CD 3000S 2PH FROM 10A TO 90A

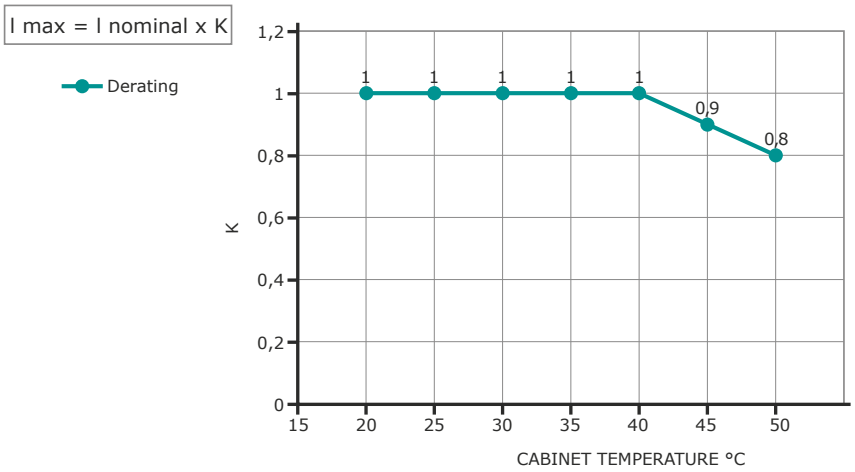
General description

- CD3000S 2PH two leg switching three wire load star or delta resistive loads or infrared lamps up to 90A
- Fully isolated from power
- Zero crossing firing available with logic input signal (SSR)
- Constant current drain with SSR input
- Analog input 4÷20mA or 0÷10V with burst firing 4, 8 or 16 cycle at 50% power demand, is available as an option from 45A to 90A
- Heater break alarm (HB) to diagnostic partial or total load failure and short circuit on thyristor, is available as an option from 45A to 90A
- Side by side mounting
- Special design for heatsink with high dissipation
- IP20 protection
- Comply with EMC specification CE and cUL

Technical Specification

Voltage power supply	24V min, 480V Max, 600V on request
Input Signal	SSR (OFF state <1Vdc ON = 4÷30 Vdc) is standard up to 90A included
	Analog input 4÷20mA and 0÷10V is available from 45A (included) to 90A (included)
Firing	Zero crossing ZC; Burst Firing 4/8/16 with 4÷20mA or 0÷10V with 12÷24V aux. power supply
Auxiliary Voltage Supply	See CD3000-2PH ordering code power consumption 10Va
Fan Voltage Supply	220V ± 15% standard f (110V on request optional, if current ≥75A)
Heater Break Alarm	Discrimination better than 20%.
	Circuit microprocessor based to diagnose partial or total load failure and short circuit on Thyristor
	Latching alarm plus reset
	Relay output 1A at 230V
	Automation calibration of one or more unit at the same time using a dedicated digital input or using for each unit the calibration button
Approvals	Comply with EMC; cULus available as an option on basic units
Mounting	Din rail mounting
Operating Temperature	0÷40° up to 90A included (for higher temperature see the derating curve)

Current derating as function of cabinet temperature



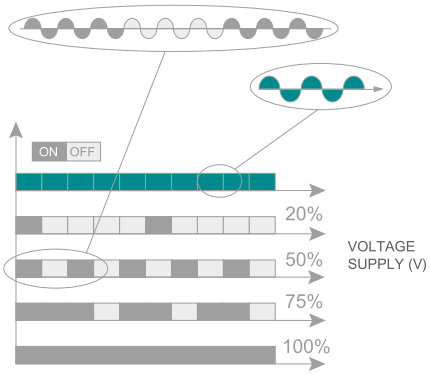
OPTIONS FEATURES AND SPECIAL DETAILS

Heater Break Alarm (HB)

Few second to set and calibrate all the units

- Microprocessor based circuit
- Self learning of current set, via external command or push button on front unit
- Load break diagnostic with alarm latch
- Partial load failure detection of each leg
- Thyristor short circuit diagnostic
- Alarm reset function and possibility to auto reset the alarm if the normal working condition is restored
- Alarm output with free voltage contact
- Available from 45A÷90A included
- Full insulation between SSR output coming from controller/multi loop and power supply, no common zero in our unit
- Easy and fast substitution/calibrate of the unit (also not expert people can do it easy)
- Available also with analogic input from 45A÷90A included

Burst Firing (BF)



- This firing performed in digital mode in our unit gives a lot advantage because switch thyristor faster than normal ZC and at the same time without EMC interferences
- Analog input is necessary for BF and can be decided how many complete cycles we want at 50% of power demand
- On CD3000S this value can be 4, 8, 16
- To have a better resolution use REVEX series, where the BF value can be implemented from 1 to 255 complete cycles doing the firing less or more fast

Analog Input and Burst Firing

- Analog input is available from 45A to 90A with CE mark only
- Burst Firing is selectable with link jumper between BF 4-8-16
- Heater break alarm is available as an option
- Possibility to choose between 4÷20mA or 0÷10V input

HB with external current transformer

- Possibility to turn around the wire on the current transformer if the nominal current is smaller compared the ones detectable by current transformer. Es: 3A with a CT of 50A
- Two CT (included on basic price of HB option)
- CT with metallic clips for horizontal DIN rail mounting (opt.)
- CT with plastic for vertical DIN rail mounting (opt.)

APPLICATION AND FOCUS ON

- Chiller application
- Autoclaves
- Furnaces
- Extrusion lines
- Dryers
- Climatic chambers
- Infrared lamps and curing units

CD3000S 2PH TAGLIE E DIMENSIONI

S0 H 120 x W 30 x D 120 - 0,33 kg

S1 H 120 x W 60 x D 120 - 0,70 kg

S4 H 120 x W 117 x D 123 - 1,15 kg

S7 H 120 x W 117 x D 159 - 1,65 kg

S8 H 138 x W 117 x D 159 - 2,10 kg

Size and options

Current	Size	Cooling	IP20
10A	S0	Natural	Standard
15-25A	S1	Natural	Standard
35A	S4	Natural	Standard
45A	S7	Natural	Option
75-90A	S8	+ Fan	Option

Input features and Heater Break

Input Signal	Input Detail	On Condition	Off Condition	Heater Break (Option)
SSR	20mA constant current drain	≥4V max 30V	≤1V	HB is available from 45-90A
4÷20mA	Impedance 100Ω			HB is available from 45-90A
0÷10V	Impedance 100Ω			HB is available from 45-90A

12÷24Vac-dc Auxiliary power supply is requested with 4÷20mA or 0÷10V input or HB option

Output features (Power device)

Current A	Voltage Range V	Ripetitive Peak Reverse Voltage		Latching current (mAeff)	Max Peak one cycle (10 msec)	Leckage current (mAeff)	I^2T value for fusig tp=10msec	Frequency range Hz	SCR power loss * I=Inom W for each phase	Isolation voltage Vac
		480V	600V							
10A	24÷480V	1200	1200	150	230	15	610	47÷70	20	2500
15A	24÷480V	1200	1200	150	230	15	610	47÷70	36	2500
25A	24÷480V	1200	1200	150	230	15	610	47÷70	60	2500
35A	24÷600V	1200	1600	250	600	15	1800	47÷70	88	2500
45A	24÷600V	1200	1600	450	1000	15	4750	47÷70	108	2500
75A	24÷600V	1200	1600	450	1350	15	8830	47÷70	180	2500
90A	24÷600V	1200	1600	450	2000	15	19100	47÷70	240	2500

* Power Loss Thyristor + Fuse

Order code CD3000S 2PH 10-90A

	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
CD3000S 2PH	**D**	**S**	**2**	_	_	_	**-**	_	_	_	_	_	_	_	_	_	_

CURRENT (A)	**4**	**5**	**6**	
description	Code			Note
10A	0	1	0	**1**
15A	0	1	5	
25A	0	2	5	
35A	0	3	5	
45A	0	4	5	
75A	0	7	5	
90A	0	9	0	**1**

MAX LOAD VOLTAGE (V)	**7**	
description	Code	Note
480V	4	
600V	6	

AUXILIARY VOLTAGE (V)	**8**	
description	Code	Note
NO Auxiliary Voltage supply	0	
12÷24V with analog input / HB Alarm	4	**2,3**

INPUT	**9**	
description	Code	Note
SSR from 4 to 30Vdc	S	
Analog Input 0÷10V	V	**3,5**
Analog Input 4÷20mA	A	**3,5**

FIRING	**10**	
description	Code	Note
Zero Crossing with SSR Input	Z	
4 cycles on + 4 off with Analog Input	4	
8 cycles on + 8 off with Analog Input	8	
16 cycles on + 16 off with Analog Input	6	

CONTROL MODE	**11**	
description	Code	Note
Open loop	0	

FUSES & OPTION	**12**	
description	Code	Note
No Fuse / No Option	0	
No Fuse / HB Option for SSR input	1	**3,5**
No Fuse / HB Option for analog input	1	**3,5**
External Fuse & Fuse Holder / No Option	F	
External Fuse & Fuse Holder / HB Option for SSR input	2	**3,5**
External Fuse & Fuse Holder / HB Option for analog input	2	**3,5**

FAN VOLTAGE	**13**	
description	Code	Note
No Fan for unit <75A	0	
Fan 110V Option - for 75A and 90A units	1	
Fan 220V Standard - for 75A and 90A units	2	

APPROVALS	**14**	
description	Code	Note
CE EMC for European Market	0	
CE EMC + cUL us listed	L	

MANUAL	**15**	
description	Code	Note
None	0	
Italian	1	
English	2	
German	3	
French	4	

IP PROTECTION	**16**	
description	Code	Note
Standard IP20 (all unit excluded 45A, 75A, 90A)	0	
External IP20 protection for size S7/S8 (45A, 75A, 90A)	P	

(1) For 10A 600V and 90A cUL us not available
(2) Necessary with 0÷10V - 4÷20mA or HB alarm
(3) Option available from 45 to 90A
(4) IP20 is standard on all units with exception of S7 and S8 size (45-75-90A). To complain IP20 use "P" option at digit 16
(5) HB not available with cUL us approval