



Q-LS 80 to 160 kVA

CUSTOMIZABLE LARGE SCALE POWER SYSTEM

POWER CONFIDENCE

The Q-LS 80 to 160 kVA customizable power management systems are known for their innovative Uninterrupted Power Quality (UPQ) technology. These uninterruptible power systems utilize 5-stages of isolation and conversion to filter and regulate dirty input power - transforming it to a pure and consistent sine wave output. The Q-LS Series delivers superior, serviceable, rugged, power conditioning and uninterrupted power for all of your critical, high-power applications.

Why the Q-LS Series is superior:



Highest Quality Power

High-resolution sine wave output



Customizable

Made to meet your voltage input/output requirements



Modular

Rapid replace modules are easily serviced or replaced



Most Reliable

Highest MTBF in its class



Customer Service

System certifications, preventative maintenance, and service plans available

Q-LS 80 to 160 kVA DATA SHEET

OUTPUT

Three-phase, split-phase, single-phase inputs or combinations available upon request.

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Capacity (VA)	80,000	100,000	120,000	160,000
Capacity (watts)	64,000	80,000	96,000	128,000
Current (peak amp) Per Phase	348	432	520	693
Current (peak amp) 1 Phase	NA			
Nominal Voltage Range (3-Phase)*	220/380/460 VΔ -- 208/380/400/415/480 VY			
Nominal Voltage Range (1-Phase) *	NA			
Frequency*	50, 60, or 400 Hz			
Frequency Tracking	± 2.5 Hz of the input frequency			
Maximum Output Frequency Deviation	± 2.5 Hz			
Power Factor	> 0.8			
Waveform	high-resolution pure sine wave			
Outlets	Terminal block–customer distribution			
Single Phase Output	No			
3-Phase Output	Yes			

INPUT

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Frequency*	50, 60 ± 2.5 Hz			
Power Factor (12-Pulse Rectifier)	0.75 to 0.9			

GENERAL

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Input To Output Impedance	5 %			
UPQ Power Conditioning Topology	Five-stage isolation with true on-line sine wave			
Remote Power Management	Yes			

*Customizable

VOLTAGE REGULATION

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Input Voltage Range*	120 to 690 VAC			
Full Load With Backup	±16%			
Full Load Without Backup	±20%			
Output Voltage Regulation (Normal Mode)	±1%			

ISOLATION

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Input To Output Isolation	Dielectric strength 5 kV, 120 dB common mode attenuation			
Common-Mode Noise Rejection	Yes			
Normal-Mode Noise Rejection	Yes			

SUPPRESSION

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
IEEE 587/ANSI 62.41 (North America)	Yes			
IEEE 587/ANSI 62.41 (International)	Yes			
Joules (Energy Absorption)	2,200			
TVSS MOV Joule Rating	765 joules per phase			
TVSS Low Pass Filter	750 Hz			
Peak Surge Current (amps)	20,000			
Multi-Stage Protection	Yes			
Reverse Inverter Impulse Protection	54 joules without batteries			
IEC	62040-2			
FCC	Class A			
EN500091-1	Yes			
EN500091-2	Yes			
EN 60610 (Leakage Current)	< 1 mA			
CE Approval	Yes			
Conditioning	Yes			
Output THD (Linear Load)	< 3%			
Current THD (6-Pulse Rectifier)	Maximum of 20%			
Current THD (12-Pulse Rectifier)	Maximum of 9%			
Input Frequency Range	50/60 Hz ± 10 Hz			

**Customizable*

HIGH FREQUENCY ON-LINE INVERTER

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Inverter Design	Full H-bridge			
Inverter Driver Frequency	16.5 to 20 kHz			
Inverter Regulation	50/60/400 Hz ± 0.1 Hz			
Overload Capacity	<110% continuous			
Crest Factor	3:1			
Transfer Time	Zero			
Overall System Efficiency	94.5%		95%	
Efficiency	>93%			
Inverter To Reserve / Reserve To Inverter	Zero-cross transfer, < 4 ms (2 ms minimum)			

RECTIFIER

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
6-Pulse	110 µs single-phase triggering			
12-Pulse	6.4 kHz pulse width, 80 µs for 1.7 ms around 11 pulses			
Efficiency	98%			
Current Limit (amp) (208/120 VAC)	364	454	546	728
Current Limit (amp) (415/380 VAC)	182	228	274	365
Current Limit (amp) (480/277 VAC)	157	198	237	315

STATIC SWITCH

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Voltage Range	173–277 VAC (line to neutral)			
Frequency Range	47.5–52.5 Hz / 57.5–62.5 Hz			
Efficiency	99.5%			
Transfer Time—Main To Inverter	0 ms			
Transfer Time—Inverter To Main	0 ms			

BATTERY

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Boost Charge	402 VDC			
Float Charge	390 VDC			
Battery Low Voltage	320 VDC			
Battery Low Stop Voltage	295 VDC			
Hot-Swappable	Yes			

*Run time may vary with environment, charge state, and age of batteries.

ENVIRONMENTAL

	Q-LS™80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
Maximum Heat Dissipation kW	4.6	5.4	6.5	8.7
Maximum Heat Dissipation BTU/hr	15,696	18,426	22,179	29,686
Operating Temperature	32 to 104 °F (0 to 40 °C) *			
Humidity	0%–90% non-condensing			
Audible Noise	< 65 dBA at 1 meter			
Altitude	Less than 1,500 m (4,921 ft) above sea level			
De-rating Temperature To Altitude	39 °F / 3,281 ft (4 °C / 1,000 m)			

*A range of 0 to 50 °C is possible with 125% system upsize but will result in shorter battery life.

PHYSICAL

	Q-LS™ 80	Q-LS™ 100	Q-LS™ 120	Q-LS™ 160
W x D x H	44 x 32 x 67 in (56 x 82 x 171 cm)			
Weight (Lbs. ¹)	2650-2800	3350-3850	3650-3800	4150-4500
Weight (Kg. ¹)	1200-1300	1525-1750	1675-1725	1900-2050

¹These weights and dimensions are provided as a reference point. Most Q-LS systems are created with customizations that will often cause the system to increase in size or weight significantly more than its standard configuration.

²Weight variance in the Q-LS 60 is significant due to the option of a single cabinet or double-wide cabinet configuration.

POWER INNOVATIONS PUTS POWER IN YOUR HANDS

Specializing in custom, critical, rugged and renewable power applications, we deliver the highest quality uninterruptible power solutions for homes, businesses, and governments worldwide.



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