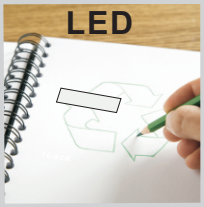
Fastron Electronics

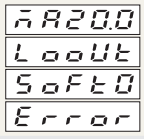
(T6-SCR Series) (ST6-SCR Series) high performance power regulator

(T7-SCR Series)has no temperature control function)



T6-SCR
T7-SCR
Power regulator

Multi function display settings



- Input signal display
- Output% display
- Output current monitoring
- Output voltage monitoring
- Fault alarm monitoring

Notes

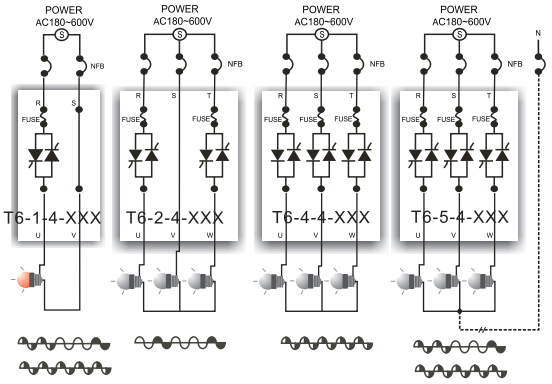
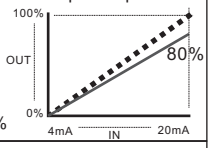
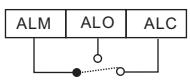
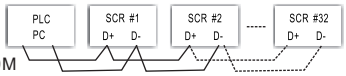
Electrical wiring to complete the delivery controller,
AC power supply before the assembly please make sure location is correct.
Errors can cause serious damage control. Serious permanent damage may
Do not susceptible to the controller assembly in
the high-frequency interference. Corrosion device body "
Normal working environment:: -55 ~ +55℃: 95% RH below" the use of

Load test

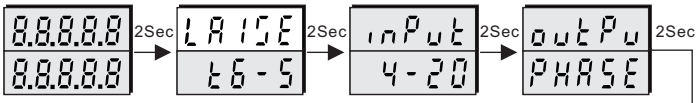
The load current >0.6A. ensures normal adjustment

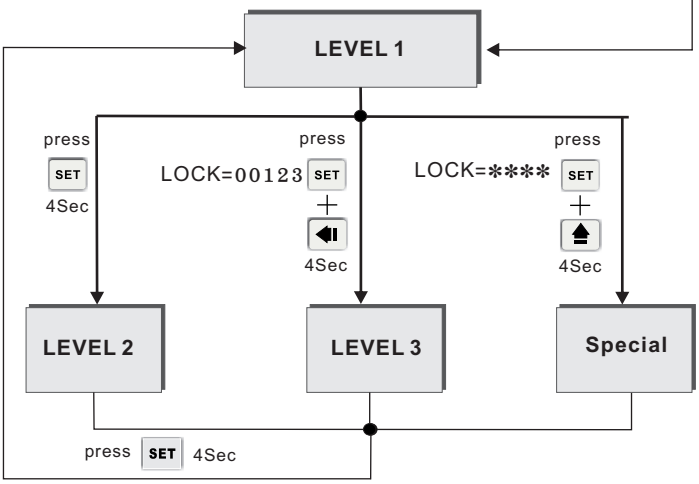
380V recommends the use of three-phase 3 100W tungsten lamp 

380V recommends the use of single-phase 2 100W tungsten lamp 

Symbol		Function description
R S T	AC Power	
U V W	Load	
AC1 AC2		The working voltage of Pc board varies with the range model voltage -10%
COM RUN		Start / stop / switch COM RUN Start RUN light; COM RUN Stop STOP light
M1		Reference voltage Input mode current signal: 4~20mA voltage =5V Input mode voltage signal: 0~10V voltage =10V
IN+ IN-		Analog signal input The LEVEL 2 sets the input signal 4~20mA/0~10V/0~20mA/0~5V
E3 E2 E1		The external potentiometer limits the maximum output amplitude E3 E2 E1 10K Example: limit maximum output 80% ----- Input signal ratio% —— Output % 
ALM ALO ALC	COM NOSCR	Abnormal alarm output contact 
D+ D-		Rs485 Modbus Communications 256 simultaneous communication The longest distance 1200M 

Automatic scanning screen

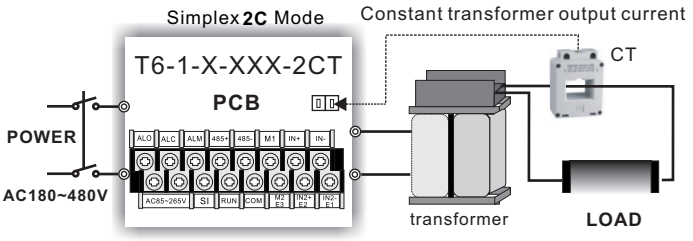




15 seconds according to the operation panel automatically back to the main screen layer

press SET 4 keys 5 seconds. All parameters returned to to factory value

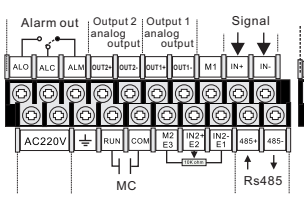
Precision control of low voltage and high current



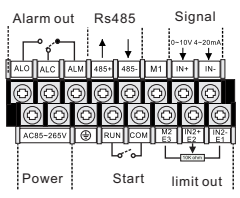
Panel function description

Symbol	Name	Function description
SET	Set key (input)	Parameter setting (input confirmation key)
RUN/STOP	Manual (start stop) key	Input mode selection KEY control panel AUTO/MAN Turn stop by alternating start
	Shift key (change selection)	Shift key (press blink)
	Decrease key (feature selection)	Parameter function change
	Add key (feature selection)	Parameter function change
RUN	Running light	COM RUN Start RUN light; COM RUN Stop STOP light
STOP	Stop light	
ERR	Alarm light	Controller alarm lights

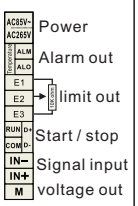
T6-SCR three-phase



T6-SCR single phase

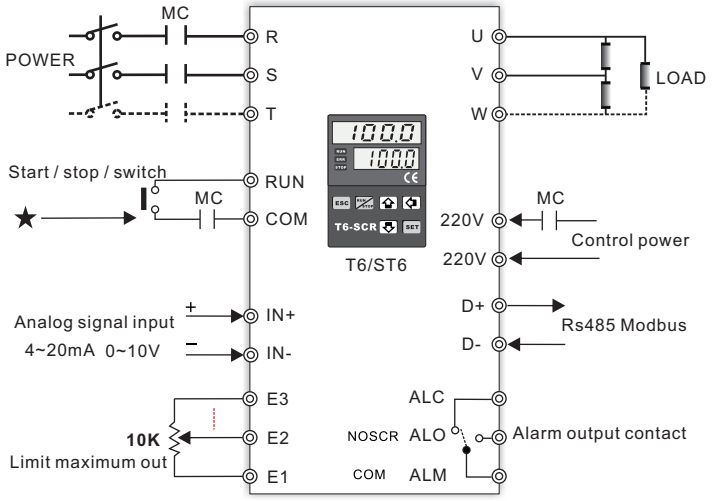


ST6-SCR

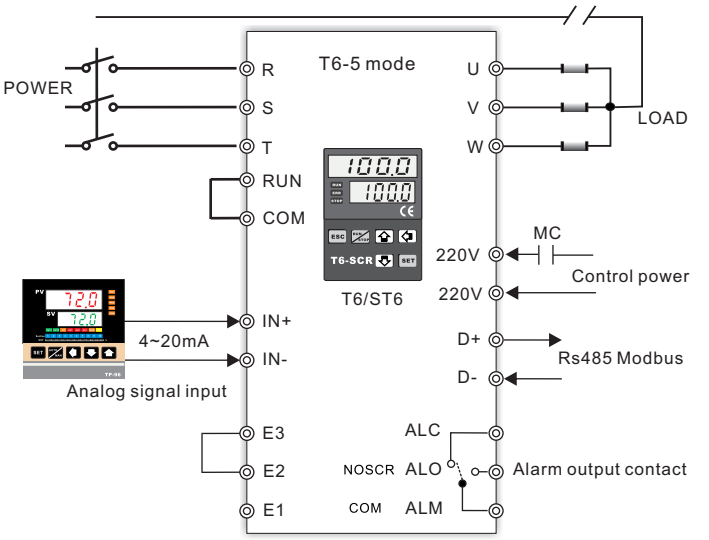


Fastron Electronics

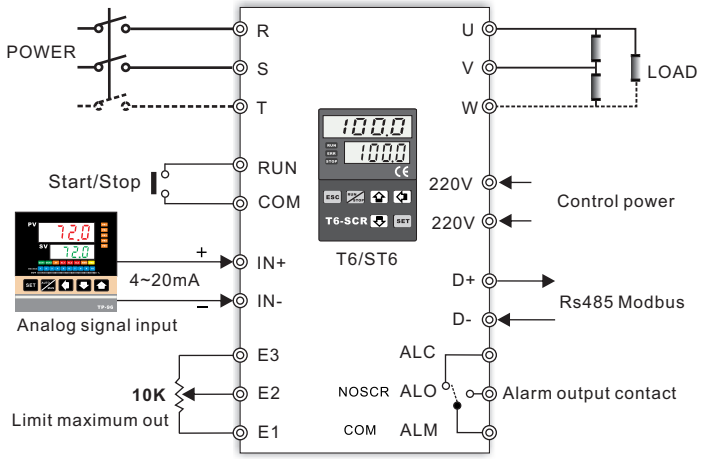
Main circuit and control circuit wiring notes



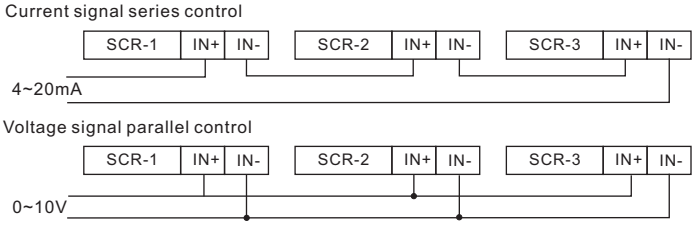
Basic wiring



Basic wiring

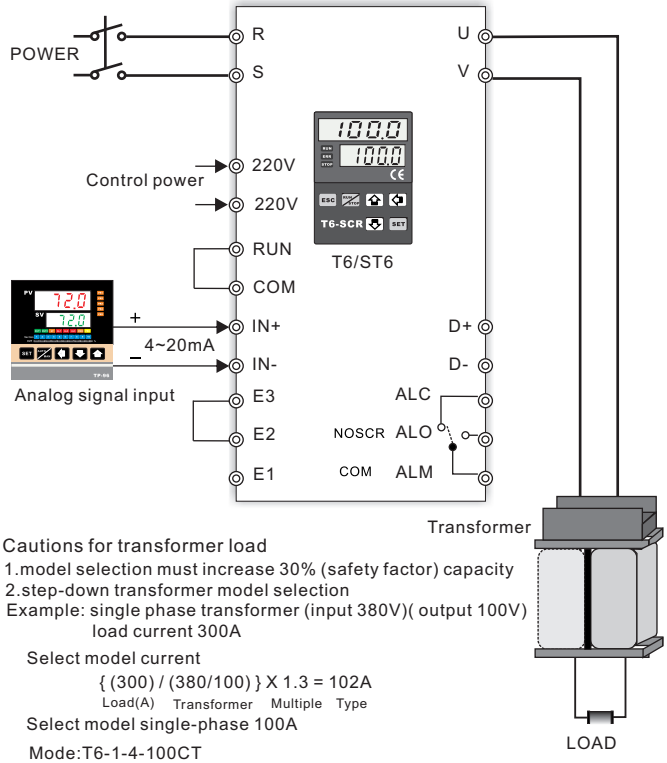


An analog signal that controls multiple SCR



An analog signal control, 10 SCR... Regulator, INSET input, signal amplification

Transformer load selection



Cautions for transformer load

1.model selection must increase 30% (safety factor) capacity

2.step-down transformer model selection

Example: single phase transformer (input 380V)(output 100V)
load current 300A

Select model current

{ (300) / (380/100) } X 1.3 = 102A

Load(A) Transformer Multiple Type

Select model single-phase 100A

Mode:T6-1-4-100CT

3.step-up transformer model selection

Example: single phase transformer (input 380V)(output 1000V)
load current 30A

Select model current

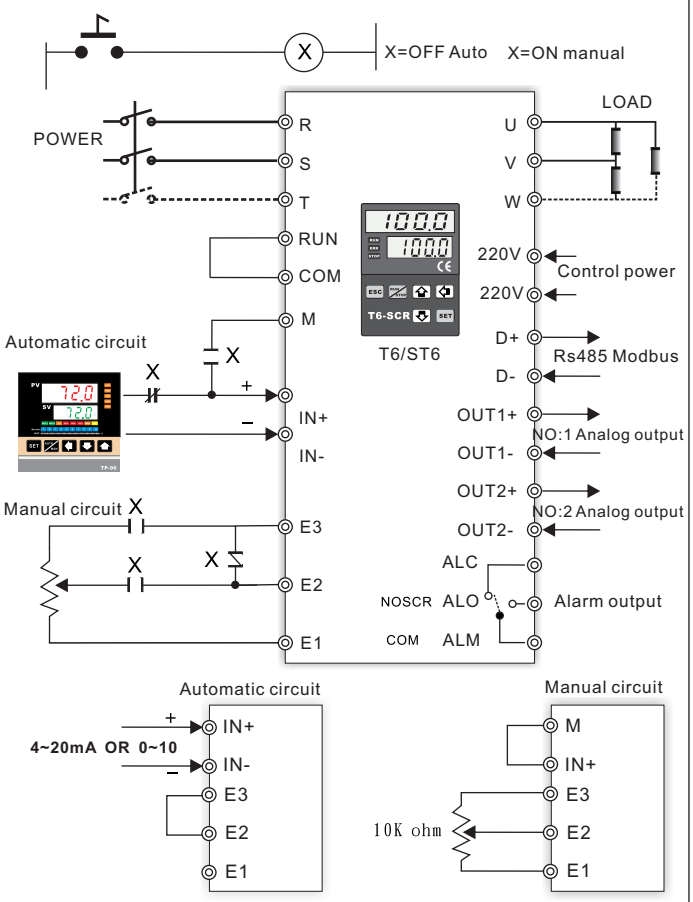
{ (30) X (1000/380) } X 1.3 = 102A

Load(A) Transformer Multiple Type

Select model single-phase 100A

Mode:T6-1-4-100CT

Automatic / manual switching circuit



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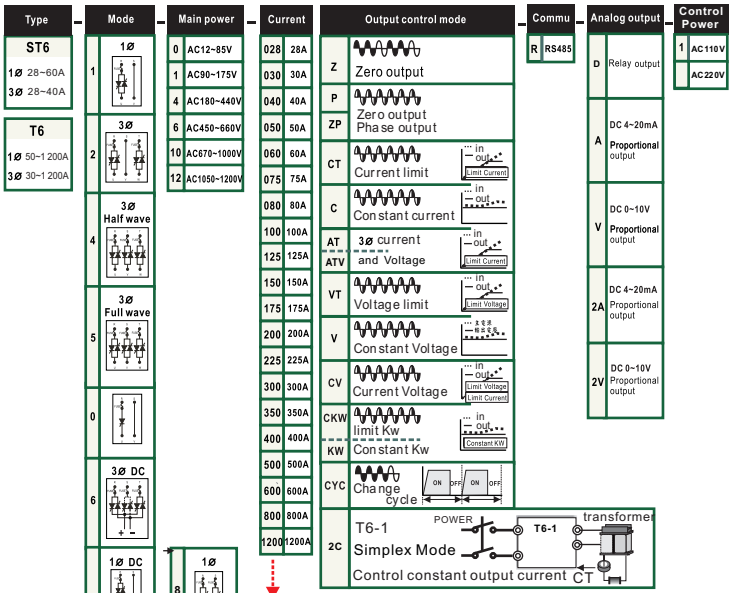
Product selection and appearance size table

Specification type index



Output control mode

Function \ Output	Z Zero	P Phase	ZP Zero Phase	CT Limit Current	C Constant Current	AT Limit Current	VT Limit Voltage	V Constant Voltage	CV Voltage Current	KW Constant KW	CKW Limit KW	CYC Change cycle
Display panel	●	●	●	●	●	●	●	●	●	●	●	●
Zero output mode	●	●	●	●	●	●	●	●	●	●	●	●
Phase output mode	---	●	●	●	●	●	●	●	●	●	●	●
Phase constant current	---	---	---	●	●	●	---	---	●	●	●	●
Load break detection	---	---	---	---	---	●	---	---	---	---	---	---
Grounding detection	---	---	---	---	---	●	---	---	---	---	---	---
Alarm contact output	●	●	●	●	●	●	●	●	●	●	●	●

Model current is applied to load KW range control table

Model specification		Current	Kw 220V	Kw 380V	Image	Kg	Shape (mm) L	W	D	Install (mm) L	W	Screw and fixed torque	Cooling mode
ST6 1 Phase Compact	ST6-1-4-028	28A	3	6	F1	1.8	185	110	155	95	105	M6	40kgfcm	Natural cooling
	ST6-1-4-030	30A	4	7	F1	2.0	185	110	155	95	105	M6	40kgfcm	
	ST6-1-4-040	40A	6	9	F1	2.1	185	110	155	95	105	M6	40kgfcm	
T6 1 Phase Conventional	T6-1-4-050	50A	7	12	F4	2.2	215	110	200	170	105	M6	50kgfcm	Natural cooling
	T6-1-4-060	60A	9	18	F4	2.2	215	110	200	170	105	M6	50kgfcm	
	T6-1-4-075	75A	14	24	F4	2.2	215	110	200	170	105	M6	70kgfcm	
	T6-1-4-080	80A	15	26	F5	2.6	250	110	200	170	105	M6	85kgfcm	Fan cooling
	T6-1-4-100	100A	18	33	F5	2.6	290	110	210	170	105	M6	85kgfcm	
	T6-1-4-125	125A	22	37	F5	2.6	290	110	210	170	105	M6	95kgfcm	
	T6-1-4-150	150A	26	45	F5	2.9	290	110	210	170	105	M8	170kgfcm	
	T6-1-4-175	175A	30	50	F5	2.9	290	110	210	170	105	M8	200kgfcm	
	T6-1-4-200	200A	35	62	F8	2.9	290	110	210	170	140	M8	220kgfcm	
	T6-1-4-225	225A	38	65	F8	2.9	290	110	210	170	140	M8	220kgfcm	
	T6-1-4-300	300A	52	90	F9	8.5	370	180	255	250	170	M10	250kgfcm	
	T6-1-4-350	350A	60	105	F9	8.5	370	180	255	200	170	M10	250kgfcm	
	T6-1-4-400	400A	70	120	F9	10	370	180	255	200	170	M14	280kgfcm	
	T6-1-4-500	500A	90	150	F9	10	370	180	255	200	170	M14	300kgfcm	
	T6-1-4-600	600A	100	175	F9	10	370	180	255	200	170	M14	320kgfcm	
	T6-1-4-800	800A	120	220	F11	15.5	520	250	250	515	195	M16	350kgfcm	
	T6-1-4-1200	1200A	160	300	F11	20	520	250	250	515	195	M16	400kgfcm	
ST6 3 Phase Compact	ST6-5-4-028	28A	5	12	F1	1.8	185	110	155	95	105	M6	40kgfcm	Natural cooling
	ST6-5-4-030	30A	6	15	F2	2.1	185	110	195	95	105	M6	40kgfcm	
	ST6-5-4-040	40A	9	18	F3	2.1	220	110	195	95	105	M6	40kgfcm	Fan cooling
T6 3 Phase Conventional	T6-5-4-040	40A	9	18	F6	3.5	215	150	155	170	140	M6	40kgfcm	Natural cooling
	T6-5-4-050	50A	14	26	F7	3.5	250	150	220	170	140	M6	50kgfcm	Fan cooling
	T6-5-4-060	60A	16	30	F7	4.5	250	150	220	170	140	M6	60kgfcm	
	T6-5-4-075	75A	22	40	F7	4.5	250	150	220	170	140	M6	70kgfcm	
	T6-5-4-080	80A	25	43	F7	4.5	250	150	220	170	140	M6	70kgfcm	
	T6-5-4-100	100A	32	56	F8	5	290	150	220	170	140	M6	85kgfcm	
	T6-5-4-125	125A	38	67	F8	5	290	150	220	170	140	M8	95kgfcm	
	T6-5-4-150	150A	45	80	F8	6	290	150	220	170	140	M8	170kgfcm	
	T6-5-4-175	175A	50	90	F9	9	370	180	255	200	170	M10	200kgfcm	
	T6-5-4-200	200A	55	100	F9	11	370	180	255	200	170	M10	220kgfcm	
	T6-5-4-225	225A	68	120	F9	11	370	180	255	200	170	M10	220kgfcm	
	T6-5-4-300	300A	89	160	F10	15.5	420	250	250	410	195	M12	250kgfcm	
	T6-5-4-350	350A	108	190	F10	15.5	420	250	250	410	195	M12	250kgfcm	
	T6-5-4-400	400A	120	220	F11	22.5	520	250	250	510	195	M14	280kgfcm	
	T6-5-4-500	500A	150	270	F11	22.5	520	250	250	510	195	M14	300kgfcm	
	T6-5-4-600	600A	180	329	F11	22.5	520	250	250	510	195	M14	320kgfcm	
	T6-5-4-800	800A	260	450	F12	51	620	350	300	610	295	M14	350kgfcm	
	T6-5-4-1200	1200A	300	550	F12	51	620	350	300	610	295	M14	400kgfcm	

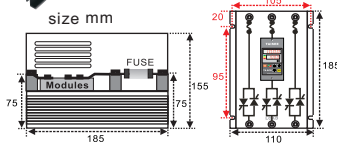
ST6-SCR (1P 28~40A)(3P 28)

F1

1Ø	28A 30A 40A		
3Ø	28A		
Appearance	L=185	W=110	D=158
Install	L=95	W=100	

PCB Power AC220V 30VA

size mm



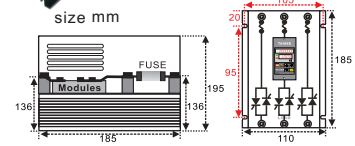
ST6-SCR (1P 50~60A)(3P 30A)

F2

1Ø	50A 60A		
3Ø	30A		
Appearance	L=185	W=110	D=195
Install	L=95	W=100	

PCB Power AC220V 30VA

size mm



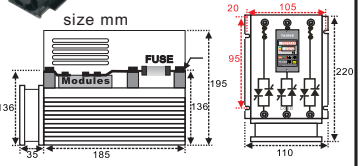
ST6-SCR (3P 40~50A)

F3

3Ø	40A 50A		
Appearance	L=220	W=110	D=195
Install	L=95	W=100	

PCB Power AC220V 30VA

size mm



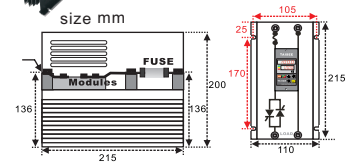
T6-SCR (1P 50~75A)

F4

1Ø	50A 60A 75A		
Appearance	L=215	W=110	D=200
Install	L=170	W=100	

PCB Power AC220V 30VA

size mm



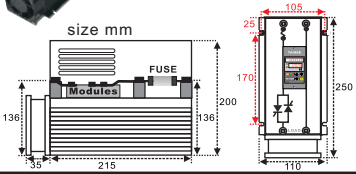
T6-SCR (1P 100~225A)

F5

1Ø	100A 125A 150A 175A 200A		
Appearance	L=290	W=110	D=200
Install	L=170	W=100	

PCB Power AC220V 80VA

size mm



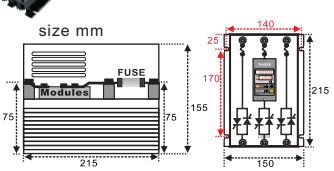
T6-SCR (3P 30~40A)

F6

3Ø	30A 40A		
Appearance	L=210	W=150	D=155
Install	L=170	W=140	

PCB Power AC220V 40VA

size mm



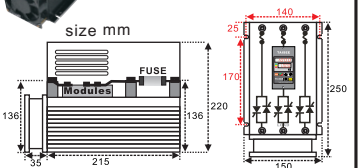
T6-SCR (3P 50~80A)

F7

3Ø	50A 60A 75A 80A		
Appearance	L=250	W=150	D=220
Install	L=170	W=140	

PCB Power AC220V 80VA

size mm



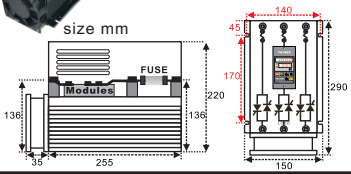
T6-SCR (3P 100~150A)

F8

3Ø	100A 125A 150A		
Appearance	L=290	W=150	D=220
Install	L=170	W=140	

PCB Power AC220V 80VA

size mm



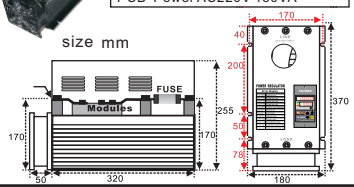
T6-SCR (1P 300~600A)(3P 175~225A)

F9

1Ø	300A 350A 400A 500A		
3Ø	175A 200A		
Appearance	L=320	W=180	D=255
Install	L=200	W=170	

PCB Power AC220V 150VA

size mm



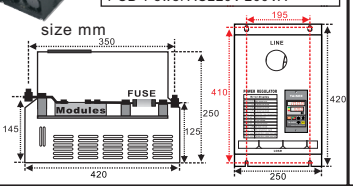
T6-SCR (1P 800~1200A)(3P 300~350A)

F10

1Ø	800A 1200A		
3Ø	300A 350A		
Appearance	L=420	W=250	D=250
Install	L=410	W=195	

PCB Power AC220V 200VA

size mm



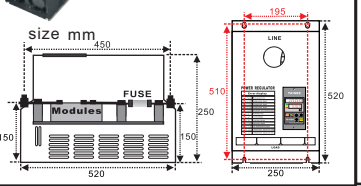
T6-SCR (3P 400~600A)

F11

3Ø	400A 500A 600A		
Appearance	L=520	W=250	D=250
Install	L=510	W=195	

PCB Power AC220V 250VA

size mm



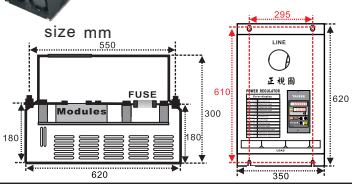
T6-SCR (3P 800~1200A)

F12

3Ø	800A 1200A		
Appearance	L=620	W=250	D=250
Install	L=610	W=195	

PCB Power AC220V 250VA

size mm



Fastron Electronics

LEVEL 1

Input display

- mA mA analog signal input: input (shows the current mA value)
- V DC V analog signal input: (displays the voltage input V value)
- Panel input control: (set output%)
- r RS485 (communication control output%)

Input mode change by LEVEL2 contL

Output display

- o (zero) (phase) output display mode (display 0.0~100.0)
- V (limit voltage) (constant voltage) voltage display
- A (limited current) (constant current) current display
- L (current limiting constant voltage)voltage display
- C (constant current limiting voltage) current display
- h (limited power Kw) (constant power Kw) power Kw display

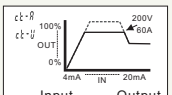
Input mode change by LEVEL3 mode

The maximum output current limit

CT-A Maximum output current limit
Limiting current type (maximum current limit setting)
Constant current type (output current range setting)
Type: C K CT AT CV KW

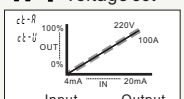
CT-V Maximum output voltage limit
Limiting voltage type (maximum voltage limit setting)
Constant voltage type (output voltage range setting)
Type: V VT CV

ct-A Current set



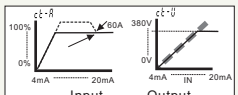
current limited model
ct-A
Limiting current 60A
voltage limited model
ct-V
Limiting voltage 220V

ct-V voltage set



current Constant model
ct-A
Constant current 60A
voltage Constant model
ct-V
Constant voltage 220V

ct-h voltage set



current Constant model
ct-A
Constant current 60A
voltage Constant model
ct-V
Constant voltage 220V

(current type) load short circuit alarm setting

Err.oc Load current (CT-A) multiple set — Factory 2
(CT-A) X (Err.oc) = overcurrent value

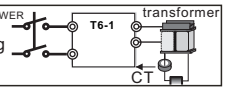
tim.oc Load overcurrent delay time — Factory 500
Over current time (20~1000mS)

cot.oc The number of load current — Factory 1
Setting range (0~5) Set =0 function cancelled

Type: C K CT AT CV KW

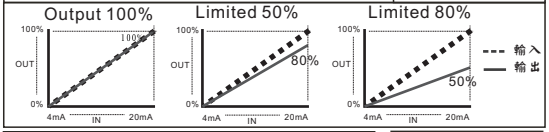
(current) >{(CT-A) x (Err.oc set)} will more than tim.oc time
Immediately shut down the output again from 0% start.
To reach cot.oc times. Stop alarm display Error OC output.

CT-A2 Simplex **2C** Mode
secondary current range setting
Control constant output current



TEMP Controller core temperature detection — Show only
Temperature is over 85°C, stop output over temperature alarm

hi.out Limited maximum output% — Factory 1000



The abnormal power contact output alarm — Factory
no Show only YES display and alarm — no

AL.TIM Power anomaly detection delay time — Factory
0 Setting range (0~30 seconds) — 0

PW.ALL Power abnormal output control — Factory
no COM / run short circuit / alarm output
YES Power supply abnormal alarm output — no

R-A Display R output current
S-A S-A Display S output current
T-A T-A Display T output current
O-V Display output voltage
AT Mode

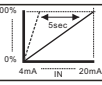
Return

Press 3 seconds LEVEL 2

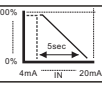
contL Set input mode

- key Panel input control 0.0~100.0
- 0-20A mA analog signal input: (0.0~20.0mA)
- 4-20A mA analog signal input: (4.0~20.0mA)
- 0-5V DC V analog signal input: (0.0~5.0V)
- 1-5V DC V analog signal input: (1.0~5.0V)
- 0-10V DC V analog signal input: (0.0~10.0V)
- 2-10V DC V analog signal input: (2.0~10.0V)
- rS485 RS485: (communication control output%)

t.soft Soft start — Factory 5.0
Range 0.0~199 sec — Sec 5.0

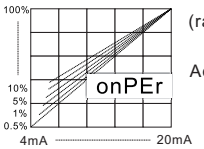


t.dwon Soft stop — Factory 0.0
Range 0.0~199 sec — Sec 5.0



t.RESP Input signal response time — Factory 0.3

onPEr Starting voltage (minimum output%) — Factory 1.0



(range 1.0~50.0%)
Adjust minimum output waveform%

Lock Password setting — Factory 00000
Password =00123 Press 3Sec enter LEVEL3

Load break alarm function settings (current type)

=NO (function off) =YES (function on) — Factory no
(three-phase AT model) (single-phase current type)

Example: load<85%

currE Load current setting — Factory 1
=0 (function off) Example:three-phase 380V 45Kw
45000/380/√3 =68.3 current setting 68.8

ErrSc Load current low% setting — Factory 85
(set current) and (detecting current comparison set%)

Example:three-phase 380V 20Kw single-phase 380V 20Kw
20000/380/√3 =30.3 20000/380=52.7
three-phase (CurrE) set 30.3 single-phase (CurrE) set 52.7 (ErrSC) set 85
During the output process, check the current < set current 85% alarm
Display:Error LoAd

Lo.Err Load break stop output setting — Factory
=NO (continue output) =YES (stop output) — no

Load break detection start start% setting — Factory
30 The output above 30%. start test — 30

Load short circuit detection (current type)

PErcE Load short-circuit detection% set — Factory
10 Output 10% below. Detection
=0 (function cancelled) — 0

AMPEr Output load current setting — Factory
0 =0 (function cancelled) — 0

PErcE set 10 AMPEr set 30
The output below 10% (current more than 30A)
Alarm Stop output **Display:Error OC**
Set the load short-circuit function. The current must be filled correctly
Otherwise, the controller will not output properly

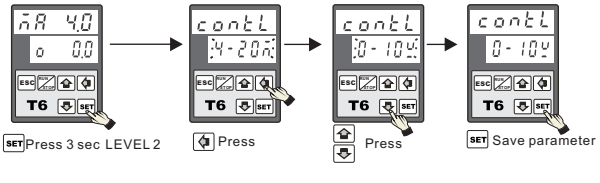
2.Show Display output current voltage — Factory
=OFF (conventional) =ON(current voltage) — oFF
Input signal 4.0 Out voltage 238.0
Out current 10.0 Out current 10.0

CV Mode

run-t Total controller use time — Factory
Display unit 0.1 days — Show only

Return

Example of parameter setting mode:
input analog signal (4~20mA) modification (0~10V)



LOCK=00123 SET + Press 3 sec LEVEL 3

Lo.out Set minimum output% — Factory 0.0

Output mode setting

SSr	Solid state relay output mode ON-OFF	
PHASE	(Phase) output mode	ALL → 0
ZEro	(Zero) output mode	
PZEro	(Phase start) zero operation	
P.curr	(Zero limited current)	
b.curr / b.curr	(Phase limited current)	CKCT AT CV KW → 8
b.VoLt / b.VoLt	(Phase limited voltage)	
A.curr / A.curr	(Phase constant current)	
A.VoLt / A.VoLt	(Phase constant voltage)	→ 1
C.curr / C.curr	(Phase limited voltage)	V CV → 2
C.VoLt / C.VoLt	(Phase limited current)	
b.CV / b.CV	(Phase limited voltage)	→ 1
Kw-b / Kw-b	(Phase limited Kw)	CKCT AT CV KW → 5
Kw-A / Kw-A	(Phase constant Kw)	
t-ZEro / t-ZEro	(Cycle changing) cyctc ON OFF cyASK Output accuracy	No harmonic

cYctc Cycle time setting — Factory 6
cyctc Setting range (0~30) seconds

cYASk Output accuracy — Factory 1
cyask Setting range (0.1~1.0)%

VoLtA Main voltage setting — Factory 380
VOLTA The kW output control mode

PLock P.Lock LEVEL 1 Parameter locking — Factory no
YES LEVEL 1 unlocking no LEVEL 1 locking

ALock A.Lock Lock the parameters at all levels — Factory no
YES LEVEL 2 3 4 unlocking no All levels locking

Addr Addr Communication address. — Factory 1
Setting range (1~255)

bAnd bAnd Communication speed — Factory 19200
Set selection (4800 9600 19200 38400)

bUS bus Communication data format — Factory 8-n-2
Set selection RTU (8-N-1 8-N-2 8-E-1 8-O-1)

Multiple online power distribution (Communication model)

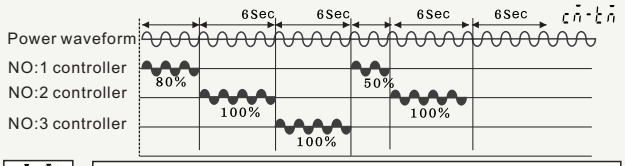
cn-nd cn-nd Online power distribution — no
YES Function start no Function stop

cn-cn cn-cn Online. Quantity
Quantity 2~32

cn-tn cn-tn Time
Setting range (1~1000.0)

NO:1 NO:2 NO:3 CYC-R Mode Have communication

Example: cn-nd=YES cn-cn=4 cn-tn=6.0



cn-Pt CM-PT 3 connected CYC output models take effect
(=1) Only start one at a time (=2) Start 2 at the same time

CPt Display current correction (current type) — Factory 100
Formula (detection current) *(Cpt set) /100= display current

CPv Display voltage correction (voltage type) — Factory 100
Formula (detection voltage) *(Cpv set) /100= display voltage

inSEt inSEt Input signal amplification — Factory 100
Formula: (input analog signal) * (inSEt setting value)

PZro Three phase full wave control — Factory no
Load center zero line setting =NO not 0V =YES 0V

485cn 485cn Controller startup mode setting — Factory no
=NO (COM RUN) Terminal Short start
=485cn (COM RUN) Short start + Communication
003H bit0=1 on bit0=0 off

SCAdJ SWADJ Low angle adjustment (0.2~40)%% — Factory 5
Formula: V=(V*1000)/{1000-(SWAdj*10)} Single camera type

AV.ou1 AV.OU1 NO:1 analog output function — Analog output model
=on Output. Relay on =W Output Kw. Ratio analog output
=I Input %. Ratio analog output
=o Output %. Ratio analog output
=V Output Voltage. Ratio analog output
=A Output Current. Ratio analog output
Output 1 analog output OUT1+ OUT1-

AV.ou2 AV.OU2 NO:2 analog output function — Analog output model
=on Output. Relay on =W Output Kw. Ratio analog output
=I Input %. Ratio analog output
=o Output %. Ratio analog output
=V Output Voltage. Ratio analog output
=A Output Current. Ratio analog output
Output 2 analog output OUT2+ OUT2-

out1L OUT1L NO:1 Analog output low point setting
Set range 0.0~100.0%

out1H OUT1H NO:1 Analog output high point setting
Set range 0.0~100.0%

Example: Analog output mA
AV.OU1=O . I . V . A . W
OUT1H 100% 20mA OUT1L 0.0% 0mA
OUT1H 100% 20mA 20.0% 4mA OUT1L

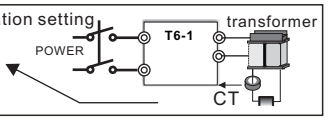
out2L OUT1L NO:1 Analog output low point setting
Set range 0.0~100.0%

out2H OUT1H NO:1 Analog output high point setting
Set range 0.0~100.0%

Example: Analog output V
AV.OU2=O . I . V . A . W
OUT2H 100% 10V OUT2L 0.0% 0V
OUT1H 100% 10V 10.0% 1V OUT1L

Shou Selection of voltage and current display mode — Factory AnS
AnS AMS Display valid value AVG AVG Display average

ct-ct ct-ct External transformer specification setting
OFF 5-5 5-50 5-100 5-200
5-300 5-400 5-500 5-600 5-750
5-800 5-1000 5-1500 5-2000



TO Lo.out

Abnormal alarm screen and troubleshooting

Error code	Causes	Error elimination method
ERROR R-OL	R phase current anomaly	3Ø AT: 1.check R phase heating wire 2.LEVEL2 (load parameter settings) and load does not match → AoYEr parameter
ERROR S-OL	S phase current anomaly	3Ø AT: 1.check S phase heating wire 2.LEVEL2 (load parameter settings) and load does not match → AoYEr parameter
ERROR T-OL	T phase current anomaly	3Ø AT: 1.check T phase heating wire 2.LEVEL2 (load parameter settings) and load does not match → AoYEr parameter
ERROR POWER	No main power	1.check main power 2.fuse break inside the controller
ERROR R-PH	R phase No main power	3Ø: 1.check main power 2.R phase fuse break inside the controller
ERROR S-PH	S phase No main power	3Ø: 1.check main power 2.S phase fuse break inside the controller
ERROR T-PH	T phase No main power	3Ø: 1.check main power 2.T phase fuse break inside the controller
ERROR TEMP	Over temperature	The internal temperature of the controller is more than 85°C to stop output **Improve ventilation effect**
ERROR OE ERROR OL	Unable to close output	Current control model: 1.The controller modul break. Repair 2.load poor insulation (earthing) inspection load
ERROR LOAD	The load current is too low	Current control model: 1.Load break (improper parameter setting) 2.no load. Check the load → AoYEr parameter
ERROR OC	The load Over current	Current control model: 1.Over load (improper parameter setting) 2.Short load. Check the load
ERROR ERROR ERROR 88888	System failure Boot error	**Contact the marketing department (repair)**

ESC Press 3 sec Alarm history query. This model 2 times of code
1-Err oc 1-Err Esc 2-Err oc 2-Err
Clear error code record Esc + ← Press 3 sec

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Modbus Rs485

Communication data address

Definition	addr	Read Write	Function description
SCR output %	000H	R/W	Enter mode RS485. to write to output%

Output% mode: Write 000H=0~1000, Out 0.0~100.0%; Out 100.0% / 0.0%; 000H= 0.0 ... 100.0

Constant current: Write 000H=0~1000, Out 0.0~100.0A; Out 100.0A / 0.0%; 000H= 0.0 ... 100.0

Output current set	001H	R/W	(1.current limit) (2. constant current)
Output voltage set	00FH	R/W	(1.voltage limit) (2. constant voltage)

Control ON-OFF	003H	R/W	bit 0 =1 ON	=0 OFF	
Limited output%	004H	R/W	Limited maximum output%		
Minimum output%	005H	R/W	No analog signal input. Minimum output setting		
Soft start time	006H	R/W	Output soft start time setting		
Soft stop time	007H	R/W	Soft stop time setting		
Input signal	008H	R/W	Analog input signal sampling average		
Set input mode	009H	R/W	01H	KEY	Manual panel input
			03H	0~20mA	IN+ IN- Analog signal
			04H	4~20mA	IN+ IN- Analog signal
			05H	0~5V	IN+ IN- Analog signal
			06H	1~5V	IN+ IN- Analog signal
			07H	0~10V	IN+ IN- Analog signal
			08H	2~10V	IN+ IN- Analog signal
			09H	Rs485	Write 000H
Input signal read	00AH	R	Enter analog signal% read		
Output% read	00BH	R	Output% read (0~100.0)		
Controller temper	00CH	R	The controller core temperature read		
Fault alarm code	00DH	R	bit 0	No power supply	=0 normal =1 Abnormal
			bit 1	R phase no power	=0 normal =1 Abnormal
			bit 2	S phase no power	=0 normal =1 Abnormal
			bit 3	S phase no power	=0 normal =1 Abnormal
			bit 4	Internal temperature	=0 normal =1 Abnormal
			bit 5	Open temperature	=0 normal =1 Abnormal
			bit 6	Over load	=0 normal =1 Abnormal
			bit 7	Open load	=0 normal =1 Abnormal
			bit 8	Load short	
			bit 9	Load leakage	
R phase current	014H	R	Three phase current AT model		
S phase current	015H	R			
T phase current	016H	R			
Output voltage	017H	R	Voltage models		
Output current	018H	R	Current models		

CRC debug code

RTU uses CRC (Cyclical, Redundancy, Check) to detect errors, and the CRC debugger is calculated by the following steps:

Step 1: loads a 17 bit register (called CRC send register) with the content of FFFFH

Step 2: performs the Exclusive OR operation of the first byte of the instruction message and the low bit word of the 17-BIT CRC send register, and saves the result back to the CRC register

Step 3: move the contents of the CRC register to the right 1bit, fill in the 0 at the leftmost bit and check the CRC scratchpad

Step 4: if the minimum bit of the CRC register is 0, repeat step 3; otherwise, the CRC registe A001H will be Exclusive

Step 5: repeat step 3 and step 4; the content of CRC has left shift register until the 8-bit the byte has finished processing

Step 6: the command message the next byte repeat step 2 to step 5 until all processing is complete all byte CRC register content is CRC, the instructions must be low byte CRC exchange sequence that is the low byte is transmitted first

Examples of computing CRC values: (CRC calculation example written in C language)

That is, the function needs two arguments:

Unsigned char* data; pointer to the message buffer

Unsigned char lenght; number of bytes in the message buffer

The function returns the Unsigned integer; the CRC value

```
Unsigned integer CRC_check(unsigned char* data,unsigned char lenght)
{
  Int x;
  Unsigned int reg_crc=0XFFFF
  While(lenght--)
      {
        reg_crc^=*data++;
        fox(x=0;<8;x++)
        {
         If(reg_crc&0x01)          //LSB(b0)==1
            {reg_crc=(reg_crc>>1)^0xa001;}
         else
            {reg_crc= reg_crc>>1;  }
        }
      }
  return reg_crc;
```

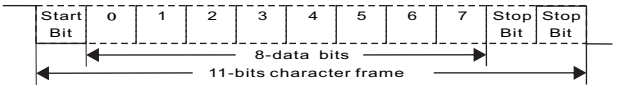
Communication format and mode of communication

Modbus Rs485 Set selection (4800 9600 19200 38400)

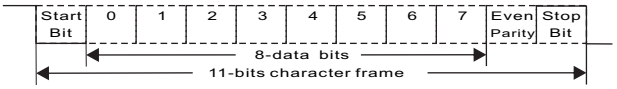
Communication format: (11-bit) Character structure: (8 -bit data)

<8: N: 2:>

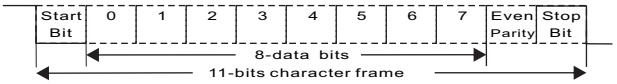
<8: N: 1:>



<8: E: 1:>



<8: 0: 1:>



Communication data structure:

Start	More than 10ms quiescent time
ADR	Communication address: 8-bit address
CMD	Instruction code: 8-bit address
DATA (n-1)	Data content
.....	N* 8-bit address N<=25
DATA0	
CRC CHK Low	CRC error detection code
CRC CHK High	16-bit detection code (2+2 8-bit) characters
END	More than 10ms quiescent time

Read: read the output format is 0BH

RTU instruction message

0	ADR		01H
1	CMD		03H
2		MSB	00H
3	Data address	LSB	0BH
4	Data length	MSB	00H
5	WORD calculations	LSB	01H
6		LSB	F5H
7	CRC debug code	MSB	C8H

RTU response message

0	ADR		01H
1	CMD		03H
2	In byte calculations	LSB	02H
3	Start address content	MSB	03H
4		LSB	E8H
5		LSB	B8H
6	CRC debug code	MSB	FAH

Write format: write to the controller, output input 00H

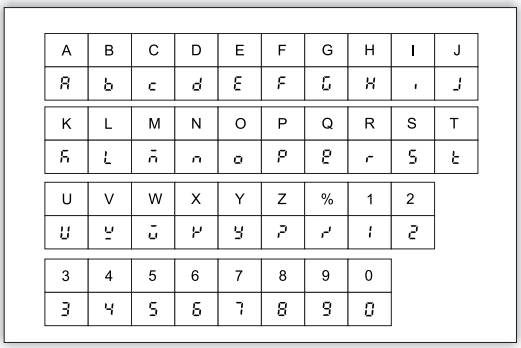
RTU instruction message

0	ADR		01H
1	CMD		06H
2		MSB	00H
3	Data address	LSB	00H
4		MSB	02H
5	Data content	LSB	BCH
6		LSB	89H
7	CRC debug code	MSB	1BH

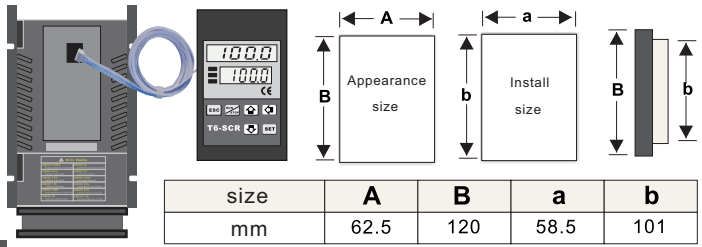
RTU response message

0	ADR		01H
1	CMD		06H
2		MSB	00H
3	Data address	LSB	00H
4		MSB	02H
5	Data length	LSB	BCH
6		LSB	89H
7	CRC debug code	MSB	1BH

Display meter



Panel size chart



size	A	B	a	b
mm	62.5	120	58.5	101