

The OZTHERM Thyristor (SCR) 3 Phase 2 Leg Burst Controller (also known as zero crossing control mode) is a robust design housed in a series of standard assemblies and enclosures. They are a reliable replacement for Electromechanical contactors being virtually maintenance free and ideal for controlling heaters, including dryers, kilns, ovens and environmental chambers.

Australian designed and manufactured in our Melbourne factory enabling us to provide complete local support to customer applications, engineering and services.



Electrical Data

Control Mode	Fast cycle burst	
Control Input		0 - 10V 4 - 20mA 10K Potentiometer
Adjustment		Ramp (soft start time) 1-20 seconds Zero (- 20% to +20%) Span (0-full scale)
	Supply	
V_{in}		110/240/415 volts A.C. 50 HZ. +/- 10%

Environment

T_A	Operating temperature Range	-10 to +50°C
H_A	Ambient Humidity	0 – 85%

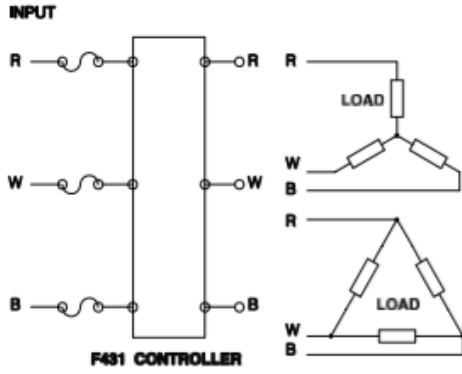
Features

- Wide 24 to 550V input voltage available
- Wide range of options
- Standard ratings 220-1100 Amps
- Robust design
- Australian designed and manufactured

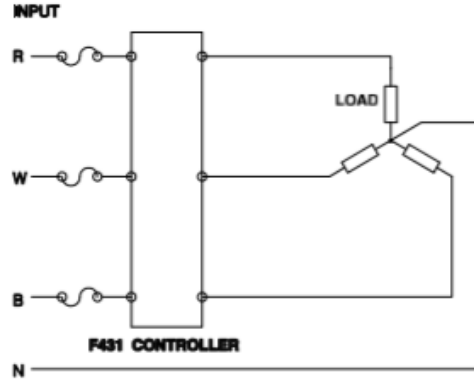
Applications

- Process Control
- Heating application
- Industrial

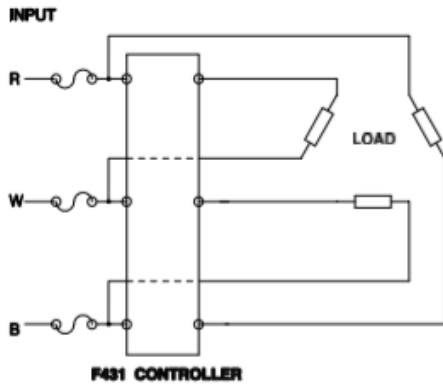
Circuit Configurations



3WIRE STAR OR DELTA



4WIRE STAR



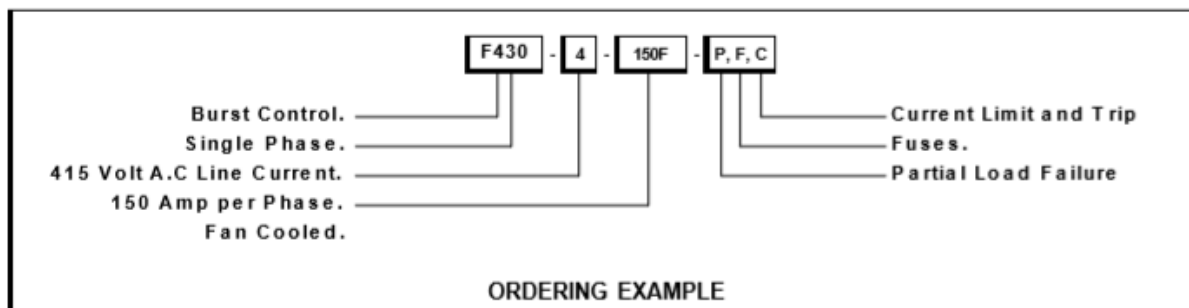
6WIRE OPEN DELTA

Application Load / Option Selection

Series Name	Primary Control of Transformer	Number	Applicable Load	Option Selection
F430	NO	1	Load where resistance does not change. (Nichrome, Iron-chrome, Kanthal, etc.)	Standard type C option
		2	Load which has peak in rush current. (Tungsten Halogen Lamp, Far infrared lamp etc.)	C option

Ordering

	F430	-	-	-	DESCRIPTION	Fuse Rating	Case Size	Weight KG	Cable Termination mm ²	Dissipation Watts	I ² t Thyristor Rating
Line Voltage	1				110 volt A.C line input						
	2				240 volt A.C line input						
	4				415 volt A.C line input						
Rated Current at 50 deg. Celcius.		25			25 amperes A.C line current	25	fig.4	10	2.5 - 6.	96	610
		40			40 amperes A.C line current	45	fig.4	10	10 - 16.	136	1,060
		50			50 amperes A.C line current	55	fig.4	10	10 - 16.	144	2,300
		65			65 amperes A.C line current	75	fig.4	10	10 - 25.	172	5,000
		75			75 amperes A.C line current	90	fig.4	10	10 - 25.	188	9,100
		100			100 amperes A.C line current	125	fig.4	10	10 - 25.	222	16,200
		110			110 amperes A.C line current	125	fig.4	10	M10 bolt	244	27,600
		125			125 amperes A.C line current	150	fig.4	10	M10 bolt	248	97,000
		150F			150 amperes A.C line current - fan	150	fig.5	12	M10 bolt	352	16,200
		180F			180 amperes A.C line current - fan	225	fig.5	12	M10 bolt	388	84,000
		200F			200 amperes A.C line current - fan	225	fig.5	12	M10 bolt	408	97,000
		240F			240 amperes A.C line current - fan	250	fig.6	23	M10 bolt	506	97,000
		280F			280 amperes A.C line current - fan	300	fig.6	23	M10 bolt	667	168,000
		340F			340 amperes A.C line current - fan	375	fig.6	23	M10 bolt	680	245,000
		400F			400 amperes A.C line current - fan	400	fig.7	40	M10 bolt	1072	106,000
		500F			500 amperes A.C line current - fan	500	fig.7	40	M10 bolt	1193	238,000
		650F			650 amperes A.C line current - fan	350x2	fig.7	40	M10 bolt	1597	781,000
	750F			750 amperes A.C line current - fan	400x2	fig.7	40	M10 bolt	1661	2x10 ⁶	
	900F			900 amperes A.C line current - fan	500x2	fig.8	66	M10 bolt	2361	781,000	
	1100F			1100 amperes A.C line current - fan	600x2	fig.8	66	M10 bolt	2553	2x10 ⁶	
Options.		C			Current limit and trip.					A.C. current measurement.	
		F			High speed fuses.						
		MD			Meter output of input control signal.						
		MI			Meter output of average current.					Requires C option.	
		PH			Phase loss output.					Requires C option.	
		PLF			Partial load failure.					Requires C option.	
		T			Thermal cutout.					Standard on fan models.	



Options

OPTION	DESCRIPTION	APPLICATION
C	Maintains average current output to a predetermined level for A.C. systems. Current limit can be set by internal or external potentiometer. LED indicates current limit operation. Current trip is adjustable " on board " and volt free output contact is provided for external indication. The trip function inhibits operation until manually reset. (A.C. Current transformers supplied loose.)	Typically used with constant resistance and transformer loads. (Control input controls output voltage)
F	Supplied loose with isolated stand-offs for external mounting.	
MD	0 - 1 mA retransmission of input control signal	Suitable for 1 milliamp moving coil meter.
MI	Single 0 - 1 mA output D.C. output signal proportional to the average of the summation of the output current of each of the three phases.	Suitable for 1 millamp moving coil meter.
PH	For indication of loss of a phase including momentary loss. A latched volt free contact is provided which will stay latched until manually reset.	
PLF	A reduction in output current from normal levels is sensed and signalled by an LED and by a volt free output contact for external indication.	Designed for sensing open or faulty load elements
T	Thermal switch is mounted on the heatsink to ensure the controller is shut off, and automatically resets when an over temperature condition is reached within the unit. This option is standard on fan cooled units. It automatically resets when temperature falls below the trip level.	

Dimensions / Mounting Details

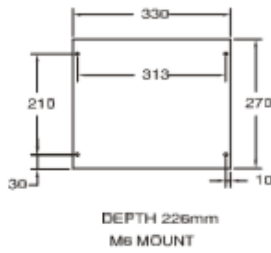


Fig.4

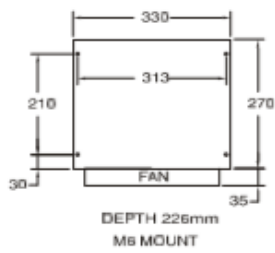


Fig.5

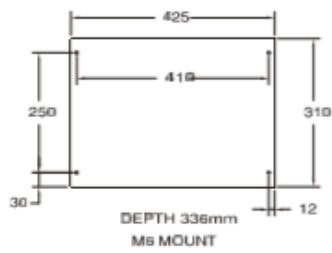


Fig.6

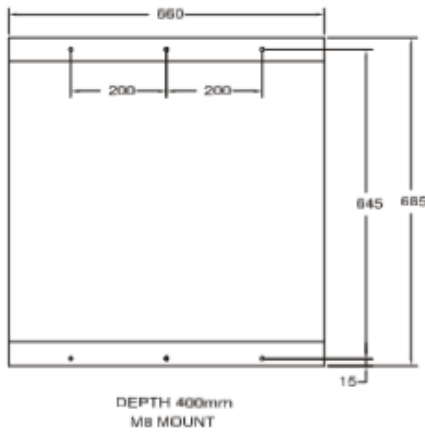


Fig.7

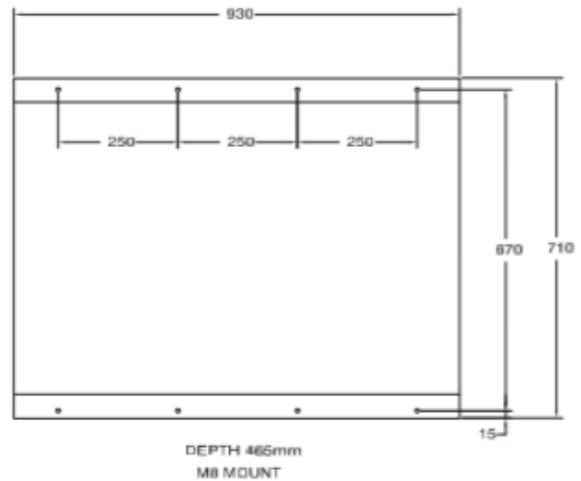


Fig.8

If the function you require is not contained within this specification please contact Temtec Controls, other options are continually being developed and we specialise in supplying non-standard or custom solutions. We reserve the right to change the specification without notice.

