

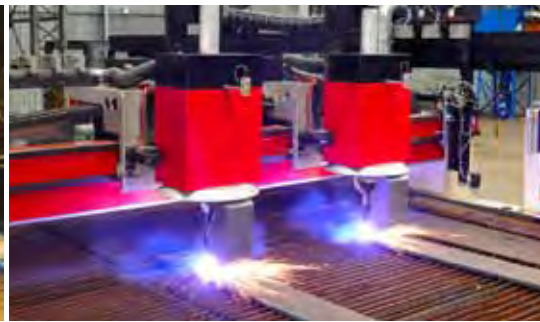
# Series CEP7 Motor Protection Solid State Overload Relays



The second generation of CEP7 solid state overload relays advances Sprecher + Schuh's leading edge technology with several improved features. This second generation of CEP7 overload relay includes features like:

- Selectable trip class and field installable modules
- A wider (5:1) set current adjustment range
- A more robust mechanical and electrical mounting
- Self-sealed latching mechanism

The basic concept of utilizing Application Specific Integrated Circuits (ASICs) resulting in an affordable solid state overload relay remains unchanged. This kind of versatility and accuracy was simply not possible with traditional bimetallic or eutectic alloy electromechanical overload relays.



## Fewer units means greater application flexibility

The CEP7 Solid State Overload is available in three basic models:

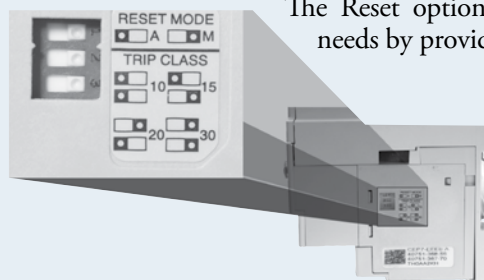
- **CEP7-ED1** is a Class 10, manual reset model available up to 45 amperes which covers the most common horsepower motors and your every day application. This model is economically priced to be competitive with adjustable bimetallic overload relays.
- **CEP7-EE** is full featured selectable trip class (10, 15, 20 & 30) 3-phase application overload relay with provision for field mountable modules to handle remote reset, jam protection, ground fault and communicators, and other modules previously available only in higher priced electronic overload relays. Manual reset or automatic reset can be selected with dip switches on the CEP7-EE models.
- **CEP7S-EE** is a 1-phase application overload relay packing all features of the 3-phase CEP7-EE model.

## 5:1 current adjustment & reset options

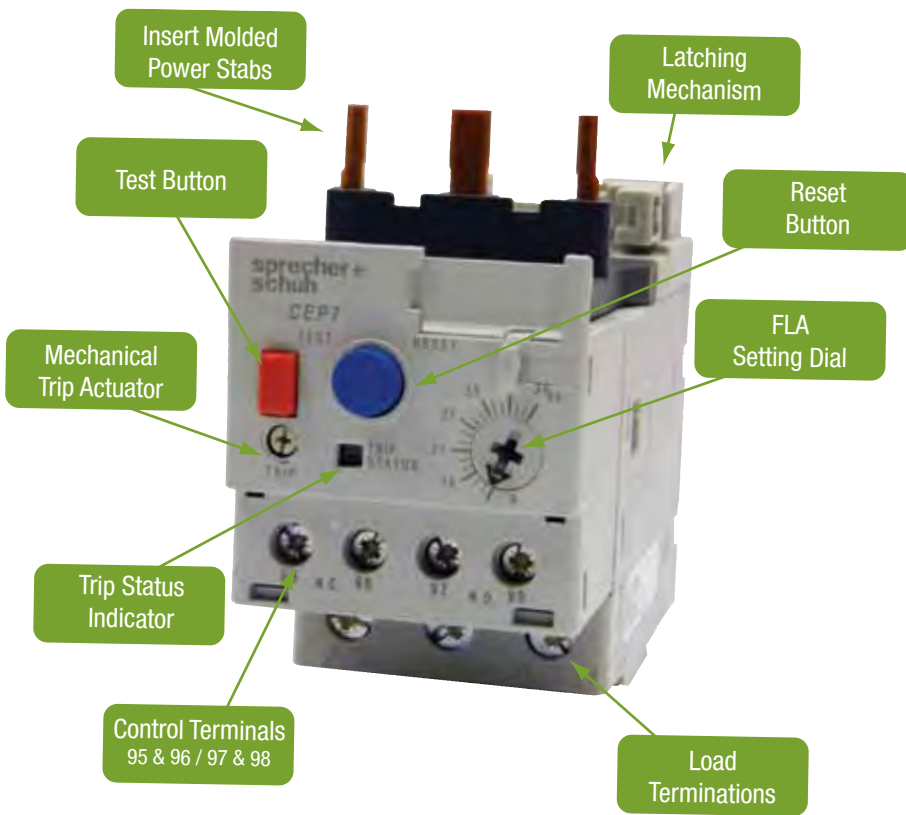
Thermal or bimetallic overload relays typically have a small current adjustment range of 1.5:1 meaning the maximum setting is generally 1.5 times the lower setting. A wider adjustment range is the primary reason the industry has been turning to more electronic overload relay protection over thermal overload relays. The CEP7 overload adjustment is capable of a maximum of **five times** the minimum set current. This dramatically reduces the number of units required on-hand to cover the full range of current settings up to 800 amperes.

The Reset options for CEP7 further reduce inventory needs by providing two choices:

- **CEP7-ED1** overload relays are available with Manual Reset exclusively which keeps the cost down.
- **CEP7-EE** models have a selectable dip switch in Manual and Automatic Reset modes.



# Series CEP7 Features



Shown above: CEP7-EE

## Second Generation Advantage

- Selectable tripping class
- Choice of reset options
- More robust design
- Increased accuracy
- Improved motor protection
- Self-powered design
- Lowers energy requirements
- Reduces panel space
- Superior phase failure protection
- Improved Flexibility

## Superior phase failure protection

The CEP7's on-board electronics are constantly monitoring all three phases. If the ASIC board senses that one phase is missing during a steady state running condition on a fully loaded motor, it will trigger in 3 seconds. If a single phase condition is present during starting, the CEP7 will trip within 8 seconds (for a motor >80% loaded). These times are much faster than any thermal bimetallic overload relay. In addition, CEP7 overload relays detect a 50% phase imbalance in the same way as a phase loss.

## Robust design

The CEP7 design physically extends to the back-pan, therefore aligning the mounting of the overload with the corresponding contactor. Further, the mechanical attachment and direct electrical connection to the contactor has been "beefed-up." This provides for a more robust mounting which means less damage from shipping or during field wire installation. The bipolar latching relay are self-enclosed therefore insulating the electromagnet and shielding against airborne metal particles and other potential environmental debris. The CEP7 has been tested to operate in -20° C (-4 ° F), or up to 60° C (140 °F) and withstand 3G of vibration or 30G of shock on a mountain up to an altitude of 2000m or in a jungle at 95% humidity.

Reliability under every conceivable environmental condition is a quality built into the design of this second generation of CEP7 electronic overload relay.

## Side Mount Modules

The CEP7 has a wide variety of side mount modules, providing an extensive array of control options, including; Remote Reset, Jam Protection with Remote Reset, Thermistor Relay/ Remote Reset, Network Communication modules, Ground Fault Protection with Remote Reset and Jam, and the Intelli-button Remote Reset indication device. Individual literature is available for each of these modules.

All these options make the CEP7 Electronic Overload relay the only device you need to stock.



Contact your Sprecher + Schuh representative for more information.