

Toshcon CD REVO I - 3PH 100A to 500A

3 Phase Unit to drive 3 phase load

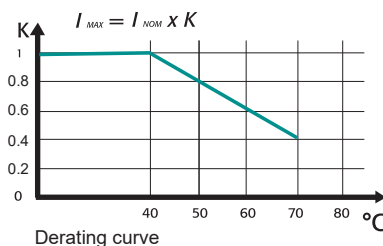
GENERAL DESCRIPTION



- Toshcon CD REVO I - 3PH is a Full digital and universal Thyristor unit based on a very powerful dedicated micro configurable via serial communication port for all inputs, control modes with Phase Angle or Burst Firing.
- Micro USB / RS485 to configure the Thyristor, software free available
- Suitable to drive resistive, inductive, transformer and complex loads requiring current limit and power feedback.
- Universal Input Signal with automatic zero / span calibration
- Universal firing modes, customer configurable via RS485 comm. as Burst Firing & Phase Angle.
- 2nd Analogue Input for current limit facility or external feedback.
- Universal Control mode V/ V2/ I/ I2/ VxI
- Soft Start facility as standard & can be used in additional to Burst Firing
- Unbalanced load, Heater Break & Heat Sink over temp. alarm.
- 4 LEDs on front for various indications
- Internal fuses are standard
- IP20 Protection
- Comply with CE EMC
- Front LED Display as option

TECHNICAL SPECIFICATION

Operating Temperature	0-40° above this temperature see derating curve
Voltage Power Supply	480V & 600V Max.
Auxiliary Power Supply	110V / 220V / 415V AC
Fan Voltage supply	230V ±15% as a standard and 110V on request
Analog Input 1	Primary reference - Current Input 0-20mA / 4-20mA Voltage Input 0-10V Potentiometer Input 10K Ohm min.
Analog Input 2	External Current Limit, External feedback, alternate Setpoint
Digital Input	Two optoisolated digital input (12/24V DC), for Enable, SP AI1/ AI2, local / remote, heater bakeout, Alarm reset
Alarm Digital Output	Heater Break, Short circuit, Current Limit, SCR over temperature, watch dog, Relay Output
Firing	Soft Start + Phase Angle / Burst firing / Zero cross over
Soft Start Control	Digital adjustable ramp rate can be used
Control Feedback Mode	V/ V2/ I/ I2/ VxI
Communication	RS 485 port. Modbus protocol
Fuses	High speed Semiconductor fuses fitted Internally
Mounting	Panel mounting
Protection	IP20



TOSHCON CD AUTOMATION (INDIA) PVT. LTD.,

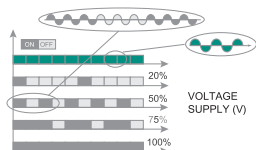
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REGD OFFICE: 401, Manish Chamber, Sonawala Cross Lane, Goregaon (E), MUMBAI - 63

BURST FIRING



This firing is performed digitally within the thyristor unit at zero volts, producing no EMC interference. Analogue input is necessary for BF and the number of complete cycles must be specified for 50% power demand. This value can be between 1 and 255 complete cycles, determining the speed of firing. When 1 is specified, the firing mode becomes Single Cycle (SC).

PHASE ANGLE PA



PA controls the power to the load by allowing the thyristor to conduct for part of the AC supply cycle only. The more power required, the more the conduction angle is advanced until virtually the whole cycle is conducting for 100% power. The load power can be adjusted from 0 to 100% as a function of the analogue input signal, normally determined by a temperature controller or potentiometer, PA is normally used with inductive loads.

FIELD BUS MODULE



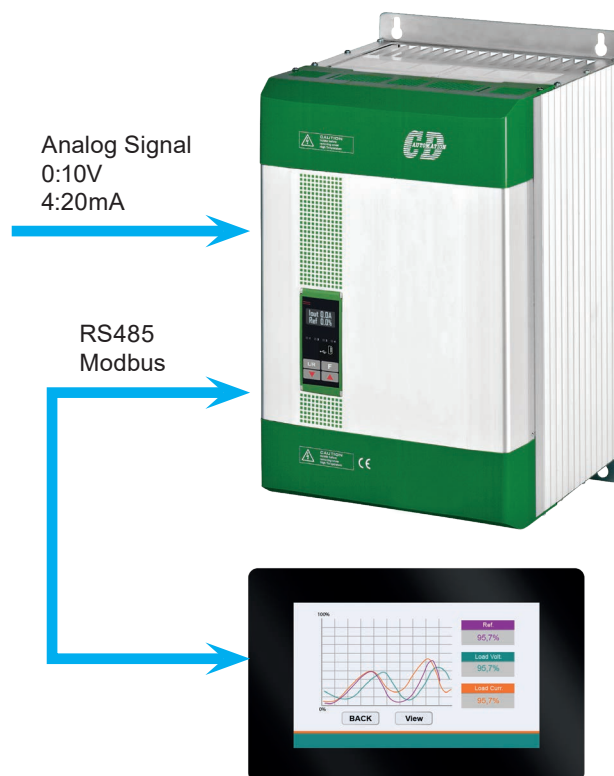
CD-RS Used to convert RS232 to RS422
 TU-RS485-PDP Used to convert RS485 Modbus to Profibus DP
 TU-RS485-DNE Used to convert RS485 Modbus to Devicenet
 TU-RS485-ETH Used to convert RS485 Modbus to Ethernet
 TU-RS485-CAN Used to convert RS485 Modbus to CAN
 For more informations see "Field Bus Module" Bulletin

OPERATOR PANEL "KP"

KP Operator Panel is designed to be mounted on the front of the cabinet and to be connected to most CD Automation thyristor units via RS485.

Parameters, power, current and alarms can be read on the display.

Local/Remote, Up and Down and Function commands are also available.



APPLICATIONS AND FOCUS ON:

Infrared lamp.
 Autoclaves.

Furnaces.
 Chemical

Petrochemical
 Climatic chambers

Pharmaceutical

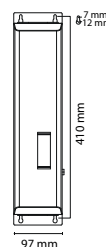
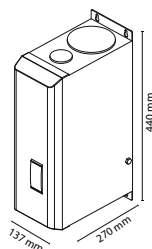
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NOTE

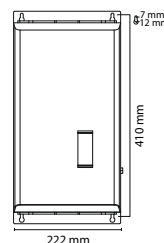
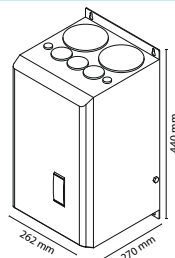
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- (1) The user installation must be protecting by electromagnetic circuit breaker or by fuse isolator
- (2) Use an appropriate external transformer based on the voltage supply of the electronic board (see the identification label)
- (3) The coil contactor, the relays and other inductive loads must be equipped with opportune RC filter
- (4) First switch ON the auxiliary voltage

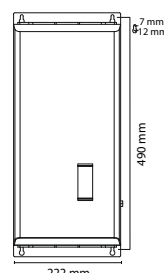
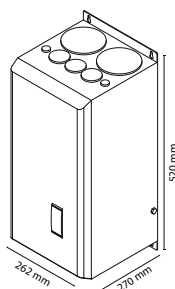
Current: 100A / 125A / 150A



Current: 225A



Current: 300A - 500A



OUTPUT FEATURES (POWER DEVICE)

Current A	Voltage range (V)	Ripetitive peak reverse voltage (480V) (600V)		Latching current (mAeff)	Max peak one cycle (10msec.)	Leackage current (mAeff)	I ² T value for fusing tp=10msec.	Frequency range (Hz)	Power loss I=Inom (W)	Isolation voltage Vac
100A	24÷600	1200	1600	600	1900	15	16940	47÷70	580	3000
125A	24÷600	1200	1600	600	1900	15	16940	47÷70	598	3000
150A	24÷600	1200	1600	400	1900	15	27500	47÷70	594	3000
225A	24÷600	1200	1600	400	1900	15	84700	47÷70	898	3000
300A	24÷600	1200	1600	300	5250	15	73500	47÷70	1324	3000
350A	24÷600	1200	1600	200	8000	15	150500	47÷70	1641	2500
400A	24÷600	1200	1600	200	8000	15	150500	47÷70	1641	2500
450A	24÷600	1200	1600	1000	17800	15	294000	47÷70	2096	2500
500A	24÷600	1200	1600	1000	17800	15	294000	47÷70	2096	2500

ORDERING CODE: REVO I-3PH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
R	I	3	-	-	-	-	-	-	-	-	-	-	-	-

4	5	6	Current		
Description code	Numeric code				
100A	1	0	0		
125A	1	2	5		
150A	1	5	0		
225A	2	2	5		
300A	3	0	0		
350A	3	5	0		
400A	4	0	0		
450A	4	5	0		
500A	5	0	0		

7	Max Voltage		
Description code	Numeric code		
480V	4		
600V	6		

8	Aux. Voltage Supply		
Description code	Numeric code		
110V	1		
220V	2		
415V	5		

9	Input		
Description code	Numeric code		
SSR	S		
0:10V	V		
0:20mA	A		
4:20mA	B		
10Kpot	K		
RS485	R		

10	Firing		
Description code	Numeric code		
Single Cycle	S		
Burst Firing BF	B		
Soft Start + Burst Firing S+BF	J		
Phase Angle Firing PA	P		
Soft Start + Phase Angle S+PA	E		
Zero Cross over firing	Z		
Delayed Triggering	D		

15	Optional		
Description code	Numeric code		
Touch Screen panel Door Display	KP		
Front LED Display	FD		

14	Load Type/Connection		
Description code	Numeric code		
Resistive Load / Star Connection with neutral	0		
Resistive Load / Delta or Star Connection	1		
IRSW infrared short wave / Star with Neutral	2		
IRSW infrared short wave / Delta or Star Connection	3		
Transformer coupled with normal resistance	4		
Transformer coupled with cold resistance	5		

13	Fan		
Description code	Numeric code		
Fan Voltage 115V ac	1		
Fan Voltage 230V ac	2		
Fan Voltage 24V dc	3		

12	Optional Feature		
Description code	Numeric code		
None	0		
Heater Break Alarm	8		
Current Limit	G		
Heater Break Alarm + Current Limit	Q		

11	Control Mode		
Description code	Numeric code		
Open Loop	0		
Voltage Feed Back	U		
Voltage Square	Q		
Current Feed Back	I		
Current Square	A		
Power Feedback VxI	W		

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