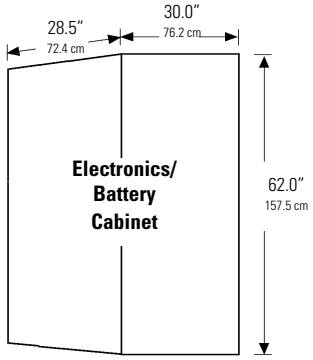
# L1PH Series Uninterruptible Power Supplies **L1PH**



4.2 kVA Single Phase UPS System

**Operates incandescent, magnetic and electronic ballast fluorescent, high power factor compact fluorescent, and high intensity discharge (HID) lamp types.**




| | |
|---|---|
| Unit | 4.2 kVA |
| Unit Less Batteries | 515 lbs. (234 kg) |
| Batteries | 970 lbs. (441 kg) |
| Total System Weight | 1,485 lbs. (675 kg) |

## How to Specify:

| L1PH | | I | 4.2 | S | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **SERIES** | **INPUT VOLTAGE** | **SYSTEM TYPE** | **BASE SIZE** | **BATTERY TYPE** | **OUTPUT VOLTAGE** | **OUTPUT CKT BRKRS[1]** | **# ON 2ND VOLTAGE** | **NORMALLY OFF LOAD** | **# OF NOL** | **NOL VOLTAGE** |
| L1PH = Single Phase Uninterruptible Power Supplies | 1 = 120 V<br>2 = 208 V<br>3 = 240 V<br>4 = 277 V<br>Z = Special Voltage (Consult Factory) | I = ETL Listed to UL 924 for Emergency Lighting Applications | 4.2 = 4.2 kVa | S = Sealed Lead Calcium | 1 = 120 V<br>2 = 208 V<br>3 = 240 V<br>4 = 277 V<br>5 = 120/208 V<br>6 = 120/240 V<br>7 = 120/277 V<br>Z = Special Voltage (Consult Factory) | Y = Hardwire<br>A = 1 OCB<br>B = 2 OCB<br>C = 3 OCB<br>D = 4 OCB<br>E = 5 OCB<br>F = 6 OCB<br>G = 7 OCB<br>H = 8 OCB<br>N = OCBA1<br>P = OCBA2<br>R = OCBA3<br>S = OCBA4<br>T = OCBA5<br>U = OCBA6<br>V = OCBA7<br>W = OCBA8 | 0<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11 | A = No<br>B = Yes<br>C = Yes w/ Time Delay Timer | 0 = No NOL<br>Y = Hardwire Terminal<br>1 = 1<br>2 = 2<br>3 = 3<br>4 = 4<br>5 = 5<br>6 = 6<br>7 = 7<br>8 = 8<br>9 = 9<br>10 = 10<br>11 = 11<br>12 = 12 | X = None<br>A = 1st<br>B = 2nd |

**NOTES:**
1) Max. OCBs 8 in 1.25 - 4.2 kVA.
**GENERAL NOTE:**
Input circuit breaker not available. Input switch is standard.

## Overall Characteristics

- 86% throughput efficiency
- Operating temperature range 32°F (0°C) to 104°F (40°C)
- Internal maintenance by-pass is standard
- Main load disconnect switch standard
- Double conversion, no interruption
- Standard backup time of 90 minutes, other run times optional
- Output circuit breakers and normally-off loads optional

## Housing

- Free standing, NEMA 1 enclosure
- Acid resistant powder coat finish
- Multiple conduit entries

## Metering/Controls

Standard

- Alpha-numeric front panel display with 14 metered measurements and 53 messages/alarms
- Normal, caution and alarm indicating LEDs
- Audible failure alarms with silence switch
- Dry contact for remote failure alarm
- "D" type 9-pin computer interface connector (see pin config. on back)
- Programmable battery monitor with alarm

Optional

- Diagnostics software for remote computer (PC) monitoring and control
- Stand-alone remote display mimics all measurements, indications and alarms shown on the front panel display
- Additional RS-232 input/output port for remote monitoring and system control

## Electrical

- Sine Wave Output
- Completely solid-state Pulse Width Modulation (PWM) inverter
- 16-bit microprocessor control
- Input power factor correction maintains power factor at 0.97
- Transient response ≤ 5%; Recovery time, 10 mS (100% load step)
- 3:1 crest factor capability
- Inverter output distortion ≤ 2.5% THD (at unity power factor)
- Output voltage regulation ±6% of nominal at full load
- Frequency within ±0.05% of nominal
- Inverter efficiency ≥ 84%
- Load power factor capability is 0.5 leading to 0.5 lagging
- Automatic, battery protecting low voltage disconnect (LVD)

*(Continued on page 2)*

**Job Information** **Type:**

**Job Name:**

**Cat. No.:**

**Lamp(s):**

**Notes:**

**Lightolier** a Genlyte Thomas Company www.lightolier.com
631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710
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## Electrical (continued from page 1)

- Advanced battery diagnostics and management system
- Temperature compensated battery charger
- 24 hour recharge time
- High frequency, very low ripple current charger
- Input and output disconnect switch
- Battery disconnect switch

## Battery

Maintenance free, sealed lead calcium battery has an estimated service life of 10 years, and an operating temperature range of 65°F (19°C) to 85°F (30°C).

## Options

0 = None
1 = PC Format Diagnostics Software
4 = Remote Display + "5"
5 = Additional RS-232

## System Input/Output Ratings

| SYSTEM RATING | INPUT VOLTAGE | INPUT AMPS | AVAILABLE OUTPUT VOLTAGES/ MAX. LOAD AMPS[1] | | | | OCB POLE SPACES AVAILABLE |
|---|---|---|---|---|---|---|---|
| | | | 120 V | 208 V | 240 V | 277 V | |
| **4,200 VA** | 120/277 | 49.0/21.2 | 35.0 | — | — | 15.1 | 12 |
| | 208/240 | 28.3/24.1 | 35.0 | 20.2 | 17.5 | — | 12 |

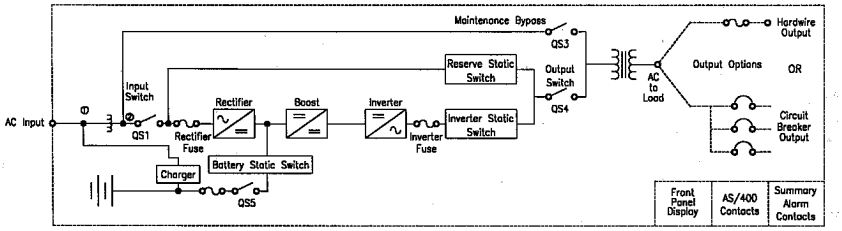
**NOTE:**
1) Total Load Not to Exceed System Rating

## Warranty

Standard Warranty
Lightolier will provide parts and on-site labor for the first 90 days following shipment of product, and parts only for an additional 270 days.

Extended Warranty
(Available with purchase of Factory Start-Up Service) Lightolier will provide parts and on-site labor for the first 12 months following start-up of the product, and parts only for an additional 12 months.

## System One-Line Diagram




## Computer Interface Pin Configuration
**(AS/400™)**

| Pin | Description | Function |
|---|---|---|
| 8 | Normal | System Functioning Normally |
| 6 | Load On Reserve | Double Conversion Inverter Not Operating |
| 9 | Power Failure | Load Supplied by Battery |
| 7 | End of Discharge Period | Unit Will Soon Stop Operating |
| 5 | Common | Common Connection to Above 4 Signals |

Listed to UL 924

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