

Complete portfolio for soft starts and smart stops

With the addition of TSA 5 and TSA 6, the Emotron TSA softstarter range just got even larger. The extended TSA range from 5,5 to 1000 kW nominal duty caters for your every need.



Prevent damage and enhance efficiency

The Emotron TSA softstarter offers smart start and stop functions preventing unnecessary breakdowns and mechanical stress to your equipment.

To enable lowest possible energy consumption, Emotron TSA softstarters are equipped with an integrated by-pass contactor.

Additionally, the built-in load monitor protects your machine and process against costly downtime, equipment damage and break-down.

Advanced functionality

The Emotron TSA is enhanced with many features to extend functionality and improve user experience. The easy to use control panel carries a multilingual display unit as standard. The real time clock together with programmable logical blocks and timers allow you to optimize your operation.

Robust certified softstarters

To improve the ability of the softstarters to withstand tough conditions the Emotron TSA units have circuit boards with conformal coating according to IEC61721-3-3, 3C3 as standard.

The full range of Emotron TSA is UL certified and DNV marine type approved.

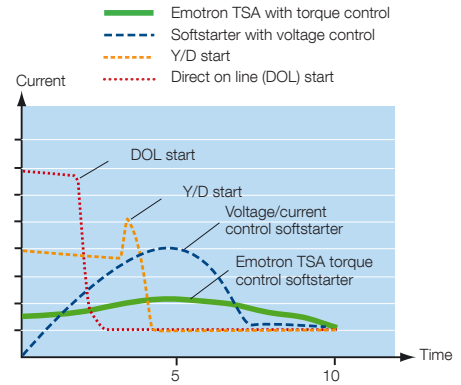
AT A GLANCE:

- RANGE FROM 5,5-1000 KW ND
(16-960A/400-690V)
- BUILT-IN BYPASS CONTACTORS
16-820A UNITS
- AC POWER TOP ENTRY, BOTTOM EXIT
- STANDARD COATED BOARDS
- MULTILINGUAL TEXT DISPLAY
- REAL-TIME CLOCK
- UL-CERTIFIED
- DNV MARINE TYPE APPROVAL
- COMMUNICATION OPTIONS:
PROFIBUS, DEVICENET, CANOPEN,
MODBUS-RTU, PROFINET, MODBUS-
TCP, ETHERCAT, ETHERNET-IP
- OPTION BOARDS:
EXT I/O, PTC/PT100 (MAX 2 EACH)

Superior torque control

Emotron TSA softstarters incorporate 3-phase control together with sophisticated algorithms for torque control. Conventional softstarters use a pre-defined voltage ramp to control the start. With Emotron TSA, the actual motor torque is continuously calculated and controlled according to the application requirements.

This torque control ensures an ultra-smooth start with constant acceleration. The torque control means the starting current is reduced even further by up to 30%. You can use smaller fuses and less expensive cables, and will thus benefit from lower installation and energy costs. The smooth starts also lead to less mechanical stress, improved process control and reduced maintenance costs.



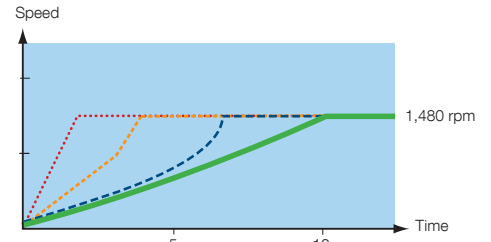
With an Emotron TSA the start current is up to 30% lower than with a conventional softstarter.

Softstarters for challenging tasks

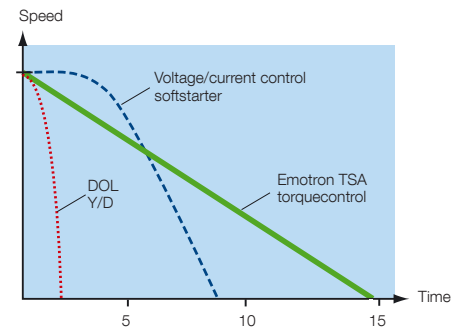
When starting, for example, a loaded crusher or mill, torque boost can be used to overcome initial torque peaks. The built-in vector brake control efficiently handles high inertia loads.

A fan which is blown in the wrong direction is helped to a full standstill before being started in the right direction. Damage is prevented and mechanical vibrations are eliminated.

For a pump, the aim is to slowly decrease the flow to prevent mechanical stress on pipes and valves. You no longer risk water hammer and there is no need for costly equipment such as motor-controlled valves.



Emotron TSA offers efficient torque control that enables you to start more smoothly with constant acceleration.



The torque control ensures a linear stop that protects your pump from water hammer. No motor-controlled valves are required.

Slow speed and jog operation

Apart from ramping up and down the speed between zero and rated motor speed, Emotron TSA softstarter offer low speed operation in both forward and reverse direction without additional hardware. Slow speed or jogging forward or backward can be useful for aligning a load or having the motor running at low speeds for test or service purposes.

TECHNICAL DATA AND MORE FEATURES

- PROGRAMMABLE LOGICAL BLOCKS AND TIMERS
- ISOLATED MOTOR PTC INPUT AS STANDARD
- ADJUSTABLE JOG FWD/REV FUNCTION E.G PUMP CLEANING
- I²t THERMAL MOTOR PROTECTION WITH MEMORY
- REMAINING MOTOR THERMAL CAPACITY READOUT (FROM I²t)
- 4 PARAMETER SETS AVAILABLE
- TSA5 WEIGHT = 60 KG
- TSA6 WEIGHT = 90 KG

Supply voltages	200-690 VAC
Rated current	16 – 960A ND
Protection class	IP20
Ambient temperature	0 – 55 deg. C 2%/deg. C derating > 40 deg. C

Model	Normal duty (Startcurr = 3 x In)		Frame size HxWxD [mm]
	Power@400V	Rated current	
TSA52/69-016	7,5	16	FRAME SIZE 1 340 x 126 x 188
TSA52/69-022	11	22	
TSA52/69-030	15	30	
TSA52/69-036	18,5	36	
TSA52/69-042	22	42	
TSA52/69-056	30	56	FRAME SIZE 2 340 x 126 x 188
TSA52/69-070	37	70	
TSA52/69-085	45	85	
TSA52/69-100	55	100	FRAME SIZE 3 380 x 196 x 235
TSA52/69-140	75	140	
TSA52/69-170	90	170	
TSA52/69-200	110	200	FRAME SIZE 4 514 x 254 x 260
TSA52/69-240	132	240	
TSA52/69-300	160	300	
TSA52/69-360	200	360	FRAME SIZE 5 750 x 550 x 350
TSA52/69-450	250	450	
TSA52/69-470	250	470	
TSA52/69-580	315	580	FRAME SIZE 6 900 x 640 x360
TSA52/69-730	400	730	
TSA52/69-820	450	820	
TSA52/69-835	450	835*	FRAME SIZE 6 900 x 640 x360
TSA52/69-960	500	960*	

* Without bypass contactor. TSA6 ratings with external bypass contactor=960/1125A.