

Controls

CS Series Power Controllers CS1 & CS3



- Industrial Solid State Relays
- Single and Three-Phase Load Designs
- DIN Rail Mounted
- Conservative Thermal Design
- Up to 120 Amp Ratings - CS1
- Up to 3x55 Amp Ratings - CS3
- Up to 600 VAC Operational Voltage
- Integrated Heatsink
- Zero Crossover Switching to Minimize Electronic Noise
- AC & DC Voltage Input Signals
- Alarms for Load/Line Interrupt
- Overtemperature Alarm
- Digital PNP Alarm Output Signal for Logic-Gated Devices
- UL / cUL
- CE Marked
- LED Status Indicator
- IP20 Touch Protection Cover



CS1



CS3

Description

The CS Series of solid state relays are an ideal, low cost power control solution for switching resistive loads found applications in such as furnaces, ovens, heat treating, injection molding, thermoforming, press platens, commercial food equipment, semiconductor, lighting and drying, just to name a few.

The CS Series power controllers feature a rugged, industrial design, touch-safe exterior and conservative, continuous service amperage ratings at 40°C ambient. They are available in both AC and DC Voltage logic input command signals and employ zero crossover firing (gated to turn on and off at zero voltage), which keeps unwanted RFI (Radio Frequency Interference) to a minimum. Each controller comes complete with integrated heat sink, SCR thermal protection with LED indication and has USA & Canadian UL component recognition and CE conformity. Optional alarms are available for over temperature as well as load and line interrupt conditions. The CS1 offers a digital PNP alarm output signal for logic-gated devices such as PLCs.

The CS1 Series controller manages single phase loads up to 120 Amps and up to 600 VAC.

The CS3 Series controller manages three phase, 3 leg loads up to 55 Amps and up to 600 VAC.

Applications

- Thermoforming
- Plastic extrusion lines
- Injection molding
- Heat treatment
- Industrial ovens / furnaces
- Mold & dye heating/cooling control
- HVAC
- Packaging
- Textile production
- Rubber vulcanization equipment
- Driers, incubators and autoclaves
- Pharmaceutical and chemical processes
- Rapid resistive heat load switching

SCR COMPONENTS

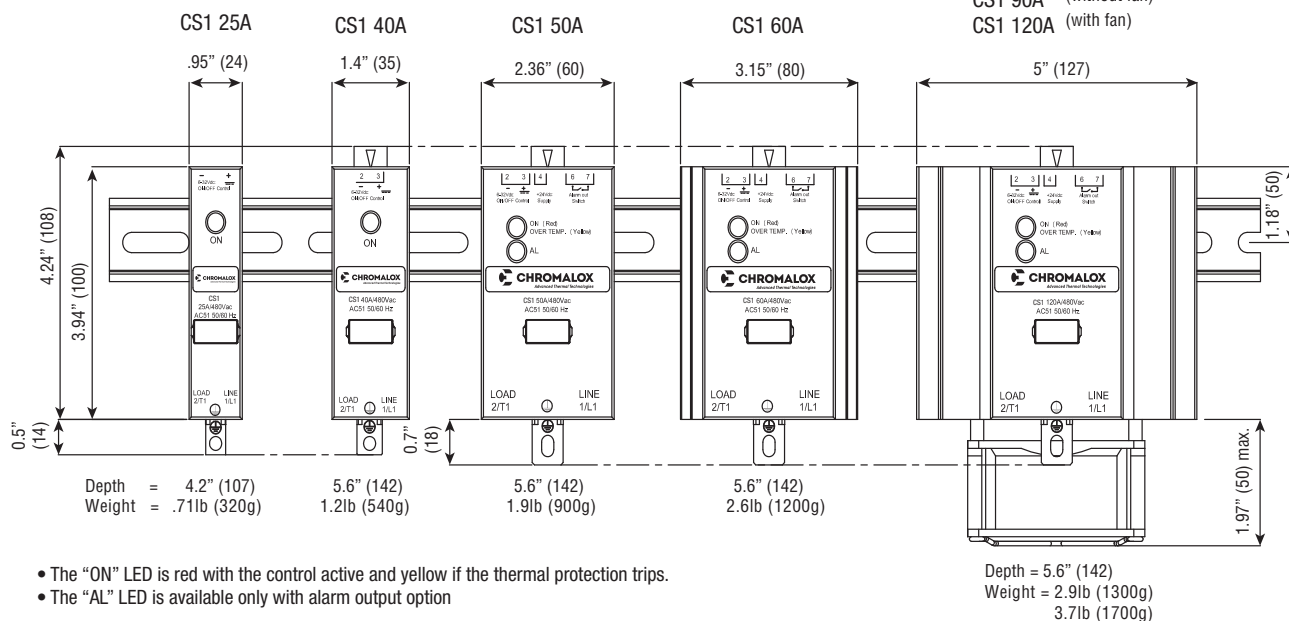
Controls

CS Series

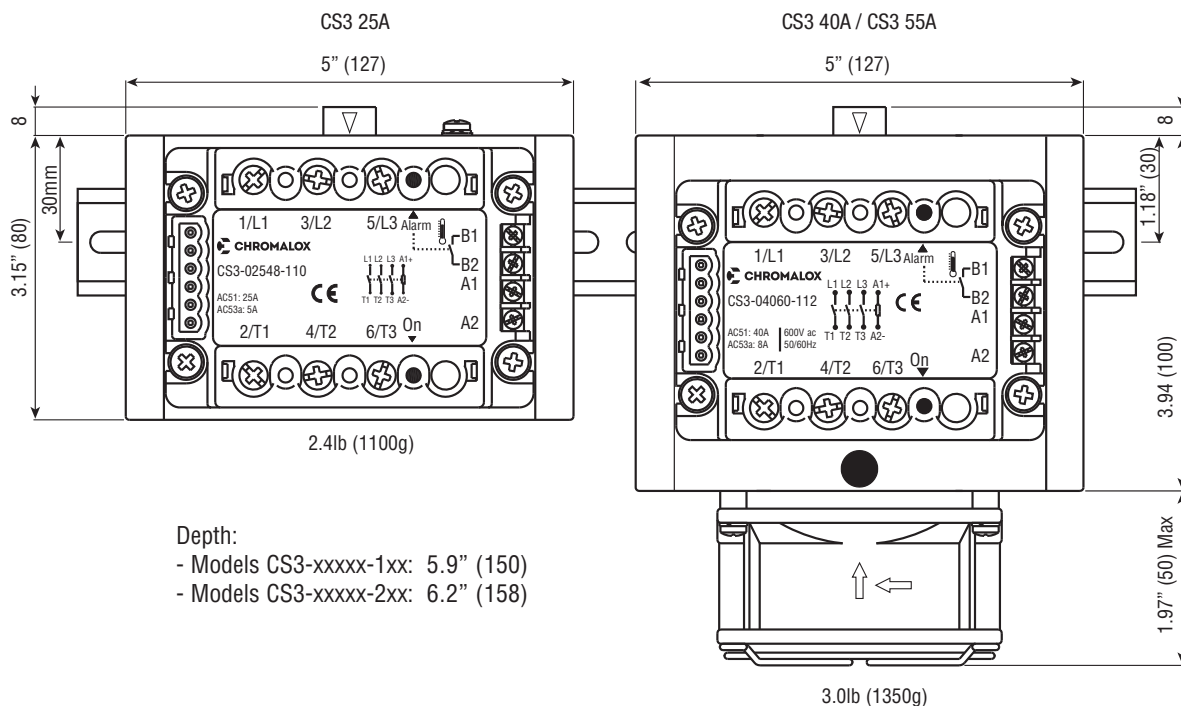
Power Controllers

CS1 & CS3 (cont'd.)

CS1 Dimensions, In. (mm)



CS3 Dimensions, In. (mm)



Controls

CS Series

Power Controllers

CS1 & CS3 (cont'd.)

Ordering Information

To Order — Complete the Model Number using the Matrix provided.

Stocked Items

Model Number	PCN
CS1-02560-100	316515
CS1-02560-200	316523
CS1-04060-100	316531
CS1-04060-200	316540
CS1-05060-100	316558
CS1-05060-200	316566
CS1-07560-100	316574

Model	Single Phase, Solid State Relay Power Controller - DIN Rail Mount
CS1	The CS1 Series are DIN Rail mounted, single-phase solid state relays with integrated heatsink for switching resistive loads in industrial applications. Standard features: Zero-voltage turn-on, LED input status indicator, internal over voltage protection (MOV), integrated SCR thermal protection with LED indication ¹ , two logic input control signals, operating voltage up to 600 VAC. Optional features: ¹ Solid state switch or PNP Digital Signal alarm output during over-heated or interrupted line/load condition. Approvals: CE, UL, cUL
	Code Current @ 104° F (40°C) Ambient, Continuous Service
	025 25 Amps
	040 40 Amps
	050 50 Amps
	060 60 Amps
	075 75 Amps
	090 90 Amps
	120 120 Amps (requires fan choice from below)
	Code Voltage
	48 480 VAC (Range: 24 - 530 VAC)
	60 600 VAC (Range: 24 - 660 VAC)
	Code Input Control Signal
	1 6 - 32 VDC
	2 20 - 260 VAC/AC
	Code Alarm Output (Note: Alarms only available on ≥ 50 Amp Models)
	0 None
	1 Solid State Relay Switch (normally open)
	2* Solid State Relay Switch (normally closed)
	3* Digital Logic PNP Output (normally open)
	4* Digital Logic PNP Output (normally closed)
	Code Fan (120 Amp Version Only)
	0 No Fan (select for all models < 120 Amp)
	1** Fan (230 VAC Power Supply Requirement)
	2** Fan (120 VAC Power Supply Requirement)
CS1-	050 48- 1 1 0 Typical Model Number

¹ Available only on models ≥ 50 Amps

² Some models may accept 24 VDC or 24 VAC. See optional Alarm Wiring details in manual

* Available only for models with 6-32 VDC input control signal

** Fan requires customer supplied voltage.

The following Chromalox Process Controllers offer a suitable 24 VDC power supply for the alarm option:

40 Series: 6040 / 8040 / 4040

50 Series: 6050 / 4050

60 Series: 6060

80 Series: 4080 / 4081 / 4082

Controls

CS Series

Power Controllers

CS1 & CS3 (*cont'd.*)

Ordering Information

To Order — Complete the Model Number using the Matrix provided.

Stocked Items

Model Number	PCN
CS3-02560-100	316582
CS3-02560-200	316590
CS3-04060-102	316603
CS3-04060-202	316611
CS3-05560-102	316620
CS3-05560-202	316638

Model 3-Phase, 3-Leg Solid State Relay Power Controller - DIN Rail Mount

CS3 The CS3 Series are DIN Rail mounted 3-phase, 3-leg solid state relays with integrated heatsink for switching resistive loads in industrial applications. Standard features: Zero-voltage turn-on, LED input status indicator, IP20 touch protection, two different input control signal choices, integrated SCR thermal protection with LED signal indication, operating voltage up to 600 VAC. Optional features: Alarms for over temperature protection and load/line interruption* conditions. Approvals: CE, UL, cUL

Code Current @ 104°F (40°C) Ambient, Continuous Service

025 25 Amps

040 40 Amps

055 55 Amps

Code Voltage

48 480 VAC

60 600 VAC

Code Input Control Signal

1 5 - 32 VDC

2 20 - 260 VAC/DC

Code Alarm Options

0 None

1 Thermal Protection

2* Interrupted Load or Line & Thermal Protection

External 24V Power Supply is Required to Power the Alarms

Code Fan (For 40A & 55A Versions Only)

0 No Fan (25 Amp only)

1** Fan (230 VAC Power Supply Requirement)

2** Fan (120 VAC Power Supply Requirement)

CS3 - 040 48- 1 1 2 Typical Model Number

* Available ONLY with Input Control Signal Code 2

** Fan requires customer supplied voltage.

The following Chromalox Process Controllers offer a suitable 24 VDC power supply for the alarm option:

40 Series: 6040 / 8040 / 4040

50 Series: 6050 / 4050

60 Series: 6060

80 Series: 4080 / 4081 / 4082