Q-SC 10 to 60 kVA

Q-SC 60 to 160 kVA

Q-SC

CUSTOMIZABLE LARGE SCALE POWER SYSTEM

POWER CONFIDENCE

The Q-SC power management system is a modular, customizable solution offering configurable input and output voltage, with hot-swappable power converters and scalable power to meet your application requirements.

By leveraging Pii's H-SRR 48/120 and 48/230-277 power converter modules, the Q-SC UPS family supports accelerated installation, greater application flexibility, and reduced inventory costs, capable of integrating battery storage in Multi-Function Units and providing N+1 up to N+N redundancy when compared to a fully redundant UPS.

Why the Q-SC 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

Customer Service
System certifications, preventative maintenance, and service plans available

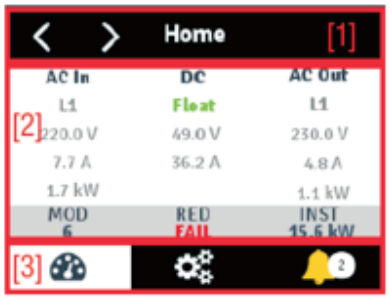
Q-SC Controller

Rack Mounted

Features and Benefits

- Provides live monitoring of UPS system on-site or in web browser
- Configurable to provide notifications and alarms for events or failures
- Capacitive 2.8" touch screen
- 19" rack mounted

2.8" Capacitive Touch Screen



1. Header: Displays the title of the currently viewed menu page, in addition to the Next (>) and Previous (<) page navigation buttons. Some pages will display corresponding Up/Down navigation buttons, indicating that more contents can be displayed with their use.

2. Information Area: Provides information relating to the currently selected menu page.

3. Toolbar: The toolbar is always visible at the bottom of the touchscreen. It provides quick access to the following sections, from left to right:

- Measures
- Settings
- Alarms/Logs

Q-SC Specifications

	H-SRR 48/120	H-SRR 48/230-277
Voltage Capability	120 Vac Single Phase 120/240 Vac Split Phase 240 Vac Single Phase 208 Vac 3-Phase Wye	277 Vac Single Phase 240 Vac 3-Phase Delta 480 Vac 3-Phase Wye
Power Options	10 to 60 kVA (7.5 to 45 kVA w N+1 redundancy) **120 Vac, 120/240 Vac & 240 Vac** 30 to 90 kVA (22.5 to 67.5 kVA w N+1 redundancy) **208 Vac 3-Phase Wye**	10 to 60 kVA (7.5 to 45 kVA w N+1 redundancy) **277 Vac** 30 to 90 kVA (22.5 to 67.5 kVA w N+1 redundancy) **240 Vac 3-Phase Delta** 30 to 90 kVA (22.5 to 67.5 kVA w N+1 redundancy) **208 Vac 3-Phase Wye**
Battery Voltage	48 Vdc	48 Vdc
Mounting	Floor	Floor
Frequency	50 or 60 Hz	50 or 60 Hz

H-SRR 48/120 and 48/230-277

GENERAL

	H-SRR 48/120	H-SRR 48/230-277
Cooling / Audible Noise	Fan forced cooling	Fan forced cooling / <65 db @ 1 meter
MTBF	240,000 hrs (MIL-217IF)	
Dielectric strength DC/AC	4300 Vdc	
RoHS	Compliant	
Operating T° / Relative Humidity (RH) non-condensing	Tested according to ETS300-019-2-3 Class 3.1 -20 °C to 40 °C, power de-rating from 40 °C to 65 °C / Max RH 95% for 96 hours per year	Tested according to ETS300-019-2-3 Class 3.1 -40 °C to +70 °C derating above 50 °C to 70 °C automatic restart / Max RH 95% for 96 hours per year
Storage T° / Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-1 Class 1.2 -40°C to 70°C / Max RH 95% for 96 hours per year	N/A
Public transport T°/Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-2 Class 3.1 -40°C to 70°C / Max RH 95% for 96 hours per year	N/A
Material (casing)	Zinc coated steel	

POWER

AC Input Data	H-SRR 48/120	H-SRR 48/230-277
Nominal voltage (AC)	120 Vac	230 Vac (11.7 A) and 277 Vac (9.75 A)
Voltage range (AC)	90 - 140 Vac	150 to 295 Vac (Derating below 190 to 150 Vac)
Brownout	1600 W @ 90 Vac / 2250 W @ 100 Vac linear decreasing	1800 W at 150 Vac linear decreasing
Power factor	> 99%	
Frequency range (selectable) / synchronization range	50 Hz (range 47 – 53 Hz) / 60 Hz (range 57 – 63 Hz)	
DC Input Data		
DC voltage: Nominal / range	48 Vdc / (40 - 60 V)	
Nominal current (at 48 Vdc and 2250 W output)	52.3 A	53.4 A
Maximum input current (for 15 second) / voltage ripple	63 A / < 10 mV RMS	
AC Output Data		
Efficiency AC to AC (EPC) / DC to AC / AC to DC	94.5% / >92.5% / >92.5%	> 96% / > 94.5% / > 94.5%
Nominal voltage AC**[2] (Adjustable)	120 V (100 - 130 Vac)	220 / 230 / 240 / 277 Vac line neutral. User adjustable in configuration
Frequency / frequency accuracy	50 or 60 Hz / 0.03%	
Nominal Output power (VA) / (W)	2.75 kVA / 2.25 kW	3 kVA / 2.4 kW (at AC full load, still 300 W available for DC output)
Short time overload capacity	125% (15 seconds)	
Admissible load power factor	Full power rating from 0 inductive to 0 capacitive	
Total harmonic distortion (resistive load)	< 3%	
Load impact recovery time (10% - 90%)	≤ 0.4 ms	
Nominal current	22.9 A @ 120 Vac	13 A @ 230 Vac / 10.8 A @ 277 Vac
Crest factor at nominal power	3 : 1 for load P.F. ≤ 0.7	
Short circuit clear up capacity 0-20 ms	200 A for 20 ms - Available while Mains is available at AC input port / 34 A RMS in DC/AC	109 Arms for 20 ms / 34 Arms for 20 ms
Short circuit current after >20 ms -15 s	42 A RMS	22.5 A for 15 seconds
AC output voltage stability	±1% from 10% to 100% load	

H-SRR 48/120 and 48/230-277

POWER

DC Output Data	H-SRR 48/120	H-SRR 48/230-277
Nominal voltage (range)	53.5 Vdc (44 - 60 Vdc)	
Maximum power	2.25 kW[3]	2.4 kW[3] (at DC full load, still 300 W available for AC output)
Maximum current at 48 Vdc	46.8 A	50 A
Reverse polarity protection	YES	
Efficiency AC to DC	> 92.5%	> 94.5%
Max. Voltage interruption / total transient voltage duration (max)	0 s / 0 s	

SAFETY & EMC

	H-SRR 48/120	H-SRR 48/230-277
Safety	UL1778	
EMC	EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8 ETSI EN 300386 v1.9.1 / FCCpart 15 class A	

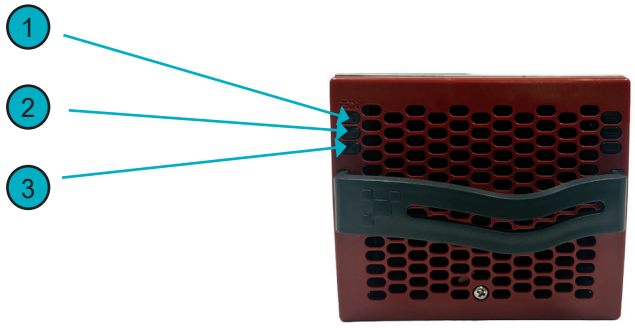
SIGNALING AND SUPERVISION

	H-SRR 48/120	H-SRR 48/230-277
Display	Synoptic LED	
Supervision	Inview S / Slot / GW	Inview ranges: Inview S - T302004100 and Inview GW - T602004000
Remote on / off	On rear terminal of the shelf through Inview	
Battery Monitoring through dry contact	MBB (Measure Box Battery)	MBB (Measure Box Battery) - 6 dry contacts and 8 digital Inputs / T302006000

*Converter module LED descriptions found on next page.

H-SRR 48/120 and 48/230-277

Front Panel



Converter Status

1	AC OUT
2	DC IN
3	AC IN

Front Panel LED Status

Converter Status LED	Description	Remedial Action
OFF	No input power or forced stop	Check environment
Permanent green	Operation	
Blinking green	Converter OK but working conditions are not fulfilled to operate properly	
Blinking green/orange alternatively	Recovery mode after boost (10 In short circuit condition)	
Permanent orange	Starting mode	
Blinking orange	Modules cannot start	Check Inview
Blinking red	Recoverable fault	
Permanent red	Non recoverable fault	Send module back for repair

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