



# CD3000M-3PH UNIVERSAL 3PHASE THYRISTOR



## GENERAL DESCRIPTION

- **CD3000M-3PH IS A DIGITAL AND UNIVERSAL THYRISTOR UNIT FULLY CONFIGURABLE VIA SERIAL COMMUNICATION PORT.**
- **RS485 MODBUS PROTOCOL COMM IS INCLUDED AS STANDARD**
- **THREE PHASE THYRISTORS TO CONTROL STAR 3/4 WIRES OR DELTA 3/6 WIRES RESISTIVE LOADS UP TO 500A**
- **MICROPROCESSOR BASED ELECTRONIC CIRCUIT FULLY ISOLATED FROM POWER**
- **UNIVERSAL INPUT SIGNAL WITH AUTOMATIC ZERO/SPAN CALIBRATION**
- **FIRING, CUSTOMER CONFIGURABLE VIA SERIAL PORT ZERO CROSSING, BURST FIRING**
- **HEATER BREAK CIRCUIT MICROPROCESSOR BASED TO DIAGNOSE LOAD FAILURE AND SHORT CIRCUIT ON THYRISTORS IS AVAILABLE AS AN OPTION.**
- **POSSIBILITY TO READ AND WRITE THE PARAMETERS VIA EXTERNAL KEY PAD: CD-KP**
- **EXTERNAL FUSES + FUSE HOLDER UP TO 90A, INTERNAL FUSES FROM 125A TO 500A.**
- **COMPLY WITH EMC  AND **
- **IP20 PROTECTION**

## TECHNICAL SPECIFICATION

Operating temperature	0÷40°C up to 90A. For higher temperature see derating curve
Voltage power supply	24V minimum, 480V max and 600V on request
Universal Input signal	SSR, 4÷20mA, 0÷10V, 10K pot., customer configurable with automatic zero/span calibration
Universal Firing	One of these firing modes can be configured on line via serial port: Zero Crossing ZC; Burst Firing BF
Auxiliary voltage supply	230V or 460V; 10VA power consumption
Fan voltage supply	230V ±15%
Heater break alarm	Discrimination better than 20%. Circuit microprocessor based to diagnose partial or total load failure and short circuit on Thyristors. Latching alarm plus reset. Relay output 1A at 230
Line Drop Voltage	Automatic compensation ±15% of supply voltage with analog input
Mounting	Din rail mounting up to 90A, bulk head over 90A,
Protection	Ip20

## ORDERING CODE

Model	Current (A)	Oper. Volt. (V)	Max. Volt. (V)	Aux Voltage (V)	Input	Firing mode	Options
CD3000M-3PH	15	24V min	480	230	SSR	ZC (Zero Crossing)	COMM (RS485 MODBUS)
	30		600	460	0÷10V	BF (Burst Firing)	CD-KP (External Key Pad)
	45			600	4÷20mA		EF (External Fuse+Fuse Holder up to 90A)
	60				10K Pot.	Note: for Burst Firing specify the desired n° of cycles ON at	NF (NO FUSE up to 90A)
	75					50% of power demand	IF (Internal Fuses are standard over 90 A)
	90						HB (Heater Break Alarm)
	125						110V Fan (Fan at 110V)
	150						UL ( cUL us Listed )
	225						
	300						
	350						
	400						
450							
500							

### EXAMPLE CODE

CD3000M 3PH/ 150A/ 440V/ 480V/ 460V/ 4-20mA/ ZC/ HB
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## DIMENSIONS

	W	H	D		W	H	D		W	H	D		W	H	D
15A	123	120	120	75A	148	138	159	225A	262	440	270	450A	262	520	270
30A	148	120	123	90A	148	138	159	300A	262	520	270	500A	262	520	270
45A	148	138	123	125A	137	440	270	350A	262	520	270				
60A	148	138	159	150A	137	440	270	400A	262	520	270				

## FUSES AND FUSEHOLDER

External Fuses + Fuse holder up to 90A, Internal Fuses from 125A to 500A.

## INPUT FEATURES

Input signal	Maximum current drain	Input impedance	ON condition	Off condition
SSR	5mA constant current drain		≥4V - max 30V	≤1V
0÷10V		8200Ω		
4÷20mA		100Ω		
10K Pot.		8200Ω		

### Auxiliary Power Supply

230V (Range 200V to 260V max.) or 460V (Range 330V to 500V max)

## OUTPUT FEATURES

	(V)	reverse voltage (480V)	(600V)	current (mAeff)	one cycle (10msec.) (A)	current (mAeff)	for fusing tp=10msec.	range (Hz)	loss I=Inom (W)	Voltage Vac
15A	24÷480	1200	NA	150	230	15	610	47÷70	54	2500
30A	24÷600	1200	1600	250	600	15	1800	47÷70	108	2500
45A	24÷600	1200	1600	250	600	15	1800	47÷70	162	2500
60A	24÷600	1200	1600	450	1000	15	4750	47÷70	216	2500
75A	24÷600	1200	1600	450	1540	15	11300	47÷70	270	2500
90A	24÷600	1200	1600	450	2000	15	19100	47÷70	324	2500
125A	24÷600	1200	1600	450	2000	15	19100	47÷70	450	2500
150A	24÷600	1200	1600	450	2000	15	19100	47÷70	540	2500
225A	24÷600	1200	1600	300	4800	15	108000	47÷70	810	2500
300A	24÷600	1200	1600	300	5250	15	128000	47÷70	1080	2500
350A	24÷600	1200	1600	200	7800	15	300000	47÷70	1260	2500
400A	24÷600	1200	1600	200	8000	15	306000	47÷70	1440	2500
450A	24÷600	1200	1600	1000	17800	15	1027000	47÷70	1620	2500
500A	24÷600	1200	1600	1000	17800	15	1027000	47÷70	1800	2500

Note: for more deep information about derating curve, fuseholder dimensions and wiring see our web site: [www.cdautomation.co.uk](http://www.cdautomation.co.uk)