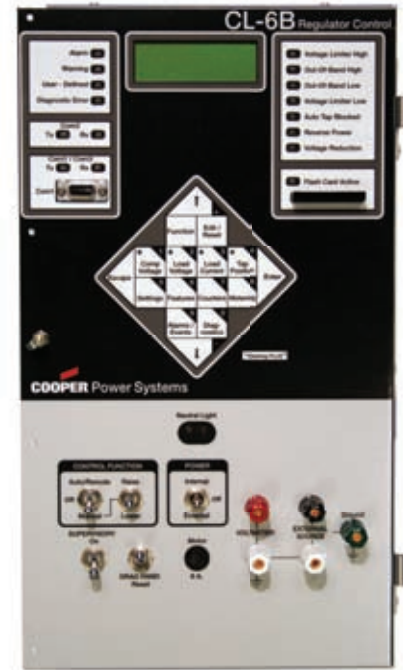


# Voltage Regulators

## CL-6B Regulator Control Replacement Selection Guide

### AFTER-MARKET CONTROL OPTIONS



#### Control Replacement Assembly—CRA

The CRA includes the CL-6B control panel, the control panel enclosure, and the back-panel. This one assembly can be used on any manufacturer's regulator and installs with simple wiring instructions.

- Replaces legacy corrosion-prone enclosures.
- One assembly fits all regulators.
- 100% guaranteed compatibility with Cooper, Siemens, GE, or Howard regulators.
- Ratio Correction Transformer (RCT) assures display and test terminal voltages match.
- Provisions for external capacitor upgrade.

**Note:** CRA does not include new control cable or external capacitor upgrade cable.

#### Control Panel Replacement

#### Panel Replacement Assembly—PRA or Control Panel and Retrofit Kits

Order the PRA, a control panel factory-assembled with mounting hardware and wiring harness, or order the CL-6B control panel and install using a retrofit kit. This allows the upgrade to a CL-6B control that is wired directly into an existing regulator control enclosure.

- Reduced-size panels fit in existing CPS, Siemens, GE, or Howard enclosures.
- Allows direct wiring connection to CPS, Siemens, GE, or Howard regulator.
- Provides the proven CL-6 benefits you know to existing regulators
- Ideal for budget-minded utilities.
- Quick installation.

Cooper Power Systems now offers flexible replacement options to upgrade your Voltage Regulator controls. Use the table below to order your solution.

	Control and Assembly Replacement	Control Panel Replacement Options		
	Control Replacement Assembly (CRA)	Panel Replacement Kit Assembly (PRA)	Control Panel Kit and Retrofit Kits	
Existing Control	CRA Part #	PRA Part #	CL-6B Control Panel Kit Part # 57A6432690EA	Retrofit Kit Part #
Cooper CL-6A	57A642716RUD	57A64328000A		57A64327900A
Cooper CL-5, CL-4	57A642716RUD	57A64328000B		57A64327900B
Siemens / Allis-Chalmers	57A642716RUD†	57A64328000C†		57A64327900C†
GE -Fork Terminal	57A642716RUD	57A64328000D		57A64327900D
GE -Pin Terminal	57A642716RUD	57A64328000E		57A64327900E
Howard	57A642716RUD	57A64328000F		57A64327900F

† Type A regulator must have load-side potential transformer.

### CRA—Control Replacement Assembly

Cooper continues to offer the universal Control Replacement Assembly (CRA), a plug-and-play solution for any regulator control update. The CRA comes with everything needed for a complete upgrade to the CL-6B regulator control package.

- CL-6B control panel
- Control box/enclosure
- Rear panel with terminal blocks
- Ratio Correction Transformer (RCT)
- Provisions for external capacitor
- Communications (optional)

Consider the CRA replacement when accessories such as heaters, ratio-correction transformers, and capacitors are installed inside the control box. In many cases, these items are added as aftermarket accessories and limit the available space inside the control box. Cooper has a full line of CRAs that can include heaters, ratio-correction transformers, and considerations for external capacitors.

### PRA—Panel Replacement Assembly

Everything needed to install a CL-6B panel into existing, specified enclosure. The mounting hardware and wiring harness come pre-assembled for plug-and-play installation.

- CL-6B control panel
- Wiring Harness—pre-installed
- Mounting Brackets—pre-installed
- Hardware
- Communication (optional)

### CL-6B Control Panel Kit

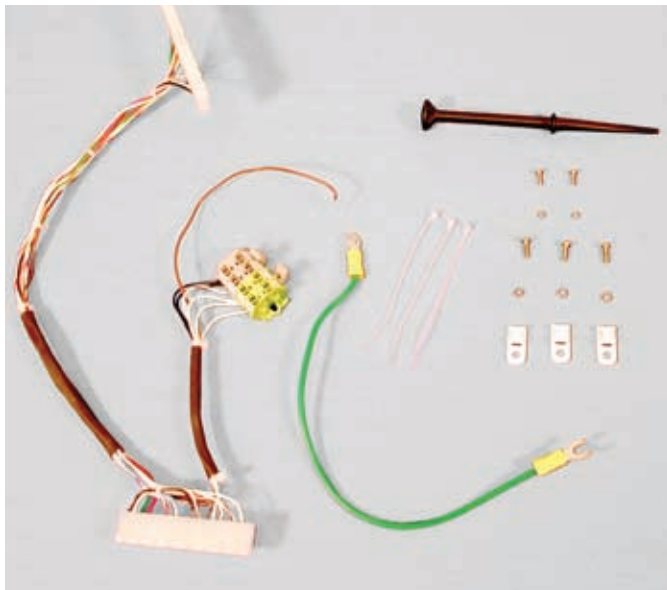
The CL-6B control panel kit comes with a control panel and Service Information S225-11-1. Order the appropriate retrofit kit to install the control, which provides these features:

- Compact Flash port
- TIME-ON-TAP
- PMT (Preventive Maintenance Tapping)
- DCM (Duty Cycle Monitor)

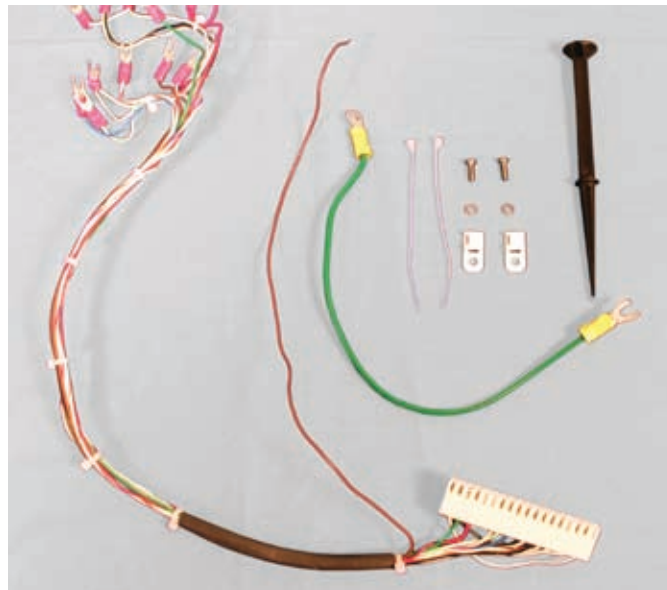
## Retrofit Kits

Includes everything needed to install the CL-6B control panel into Cooper, Siemens, GE, or Howard regulators. Refer to the table for appropriate part numbers.

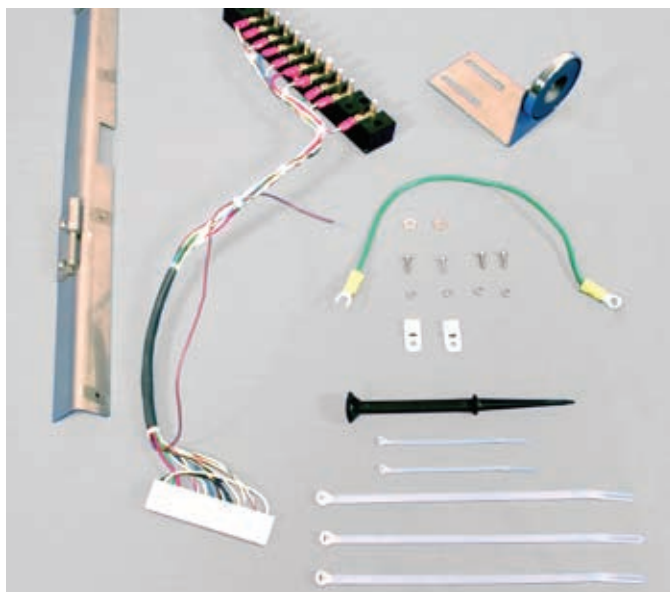
- Wiring harness
- Mounting brackets
- Hardware



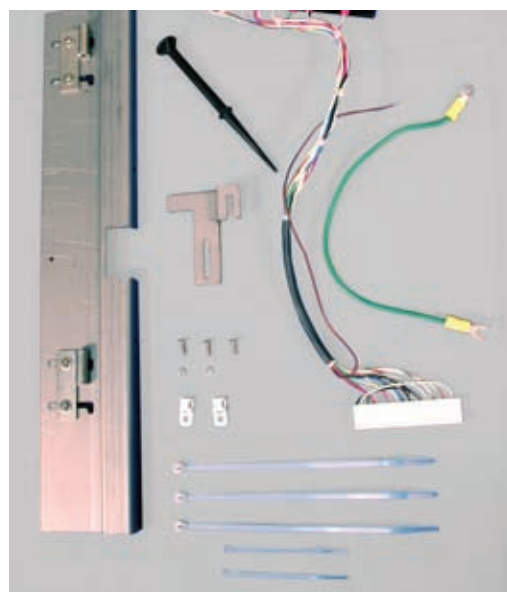
GE Pin Terminal Retrofit Kit  
57A64327900E



GE Fork Terminal Retrofit Kit  
57A64327900D



Siemens/Allis Chalmers Retrofit Kit  
57A64327900C



Howard Terminal Retrofit Kit  
57A64327900F

## CL-6B ACCESSORIES

### Digital Communications

The digital communications card provides an interface for digital communications with 2179 or DNP 3.0 protocols. Cooper offers fiber-optic/RS-232 and RS-485 cards. LEDs provide positive indication of board status.

Fiber-Optic/RS-232 Card: Part # 57A64264800B

RS-485 Card: Part # 57A64305900B

### Control Box Heater Assembly

Maximize your control investment by protecting it against the elements. The thermostatically controlled heater assembly is best used in high humidity environments. The thermostat in the heater assembly will activate the heater when the temperature falls below 85 °F (29 °C). The heater will shut off when the temperature exceeds 100 °F (38 °C).

Part Number: 57A64319100C

## What are the different CL-6B control replacement kits?

### Control Replacement Assembly (CRA)

The Control Replacement Assembly (CRA) consists of the entire control package. This includes the CL-6B control panel, the back panel, terminal blocks, control box, and mounting hardware. When utilizing a CRA, the original control box and contents are completely removed and replaced. The original control cable is re-used and wired directly to the new CRA.

### Panel Replacement Assembly (PRA)

The Panel Replacement Assembly (PRA) only replaces the control panel; the wiring harness and mounting brackets are factory assembled. The existing control box and internal components are re-used.

### CL-6B Control Panel and Retrofit Kits

The CL-6B control panel is ordered separately, and a retrofit kit is selected to ensure connectivity to an existing control box. This provides inventory flexibility to the customer with more than one type of existing control.

## What if I have a Type A regulator?

All of the CL-6B control replacement options can be used with Type A regulators.

**Note:** Siemens has made some Type A regulators without a load-side PT. The CL-6B control is not designed for use with these units.

## What if the regulator had a previous control replacement?

Regardless of the current replacement control, the connections within the control box determine which retrofit kit to utilize. Determine how the current control interfaces to the control box (fork terminals, pins, etc.), and select the retrofit kit that matches this configuration.

## What are the advanced features of the CL-6B control?

Cooper's CL-6B control provides duty-cycle monitoring (with CPS regulators); preventive maintenance tapping (PMT), our unique anti-coking functionality; configurable custom logic, indications, and communications; and compact flash card upload (data, settings, and firmware) and download (data and settings).

## Who should I contact for further questions?

### Application and Selection help:

Contact Cooper Power Systems customer support.

Phone: 262.524.3300

### Installation help:

Contact your local Regional Sales Engineer.

Cooper has over 60-years of experience in the design and support of regulator mechanisms, controls, and control software. Factory and on-site classes provide training on installation, operation, and maintenance. Our experienced power engineers are available for system-specific design and support.

