**OCC-DVC**

- Control grid voltage precisely, autonomously

### Breakthrough Technology:
First time in history, grid voltage can be controlled to a flat line according to a setpoint. OCC-DVC leverages unique patented technology from Caltech & the University of California as well as the experience of the world-leading experts in power electronics. OCC-DVC delivers ultra-fast, precise, reliable, and autonomous voltage regulation with a simple user interface and small footprint. OCC-DVC enables local voltage “reflexes” and wide-area voltage profile optimization. OCC-DVC is now in commercial service on the US grid.

### Problems:
- Renewable intermittency causing grid voltage fluctuation
- Equipment damage and process disruption within facilities
- Large-area blackouts and brownouts
- Grid losses from non-ideal grid-voltage profiles
- Instability of low-inertia micro-grids
- Costly maintenance of load tap changers (LTC) and switched capacitor banks (SCB)

### OCC Solution:
- Bring widely fluctuating voltage back to a steady flat line
- Reduce equipment damage & disruption by stabilizing facility voltage
- Improve grid resilience by autonomous voltage-control
- Improve grid efficiency by voltage-profile optimization
- Fast “reflexes” stabilize rapid-dynamic micro-grids
- Collaborate with LTC/SCB to reduce their cycling

### OCC Benefits:
- Hardware enabled control — ultrafast, precise, reliable
- Simple graphical user interface — easy to use
- Small footprint — easy to site
- Modular, scalable --field replaceable
- Long life design — low OPEX
- Light weight — easy to install
- ETL listed OCC-VAR module — safe and high quality
- US Department of Energy sponsored and award winning technology — premium brand

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**OCC Features:**
- One-Cycle Control technology
- Ultrafast bidirectional VAR control (±240kVAR)
- Regulate voltage within a band (e.g. ±1V)
- Manual or remote voltage set point control
- Autonomous grid “reflexes”
- Web accessible graphical user interface
- Installation on a standard 4′X4′ transformer pad
- 400Hz or variable frequency by custom order
- Modular scalable to MVAR

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www.onecyclecontrol.com

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### OCC-Dynamic VAR Compensator

#### Electrical Specifications

<table>
<thead>
<tr>
<th>Product Code</th>
<th>DVC3300A6480/XXXXIR</th>
<th>DVC3300A5380/XXXXIR</th>
<th>DVC3600A6208/XXXXIR</th>
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</thead>
<tbody>
<tr>
<td>AC Phase/Wires</td>
<td>3 phase/3 wires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Freq Range (Hz)</td>
<td>57-63</td>
<td>47-53</td>
<td>57-63</td>
</tr>
<tr>
<td>AC Voltage Range (V, rms) Line-to-Line</td>
<td>400-552</td>
<td>320-440</td>
<td>175-240</td>
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<tr>
<td>Max AC Current (A, rms)</td>
<td>300</td>
<td>600</td>
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<tr>
<td>Efficiency @ Full Power</td>
<td>&gt; 97%</td>
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<tr>
<td>AC Current THD @ Full Power</td>
<td>&lt; 5%</td>
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<td></td>
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</tbody>
</table>

#### Environment Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp. (°C)</td>
<td>0 to 40</td>
</tr>
<tr>
<td>Operating Relative Humidity</td>
<td>0-95%</td>
</tr>
<tr>
<td>Storage Temp (°C)</td>
<td>-10 to 55</td>
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</tbody>
</table>

#### Safety

- UL 508C: OCC-VAR module
- ETL Listed
- Designed

### Diagrams

- OCC-DVC on US grid
- OCC-DVC connection diagram
- Web accessible graphical user interface

### Field Demonstration Data

#### OFF

![Field demonstration data OFF](image)

#### ON

![Field demonstration data ON](image)

### OCC-DVC

OCC authorized dealer:

One-Cycle Control, Inc. 12 Mauchly Building P. Irvine CA 92618

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