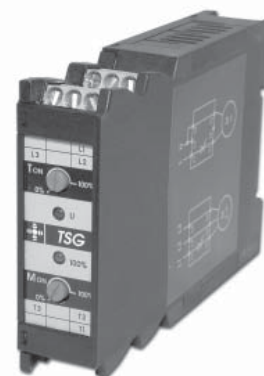


- ▶ Softstarter
- ▶ 1-phase controlled
- ▶ Reduced mechanical stress on drives
- ▶ Maintenance-free
- ▶ Width 22.5mm
- ▶ Industrial design



## Technical data

### 1. Functions

Softstarter reducing mechanical stress on drives during the acceleration phase of motors

### 2. Adjustments

	Adjustment range	
Acceleration time $T_{ON}$	0s	20s
Starting torque $M_{ON}$	0	100%

### 3. Indicators

Green LED ON:	indication of supply voltage
Yellow LED (100%)ON:	output voltage 100%, integrated bypass contactor activ

### 4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40  
 Mounted on DIN-Rail TS 35 according to EN 50022  
 Mounting position: any  
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20  
 Tightening torque: max. 0.5Nm  
 Terminal capacity control circuit:  
 1 x 0.5 to 2.5mm<sup>2</sup> with/without multicore cable end  
 2 x 0.5 to 1.0mm<sup>2</sup> with/without multicore cable end

### 5. Control circuit

Supply voltage:	internal generated
Tolerance:	-
Rated frequency:	-
Duration of operation:	100%

### 6. Power circuit

Supply voltage:	
Terminals L1- L2 - L3:	
TSG 2.2-230VAC	1~230V
TSG 2.2-400VAC	3~400V
Tolerance:	±20%
Rated frequency:	50 to 60Hz
Starting torque $M_{ON}$	0 100%
Start-up cycles:	30/hour (at medium load)
Bypass contactor:	integrated
Start-up current:	16A (max.5s)
Max. motor power:	
TSG 2.2-230VAC	1.3kW
TSG 2.2-400VAC	2.2kW
Surge voltage:	2.5kV (according to IEC 60947-1 and DINVDE 0110 Teil1)
Rated voltage:	345/600V (acc. to IEC60947-1, 4.3.1.2)

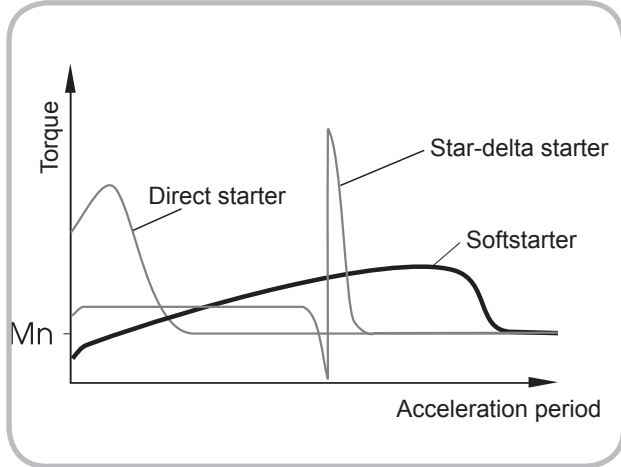
### 7. Ambient condition

Ambient temperature:	-20 to +45°C (according to IEC 68-1)
Storage temperature:	-10 to +70°C
Transport temperature:	-10 to +70°C
Relative humidity:	5% to 95% not condensing
Pollution degree:	2 (EN 60947-1/DIN VDE 0110, Teil1, 4.2)

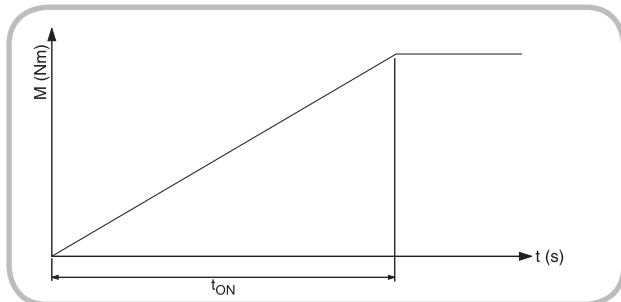
## Functions

The soft startup device in the TSG series has been designed for asynchronous machines with squirrel-cage rotors to counter the disadvantage of these units, namely the high startup current and the associated jerky startup of the motor.

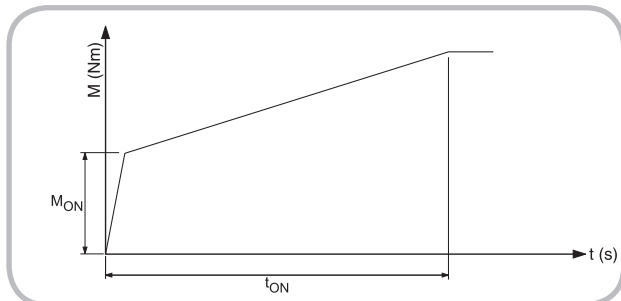
The ramped increase in motor voltage is achieved with phase control in one phase. Startup control is performed by a special processor.



When supply voltage is applied, the TSG increases the stator voltage of this phase linear with the startup time to full ac voltage. The two other phases are applied directly to the supply system. The time for this voltage ramp can be set on the TON controller to any value from 0 to 20 seconds. As the voltage increases, so too does the torque, just rising above the load moment. The motor therefore starts with slow acceleration.

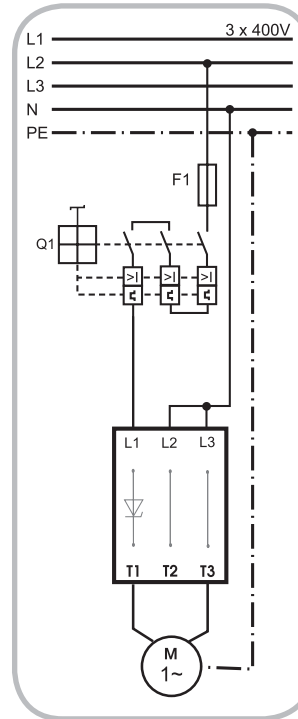


By specifying a motor-specific startup moment the voltage (torque) increases rapidly when the soft startup device is activated, until the startup moment set on the MON controller is reached. Only then does the voltage start increasing slowly for the remaining startup time until full system voltage is reached. In this way, more effective use is made of the startup time and wear and tear is kept to a minimum.

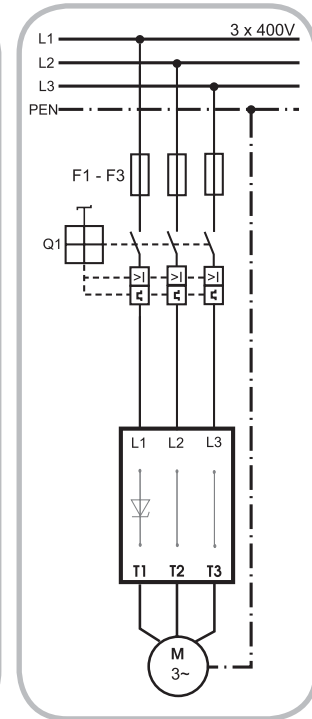


## Connections

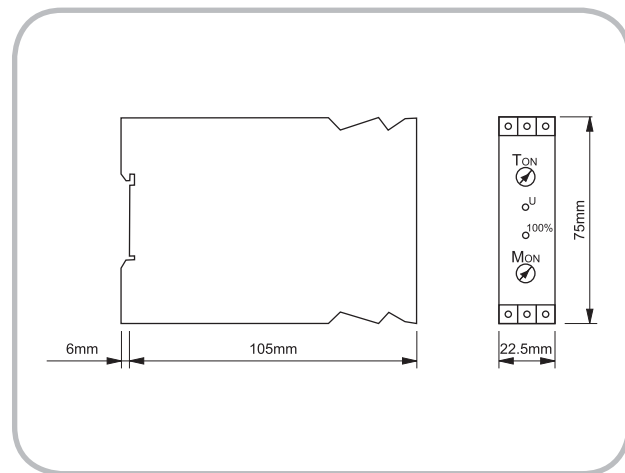
TSG 2.2 - 230V



TSG 2.2 - 400V



## Dimensions



Subject to alterations and errors