

# TC3000

## True Three Phase SCR Power Controller



The TC3000 SCR assembly is a general purpose three phase power controller for all constant resistance or inductive loads up to 500A/500Vac. Three wire wye or delta, four wire wye with neutral and six-wire inside delta load configurations can be controlled. Resistive load firing modes include logic firing for action as a solid state contactor, single cycle for quick acting heaters and slow cycle for large loads. Phase angle firing is available for inductive loads. Inputs are logic or analog. The TC3000 is phase rotation insensitive. The unit is shrouded in a protective cover, has commissioning and diagnostic points with optional fuse-fail microswitches, snubbers and varistors and SCR quenching action on any of several operational alarm conditions. Cooling at 100A and up is by fan, with over-temperature shutdowns. The TC3000 can be used with the model 260 Diagnostic Unit.

### Features

- 25-500 amps, 500Vac max
- three or four wire loads
- selectable control and firing modes
- resistive and inductive loads

### Specifications

#### Dimensions:

25 to 250A: 480H x 248W x 268D mm; 16kg (250A:18kg)

300 to 500A: 570H x 373W x 268D mm; 21kg

#### Operating temperature:

0 to 45°C without derating

#### Mounting:

panel mounting

#### Load type:

Resistive or inductive

#### Inputs:

DC voltage: 0 to 5V, 1 to 5V, 0 to 10V or 2 to 10V, input impedance 100KΩ

DC current: 0 to 20mA or 4 to 20mA, input impedance 100Ω

Logic: 5V, 10V, 20mA (>50% ON: <25% OFF), input impedance 100Ω

#### Firing mode:

Logic, phase angle and fast cycle, slow cycle, and single cycle

#### Control mode:

V2, external measurement or open loop

### Specifications

TC3000	1	2	3	4	5	6	7	8	9
	10	11	12	13	14	00			

For replacement fuses, see pages 3-47 to 3-49.

1 Current	
25A	25 amps
40A	40 amps
60A	60 amps
75A	75 amps
100A	100 amps*
150A	150 amps*
250A	250 amps*
300A	300 amps*
400A	400 amps*
500A	500 amps*

2 Max. line - line Volt	
240V	240 volts
440V	440 volts
480V	480 volts
500V	500 volts

\* Fan cooled 25VA per fan, 2 fans 100A-250A, 3 fans 300A-500A

3 Auxiliary Supply (20VA)	
100V	100 volts
110V120	110-120 V
200V	200 volts
220V240	220-240 V

Other voltages available

4 Operating Voltage	
100V	100 volts
110V	110 volts
115V	115 volts
120V	120 volts
220V	220 volts
230V	230 volts
240V	240 volts
380V	380 volts
400V	400 volts
415V	415 volts
440V	440 volts
480V	480 volts
500V	500 volts

5 Inputs	
0V5	0-5 volts
1V5	1-5 volts
0V10	0-10 volts
2V10	2-10 volts
0mA20	0-20mA
4mA20	4-20mA

6 Firing Mode	
LGC	Logic (On/Off)
PA	Phase angle
FC1	Single cycle
FC8	Burst 8 cycles
C64	64 cycles
255	255 cycles

7 Ramp, soft start/end	
NRP	No ramp
URP	Soft start of burst
UDR	Soft start and end of burst

8 Load Connection	
3D	3 Wire delta
3S	3 Wire star
4S	4 Wire star w/ neutral
6D	6 Wire open delta

9 Load Type	
RES	Resistive
IND	Inductive

10 Feedback Mode	
EX	External
V2	V <sup>2</sup>
OL	Open Loop

11 Aux. Inputs & Outputs	
RTR	Feedback retrans
External feedback (if mode EX is selected)	
E0V5	0-5V
E0V10	0-10V
E0mA20	0-20mA
E4mA20	4-20mA
Second setpoint input	
W0V5	0-5V
W0V10	0-10V
W0mA20	0-20mA
W4mA20	4-20mA

12 Language	
ENG	English
FRA	French
GER	German

13 Fuse	
FUSE	Standard fuses
FUMS	Microswitch fuses
NORFUSE	Fuses not incl.

14 Options	
IPU	PLU closed in alarm (open as standard)