



DLS SERIES

Single-Phase Central Lighting Inverter

FEATURES

Application

Designed for indoor installation in commercial or industrial applications.

Operation

When normal utility-supplied power is present, the Synchron central lighting inverter allows utility power to pass through to the connected load and charges the system batteries as required. When utility-supplied power is interrupted, the system will automatically and instantaneously transfer to emergency mode without interruption to connected loads. DC battery-derived emergency power is inverted to AC power and supplied in a pure sine wave output form for 90 minutes (standard run time).

A low voltage battery disconnect circuit prevents “deep discharge” damage to the batteries during prolonged power outages. When normal power is restored the system will automatically restart, providing power to connected loads and recharging the batteries. The charging circuit will bring the batteries to full recharge within UL time standards.

Construction

The Synchron cabinet is constructed of NEMA 1 rated, painted steel.

Installation

Input power entry point is from the cabinet top. Unit supplied with wall brackets for anchoring and features front service entry.

Compliances

UL 924 Listed, Emergency Lighting and Power Equipment (standard 90 minute run time)
 National Electrical Code (NFPA 70)
 Life Safety Code (NFPA 101)
 OSHA, state and local codes
 Made in U.S.A.

Factory Startup

Use accessory number FSS when ordering

Catalog Number	
Comments	Type

SYNCHRON

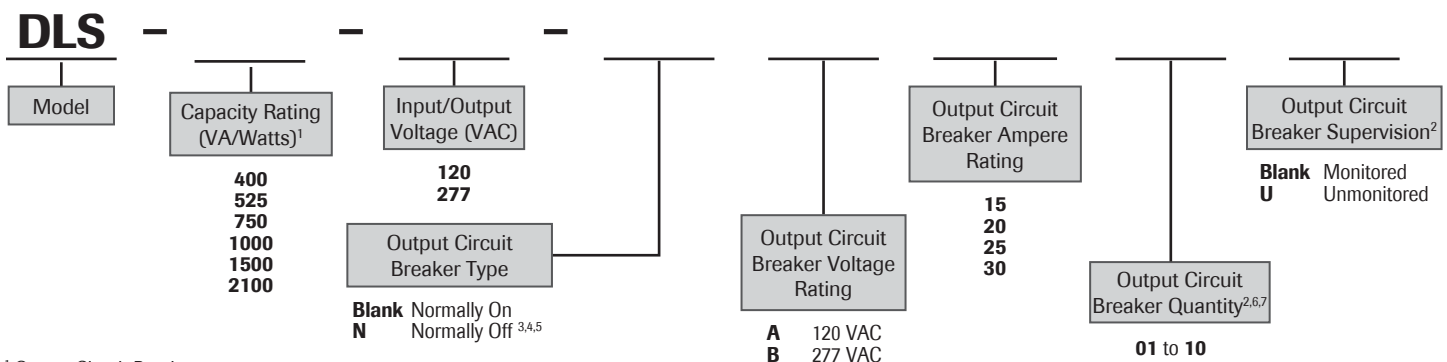


Warranty

Two years full on all components from date of shipment when a Factory Start-Up is ordered; one year full when a Factory Start-Up is not ordered.
 One year full, 9 years pro-rata for batteries.

Batteries must be connected to an energized charging circuit within 90 days from date of shipment or warranty is void. Factory Start-Up is non-concancellable / non-returnable and must be performed within 6 months of inverter shipment to maintain 2 yr. full warranty. Order a quantity of 1 per system. Systems powered up by others are done so at their own risk.

ORDERING GUIDE



¹ Output Circuit Breakers

• 400VA and 525VA models: Supplied standard with one 15 amp normally-on output circuit breaker only. Use 750VA model if more than one circuit breaker is required.

• 750VA through 2100VA models: Output circuit breakers are optional.

² A maximum of 6 monitored or 10 unmonitored normally-on circuit breakers may be specified.

³ A maximum of 4 normally-off circuit breakers may be specified.

⁴ Maximum rating of normally-off circuit breakers is 20 amperes.

⁵ Normally-off output circuit breakers include a built-in, 15-minute retransfer delay to accommodate HID lighting loads.

⁶ Total quantity of monitored normally-off and normally-on breakers cannot exceed 6

⁷ Total quantity of unmonitored normally-off and normally-on breakers cannot exceed 10





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SPECIFICATIONS

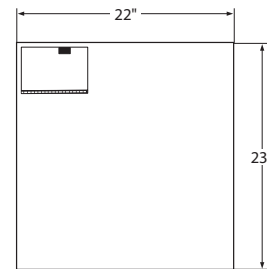
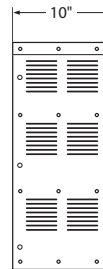
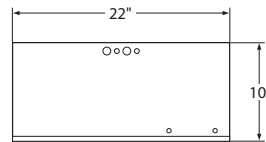
VA/Watts	400	525	750	1000	1500	2100
Power Factor Range	.8 lead to .75 lag					
Input/Output Voltage	120/120 or 277/277VAC ±10%					
AC Input Circuit Breaker Rating 120/277V	10/15 Amps			15/15A	20/15A	25/15A
Charger Size	2 Amps					
System DC Voltage	36	36	72	72	72	96
Cabinet Size	22"W x 23"H x 10"D (55.9cmW x 58.4cmH x 25.4cmD)			32"W x 36.5"H x 12"D (81.3cmW x 92.7cmH x 30.5cmD)		
BTU/Hour - Line/Inverter	70/260	92/341	131/382	175/510	263/765	368/886
Weight [lbs. (kg) - including batteries]	143 (65.1)	173 (78.8)	281 (128)	346 (157.6)	400 (182.2)	480 (218.7)

Electronics

- System Short Circuit Rating:** 18K AIC, RMS symmetrical
 - Input Power Connection:** Terminal block
 - Input Circuit Breaker:** Sized to system rating
 - Power Factor:** Unity 1.0 (VA = W)
 - Power Consumption:** Offline, 98% efficient
 - Inverter Design:** Pulse width modulation via IGBT circuitry
 - Input Frequency:** 60 Hz, ±3%
 - Synchronizing Slew Rate:** 1 Hz per second, nominal
 - Transfer Time:** "No break" switching; instantaneous
 - Output Wave Shape:** True AC sine wave
 - Output Frequency:** Normal: synchronized to utility; Inverter: +0.05 Hz
 - Output Circuit Breakers:** Single Pole; See "Ordering Guide"
 - Output Regulation:** (static) +10%, -5%, based on a 5% to 100% resistive load
 - Output Distortion:** Less than 5% THD (linear load)
 - Overload Rating:** 115% momentary
 - Overload/Short Circuit Protection:** Circuit breakers, output fuse
 - AC Lockout:** Prevents battery discharge following installation when AC power is not present
 - Compatibility:** Magnetic and electronic ballasts; incandescent, LED, fluorescent, compact fluorescent and HID lamps
 - Time Delay Retransfer:** Supplied with "normally off" optional circuit breakers. Holds the unit in emergency mode for 15 minutes after normal AC power is restored, allowing utility power to stabilize and voltage sensitive lighting to resume normal operation.
 - Low Voltage Battery Disconnect:** Protects the batteries from damaging "deep discharge" conditions during prolonged power outages
 - Test Means:** "Push-to-test" button provided
 - Indicators:** Visual LED indicators, audible alarm system
 - Interior Relative Humidity:** 95% non-condensing
- ### Battery/Charging System
- Charging System:** Monitored - 3-step temperature compensated float
 - Battery Circuit Breaker:** Sized to system rating
 - Battery:** Type S - VRLA Lead Calcium
 - Expected Normal Life:** 10 years at 25°C (77°F)
 - Operating Temperature Range:** 20°C to 30°C (68°F to 86°F)

DIMENSIONS

400VA to 525VA Models (can be wall mounted)



750VA to 2100VA Models (floor mount only)

