

Product comparison Between TAS Cap duty Thyristor Switches ZCTC, TSCM-TT, TSCI and ThyCon.



Sr. No.	Feature Description	ZCTC-02	TSCM-TT	TSCI	Thy-Con
Hardware					
1	Zero differential Voltage Turn On & Current zero turn Off.	Yes	Yes	Yes	Yes
2	Control over the phases.	2-phase cont.	2-phase cont.	2-phase cont.	2-phase cont.
3	Auxiliary supply for Electronics	415Vac 4Wire	415Vac 1ph	240Vac 1ph	240Vac 1ph
4	Auxiliary supply range.	330V-480Vac	330V-480Vac	90V-300Vac	90V-300Vac
5	Control supply.	12V.dc	12V.dc	12/24V.dc.	240Vac 1ph
6	Range of control supply	11V-14V.dc	10V-15V.dc	10V-27V.dc.	140V-300V.ac.
7	Power Supply Voltage Range	200V-500Vac 3ph 3wire	200V-500Vac 3ph 3wire	100V-500Vac 3ph 3wire	200V-500Vac 3ph 3wire
8	Maximum Continuous RMS current rating.	20, 40, 80, 120, 160 Amp.AC.	25, 40, 80, 120, 160 Amp.AC.	25, 40, 80, 120, 160 Amp.AC.	40, 80 Amp.AC.
9	Supply Frequency	47 to 63Hz	47 to 63Hz	47 to 63Hz	47 to 63Hz
10	Power Terminals.	Cu-Busbar	Cu-Busbar	Cu-Busbar	Cu-Busbar
11	Cooling	Fan cooled	Fan cooled	Fan cooled	Natural
Performance					
12	Maximum Watt Loss per 3-ph line current.	3.5 Watt / Amp	3.5 Watt / Amp	3.5 Watt / Amp	0.1 Watt / Amp
13	Cold Turn On time. (All 3-phases conduction)	1.5 Cycle	0.5 Cycle	1.5 Cycle	1.5 Cycle
14	Hot Turn On time.(Turn On after Turn Off - 3 phases conduction)	Upto 3 cycles with HSDR	2 Sec to 10 Sec as per cap rating	Upto 3 cycles with HSDR	30 Sec to 1 Min
15	Turn Off time (Maximum)	2 Cycles	1.5 Cycles	2 Cycles	1 Second
Protection & Reliability					
16	Power Circuit Fuses Protection requirement.	HRC fuse	Semiconductor Fuse	HRC fuse	HRC fuse
17	Need of series Reactor	0.25% V-drop 3-ph reactors	0.25% V-drop 3-ph reactors	0.25% V-drop 3-ph reactors	Not compulsory.
18	Thyristor PIV, FBV rating (V-pk)	1800 V-pk	2200 V-pk	2200 V-pk	2200 V-pk
19	Thyristor blocking Voltage control logic.	Yes	No	Yes	Yes
20	Spike Current Protection to thyristors	Yes	No	Yes	No
21	Transient triggering cut off control	Yes	Yes	Yes	Yes
22	Blocking Voltage transient Protection by MOV	No	No	Yes	Yes
23	dV/dt control by R-C Snubber protection	Yes	Yes	Yes	Yes
24	Over Current monitoring and tripping	Yes	No	Yes	Yes-optional
25	Capacitor / Reactor circuit Earth Fault monitoring	No	No	Yes	No
26	Supply fuse failure on line monitoring	Yes	Yes	Yes	Yes
27	Over Temperature / Fan failure Protection.	Yes	Yes	Yes	Yes
28	Insulation level with respect to Earth.	2.5kVac	2.5kVac	2.5kVac	2.5kVac
29	Human Safety - Shrouding to terminals	No	No	Yes	Yes
Functionality					
30	Display on Unit	LED indication	LED indication	7-segment Digital display	LED indication multiple logic
31	Display of Current	No	No	Yes	No
32	Capacitor Health Check monitoring	Yes- Fixed at 65% value	No	Yes - User Programmable	Yes-optional
33	Programming of User defined parameters.	No	No	Yes - Through 3keys Keyboard.	No
34	Local On-Off testing Control	No	No	Yes	Yes
35	Thyristors Health Check Monitoring	Yes	No	Yes	Yes
36	Fault alarm Auxiliary contacts	No	No	Yes	No
37	Automatic Fault Reset	Yes. Fixed	Yes. Fixed	Yes - Intelligent Control	Yes - Intelligent Control
Mechanical					
38	Mounting	Channel mounting with mounting bolts	Channel mounting with mounting bolts	Channel mounting with mounting bolts	C-channel DIN rail mounting OR bolts mounting.
39	Body parts	Metal	Metal	Metal with Plastic cabinet	Complete plastic cabinet.