1.5 kVA to 14 kVA SINGLE PHASE

Model ESV
UNINTERRUPTIBLE POWER SYSTEM

True online double conversion design with a field-proven track record of protecting mission critical applications and preventing downtime.

Choosing A New UPS?

Not all UPS are the same! May we suggest an extended battery runtime, a compact footprint, and the following unique features?

- ☑ A UPS enclosure featuring a "front access" design for ease of installation, operation, and service.
- ☑ Extended battery backup time, without the need for additional cabinetry.
- ☑ A centralized UPS installation that eliminates the need for multiple lower VA rated UPS's requiring maintenance / replacement at varied and unexpected times.
- ☑ Many models available from 120 VAC to 600 VAC, with conversion to the exact nominal output voltage needed, even in bypass.
- ☑ A standard internal push-to-turn bypass system that assures a fully in-sync transfer and no loss of output power when switching to and from bypass mode.
- ☑ Voltage regulation and power conditioning on all models, many with an internal computer-grade isolation transformer.
- ☑ Output distribution options where you decide the exact output breaker configuration.

If some or all of these features are on your "must include" UPS checklist … don't compromise! Choose the **"Model ESV" Uninterruptible Power System** … **the complete, integrated back-up power solution!**

14 kVA/kW model shown

UL 1778 Listed
C-UL Listed to CSA C22.2 No. 107.1-01

MADE IN THE USA

CONTROLLED POWER COMPANY

FEATURES, BENEFITS, & SPECIFICATIONS

Controlled Power Company engineers and manufactures the industry's highest quality uninterruptible power systems, capitalizing on over 45 years of expertise. We have an enviable reputation for quality, which is reflected in the design, workmanship, and performance of our products.

Our true online, double conversion **"Model ESV"** UPS is a field-proven Controlled Power Company standard, with a solid track record of protecting mission critical applications and preventing downtime. For you, this translates into trusted performance and reliability.

From its full-featured, innovative design … to its ease of installation and user-friendly operation, the **"Model ESV"** is the right choice to provide conditioned, continuous back-up power for today's mission critical applications.

Features & Benefits

- True, online double-conversion topology provides uninterrupted power to critical loads.
- Pulse width modulation and IGBT technology provide tight output voltage regulation.
- High-speed static bypass.
- System approved for 42k AIC rated source, 120 - 277 VAC.
- Adaptive input range technology provides added security during deep brownout conditions, without battery consumption — thus assuring that the batteries will be at full capacity for a power outage.
- Internal isolation transformer is supplied on certain models, which provides a high degree of electrical noise attenuation and generates a new noise-free ground reference for critical loads … even in bypass.
- 120 VAC input available through 5kVA.
- Standard internal push-to-turn bypass system assures no-break transfer and maintains voltage transformation when required.
- Optional external, wall-mounted BBM or MBB maintenance bypass switch with lockout feature.
- Field-modifiable distribution.
- NEMA 1 enclosure requiring zero side / rear clearance.
- Accommodates vertical overhead power conduit / cable landings for server racks and other critical equipment.
- Generator-compatible.
- 4-stage, temperature compensating smart charger.
- Status and alarm relay contacts. (See Page 3.)
- Optional remote status panel.

Agency Approvals / Standards

- American National Standards Institute (ANSI C57.110)
- National Electrical Manufacturers Association (NEMA PE-1)
- NFPA 70 National Electric Code (NEC)
- ANSI / IEEE C62.41 Category B3 Surge Capability
- IEEE 519 Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
- FCC Class A limits, 47 C.F.R. Part 15, Subparts A, B

Safety

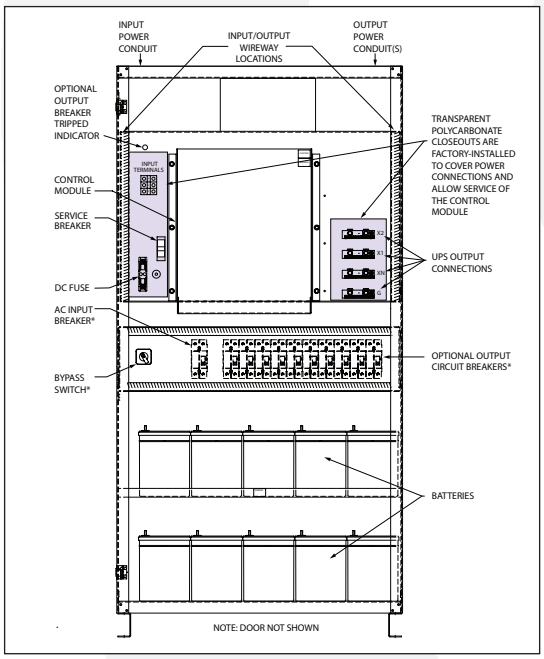
- UL 1778 listed Uninterruptible Power Supplies
- C-UL listed to CSA standard C22.2 No. 107.1-01 General Use Power Supplies

Product Specifications

- Input Operating Voltage Range: +12%, -30% typical, load-dependent without battery usage
- Input Frequency: 60 Hz, ± 2.5 Hz
- Input Current Harmonic Distortion: <5% THD
- Input Power Factor Correction: > .99 PF
- Output Power Factor Rating: kVA at 1.0 power factor (unity), kVA = kW
- Output Sine Wave Voltage: Typical 3% output THD with linear load
- Output Regulation: Typically better than ± 1.5%
- Output Circuit Breaker Pole Spaces Available:
  Without Trip Indicator Alarm / Light: 20
  With Trip Indicator Alarm / Light: 13
- Standard Unit Operating Temperature: UL and C-UL listed as 0° C to 40° C.
- Total System MTBF: Approx. 100,000 hours
- Audible Noise: < 50 dB
- Noise Attenuation: [1] Common Mode: 120 dB
  Transverse Mode: 70 dB

[1] Models supplied with isolation transformer.

Product Layout



* Bypass Switch, AC Input Breaker, and Optional Output Circuit Breakers are located behind a hinged, key-lockable, drop-down panel door.

Standard Display Monitor & Diagnostics

The **"Model ESV"** includes a standard, full-featured touchpad monitor with LED status and diagnostics indicators.

"Green", "yellow", and "red" LED's indicate high/low/normal input voltage, bypass status, percent of load, on battery, percent of battery, low battery, check battery, and alarm status. In addition, a protected On/Off switch, alarm silence, and push-to-test are provided for easy user control.

Advanced Digital Monitoring — The Intellistat TS™

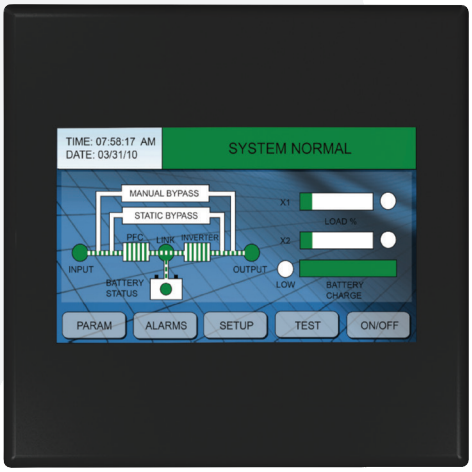
The full-featured, user-friendly ***Intellistat TS***™ monitor provides quick and easy access to the **"Model ESV"** UPS's electrical parameters, system status, and event logs from its touchscreen display. The monitor displays operational conditions including system normal, percent battery capacity remaining, and battery test in progress. Alarm conditions are displayed on the screen, together with an audible alarm.

The color, high resolution, LCD touchscreen display allows the entry of date / time values, system setpoints, alarm threshold settings, and password information into the monitor. The ***Intellistat TS*** provides complete system diagnostics, including user-programmable automatic battery testing and date / time stamped logging of the results.

The ***Intellistat TS*** is an industry-leading UPS monitor and display that is information-rich, easy to use, and a welcome departure from mechanical pushbuttons, and traditional 2-row LED displays.

Status & Alarm Relay Contacts

The **"Model ESV"** with its ***Standard Display Monitor*** includes relay contacts (potential-free, normally open, and rated for 120 VAC 0.5 amps) for on battery, low battery, battery test active, and general alarm. When selecting the ***Intellistat TS*** monitor, the system on bypass, battery test pass, and battery test fail relay contacts are also provided.



The Intellistat TS's main status screen (shown above) displays the power flow through the "Model ESV". Status bar graphs indicate the percent load and battery charge levels. Alarm indicators will be "red" in the event of overload or user-programmable low-battery conditions. A battery status indicator turns "yellow" when the "Model ESV" is on battery, or "red" if a weak battery condition is detected.

Optional Network Communications

The ***NetMinder's***™ series of adapters integrate the **"Model ESV"** with Standard Monitor into an Ethernet TCP/IP, MODBUS TCP, or MODBUS RS485 network with a specific IP address for Ethernet connected systems. A **"Model ESV"** provided with the ***Intellistat TS*** Monitor offers the same network communications, plus BACnet/IP or BACnet MS/TP, without the need for a ***NetMinder*** adapter. Both options provide remote monitoring of the UPS status, battery test pass/fail results, alarm conditions, and electrical measurements via a web browser, without the need for any external software.

Remote notification of alarms and status is available via SNMP, e-mail, and text messaging. Temperature and humidity sensing interface is also available if the ***NetMinder*** adapter is supplied. The ***NetMinder RCCMD*** and ***UNMS II*** options described on this page require using the ***NetMinder*** adapter.

NetMinder RCCMD Shutdown Software

The ***NetMinder RCCMD*** is a client-side application that performs the orderly, unattended shutdown of critical computers or servers.

NetMinder UNMS II UPS Network Management System

The ***NetMinder UNMS II*** is a windows-based, server-side application that allows the user to view and manage multiple, network-connected UPS's from a single computer. Using the Basic Version, you can monitor up to (9) UPS's … the Enterprise Version monitors even more UPS's, as well as environmental sensors or alarm contacts, and features a customizable graphical interface.

Note: The ***NetMinder RCCMD and UNMS II*** both require using the ***NetMinder*** adapter. The ***UMNS II*** will monitor the status of not only Controlled Power Company's UPS's, but also those of other manufacturers.

PRODUCT SELECTION GUIDE

ESV MODEL NUMBER GUIDE

Product	—	Input VAC	Output VAC	Freq	—	Output KVA / KW	—	Monitor	Battery	Distribution
ESV		A=120 I=220 J=277 L=208/120 G=240/120 V=347 D=480 E=600	A=120 L=208/120 T=220/127 G=240/120	X=60Hz		1.5 kVA 7 kVA 2.2 kVA 7.5 kVA 3 kVA 8.5 kVA 3.5 kVA 10 kVA 4.2 kVA 12.5 kVA 5 kVA 13.5 kVA 6 kVA 14 kVA		0 = Standard Monitor 1 = Intellistat TS Intellistat TS with 2 = TCP/IP MODBUS TCP MODBUS RS485 BACnet/IP BACnet MS/TP	N=None or UPS Battery Option	0=None 1=Yes

Notes: Consult factory for specific input / output voltage configurations available for each UPS model; as well as for other output voltages not shown above.

MAXIMUM BATTERY RUNTIMES @ FULL LOAD

kVA/kW	INTERNAL (UPS CABINET)	EXTERNAL BATTERY CABINET		
		QTY	SIZE[1]	RUNTIME
1.5	4h 28m	NA	NA	NA
2.2	4h 9m	NA	NA	NA
3	3h 5m	1	A	4h 8m
3.5	2h 29m	1	A	4h 5m
4.2	1h 15m	1	A	4h 48m
5	1h 12m	1	A	4h 5m
6	1h 13m	1	A	2h 42m
		2	A	4h 7m
7	1h	1	A	2h 2m
		2	A	4h 6m
7.5	39m	1	A	2h 24m
		2	A	4h 33m
8.5	1h 8m	LLX & GGX MODELS ONLY		
	NA	1	A	2h 10m
		2	A	4h 40m
10	31m	LLX & GGX MODELS ONLY		
	NA	1	A	1h 16m
		1	B	2h 15m
		2	A	4h 57m
12.5	31m	LLX & GGX MODELS ONLY		
	NA	1	A	1h 10m
		1	B	2h 15m
		2	A	4h 20m
13.5	30m	LLX & GGX MODELS ONLY		
	NA	1	A	1h
		2	A	2h 30m
		2	B	4h
14	20m	LLX & GGX MODELS ONLY		
	NA	1	A	36m
		1	B	1h 12m
		2	A	2h 5m
		2	B	4h

Notes: Consult factory for intermediate battery runtimes and cabinet configurations.

Warranty: This product is guaranteed to be free from defects in material and workmanship for a period of 2 years following shipment from factory. Optional, extended warranty and maintenance contracts are available — consult factory.

Note: Consult factory for battery and output distribution options.

Example: ESV-DGX-14kVA-2N1
14kVA/kW UPS, 480 VAC input, 240/120 VAC output, 60 Hz, Intellistat TS monitor with network communications, UPS battery option, with output distribution breakers

[1] BATTERY CABINET SIZE	DIMENSIONS
A	29"W X 24"D X 80"H
B	36"W X 27"D X 80"H

UPS CABINET DIMENSIONS	
OUTPUT RATING	CABINET HEIGHTS (H)
1.5kVA - 3.5kVA	72"
4.2kVA - 14kVA	80"

CONTROLLED POWER COMPANY

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