OCC-PFC
Active PFC Rectifier

One-Cycle Control, Inc.
The Art of Power Processing

Convert AC to regulated DC with unity power factor

www.onecyclecontrol.com

BENEFITS

- Hardware enabled control
  - fast, stable, reliable
- High efficiency
  - energy saving
- Simple user interface
  - low maintenance & low service
- Modular plug & play architecture
  - scalable
- Long life design
  - Low logistics & installation cost
- Light weight minimum raw material usage
  - environmentally friendly
- Small size
  - space saving
- ETL listed
  - safe and high quality
- Department of Energy sponsored and award winning
  - Highly competitive

FEATURES

- ☑ One-cycle Control Technology
- ☑ Power factor > 0.99
- ☑ Current harmonics < 3%
- ☑ Efficiency > 97%
- ☑ Stable zero load operation
- ☑ Leading response speed (100s of microsec)
- ☑ Leading light weight < 29 kg (65 lbs)
- ☑ Leading power density ~20 W/inch^3 to 30 W/inch^3
- ☑ Single unit 40kW to 60kW, scalable to MW

OVERVIEW

OCC-PFC leverages unique patented technology invented at Caltech & University of California and developed by the world leading power electronic experts under partial sponsorship of U.S. Department of Energy. OCC-PFC is the first hardware-enabled 3-phase PFC rectifier with high reliability, ultrafast dynamics, and simple user interface, enabling AC/DC conversion with regulated DC bus and unity power factor.

APPLICATIONS

- PFC front-end for motor drives
- PFC front-end for UPS
- PFC front-end for medical/industrial equipment
- Data center high voltage DC power supply
- Semiconductor foundry power supply with unity power factor
- Electronic AC load with dynamically adjustable inductive/capacitive impedance and energy regeneration capability
- Microturbine power generation rectifier
- Wind power generation rectifier
- Microhydro power generation rectifier

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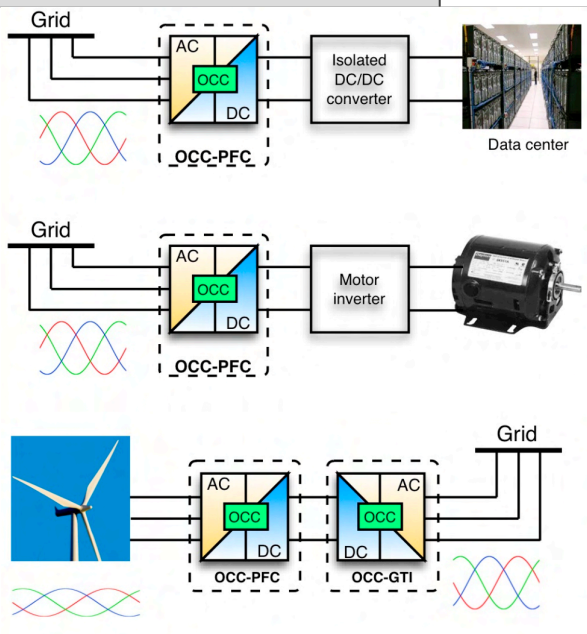
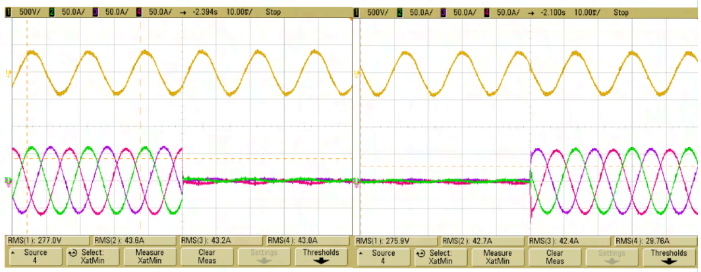
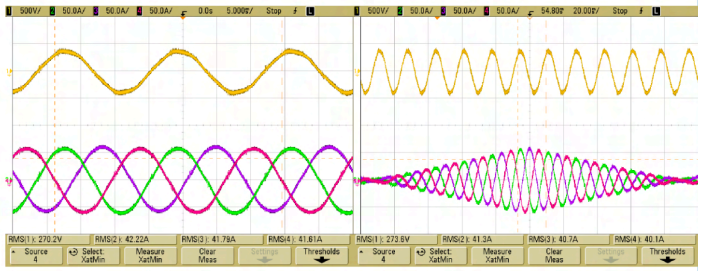
	PFC3050A6480/8001IR PFC3075A6480/8001IR	PFC3050A5380/6351IR PFC3075A5380/6351IR	PFC3100A6208/3651IR
Electrical Specification			
AC Phase / Wires	3 phase / 3 wires		
AC Freq Range (Hz)	57 - 63	47 - 53	57 - 63
AC Voltage Range (V, rms) Line-to-Line	400 - 552	320 - 440	175 - 240
Max AC Current (A, rms)	75 / 50		100
DC Bus Voltage (V), Nominal	800	635	365
Efficiency @ Full Power	>98.3% / >97%		
AC Current THD @ Full Power	< 3%		
Power Factor @ Full Power	> 0.99		
Mechanical Specifications			
Weight kg (lb)	29 (65)		
Size (L × W × H) cm (inch)	58 x 45 x 13 (23 x 17.5 x 5.25)		
Environment Specifications			
Operating Temp. (°C)	0 to 40		
Operating Relative Humidity w/o Condensation	0 - 95%		
Storage Temp. (°C)	-10 to 55		
Audible Noise (dBA) @ 1m (3ft)	< 80		
Safety			
UL 508C	ETL Listed		





Fast step load response and stable zero load operation



Steady state Following variable load

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