



The T-Series: Intelligent Thyristor Switches



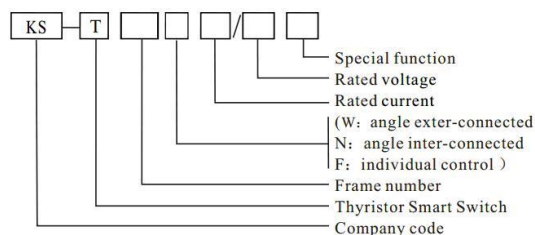
General:

The intelligent thyristor switches of the series KS-T are electrical power elements for quick switch-on-and-off-operations of an electrical power factor compensation capacitor, so called, dynamic TSC switches. We have developed these intelligent thyristor control circuits to avoid problems such as inadequate reliability and slow second switching on comparable products available on the market. They are suitable for the rapid dynamic compensation of the reactive power of a power grid, for frequent switch-on-and-off operations of a harmonic control capacitor, as well as for the control of elements such as electrical resistors, heating wires and electric motors.

Features:

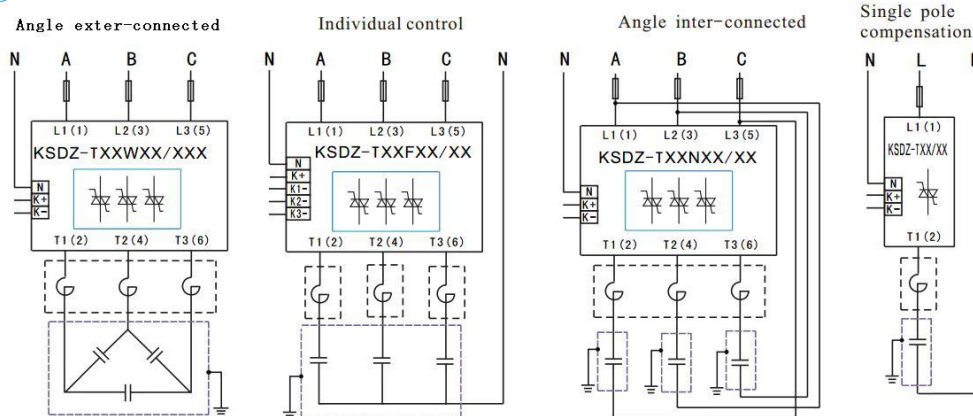
1. A high-speed SOC (System On Chip) microprocessor, a phase sequence control, a phase failure protection unit and an intelligent control circuit are used in addition to a built-in protective circuit against instantaneous over voltages; optoelectronic insulation technology, strong immunity to interference and protective measures to ensure high EMC.
2. Thanks to the use of a patented, fast and energy - saving forced release technology, advantages such as a high trigger current and very low energy consumption for the control are noticeable against other comparable products on the market, even without a discharge of a load capacitance having a phase difference of the output three-phase current of not more than 120° a fast switch-on within 20 ms is possible.
3. Full aluminum housing and an oversized cooler, based on the principle of thermal convection, intelligent temperature detection and control system to ensure good cooling performance even at a very short operating time of the cooling fan, thereby prolonging the life of the fan and reducing the dirt deposit on the switch itself the operating energy consumption of the switch is further reduced. Heat resistant high quality electronic elements or components and high quality power elements are used for the respective circuit, and the circuit board is subjected to a resin potting treatment or insulation impregnation, the design life of the circuit being more than 100,000 hours.

Product Code:



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Wiring Diagram:



Note: Customers can choose the reactor and other load capacitors

Intelligent Thyristor Switch Main Electrical Parameters Table:

Wiring diagram	Model	Main parameter				
		R-current	R-voltage	R-loads capacity	SizeL*W*H (mm)	Frame
3 phase angle exter-connected common control	T100W50/450	50A	450V	≤30Kvar (KVA)	172*120*152	1
	T100W60/450	60A	450V	≤40Kvar (KVA)	172*120*152	1
	T100W90/450	90A	450V	≤60Kvar (KVA)	172*120*152	1
	T100W110/450	110A	450V	≤72Kvar (KVA)	190*120*152	1
	T160W90/450	90A	450V	≤60Kvar (KVA)	200*140*152	2
	T160W120/450	120A	450V	≤80Kvar (KVA)	200*140*152	2
	T160W160/450	160A	450V	≤105Kvar (KVA)	200*140*152	2
	T160W200/450	200A	450V	≤114Kvar (KVA)	200*140*152	2
3 phase inter-connected common control	T160N60/450	60A	450V	≤68Kvar (KVA)	200*140*152	2
	T160N90/450	90A	450V	≤91Kvar (KVA)	200*140*152	2
	T160N120/450	120A	450V	≤108Kvar (KVA)	200*140*152	2
	T160N160/450	160A	450V	≤160Kvar (KVA)	260*140*152	2
	T160N200/450	200A	450V	≤180Kvar (KVA)	260*140*152	2
3 phase individual control	T100F40/250	40A	250V	≤9Kvar (KVA) *3	172*120*152	1
	T100F60/250	60A	250V	≤13Kvar (KVA) *3	172*120*152	1
	T100F90/250	90A	250V	≤20Kvar (KVA) *3	172*120*152	1
	T160F60/250	60A	250V	≤13Kvar (KVA) *3	200*140*152	2
	T160F60/450	60A	450V	≤22Kvar (KVA) *3	200*140*152	2
	T160F90/250	90A	250V	≤20Kvar (KVA) *3	200*140*152	2
	T160F90/450	90A	450V	≤34Kvar (KVA) *3	200*140*152	2
	T160F120/250	120A	250V	≤26Kvar (KVA) *3	200*140*152	2
	T160F120/450	120A	450V	≤45Kvar (KVA) *3	200*140*152	2
	T160F160/250	160A	250V	≤30Kvar (KVA) *3	260*140*152	4
	T160F160/450	160A	450V	≤52Kvar (KVA) *3	260*140*152	4
	T160F200/250	200A	250V	≤40Kvar (KVA) *3	260*140*152	4
T160F200/450	200A	450V	≤75Kvar (KVA) *3	260*140*152	4	
Single pole	T200/250	200A	250V	≤45Kvar (KVA)	300*120*145	3
	T200/450	200A	450V	≤76Kvar (KVA)	300*120*145	3
	T300/250	300A	250V	≤66Kvar (KVA)	300*120*145	3
	T300/450	300A	450V	≤114Kvar (KVA)	300*120*145	3
	T400/250	400A	250V	≤88Kvar (KVA)	300*120*145	3
	T400/450	400A	450V	≤152Kvar (KVA)	300*120*145	3
	T500/250	500A	250V	≤110Kvar (KVA)	340*120*145	3
	T500/450	500A	450V	≤190Kvar (KVA)	340*120*145	3
	T600/250	600A	250V	≤132Kvar (KVA)	340*120*145	3
	T600/450	600A	450V	≤228Kvar (KVA)	340*120*145	3
	T800/250	800A	250V	≤176Kvar (KVA)	340*140*145	3
	T800/450	800A	450V	≤300Kvar (KVA)	340*140*145	3
T1000/250	1000A	250V	≤200Kvar (KVA)	340*140*145	3	
T1000/450	1000A	450V	≤330Kvar (KVA)	340*140*145	3	

Note : 1、 Voltage/current: 6-16VDC\2-20mA; Speed: ≤20ms;

2、 With a smart mouth design, it not only can be used to control single-phase load, but also can be free combined to used control the three-phase load, for 790 v, 1140 v need to be custom-made.



Operation Conditions:

- 1、 Working temperature: -25~45℃
- 2、 Relative humidity: 0~95%, non-dew
- 3、 Storage /transport temperature: -30~85℃
- 4、 Forbidden to be used in the gas and other media that damage the line insulation or with the explosion danger.
- 5、 Electrical cabinet to hold TTS shall be well ventilated.

Installation Size Table (Unit: mm):

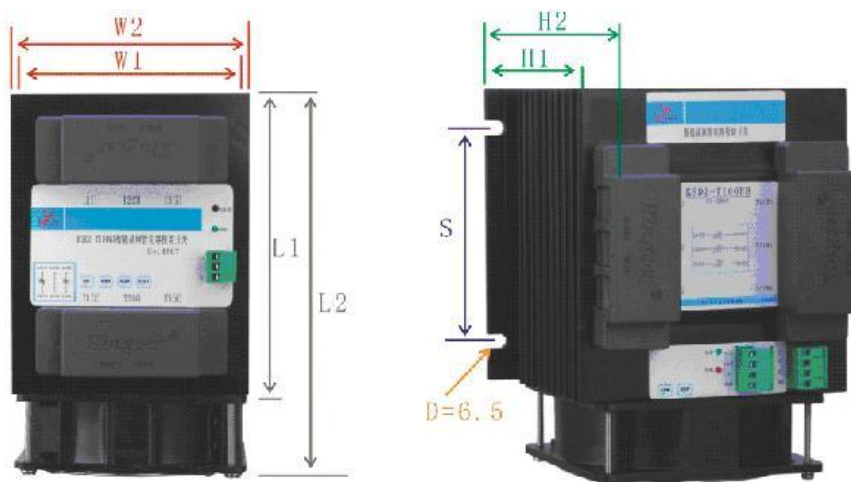
parameter Frame number	item	size					Installation size			
		L1	L2	W1	W2	H1	H2	Aperture heart distance(up to down)	Aperture distance	Aperture heart distance (right to left)
Frame1	①	150~170	150~210	85	120	120	152	$0 \leq S \leq 140$	7.5	88
Frame 2	②	150~220	200~260	140	158	120	152	110	6.5	148
Frame 3	③	239	280~322	85	120	120	136	$0 \leq S \leq 230$	7.5	88
Frame 4	④	223	260	140	158	120	136	160	6.5	148

Note :

- ① In/out terminal is up in down out,Current range:40~110A
- ② In/out terminal is left in right out,Current range:40~200A
- ③ In/out terminal is up in down out,Current range:200~1000A
- ④ In/out terminal is left in right out,Current range:120~200A

Frame:

Frame1/2

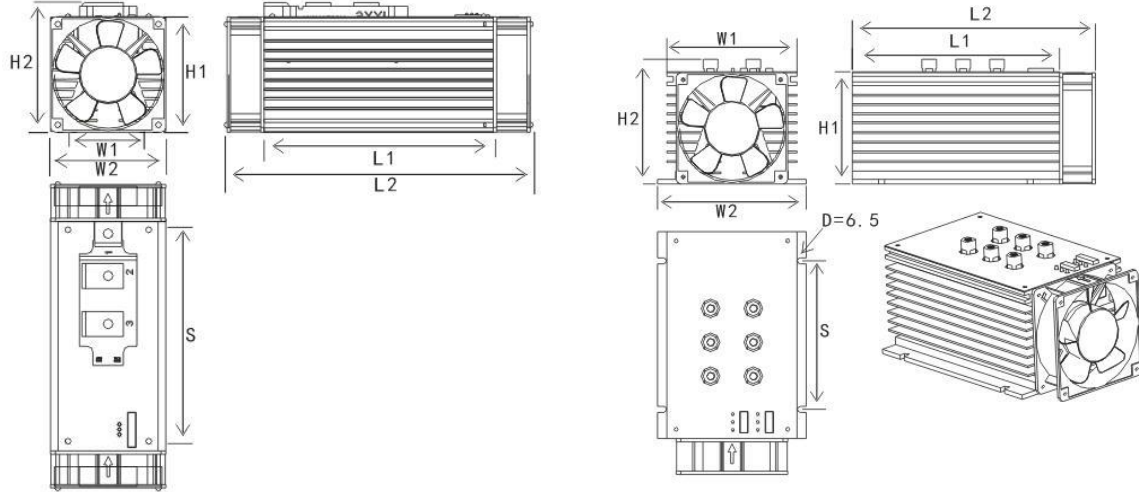




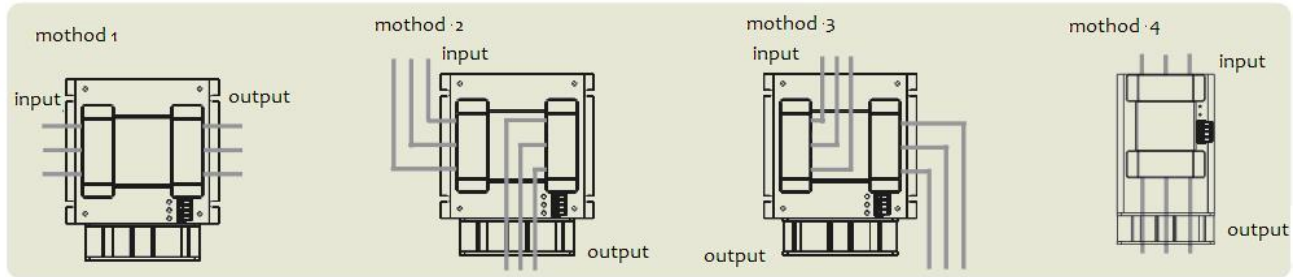
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Frame 3

Frame 4



In-Out Port Wiring Diagram:





Oscillogram of a usual thyristor:



Oscillogram of our thyristor:

