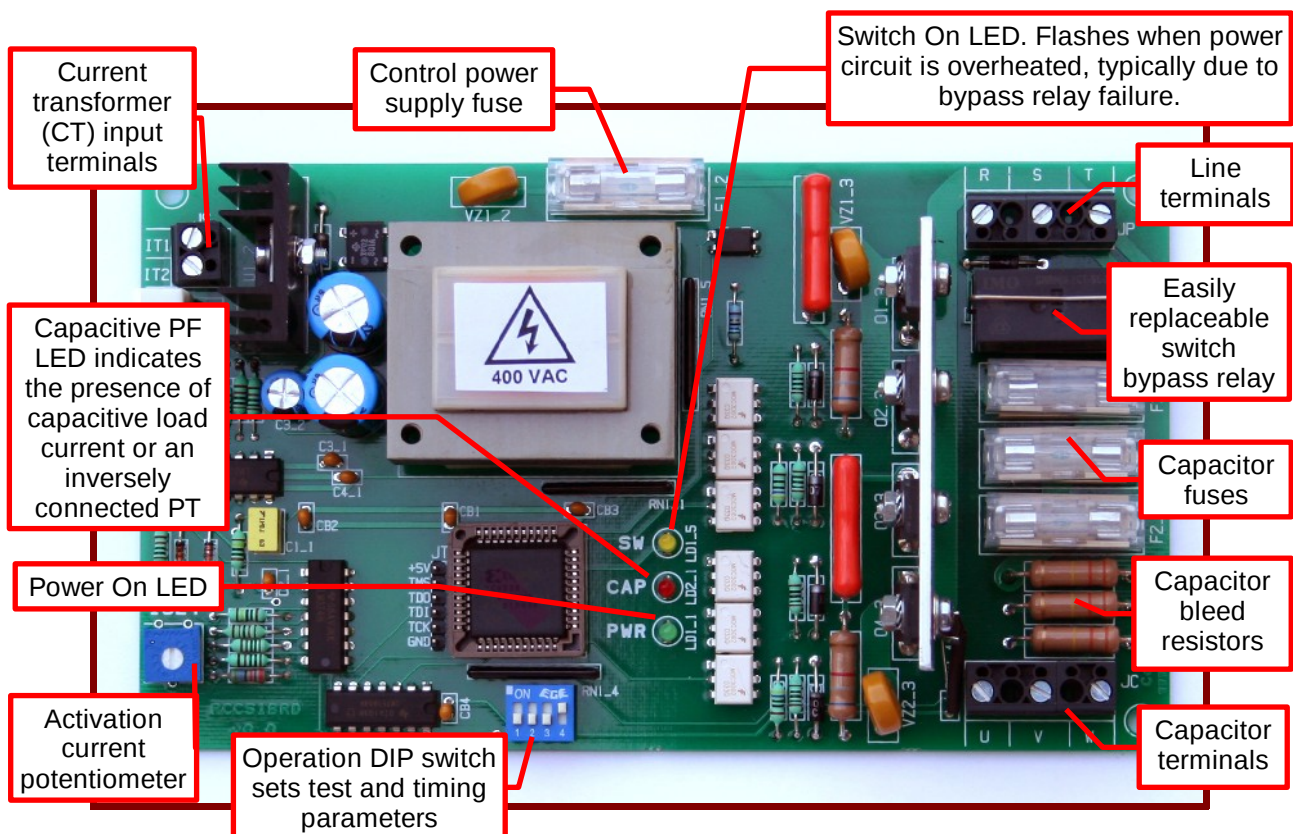


Single (RCCS1) and Triple (RCCS3) Reactive Current Controlled Switch

The new (v1.1) RCCSx switches measure the reactive current in single- and three-phase line systems and activate one (RCCS1) or three (RCCS3) 8 A solid state switches to connect compensating capacitors in and out of the line system. The current is detected with a current transformer (CT) in one of the lines and the sampling period is selectable from 4 to 32 seconds.

The RCCSx response makes it particularly suitable for fast dynamic power factor (PF) compensation of frequently-started, low-duty or variable loads such as lifts, conveyors, compressors, pumps and fans.

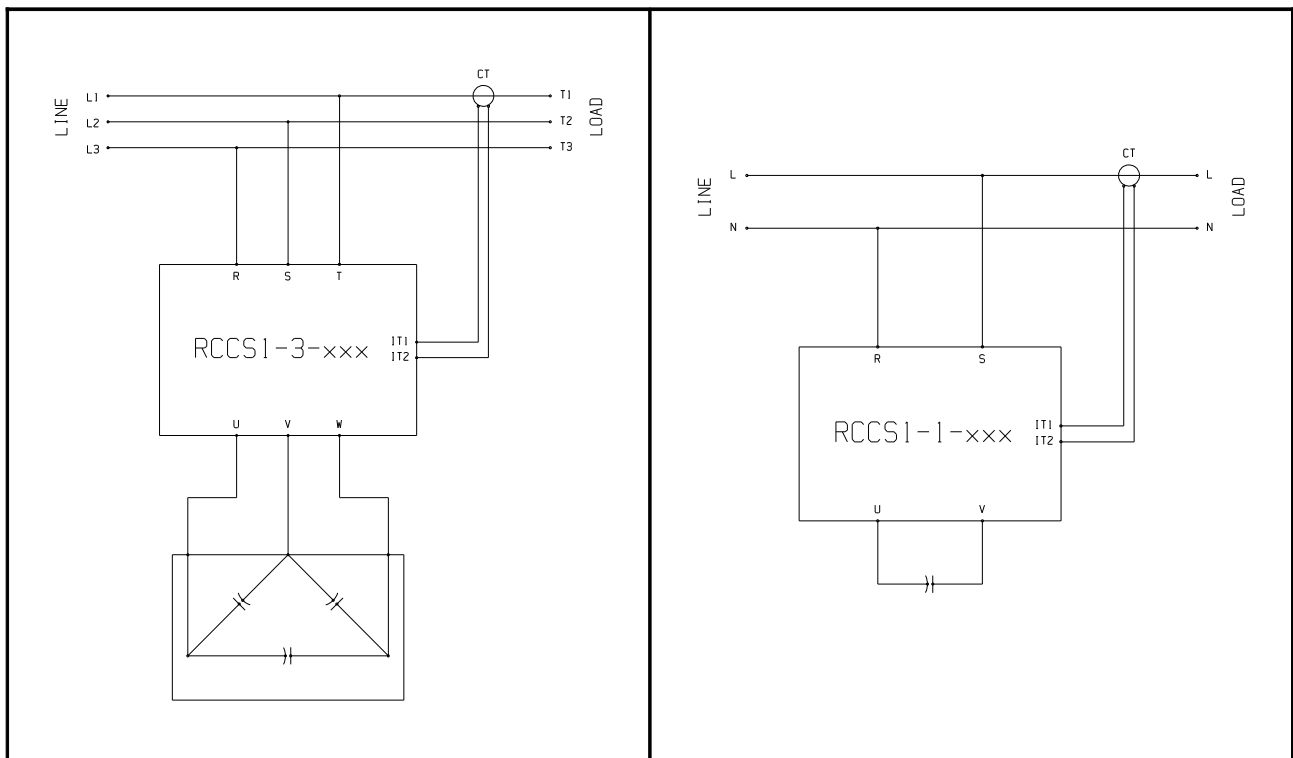


The RCCS1 v1.1 single switch

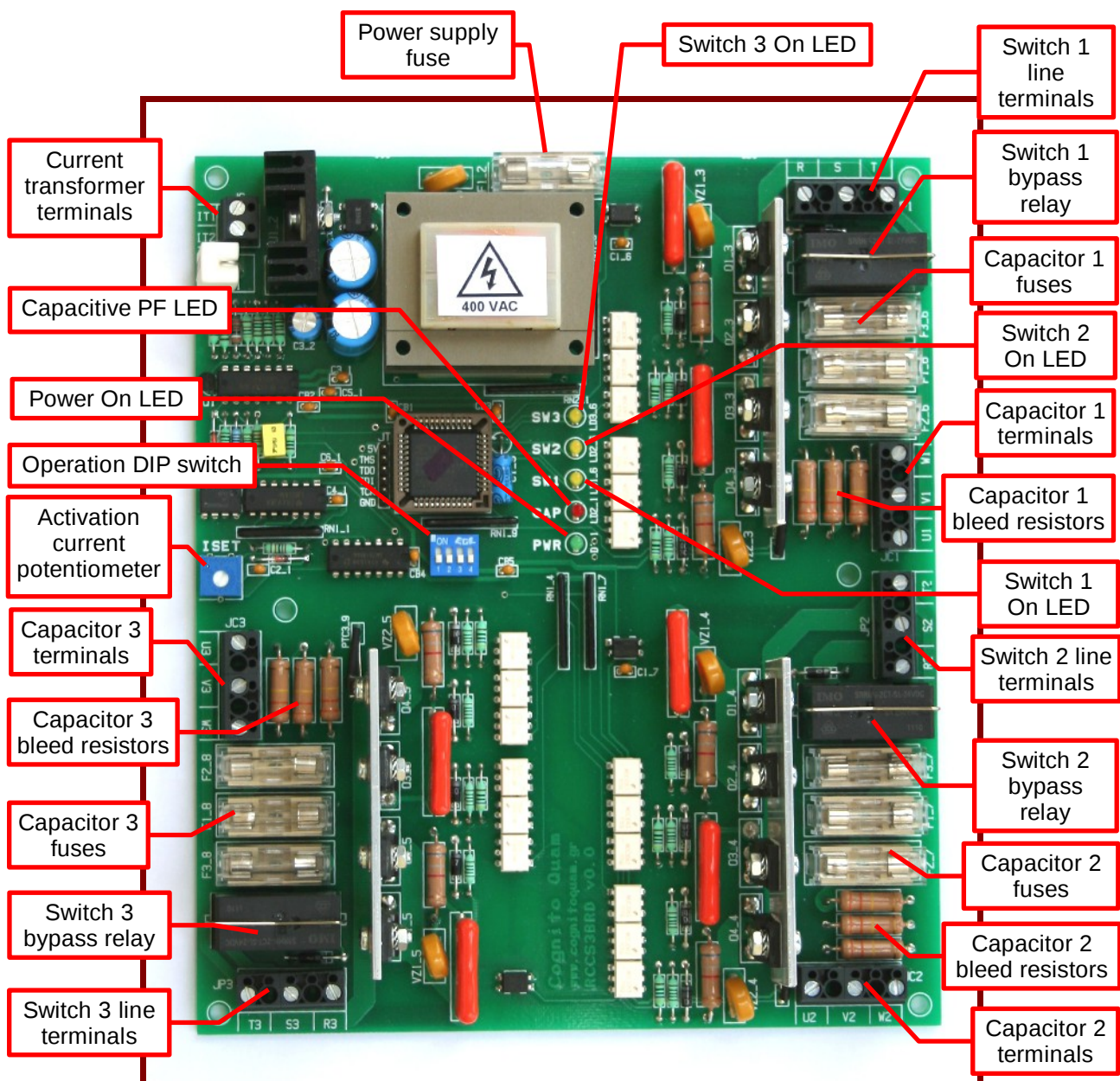
Each switch is activated when the detected reactive current is above the respective set value as determined at the activation potentiometer. Switch activation/deactivation happens at every sampling instant as set at the DIP switch.

The RCCSx is a fully protected, digitally-controlled unit, simple to install and adaptable to all power factor capacitor compensation applications. The only other parts required to build a complete power factor correction system are the current transformer and the compensating capacitor(s).

RCCSx Feature Summary	
Line connection	No neutral connection for the three-phase models.
Current detection	By standard 5 A secondary current transformer (CT).
Reactive current activation range	Activation potentiometer range of 0.3 - 3 Ar (measured at the current transformer secondary) ensures versatile and scalable operation.
Phase sensitive detection method	Reactive current is measured by phase sensitive detection rejecting noise and line harmonic effects.
Overheat protected solid state relay	Solid state relay circuits switch each 8 A compensating capacitor in and out of the line at every sampling instant.
Zero crossing type solid state relay	The capacitor is switched in when the line voltage equals the capacitor voltage thus eliminating capacitor inrush current and extending service life.
Bypass relay	Bypass relay across each solid state switch minimizes switch losses.
Sampling time	DIP switch selectable of 4, 8, 16 and 32 seconds.
Forced state	DIP switch selectable state turns each switch on or off regardless of current input enabling individual power circuit testing or orderly system disconnection.
Indicating LEDs	LEDs show the power supply state, each switch activation/overheat status and the capacitive PF condition (or a reverse connected current transformer).
Bleed resistors	Capacitor bleed resistors ensure charge-free capacitors after shut-down.
Isolated control circuit	Control circuit is galvanically isolated enhancing safety and noise immunity.
Protection	Against line overvoltages, faults and power circuit overheating.

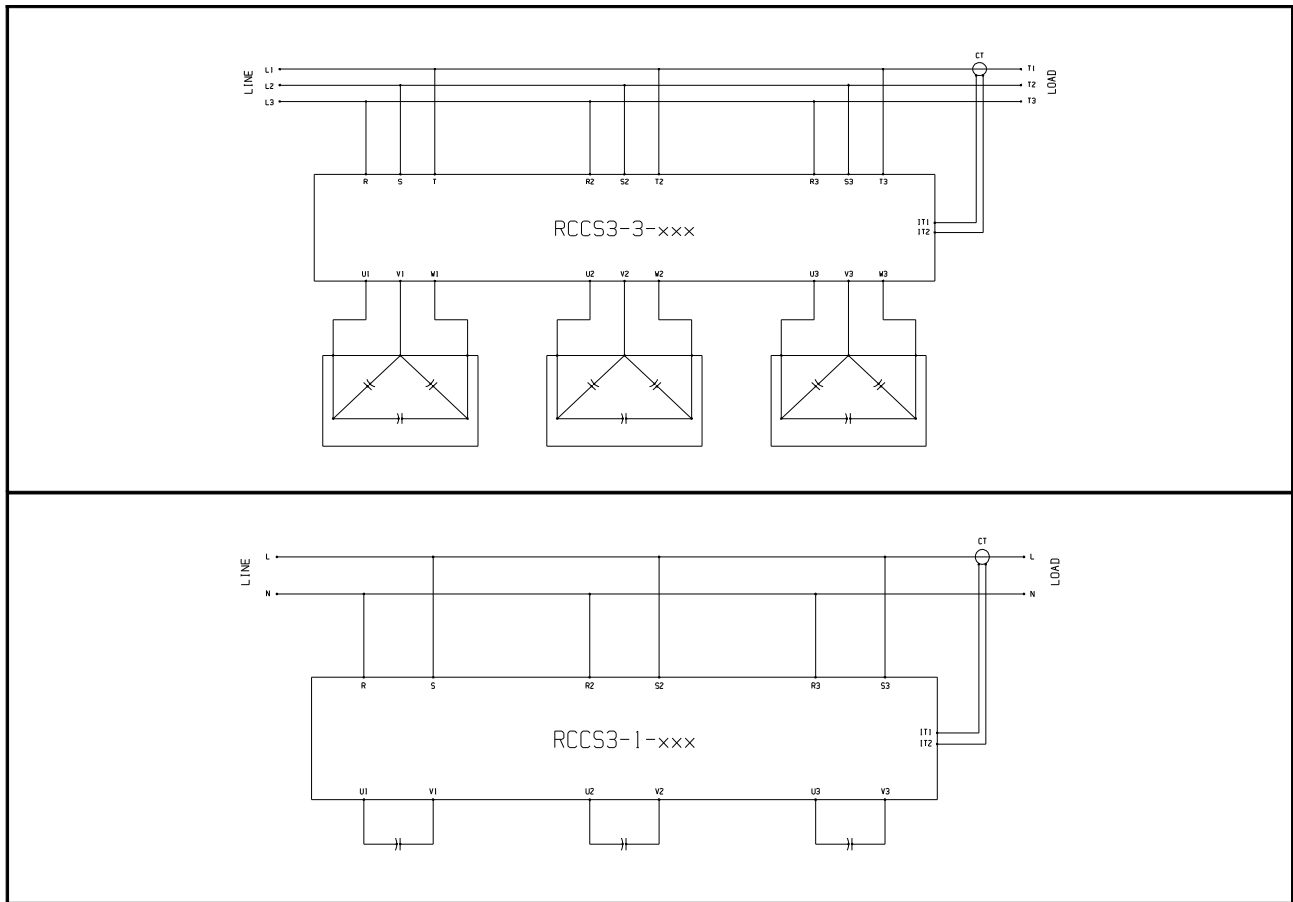


Typical three-phase (left) and single-phase (right) power factor compensation RCCS1 systems.



The RCCS3 v1.1 triple switch

During normal operation each “Switch ON” LED indicates the on or off condition of the relevant switch. In the event of its power circuit overheating, the switch is deactivated and the “Switch ON” LED flashes until power is removed. Overheating is usually the result of switch bypass relay failure and in such a case the worn relay is easily removed from its socket and replaced.



Typical three-phase (top) and single-phase (bottom) power factor correction RCCS3 systems.

Ordering Information by Line System					
Description	120 V, 60 Hz lines	230 V, 50 Hz lines	240 V, 60 Hz lines	400 V, 50 Hz lines	480 V, 60 Hz lines
Single-phase RCCS1 single reactive current controlled switch	RCCS1-1-120	RCCS1-1-230	RCCS1-1-240		
Three-phase RCCS1 single reactive current controlled switch	RCCS1-3-120		RCCS1-3-240	RCCS1-3-400	RCCS1-3-480
Single-phase RCCS3 triple reactive current controlled switch	RCCS3-1-120	RCCS3-1-230	RCCS3-1-240		
Three-phase RCCS3 triple reactive current controlled switch	RCCS3-3-120		RCCS3-3-240	RCCS3-3-400	RCCS3-3-480

Supplied by