



**PECO II®**

# Quantum™ Power System



**Integrated**



**Consolidated**

# Quantum™ Power System

## 30 to 700A System Solutions

**-54VDC**



Power systems are critical to the reliability of any broadband, voice, video or data networks. As equipment to support these high grade services continues to migrate closer to the end user, DC power systems must be highly reliable and flexible to meet this changing environment. Whether the application is in an outside cabinet, customer premise or a controlled environment, the Quantum Power Systems (QPS) provides a versatile system solution designed to meet those needs and grow with the application.

### ■ ■ FEATURES

- ▶ System designs from 15 to 700 Amps output
- ▶ Input voltage from 85-275 VAC
- ▶ Vertical cooling with variable speed fans
- ▶ 2RU to 13RU system height
- ▶ 19" & 23" systems available
- ▶ Temperature hardened to +75°C
- ▶ Front and rear access systems with multiple options for AC and DC terminations to meet a wide host of application requirements
- ▶ Individual, dual or bulk AC feed option
- ▶ Optional LVD and manual battery disconnect features

### ■ ■ APPLICATIONS

- ▶ Fiber-to-the-Node
- ▶ Outside Plant electronics
- ▶ Remote switch
- ▶ Customer premises applications
- ▶ Central office
- ▶ Cellular
- ▶ Personal communications service (PCS)
- ▶ NGDLC, DSLAM, FITL electronics, Broadband Communications and Multiplexers

### ■ ■ CONTROLLER

QPS is focused on optimizing the user experience with a unique system controller. With a user friendly craft access control knob the operator can quickly access the menu structure with intuitive action allowing rapid set up and interrogation of the system.

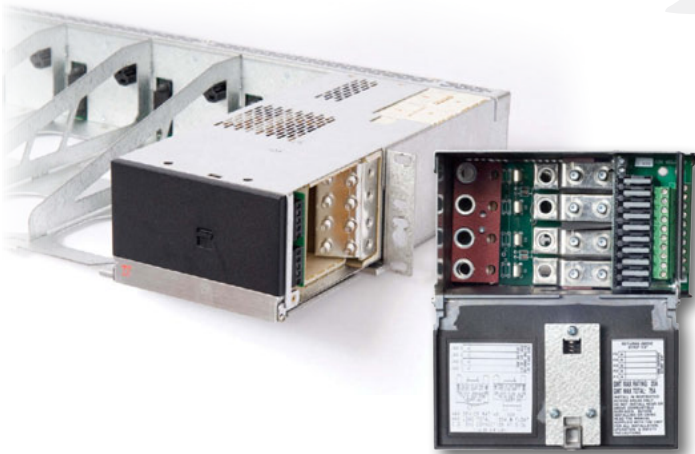
- ▶ Ethernet, SNMP and Telnet connectivity is standard with all controllers
- ▶ Internal webpage allows for local and remote interaction
- ▶ Battery float control with temperature compensation
- ▶ Monitors temperature for up to 28 battery strings
- ▶ Six programmable form-C relays for customizable alarm outputs
- ▶ Four external, programmable alarm inputs (door alarms, etc)
- ▶ User activated alarm test function
- ▶ Multiple downloadable logs for Alarms, BOD, rectifier, and trending analysis with no proprietary software required
- ▶ Monitors 2 additional external shunt inputs





## ■ ■ RECTIFIER

Meeting current and future DC power needs, the Quantum switch mode rectifier easily operates in a Central Office or Outside Plant environment with its temperature range of -40°C to +75°C. With >92% efficiency, the QSM rectifier family perform in a wide range of input voltages from 85-275VAC. Six rectifier output ranges from 15 – 50 Amps, these plug 'n play modules can provide the optimal size minimizing the power footprint and maximizing space for network elements. Designed with whisper quiet multi-speed fans, the Quantum rectifier provides all the necessary DC power to run your equipment.



## ■ ■ DISTRIBUTION

The QPS offers multiple distribution options designed to meet the varying needs of customer specific applications. Whether bulk outputs or distribution needs to 24 positions the QPS will adapt to the need. Exclusive to the Consolidated models, the QPS provide an installer friendly distribution panel featuring 24 dedicated distribution and 6 battery terminations in a 23" mounted panel. Distribution choices include a full complement of bullet style receptacles with user choices of GMT, TPS, TPL, TLS fuses as well as Circuit Breakers to 250 Amp. Optional LVD's are available.

## ■ ■ ORDERING INFORMATION

Consult 438181 J-specification when ordering.

## ■ ■ AC CHOICES

### ► Front Access

- Modular Mate & Lock plugs for individual and dual feed configurations
- Cord sets available in custom lengths with or without male plugs



### ► Rear Access

- 5-Way cabling egress
- Electrician ready 3/4" knockouts
- Dual, bulk and individual rectifier feed option
- Cord sets available in custom lengths with or without male plugs



## ■ ■ DC OUTPUT CHOICES

### ► Integrated

- 4 CB's w/top Battery landings
- 4 CB's

### ► Bulk

- Outputs terminations accept 3/8 on 1" centers



### ► Consolidated

- 19" 18 Distribution, 6 Battery Terminations
- 23" 24 Distribution, 6 Battery Terminations



# ■ ■ SPECIFICATIONS

System	
Voltage Range	Single phase, 90 – 275VAC 208 VAC nominal
Frequency	45 – 66Hz
AC Input Current	Per number of rectifier modules equipped and system configuration
Single Shelf Capacity	250A maximum @ -54VDC for 23" shelf
DC Output Voltage	42VDC to 58VDC
Noise	
Wide Band	≤ 100 mVrms (10 – 20MHz)/ < 250 mV peak to peak (0 – 100MHz)
Acoustic	< 55dB
Total Harmonic Distortion	> 5% at full load

Mechanical	23"	19"
Dimensions, Quantum Integrated	3.5"H x 12.3"D x 23" mounting width	3.5"H x 12.3"D x 19" mounting width
Dimensions, Quantum Consolidated	10.5"H x 12.3"D x 23" mounting width	10.5"H x 12.3"D x 19" mounting width
Shelf Weight	15.1 lbs / 6.85 kg	7.9 lbs / 3.58 kg
Rectifier Weight	5.75 lbs / 2.5 kg	
Cooling	Vertical fan cooled with speed control	
QSC1100 Controller		
Display	128 X 128 LCD	
Local	Rotary Knob or PC via RJ45	
Programmable Relays	6	
External Alarm Inputs	4	
Controller Security	Administrator optioned front panel security Physical toggle allows for security lockdown	
Documentation		
Product Manual	4380435PD	
J Drawing	438181	
Environmental		
Storage Ambient	-40°F to +185°F (-40°C to +85°C)	
Operating Ambient	-40°F to +167°F (-40°C to +75°C)	
	-40°F to +149°F (-40°C to +65°C) 40&50A	
Humidity	< 95% non-condensing	
MTBF	> 435K BTU/hr @ 25°C	
Safety & Compliance		
NEBS Level 3	Pending	
UL/cUL	Pending	



MODEL #	QSM15B50L	QSM20B50L	QSM30B50L	QSM40A50L	QSM50A50L
Input Voltage	85 – 275 VAC Nominal Voltage: 120 / 208 / 240 VAC	85 – 275 VAC Nominal Voltage: 120 / 208 / 240 VAC	85 – 275 VAC Nominal Voltage: 120 / 208 / 240 VAC	150 – 275 VAC Nominal Voltage: 208 / 240 VAC	150 – 275 VAC Nominal Voltage: 208 / 240 VAC
Input Current	7.8 A @ 120 VAC 4.4 A @ 208 VAC	6 A @ 208 VAC	13 A @ 120 VAC 8.8 A @ 208 VAC	11.8 A @ 208 VAC	14.5 A @ 208 VAC
Frequency	45 to 66 Hz	45 to 66 Hz	45 to 66 Hz	45 to 66 Hz	45 to 66 Hz
Output Voltage	42 to 58 VDC	42 to 58 VDC	42 to 58 VDC	42 to 58 VDC	42 to 58 VDC
Rated Power	818 W (15 A)	1090 W (20 A)	1635 W (30 A)	2180 W (40 A)	2725 W (50 A)
Efficiency	> 92%	> 92%	> 92%	> 92%	> 92%



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