

MAXWELL

Intelligent SCR Power Regulator

T-51/T-6/T-7 Series

General Features

- Rated load voltage 380VAC~440VAC
- Power supply 220VAC
- Voltage input signal: 0-5VDC,0-10VDC,1-5VDC,2-10VDC
- Current input signal: 4-20mA,0-20mA,0-10mA
- Rated load current 40A, 60A, 75A, 100A.

Unique Features

- 3 phase input, auto phase detect
- Soft start function to protect load and SCR against surge current
- Integrated display with various LED indicator for status and error display
- Integrated heatsink with auto temperature detection with over temperature alarm, SCR output reduce to preset value after alarm on(except T51).
- Maximum and minimum output configurable
- Maximum and minimum output configurable
- Auto/manual control switch
- RS-485 Mod Bus RTU communication optional(Except T-51)
- Input event function

Cautions !!!

- *SCR can not be operated without load or load current less than 0.5
- *Please make sure to tighten the screw securely while wiring the SCR, otherwise extra heat will be accumulated on the terminals results a damage on the SCR
- *SCR must be mounted vertically on a solid panel without any objects placed above or beneath the SCR to make sure a smooth air flow
- *If multiple SCR installed at the same control cabinet, the main principle is to make the air flow efficient among each unit
- *The temperature inside of the control cabinet must be lower than 55 celsius, otherwise a cooling fan must be installed
- *If two SCR installed paralleled, the distance between the two units must be more than 5CM
- *It is user's responsibility to make sure your selection on the SCR is compatible with your application
- *For safety consideration, a circuit breaker must be installed between the load and SCR
- *Touch the input and output terminals have the same risk even if there is not current at some certain period while SCR is still working
- *Never ever try to replace the cooling fans when SCR is working
- *Make sure the load voltage compliance with the ratings of SCR
- *Always make sure the wiring goes to the correct negative and positive terminals

Ordering Information

T51/T-6/T-7 —

1 2 3 4 5 6 7

1:Version Code

- T51:** T51 series, simplified version with limited function with compare to T6 and T7
- T6:** T6 series, with more features
- T7:** T7 is the same function as T6, just different size for different mounting space

2:Load type

- 3:** 3 phase load 380VAC~440VAC

Temperature Controller/Solid State Relay/Rotary Encoder/Proximity Sensors/Capacitive Sensors

3:Load current

- 40:** 40A
- 60:** 60A
- 75:** 75A
- 100:** 100A(only available for T6)

4:Power Supply

- 220:** 220VAC
- 380:** 380VAC
- D:** 12-24VDC

5:Control signals

- 1:** 0-10mA
- 2:** 0-20mA
- 3:** 4-20mA
- 7:** 2-10VDC
- 4:** 0-5VDC
- 5:** 0-10VDC
- 6:** 1-5VDC

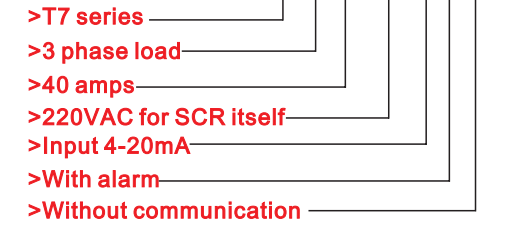
6:Alarm

- M:** With alarm and Relay output
- N:** No alarm

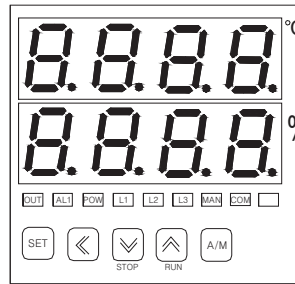
7:Communication

- M:** With RS-485 Mod bus RTU
- N:** Without communication feature

If you have a selection [**T7-3-40-220-3-M-N**]

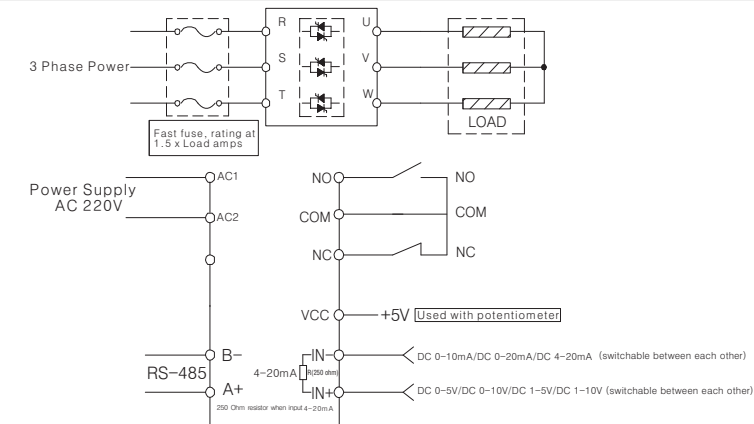
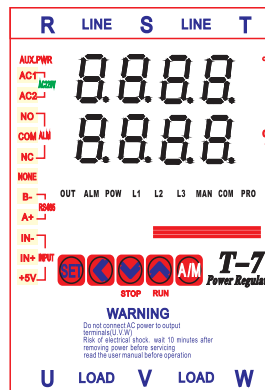


Panel Discription

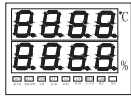


- INDICATOR** OUT: The flashing frequency indicate the output ratio
AL1: Over temperature alarm indicator
POW: Power feed indicator
L1: Phase indicator, when L1 absence, lights on
L2: Phase indicator, when L2 absence, lights on
L3: Phase indicator, when L3 absence, lights on
MAN: Manual control indicator
COM: Communication indicator
- SET KEY** SET: Parameter setting and configuraion
A/M: Manual/auto control switch
POW: Power feed indicator
<: Left shift key, to shift the display unit
v: Decrease key or Stop key
^: Increase key or Run key

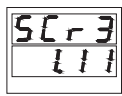
Connection Diagram



Power Up



→
1 Sec



→
1 Sec



Power Up

Upper : SCR3
Lower : 1.11

Normal display
Upper display shows heatsink temperature
Lower display shows the input percentage

Configuration flow chart

Menu Level 1

Press SET once to enter Menu Level 1



UAD : To display the communication address
uad=ADD (ADD was preset during the communication setup)
Press SET to password parameter

↓
Passwork "LCK"



SET LCK=101 , Press SET to goes to menu level 1
Press SET

↓
Level 1



AL1
SET a temperature for alarm to be triggered if heatsink temp exceed set value, when AL1 set as "0" , this function disabled

↓
Press SET



EOP
Output value goes down to EOP value if over temperature alarm on
eg : When SCR temp reaches to AL1 alarm, the output goes down to EOP value

↓
Press SET



OPL
Minimum output parameter, Range : 0.0-100.0%
Eg : When there is no signal feed from outside, the SCR still output at OPL value

↓
Press SET



OPH
Minimum output parameter, Range : 0.0-100.0%
Eg : The maximum output can be restrained at OPH value to protect the system

↓
Press SET



BUF
Soft-start parameter , Range:0.0-100.0
The outut change ratio per second
Eg : BUF=10.0 , means that it takes 10 seconds for the SCR output changes from 0.0-100.0% BUF=100.0, soft-start function disabled

↓
Press SET

Temperature Controller/Solid State Relay/Rotary Encoder/Proximity Sensors/Capacitive Sensors



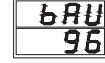
ADD: communication setting parameter

Range : 0-127

Set Communication address for each SCR



Press SET



BAU

BAU: commnication speed

Range : 24:2.4KBPS 48:4.8KBPS 96:9.6KBPS 192:19.2KBPS



Press SET to exit

level 2



Press SET once to enter

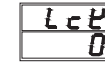
UAD : To display the communication address

uad=ADD (ADD was preset during the communication setup)

Press SET to password parameter



Parameter LCK



Set LCK= 202 , Press SET to goes to auto/manual parameter
Press SET to enter



AUTO(Auto/manual control configuration)

0 : auto/manual function off

1 : auto/manual function on



Press SET



RUN(Run/stop configuration)

0 : Run/stop off

1 : Run/stop on



Press SET

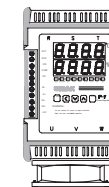
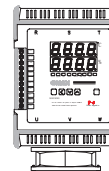
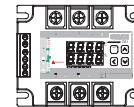


HZ : To choose the power supply frequency



Press SET to exit

Size and Dimensions



Model	Size(mm)L*W*H	Install(mm)L*W
T-51-3-40-220-3-N-N	118*140*118	55*135
T-51-3-60-220-3-N-N	133*140*118	55*135
T-51-3-75-220-3-N-N	133*140*118	55*135

Model	Size(mm)L*W*H	Install(mm)L*W
T-6-3-40-220-3-N-N	160*140*145	120*130
T-6-3-60-220-3-N-N	160*140*145	120*130
T-6-3-75-220-3-N-N	220*140*145	150*130
T-6-3-100-220-3-N-N	220*140*145	150*130

Model	Size(mm)L*W*H	Install(mm)L*W
T-7-3-40-220-3-N-N	160*110*148	105*100
T-7-3-60-220-3-N-N	160*110*148	105*100
T-7-3-75-220-3-N-N	160*110*148	105*100