

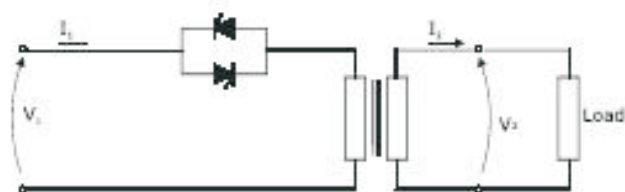
RCL Series

1 PHASE THYRISTOR POWER CONTROLLER

General Features

PMA RCL Series Thyristor power controller has been specifically designed to drive single phase transformers coupled on the secondary with a normal resistance or special resistance like cold resistance (Kanthal Super) and Silicon Carbide elements.

This unit has all the drive capability & techniques required, configurable from the front panel display, close examination of the transformer application needs to be made as the typical inrush current, when switched on. This over-current will have the result of fuse or thyristor failure.

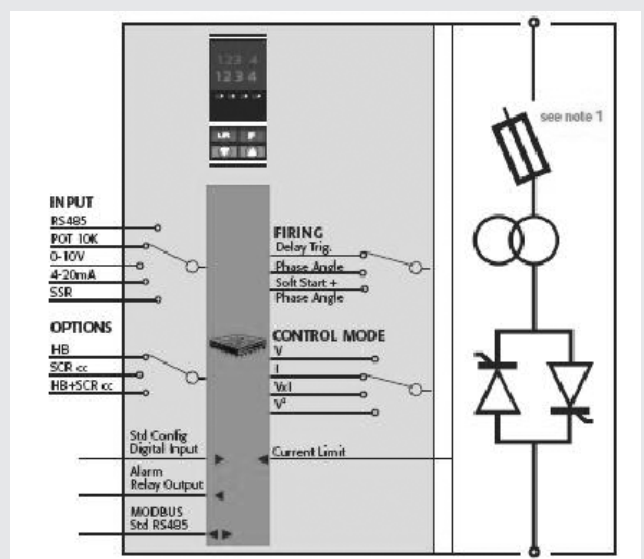
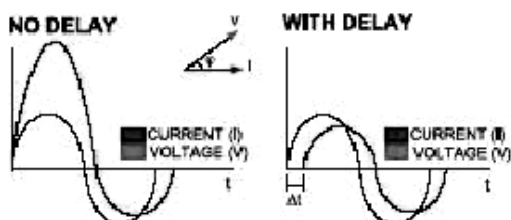


To avoid these peak current two techniques can be used:

- **Phase angle firing with soft start and current limit.**
This type of firing can be used with all types of loads. Normal resistance.
- Cold resistance (Example: Kanthal Super elements)
- Transformer coupled with normal or cold resistance



- **Burst firing using the Delay Triggering (DT) technique.**
To avoid magnetic circuit saturation, the thyristor unit will switch OFF when the load voltage is negative and switch ON again when positive. The unit also has an adjustable delay on voltage zero crossing. In this way it is possible to switch ON when current is zero. This Firing technique can only be used with normal resistance, where its resistive value remains constant with temperature variations



Worloegem's geregelf
close the loop with PMA



Specification - Technical data

Firing modes	PA : Phase angle, DT+BF : Delayed Triggering +Burst Firing,			
	S+PA : Soft start+ Phase Angle			
Max. Rated voltage	Max : 480V AC Range 24 - 480 Volt AC			
	600 V & 690 V Available on Request			
Frequency	From 47 to 70 HZ			
Load Voltage & Aux. Voltage Supply	90 -130V	170-265V	230-345V	
	300-530V	510-690V	690-760V	
Current Ratings	30A, 35A, 40A,45A,60A,90A,120A,150A,180A,210A,280A,400A,500A,600A,700A			
Analog input – 1	0-10V DC , 4-20mA, 10K POT, Comm. Command Via Rs485 Modbus ,			
	4-30VDC logic SSR input			
	1-5V, 0-5 V, 0-20mA, are Available on request.			
Analog input -2	0-10V DC for External Current profiling or External Feed back			
Feed Back control Mode	OL	Open Loop		
	V	Voltage feed back		
	V ²	Voltage Square Feed back		
	Vxl	Power Feed Back		
	I	Current Feed Back		
Current Limit	Current limit can be done in two ways, Via front control panel and second analog input.			
Monitoring	H.B : Heater brake Monitoring, SC: SCR Short circuit Monitoring as option			
Load types	Normal resistive ,Cold Resistance, Transformer coupled with Cold resistance , infrared long, Short and medium wave, Silicon carbide and cold resistance			
Operating temperature	0-40°C for higher temperature please see Derating curve			
Output	1 Relay output for heater brake Alarm(only with HB option)			
Digital input	2 digital Input, Digital Input 1 Configurable , Digital input 2 for thyristor Enable			
Unit display (HMI)	Control Panel display visualizes the Alarm Status, Load Voltage, current, Power, %input Signal and internal LEDs			
Configuration	Through Control Panel and using Configurator Software			
Protection	Inbuilt High rapid Semiconductor Fuse,			
Cooling Fan	Available D120 Amps			
System Interface	RS 485 Modbus RTU inbuilt and Profibus, Device net are options.			
Mounting	Din rail mounting Up to 30- 45A over 45A Panel Mounting , IP 20 protection			
Dimensions	Current Rating	Width	Height	Depth
	30-45 Amps	72 mm	120.7 mm	184 mm
	60-210 Amps	93 mm	170 mm	274 mm
	280 Amps	120 mm	350 mm	230 mm
	400-700 Amps	137 mm	520 mm	270 mm



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