

RS40 40kVA PCS

Rack Scale™ Series

120/208V | 230/400V | 277/480V 3-phase

With a compact, 2.5U form factor, the transformerless Trystar-RS40 power conversion system installs directly into Li-ion battery racks. Front-side terminations simplify interconnect, and the fully parallelable, 40kW architecture permits easy system expansion.

Offering wide 208-480VAC and 330-820VDC operating ranges, grid-tie and grid-forming operating modes, advanced “Smart Inverter” features, and design and certification for energy storage applications, system design doesn’t get any easier.



Flexible

- Grid-tie and grid-forming operation
- Seamless transfer
- 330–820 VDC input
- Three and four wire transformerless grid interface

Scalable

- Designed to be paralleled for high power applications
- Compact 2.5U 19” rack mount
- Front-side terminations for easy cable routing
- 96.4% CEC efficiency

Integrated

- Black start bias supply
- AC circuit breaker and contactor
- DC contactors
- Pre-charge circuitry
- Variable speed forced air cooling

SPECIFICATIONS

REDUCE TIME TO MARKET

- Supports grid-tie and grid -forming applications
- Easy paralleling allows for quick product scaling
- 2.5U, 19” rack mount

FEATURES

- Seamless transfer
- UL1741-SA smart inverter functions
- Three and four wire transformerless grid interface
- Integrated data logging

WORLDWIDE APPLICATION

- Wide AC voltage range
 - 208-480VAC
 - 50/60 Hz
- Wide DC voltage range
 - 330-820VDC

INDUSTRY STANDARD INTERFACE

- SunSpec certified
- Modbus RS-485



DC CONNECTION

Operating Voltage Range	330 - 820 VDC
Full Power Voltage Range	550 - 820 VDC
Max DC Current	+/- 75 A
Max DC Power	40 kW
Wiring Configuration	Two wire

AC CONNECTION

Max AC Power	40kVA @ 480 VRMS
Max AC Current	50 ARMS
AC Line Voltage	208 - 480 VRMS
AC Line Frequency	50 / 60 Hz
Supported Grid Connections	Three and four wire, grounded neutral
Power Factor	-1 to +1
Current Harmonics	IEEE 1547 Compliant, <3%THD
Peak Efficiency	97%

ENVIRONMENTAL

Operating Temp	-5°C to 45°C continuous 60°C max
Cooling.	Forced air by internal variable speed fans
Max Elevation	1,000m No Derating 1,000m - 3,000m Derated
Enclosure	2.5U, 19” Rack Mount
Weight	43kg / 97 Lbs
Ingress Protection	IP20
Certifications and Standards Compliance	UL1741 SA, CA Rule 21 phases 2 & 3, CSA C22.2#17, IEEE 1547, SunSpec Cert # 032-001, California Energy Commission, SGIP, IEEE 519, IPC9592

USER INTERFACE

Isolated Communication Link	Modbus RS-485
Register Mapping	SunSpec PCS
Isolated Digital Inputs	Emergency Shutoff Bias
Enable	
Isolated Digital Outputs .	User Configurable 1 and 2
Indicator LEDs .	1,000m - 3,000m Derated Fault Operating Standby Power On
Warranty	5 years standard 5 year warranty extension available

