

Dynamic Voltage Recover Product

An aerial night view of a city, likely Dubai, featuring several prominent skyscrapers with illuminated windows. The image is overlaid with a network of white lines connecting various points across the cityscape, suggesting a global or interconnected network. The overall color palette is dominated by deep blues and bright whites from the city lights.

Type CELD Dynamic Voltage Recover



CELD Type Dynamic Voltage Recover (DVR)

Product Features

- ★ Fast response time, <math><2\text{ms}</math>
- ★ High efficiency, $\geq 99.2\%$
- ★ IGBT green technology, no harmonic injection
- ★ 32-bit DSP digital control, high reliability
- ★ Super capacitor storage available, fast charging, long service life
- ★ Deep voltage sags correction, lasting time customized designed

Product Parameters

- Voltage: 400V, 3P/3L, or 3P/4L
- Frequency: 50 / 60Hz
- Capacity: 1~2500kVA, customizable
- Scope: 0~0.9p.u.
- Respond time: <math><2\text{ms}</math>
- Lasting time: $\geq 1\text{s}$, customizable
- Storage type: Super capacitor / battery storage
- Application: Indoor cabinet / Outdoor cabinet
- Average loss: <math><0.8\sim 1.0\%</math>
- Cooling: Neutral cooling / Ventilation cooling



■ DVR Technology

DVR (Dynamic Voltage Recover)

It is a dynamic voltage support technology that sets a specific protection time to protect sensitive loads from being affected by power supply system interruptions or voltage sags, so that they can continue to work normally and stably.

With the development of the industry and the widespread application of advanced technologies, more and more sensitive loads need the protection of DVR power supply systems.

For the site, the DVR system can no longer be used as a complete product to continue to supply power to the load after a power outage, but as a highly reliable and intelligent power supply platform, it can provide comprehensive protection for the entire system, provide backup time, and improve the power supply quality of the power grid.

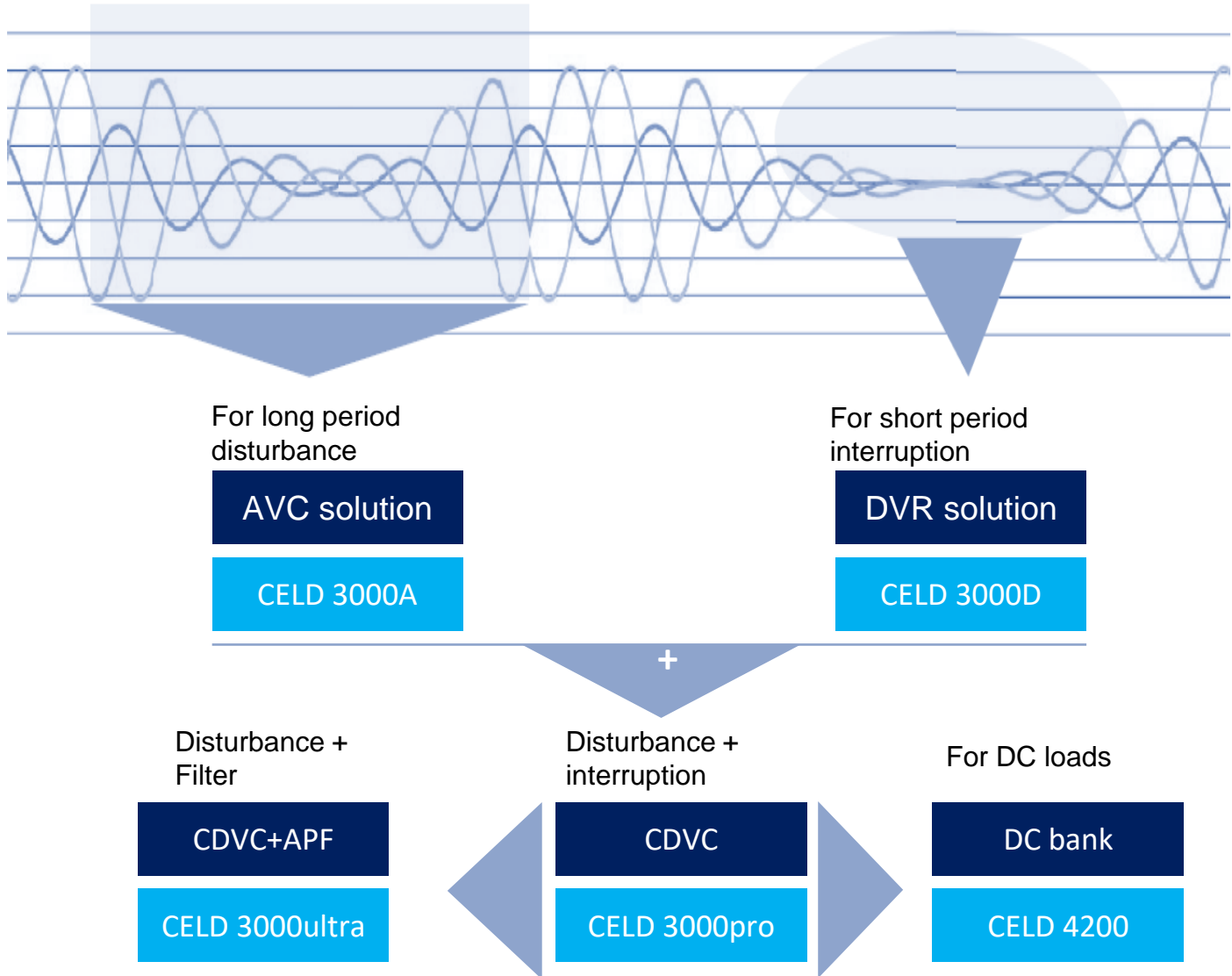


**Do you
know**

Eaton Cooper has more than 70 years of operating experience in the fields of reactive power compensation, voltage support and harmonic mitigation.

CELD series voltage Dynamic Voltage Recover Product

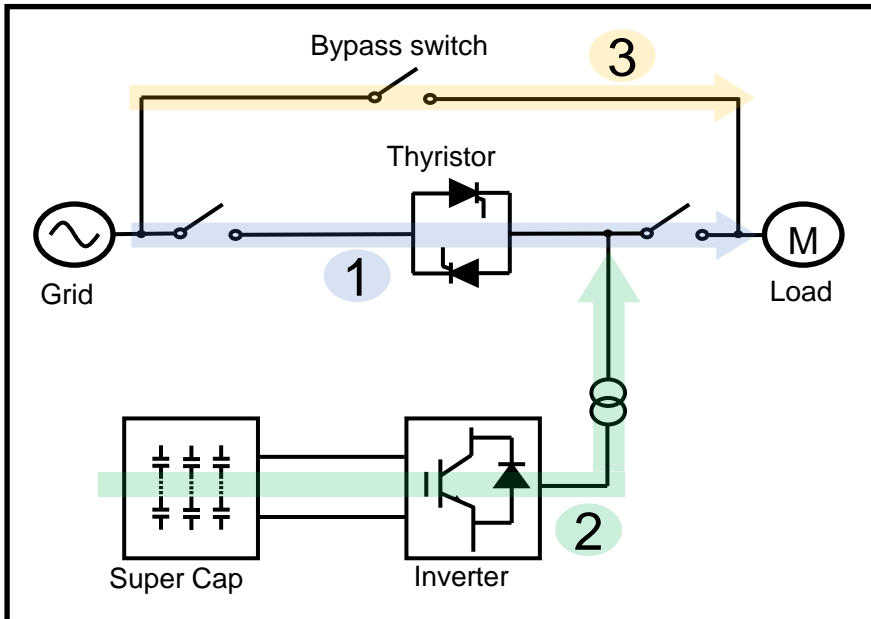
Product Family



CELD-3000D Type Dynamic Voltage Recover (DVR)

Principle and Function

Output mode and principle



1

Normal working condition, power through thyristors, inverter module standby.

2

When voltage sag, swell or interruption occur, the thyristor turned off, system enters island operation mode, and the energy storage unit supplies power to the load through the inverter module.

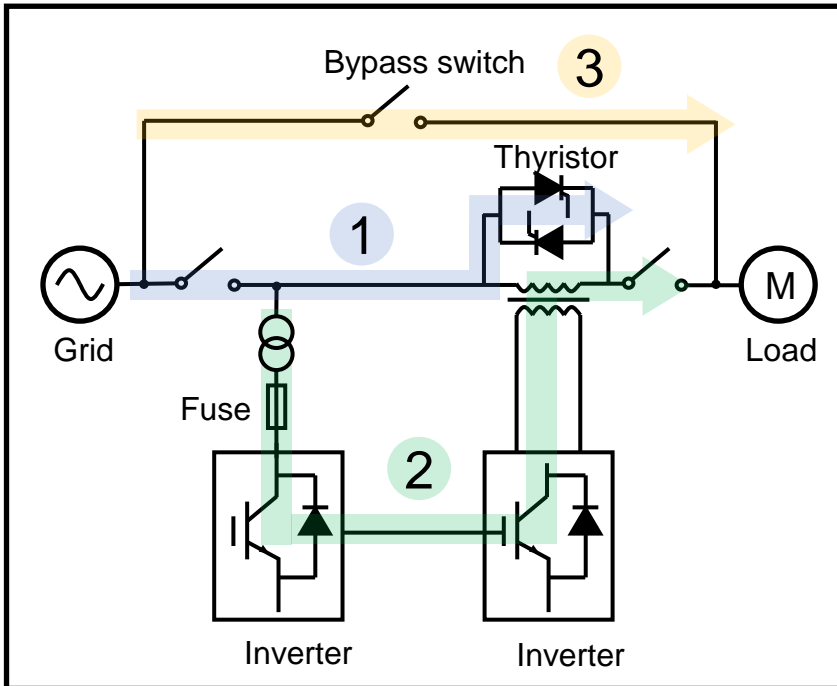
3

When equipment fails or is under maintenance, close the bypass switch without affecting the power supply of the grid to the load.

CELD-3000A Type Active Voltage Conditioner (AVC)

Principle and Function

Output mode and principle



1

Normal working condition, power through thyristors, inverter module standby.

2

When voltage sag, swell or interruptions occur, the thyristor turned off, inverter adjusts the system voltage in real time through the injection transformer.

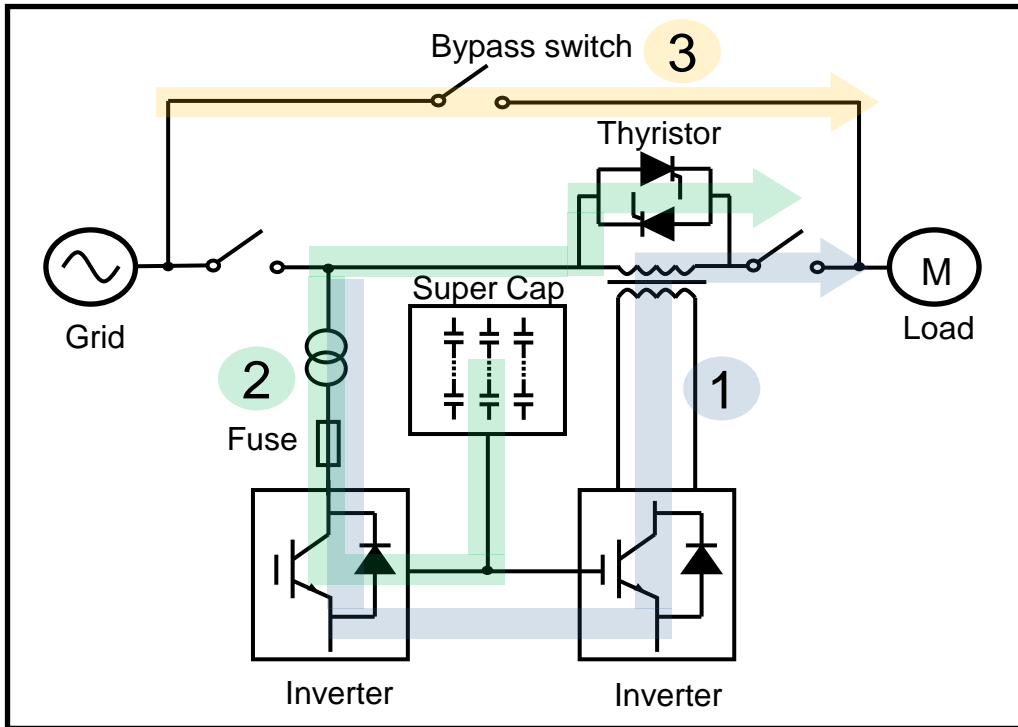
3

When equipment fails or is under maintenance, close the bypass switch without affecting the power supply of the grid to the load.

CELD-3000pro Type Comprehensive Dynamic Voltage Conditioner (CDVC)

Principle and Function

Output mode and principle



1

When the voltage fluctuates within limitation range (for example, $\pm 20\%$), the inverter adjusts the system voltage in real time through the injection transformer.

2

When voltage disturbance of the external power supply exceeds the limitation, the energy storage unit outputs the voltage through the parallel converter.

3

When equipment fails or is under maintenance, close the bypass switch without affecting the power supply of the grid to the load.



Do you know

According to the results of grid voltage sag monitoring and big data analysis, voltage sag is the dominant factor of distribution network failure. As an anti-sway device, the reliability of the dynamic voltage restorer itself is crucial

Application Features

■ High reliability, designed for sensitive loads

Multi-level protection, simple circuit, indoor or outdoor products, can withstand large load impact and harsh environment, high reliability.

■ High efficiency, fast response time

Efficiency up to 99.2%; protection response time less than 2ms; lasting time to be customized.

■ Superior rectifier performance, no harmonic injection

The new generation of insulated gate bipolar transistor (IGBT) power devices and multiple protection technologies are used to ensure the absolute reliability of the equipment, the advanced IGBT green rectification technology ensures harmonic free.

■ Based on DSP full digital control technology, high reliability

Utilizing the most advanced 32-bit DSP (digital signal processor), the DVR can achieve extremely high performance and reliability through advanced flexible logic algorithms.

■ Advanced parallel expansion function, modular design

The parallel expansion function not only increases the capacity of the DVR system but also provides mutual redundancy backup, further improving the reliability of the power supply.

■ Multifunctional panel with graphic TFT true color display

The DVR's multi-function panel is equipped with an 8" graphic TFT display. Through the graphic display and user-friendly menu operating system, users can easily browse input, output, load and operating parameters.

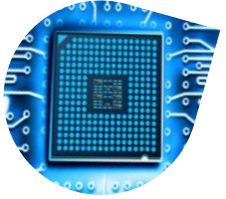


Applications



Automatic

- Control the shutdown and restart of robots caused by voltage sags
- Avoid batch damage caused by shutdown of CNC equipment
- Avoid time caused by shutdown and restart of production line



Semi-conductor

- Avoid huge losses caused by batch scrapping due to voltage sags in the entire process line
- Avoid shutdown caused by voltage sags in any link of the associated production system



Processing Industry

- Avoid sunk costs caused by misalignment and failure of standardized production lines due to voltage sags
- Avoid waiting time for restarting the production line due to voltage sags



Automotive

- Avoid chain failures caused by voltage sags in continuous production links such as electrophoresis and drying



Medical treatment, hospital

- Avoid alarms and failures caused by voltage sags in high-precision medical equipment.
- Avoid accidents caused by voltage sags during key treatment steps such as surgery.



Telecom、IT

- Avoid huge losses caused by power outages in computer centers and meet the high power quality requirements of communication equipment



Eaton
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Reactive Compensation, Harmonic Filter and Voltage Support

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