# Easily integrate the new single- and multi-phase CL-7 regulator controls into your applications


This easy-to-use intelligent control is built to easily adapt to emerging changes you can expect from your system. Available as a single- or multi-phase device, the CL-7 control is designed with a full suite of deployment options to enhance power quality.

Eaton's Cooper Power™ series CL-7 voltage regulator control is uniquely qualified to take on the voltage regulation requirements of both commercial and industrial applications. With single-phase and multi-phase controls available, the possibilities are almost unlimited.

## Three-phase motors for mining

When utilizing three-phase motors in mining applications, coordinating the voltage between all phases is critical. The CL-7 control is available in a multi-phase design, allowing control of up to three regulators with a single device. This results in decreased purchase, installation, commissioning and maintenance costs. In addition, if communications provisions are required, only one communications card is necessary.

Using the multi-phase control allows the user to take full advantage of the enhanced Leader/Follower features for motor phase coordination.

- Ganged mode keeps all regulators on the exact same tap position regardless of discrepancies between source voltages
- True independent mode allows each apparatus to regulate completely independently from one another and as closely as possible to a set voltage for true accuracy
- Maximum deviation mode utilizes user-defined input to leverage a combination of ganged and independent modes
  - Allows the separate devices to regulate to a set voltage independently of one another—up to a specified maximum range of tap positions
  - Useful when regulation accuracy is vital, but not at the expense of destroying motors, should source voltages differ greatly
- In extremely abnormal conditions, regulation parameters can be set to conform to "typical" settings using a historical tap position mode where historical data can be used to make tap position decisions based on time of day, day of week and week of year

## Cogeneration

The CL-7 regulator control also allows the user to take advantage of cogeneration, facilitating the most energy-efficient industrial practices. In traditional reverse power flow and bi-directional modes, the control would regulate to the new load bushing (upline bushing) under actual reverse power flow, sometimes resulting in overvoltage scenarios on the line between the regulator and the distributed generation device. Using the cogeneration mode dictates that the control will regulate to the new source bushing (downline bushing), keeping locations downline from experiencing overvoltage situations.

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## Wind farms and oil and gas fields

Wind farms, solar farms and oil and gas fields often require long stretches of conductor to transmit energy to or from the application, creating the need to battle voltage sags.

- Employing the line drop compensation feature allows the user to specify a "load center" somewhere on the line so that voltage regulation can be achieved at a point other than the load bushing, limiting the need for staggered regulator banks
- The CL-7 control was designed on the same platform as the Eaton CBC-8000 capacitor control so integration between power quality devices is seamless
- Multiple communications protocols are available—DNP, Modbus®, 2179, IEC 61850 and IEC 60870-5—so that the CL-7 can be retrofitted to a system that has any number of non-Eaton devices without revamping the entire communications package

## Hospitals and data centers

The importance of reliable power quality for hospitals, data centers and schools cannot be understated. In the condition of a power outage, the CL-7 control has battery backup power that will keep communications to the control established, while the hospital is backed up by generators. This allows the SCADA system to record which regulators on the system were on tap positions other than neutral when the power was lost. This data will assist operators in knowing the specific regulators to move tap positions prior to return of power.

To keep machines and equipment from sustaining damage, tap positions may need to be manipulated so that there are as few voltage sags or swells as possible as a result of inrush current upon power restoration.

## CL-7 control overview

Virtually all commercial and industrial applications can benefit from installing the CL-7 voltage regulator control on their system. In addition to numerous control features, Eaton has the quickest tap change in the industry with the CL-7 control and Quik-Drive™ tap changer combination.

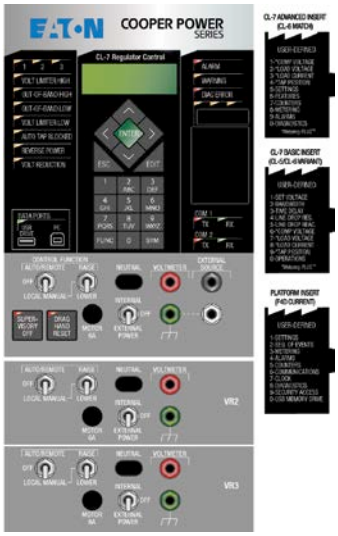
This highly flexible control can be deployed in a number of operational strategies using site metrics, which include voltage and current.

### Key operating features

- Single- or multi-phase control
- Local or remote control of regulators
- Multiple operating profiles
- Fully programmable preventative maintenance tools
- Battery backup options to maintain communications

### Key two-way communication features

- Single access communications
- Real-time scanning
- Site alarm notifications
- Radio-ready control




CL-7 control

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