



# CD3000M-1 PH UNIVERSAL 1 PHASE THYRISTOR UNIT

## GENERAL DESCRIPTION



- **CD3000M IS A DIGITAL AND UNIVERSAL THYRISTOR UNIT, CONFIGURABLE VIA SERIAL COMMUNICATION PORT**
- **RS485 COMM MODBUS PROTOCOL IS INCLUDED AS STANDARD**
- **SINGLE PHASE THYRISTOR UNIT UP TO 700A**
- **SUITABLE TO DRIVE RESISTIVE LOADS WITH ZERO CROSSING FIRING AND ONE PHASE TRANSFORMER WITH DELAYED TRIGGERING** MICROPROCESSOR BASED ELECTRONIC CIRCUIT FULLY ISOLATED FROM POWER
- **UNIVERSAL INPUT SIGNAL**
- **UNIVERSAL FIRING, CUSTOMER CONFIGURABLE VIA SERIAL PORT ZERO CROSSING, SINGLE CYCLE, BURST FIRING, DELAYED TRIGGERING AND PHASE ANGLE**
- **SOFT START CAN BE USED WITH BURST FIRING HEATER BREAK CIRCUIT MICROPROCESSOR BASED TO DIAGNOSE LOAD FAILURE AND SHORT CIRCUIT ON THYRISTORS IS AN OPTION.**
- **POSSIBILITY TO READ AND WRITE THE PARAMETERS VIA AN EXTERNAL KEY PAD: CD-KP**
- **EXTERNAL FUSEHOLDER AND FUSES UP TO 110A, INTERNAL FUSES OVER 110A**
- **COMPLY WITH EMC  AND **
- **IP20 PROTECTION**

## TECHNICAL SPECIFICATION




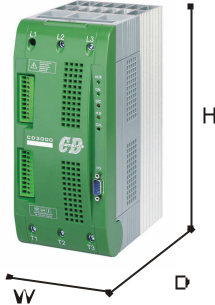

Operating temperature	0÷40°C up to 110A. For higher temperature see derating curve
Voltage power supply	24V minimum, 480V max and 600V on request
Universal Input signal	SSR, 4÷20mA, 0÷10V, 10K pot., customer configurable with automatic zero/span calibration
Universal Firing	One of these firing modes can be configured on line via serial port: Zero Crossing ZC;
Burst	Firing BF; Single Cycle SC; Soft Start + Burst Firing S+BF; Delayed Triggering + BF DT; Phase Angle PA.
Auxiliary voltage supply	230V to 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 230V	
Line Drop Voltage	Automatic compensation ±15% of supply voltage with analog input
Mounting	Din rail mounting up to 110A, bulk head over 110A, IP20 protection.

## ORDERING CODE

Model	Current (A)	Oper. Volt. (V)	Max. Volt. (V)	Aux Voltage (V)	Input	Firing mode	Options
CD3000M	15	24V min	480	230	SSR	ZC (Zero Crossing)	COMM (RS485 MODBUS)
	25		600	460	0÷10V	SC (Single Cycle)	CD-KP (External Key Pad)
	35			600	4÷20mA	BF (Burst Firing)	EF (External Fuse+Fuse Holder)
	45				10K Pot.	DT (Delayed Trigg. + Burst F.)	NF (NO FUSE)
	60					S+BF(Soft Start + Burst F.)	IF (Internal Fuses are standard over 110A)
	90					PA (Phase Angle)	
	110						HB (Heater Break Alarm)
	125						110V Fan (Fan at 110V)
	150						UL (cUL us Listed)
	200						
	300						Note: for Burst Firing specify the desired n° of cycles ON at 50% of power demand
	400						
	500						
	600						
700							

### EXAMPLE CODE

CD3000M 1PH/	150A/	440V/	480V/	460V/	4-20mA/	PA/	HB
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CD3000M 1PH 15-25A	CD3000M 1PH 35-45A	CD3000M 1PH 60-110A	CD3000M 1PH 125-200A	CD3000M 1PH 300-700A
				

## DIMENSIONS

	W	H	D		W	H	D		W	H	D		W	H	D
15A	63	120	120	60A	148	120	159	150A	116	316	187	500A	137	520	270
25A	63	120	120	90A	148	120	159	200A	116	316	187	600A	137	520	270
35A	85	120	120	110A	148	138	159	300A	137	520	270	700A	137	520	270
45A	85	120	120	125A	116	316	187	400A	137	520	270				

## FUSES AND FUSEHOLDER

External Fuses + Fuseholder up to 110A, Internal Fuses from 125A to 700A

## INPUT FEATURES

Input signal	Maximum current drain	Input impedance	ON condition	Off condition
SSR	5m A 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

Current	Voltage range (V)	Ripetitive peak reverse voltage (480V)	(600V)	Latching current (mAeff)	Max peak one cycle (10msec.) (A)	Leakage current (mAeff)	I2T value for fusing tp=10msec.	Frequency range (Hz)	Power loss I=Inom (W)	Isolation Voltage Vac
15A	24÷480 V	1200	NA	150	230	15	610	47÷70	18	2500
25A	24÷480 V	1200	NA	150	230	15	610	47÷70	30	2500
35A	24÷600 V	1200	1600	250	400	15	780	47÷70	42	2500
45A	24÷600 V	1200	1600	250	600	15	1800	47÷70	54	2500
60A	24÷600 V	1200	1600	450	1000	15	4750	47÷70	72	2500
90A	24÷600 V	1200	1600	450	2000	15	19100	47÷70	108	2500
110A	24÷600 V	1200	1600	450	1540	15	11300	47÷70	137	2500
125A	24÷600 V	1200	1600	450	1540	15	11300	47÷70	146	2500
150A	24÷600 V	1200	1600	450	2000	15	19100	47÷70	162	2500
200A	24÷600 V	1200	1600	300	4800	15	108000	47÷70	204	2500
300A	24÷600 V	1200	1600	300	5250	15	128000	47÷70	320	2500
400A	24÷600 V	1200	1600	200	7800	15	300000	47÷70	397	2500
500A	24÷600 V	1200	1600	200	8000	15	306000	47÷70	530	2500
600A	24÷600 V	1200	1600	1000	17800	15	1027000	47÷70	589	2500
700A	24÷600 V	1200	1600	1000	17800	15	1027000	47÷70	712	2500

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