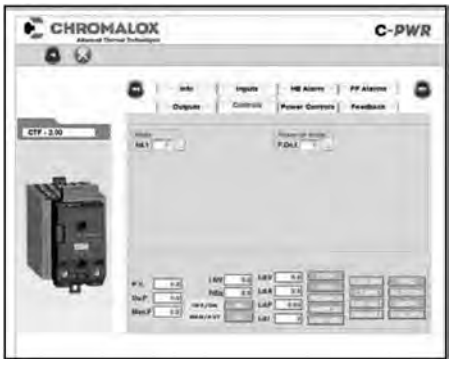
CTF-Xtra

Advanced Single Phase SCR Power Controller

with Electronic Resettable Fuse

- **25 A to 60A**
- **100-480 VAC**
- **Integral Over Current Fault Protection**
- **User Configurable Firing Modes: Zero Cross (Fixed Cycle, Burst Firing (DOT) & Half Single Cycle) or Phase angle**
- **Analog Control Inputs: 0-5 Vdc, 0-10 Vdc, 0-20 mA, 4-20 mA & Potentiometer from 1 kΩ to 10 kΩ**
- **Digital Input: 5-30 V or PWM (Pulse Width Modulation)**
- **Current Alarms - SCR Short Circuit, Full or Partial Interrupt & Load (Heater Break)**
- **Modbus RTU/RS485 Communications**
- **Soft Start, Current limit, V, I, P feedback**
- **Master Controller for 2 or 3-Leg/3-phase loads (zero crossing)**
- **Powerful C-PWR Configuration Software**
- **UL, CUL, CE, TÜV Marking**





CTF-Xtra 25 A - 60 A

NEW!

c UL us

CE

TÜV SÜD

Description

The CTF-Xtra microprocessor-based advanced SCR power controller is designed to control all types of industrial heater loads ranging from 25 A to 60 A and up to 480 Vac in several different configurations. Integral programmable over-current fault protection, powerful system parameter diagnostics, multiple firing mode options, control mode versatility and on-board Modbus communications make the CTF-Xtra an ideal choice for almost any process power control application.

Whether you have traditional resistive heaters, elements with low thermal inertia, medium/short-wave IR lamps or transformer-coupled loads, the CTF-Xtra offers several zero crossing (fixed cycle time, burst fire (DOT) and half -single cycle) and phase angle firing modes to properly and precisely manage these types of loads.

The **"Xtra"** is an on-board over-current fault protection feature which eliminates the need for extra-rapid fuses, reduces machine downtime and the cost of replacing failed fuses. In applications susceptible to intermittent short-circuits and overloads, the CTF-Xtra power controller can be programmed to restore power automatically when the fault has cleared, preventing complete process shutdown and maintaining production. Alternatively, power can be manually restored, locally or remotely. To prevent system damage in the event that the fault is not effectively cleared, A soft-start ramp is applied when the current is restored.

The CTF-Xtra runs complete diagnostics of temperature, current (including full or partial load interrupt/heater break), voltage, and power and offers programmable soft start-up and current limiting controls to keep your system safe and reliable while extending the heater life.

The configurable control input accepts analog and digital signals, including 0-20 mA, 4-20 mA, 0-5 VDC, 0-10 VDC, potentiometer, logic, and PWM (pulse width modulation).

On its own, the CTF-Xtra manages single phase loads. However, it is designed to also be the master controller in 2- & 3-Leg, 3-phase load configurations with one or two CTF-Xtras as the slave(s).

The CTF-Xtra also features the powerful and detailed C-PWR configuration software, which allows you to run trends, save historical data and read or write device parameters quickly and easily. Configurations may be saved locally for later retrieval or sent across a network for cloning of other units. This significantly reduces mistakes and system setup time.

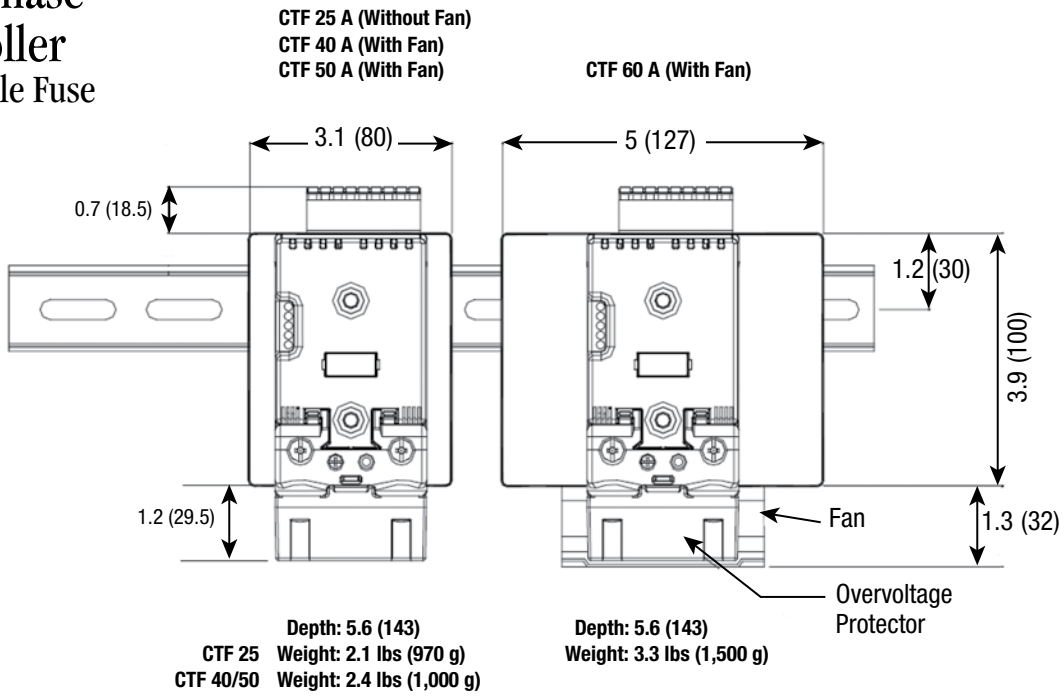
Applications

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

CTF-Xtra

Advanced Single Phase SCR Power Controller with Electronic Resettable Fuse *(cont'd.)*

CTF-Xtra Dimensions, In. (mm)



General Ratings

Maximum Rated Voltage	480 VAC
Work Voltage Range	90 - 530 VAC
Non Repetitive Voltage	1200 Vp
Rated Frequency	50/60Hz auto-synchronization

CTF-Xtra Model	CTF-025	CTF-040	CTF-050	CTF-060
Rated Current, AC51 - AC55b Resistive Load (@ 40˚C continuous service)	25 A	40 A	50 A	60 A
Rated current AC56A permitted trigger modes: **ZC, BF/DOT** with **DT** (Delay Trigger), **PA** with softstart (@ Tamb =40˚C)	20 A	32 A	40 A	50 A
Over current fault protection	This function eliminates the need for an external extra-rapid fuse to protect the device. In case of load short-circuit, the internal device is instantaneously switched off and the alarm status is signaled.			
Critical dV/dt Off-state (minimum)	1,000 V/µs			
Nominal Impulse Voltage	4 KV			
Nominal SCCR	5KA / 480 V **WARNING**: Maximum permissible inductance loop impedance is 500 µH			

CTF-Xtra Advanced Single Phase SCR Power Controller
with Electronic Resettable Fuse
(cont'd.)

Ordering Information

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

Model	Product Overview
CTF	The CTF-Xtra Series industrial SCR power controller is designed to control 1-phase loads or be the master control for 3 phase line with 2-Leg or 3-leg 3-phase loads or 3 phase line with 3 single phase loads. CTF-Xtra Standard features: Several zero cross firing modes or phase angle firing, integral programmable electronic fuse, operational voltage rating up to 480Vac. Optional features: Total and partial load interrupt alarm, and Modbus RTU/RS485. Approvals: CE, TÜV, UL Listed in USA & Canada .

Code	Current @ 104˚F (40˚C) Ambient, Continuous Service
025	25 Amps
040	40 Amps
050	50 Amps
060	60 Amps

Code	Voltage
48-	480 V

Code	Control Options
0	None
1	Current Limit
2	Current Limit and Feedback V.I.P.

Code	Heater Break Alarm
1	Heater Break Alarm (Partial/Total Load)

Code	Fusing
2	Electronic Resettable Fuse

Code	Communications
0-	None
M-	Modbus RTU/RS485

Code	Signal Control
1	10 V (Default)
2	5 V/Potentiometer
3	0-20 mA
4	4-20 mA
5	PWM/Digital Input

The shaded settings are user selectable only with the C-PWR configuration Software

Code	Trigger Modes
B	Burst Fire (DOT) (Default)
Z	Zero Cross
H	Half Single Cycle
P	Phase Angle

Code	Function Type
M	Master (Default)
2	Slave (2-Leg)
S	Slave (3-Leg)

CTF-	**050**	**48-**	**2**	**1**	**2**	**0-**	**1**	**B**	**M**	**Typical Model Number**

Accessories

Description	PCN
Communication Cable, USB to TTL	309171
Communication Cable, USB to RS485	309180