is a UL Listed single-phase sine wave output inverter designed to provide power to designated emergency lighting fixtures in the event of a loss of normal power. In a power loss situation, the IOTA **IIS EXT** will supply **3.0KVA to 8.0KVA** of emergency power from the battery supply at **2ms transfer time**. The IOTA **IIS EXT** works in conjunction with any lighting load type and is capable of running normally-on or normally-off designated circuits in the emergency mode. The **IIS EXT** is ideal for providing emergency power to extensive 120V/277V lighting arrangements that utilize multiple lamp and fixture types. The **IIS EXT** conducts monthly and annual tests for operation readiness and logs the test results for reference as needed. The **IIS EXT** features a durable front-access NEMA 3R steel cabinet design **suitable for outdoor use** and is backed with a standard 1-year warranty.

SPECIFICATIONS

| | |
|---------------------------------------|--|
| Input Voltage | 120/208/240/277VAC Single-Phase |
| Output Voltage | 120/277VAC Single-Phase |
| Frequency | 60Hz* |
| Output Power | 3.0KVA - 8.0KVA |
| Transfer Time | 2 milliseconds |
| Emergency Operation | 90 minutes |
| Input Line Power Factor Range | .5 lagging to .5 leading |
| THD (input/output) | <5% / <3% |
| Input Power Walk-in | Limiting inrush current to <125%, 10 times for 1 line cycle |
| Synchronizing Slew Rate | 1Hz per second nominal |
| System Short Circuit | 65 KAIC |
| Static Voltage | +/- 2% (Load current change), +/- 12.5% (Battery discharge) |
| Dynamic Voltage | +/- 2% (+/- 25% load step change) +/- 3% (+/- 50% load step change) recovery within 3 cycles |
| Inverter Overload Threshold | 280% for 12 line cycles, 115% for 10 minutes |
| Crest Factor | 2.8 |
| Operating Temp | 10° to 40° C |
| Storage Temp (electronics only) | -20° to 70° C |
| Relative Humidity | < 95% |
| Battery | Maintenance-free Valve Regulated Lead Acid (VRLA) |
| Audible Noise (standby mode) | 45 dba @ 1m |
| Certifications | UL 924 Listed |

*Input +/- 3%, Output in emergency +/- 0.05Hz



MODEL NO: _____
 TYPE: _____
 PROJECT: _____
 COMMENTS: _____

LOAD CAPABILITY

3.0KVA - 8.0KVA

LOAD TYPES

All Lighting Load Types

Product Advantages

- **Single-Phase emergency system with exceptional 97% power efficiency**
- **NEMA 3R steel cabinet rated for outdoor installation applications**
- **Fast 2 millisecond transfer time allows for uninterrupted operation of all lighting load types**
- **Provides full light output in the emergency mode**
- **Conducts required monthly and annual tests for operational readiness and logs test, event, and alarm data**

Features

- PWM/IGBT inverter design for optimal switching speed
- Micro-processor controlled, temperature compensating charger
- Valve Regulated Lead Acid (VRLA) batteries provide long life and are maintenance free
- Low Battery Voltage Disconnect protects batteries against deep discharge
- Includes Input Circuit Breaker and Battery Fuse Protection
- Summary Dry Form C Contact included
- Output Circuit Breaker options available
- User Programmable / Password Protected Interface
- Touchpad interface and LCD display screen
- Includes RS232 Serial Communications port
- Locking NEMA 3R steel cabinet design with white finish
- Includes Seismic Bracing as standard
- Temperature-controlled forced air cooling with no filter requirement
- Meets or exceeds all National Electrical Code and Life Safety Code Emergency Lighting Requirements
- Covered by IOTA's standard 1-Year Warranty on all electronic components and 5-year pro-rated warranty on batteries.
- Factory Startup, On-Site Training, and Preventative Maintenance available



IIS EXT SERIES

3.0KVA-8.0KVA OUTDOOR INVERTER SYSTEMS

ORDERING GUIDE

MODEL NAME

| | Output Wattage ¹ | AC Input | AC Output |
|-----|-----------------------------|----------|-------------------------|
| IIS | | | |
| EXT | | | |
| | 3000 (3.0 KW / KVA) | 120IN | 120OUT |
| | 4000 (4.0 KW / KVA) | | 120/277OUT |
| | 5000 (5.0 KW / KVA) | 208IN | 120OUT |
| | 6500 (6.5 KW / KVA) | | 120/208OUT ⁷ |
| | 8000 (8.0 KW / KVA) | 240IN | 120OUT |
| | | 277IN | 120OUT |
| | | | 277OUT |
| | | | 120/277OUT |

Example Model: IIS3P 5000 120IN 120OUT BACNET

¹ Derate for applications >10,000 ft. elevation

² 120 Minute runtime may require larger cabinet. Option not available on 8.0K or > models.

³ Includes Extended Two-Year Warranty.

⁴ Requires Factory Start Up option.

⁵ External Bypass cannot be used with branch circuit options.

⁶ Provides additional operation to -20°C.

Unit is not UL Listed to extended operating temperature.

⁷ 120/208V Output only available on 3000 and 4000 models.

Note: Batteries must be connected to continuous AC power within the time period as detailed per battery warranty. Under no circumstances should batteries remain unenergized for a period exceeding 180 days.

DIMENSIONS / WEIGHT

| Inverter Model | Width/Height/Depth (inches) | Electronics Weight | # of Batteries (90 min) | Battery Weight | Total Combined Weight |
|----------------|-----------------------------|--------------------|-------------------------|----------------|-----------------------|
| IIS EXT 3000 | 48" x 76" x 30" | 805 lbs | 10 | 740 lbs | 1545 lbs |
| IIS EXT 4000 | 48" x 76" x 30" | 805 lbs | 12 | 888 lbs | 1693 lbs |
| IIS EXT 5000 | 48" x 76" x 30" | 805 lbs | 15 | 1184 lbs | 1989 lbs |
| IIS EXT 6500 | 48" x 76" x 30" | 805 lbs | 20 | 1480 lbs | 2285 lbs |
| IIS EXT 8000 | 48" x 76" x 30" | 805 lbs | 24 | 1776 lbs | 2581 lbs |

RECOMMENDED ACCESSORIES

These ALCR items are ordered separately to be used in conjunction with the loads connected to the IIS inverter supply. ALCRs eliminate the power consumption from 24/7 "Always On" fixtures while enabling occupants to regain local fixture control without impacting required emergency performance.

ETS DR

The ETS DR is a fixture-level ALCR that shunts power around local controls, allowing the inverter supply to operate the fixture regardless of ON/OFF control setting. Includes the DR dimming relay to also bypass any present 0-10V dimming signal, forcing the fixture to operate at full brightness.

ETS 20

Circuit-level ALCR that shunts power around the local control operating multiple fixtures on a designated circuit, allowing the inverter supply to operate the fixture regardless of ON/OFF control setting.

ETS 20 DR

Same ACLR function as the ETS 20. Includes dual dimming relay for bypassing up to two different 0-10V dimming signals, forcing the fixtures to operate at full brightness.

Warranty: 1-Year Limited Warranty

Complete warranty terms located at

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

IOTA REV 060823

ADDITIONAL OPTIONS

Emergency Runtime²

[blank] - 90 minutes

120M - 120 minutes

Check any that apply

[blank] - none

- ☐ MDC - Status Monitoring Dry Form C Contacts
- ☐ MDCP - Status Monitoring Contacts w/ Remote Panel
- ☐ RAP - Remote Summary Alarm Panel
- ☐ IDC - Inverter on Dry Form C Contact
- ☐ FASTCHG - Fast Charge
- ☐ BLOCK(#) - Breaker Locks, (#) = qty 1-24
- ☐ EXTPASS - External Maintenance Bypass ("make before break")⁵
- ☐ OTDELAY - Output Transfer Delay
- ☐ VRLA10 - Long Life VRLA batteries (10-yr)
- ☐ BACNET - BACnet (MS/TP Only)
- ☐ BACIP - BACnet (over ethernet) ASHRAE 135 compliant interface
- ☐ MODBUSRTU - RTU protocol for BAS, SCADA (serial)
- ☐ MODBUSIP - TCP/IP protocol for BAS, SCADA (RJ45)
- ☐ HEATER - Battery Heater for Additional Temperature Protection⁶
- ☐ SNMP - Serial to Ethernet Adaptor
- ☐ STAINLESS - Stainless Steel Enclosure
- ☐ ZM(#) - Zone Monitoring, (#) = qty
- ☐ FSREG(#) - Factory Start Up³, (#) is the assigned installation zone (1-18)
- ☐ TREG(#) - On Site Training⁴, (#) is the assigned installation zone (1-18)
- ☐ PM(A or B)5REG(#) - 5-Year Preventative Maintenance⁴, (A) for annual plan, (B) for bi-annual plan, (#) is the assigned installation zone (1-18)
- ☐ BATINST - Battery Installation by Factory Certified Technician⁴
- ☐ 5YR - Extended Five-Year Warranty⁴

Output Breaker "A"

Breaker Package Worksheet

QTY maximums

Max. breaker positions is 14 (see below).

Note that 2-pole breakers will require

2 breaker positions.

14 unsupervised, 8 supervised

If all breakers are the same type, complete "Output Breaker A" section

| QTY | Pole/Voltage | Amps | Type** | Output Trip Alarms |
|-------------------|--|--|--|---------------------|
| OB(#) - (#) = qty | 1P120 - 1 pole 120V 1P277 - 1 pole 277V 2P208 - 2 pole 208V 2P240 - 2 pole 240V | 10AMP - 10A Breaker 16AMP - 16A Breaker 20AMP - 20A Breaker 25AMP - 25A Breaker 32AMP - 32A Breaker 40AMP - 40A Breaker 50AMP - 50A Breaker 63AMP - 63A Breaker | ON - Normally On OFF - Normally Off | OTA(#) - (#) is qty |

If requiring 2 types of breakers, identify the second type in the "Output Breaker B" section:

| QTY | Pole/Voltage | Amps | Type** | Output Trip Alarms |
|--------------------|--|--|--|----------------------|
| BOB(#) - (#) = qty | B1P120 - 1 pole 120V B1P277 - 1 pole 277V B2P208 - 2 pole 208V B2P240 - 2 pole 240V | B10AMP - 10A Breaker B16AMP - 16A Breaker B20AMP - 20A Breaker B25AMP - 25A Breaker B32AMP - 32A Breaker B40AMP - 40A Breaker B50AMP - 50A Breaker B63AMP - 63A Breaker | BON - Normally On BOFF - Normally Off | BOTA(#) - (#) is qty |

If requiring 3 or more types of breakers, then IOTA will assign a Breaker Package number for ALL of the breakers combined. Do not complete Output Breaker A or B sections; instead, identify all of the desired breakers in the worksheet below:

| QTY | Pole/Voltage | Amps | Type** | Output Trip Alarms |
|-----|--------------|------|--------|--------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**Normally Off loads cannot exceed 20% of total KVA rating with a combination of HID loads.