



an EnerSys® company

CXPS-FR3

Ferroresonant Rectifier Retrofit Solution



- Ferroresonant rectifier retrofit solution for RL400 and PECO II 400 rectifiers
- Significant CAPEX savings by maintaining existing AC and DC cabling infrastructure
- Unique solution providing up to 50% capacity growth or floor space savings without changes to existing infrastructure
- Fully integrated solution including in-bay system controller
- Wrap-around bay design directs heat exhaust via the top, allowing batteries to be placed directly behind the bay

The FR3 is a standalone rectifier bay that can be used to upgrade inefficient and aging ferroresonant rectifiers. As a drop-in replacement for RL400 and PECO II 400 rectifiers, the FR3 repurposes existing AC and DC cabling which minimizes installation time and avoids costly replacements.

For decades, ferroresonant rectifiers have powered traditional telecom central offices. However, as ferros age and begin to fail, it is becoming difficult to find parts as well as qualified technicians to diagnose and repair the problems. Maintenance issues can result in lower network reliability. These issues, coupled with the ferros' relative operational inefficiencies, are driving operators to upgrade their systems to modern, high efficiency switchmode rectifiers.

Alpha Technologies provides the ideal 'like for like' retrofit solution, with minimal installation time and disruption to the office. The interfaces to the FR3 have been engineered in such a fashion that the existing AC and DC infrastructure feeding the ferroresonant plants can be reused. The building blocks for the FR3 are Alpha's highly reliable Cordex HP 12.0kW and 4.0kW rectifiers.

Unlike other solutions in the market, the FR3 design enables operators to add up to 50% more power capacity or recover floor space savings. In addition, the wrap-around bay design deflects heat flow upwards, allowing operators to install batteries directly behind the bay.

Furthermore, the bay also comes equipped with Alpha's powerful CXC HP Controller, which can further modernize the power plant with advanced control and monitoring features.

CXPS-FR3 Ferroresonant Rectifier Retrofit Solution

Model	Single	800A B2B & S2S	1200A B2B & S2S
Electrical			
AC Voltage:	208Vac 3 Phase 480Vac 3 Phase	208Vac 3 Phase 480Vac 3 Phase	480Vac 3 Phase
AC Feeder Breaker:	208Vac: 1x 100A Breaker 480Vac: 1x 50A Breaker	208Vac: 2x 100A Breaker 480Vac: 2x 50A Breaker	480Vac: 2x 60A Breaker
AC Feeder Wire Size:	208Vac: 2AWG 480Vac: 6AWG	208Vac: 2AWG 480Vac: 6AWG	480Vac: 6AWG
In Bay Rectifier AC Breakers (optional):	Total: 2x AC Breakers 480Vac: 1 CB/Module 208Vac: 1 CB/3 Modules	Total: 4x AC Breakers 480Vac: 1 CB/Module 208Vac: 1 CB/3 Modules	Total: 6x AC Breakers 480Vac: 1 CB/Module
Bay DC Output Capacity:	440A	880A	1320A
Mechanical			
Lorain Dimensions :	inches: 72H x 24W x 17.6D mm: 1829H x 610W x 447D	B2B inches: 72H x 24W x 35.3D mm: 1829H x 610W x 897D S2S inches: 72H x 48W x 17.6D mm: 1829H x 1219W x 447D	
PECO Dimensions:	inches: 84H x 25.9W x 17.6D mm: 2134H x 658W x 447D	B2B inches: 84H x 25.9W x 30D mm: 2134H x 658W x 762D S2S inches: 84H x 51.9W x 17.6D mm: 2134H x 1318W x 447D	
Weight:	≤520lbs (236kg)		
AC Cable Landing:	2/0 to #14 AWG		
DC Cable Landing:	Up to 3x 3/8" holes on 1" center, 2 hole lugs or 1/2" holes on 1 3/4" center, 2 hole lugs		
Related Components			
Controller:	CXC-HP*		
Peripherals:	L-ADIO* Option for up to 18 current monitoring channels (3 x 6i Shunt mux)		
Environmental			
Temperature:	0 to 40°C (32 to 122°F)		
Humidity:	0 to 90% RH (non-condensing)		
Elevation:	-100 to 2000m (-330 to 6500ft)		
Agency Compliance			
Safety:	CSA C22.2 No. 60950		
NEBS:	NEBS L3 Certified		
*Supplemental or expansion bays do not have the controller or the L-ADIO			



Alpha Technologies Services, Inc. USA: 3767 Alpha Way, Bellingham, WA 98226 Canada: 7700 Riverfront Gate, Burnaby, BC V5J 5M4
Toll Free North America: +1 800 322 5742 Outside US: +1 360 647 2360 Technical Support: +1 800 863 3364
For more information visit www.alpha.com

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