

**Enabling Advanced Power Conversion**

One-Cycle Control Inc., products are designed and manufactured utilizing breakthrough One-Cycle Control (OCC) technology, invented at Caltech and developed in the Power Electronics Lab at University of California that delivers a new paradigm: active conversion of 3-phase power without software!



**Call: (949) 727-0107 Ext. 15**

**OCC-PFC Features**

One-Cycle Control Technology!  
No Programming and No DSP!

Converts AC to DC voltage to power DC loads.

Sinusoidal 3-Phase Input Current at unity Power Factor.

Provides < 5% THD sinusoidal current.  
Weighs < 50 lbs (23 kg)  
3U (5.25"), 19" Rackmount, 23" Depth  
Wall or Bench Mount optional

**Applications:**

- UPS Inverters
- Battery Chargers
- Frequency Converters
- 3-Phase Power Converters
- Motor Drive Front-End

**Technical Specs:** At full rated load.

- Efficiency: > 97%
- Input Current %THD: < 5%
- Input Power Factor: ~ 0.99
- Overload: 1 hour @ 110% load
- Operating Temp: 0°C (32°F) to +40°C (+104°F)
- Operating Altitude: 4000 ft. @ 40°C and 100% load
- Operating Relative Humidity: 0 to 95% without condensation
- Storage Temp: -10°C (14°F) to +55°C (122°F)
- Audible Noise at 1m (3 ft): < 60 dBA

**Optical Isolated User Interface:**

Power Supply, De-saturation, OverTemp, DC Over Current, DC Over Voltage, DC Under Voltage, AC Over Current, AC Over Voltage, Remote Start/Stop Control.

**PFC Models & Options**

**PFC050A34802/D8000R**  
0 - 50 ARMS Input  
320 - 552 VRMS Line to Line  
3 Phase - 3 Wire  
47 - 63 Hz  
50 Adc Max. @ 800 Vdc Output

**PFC100A32402/D3650R**  
0 - 100 ARMS Input  
175 - 240 VRMS Line to Line  
3 Phase - 3 Wire  
47 - 63 Hz  
100 Adc Max. @ 365 Vdc Output

**Also Available:**  
5 kW and 15 kW @ 200 - 220 VRMS Line to Line

**Options:**

- ☑ 350 - 850 Hz. Input Frequency.
- ☑ Adjustable Vdc Output
- ☑ Brackets for wall or rack mounting. Rubber feet for bench mounting.
- ☑ LED status display indicators:  
Green: Normal Operation  
Red: Fault Shutdown  
Yellow: Over Temp. Warning
- ☑ Internal Microprocessor compatible interface, scaled 5V logic fault signals, (0 - 5V) analog voltage and current signals.

**Green Design:**

12x Size Reduction!  
7x Weight Reduction!  
Less raw material!



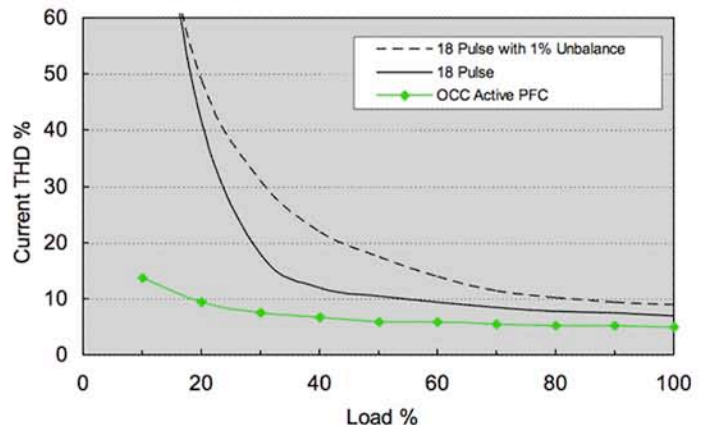
40 kW OCC Active PFC Rectifier

- ☑ One-Cycle Control Technology
- ☑ Input current < 5% THD
- ☑ Input current ~ 0.99 Power Factor
- ☑ Weight < 50 lbs (23 kg)
- ☑ Efficiency > 97%
- ☑ High Power Density 20W/in<sup>3</sup> (>1.2W/cm<sup>3</sup>)
- ☑ 3-Phase Power Converters
- ☑ No Programming or Software Necessary

**One-Cycle Control Is Breakthrough Technology!**



**Current THD-Load Curve**  
OCC Active PFC Rectifier vs. 18-Pulse Passive Rectifier



18 pulse passive rectifier data extracted from: Karl M. Hink, "18-Pulse Drives and Voltage Unbalance" MTE, Corp.