WEIGEL

FULL-WAVE SOFTSTARTER

VSA 03 VRT-7

PRODUCT INFORMATION



Our full wave softstarter VSA is a kind of ‘current brake’ for climate control compressors. It reduces the start-up current in clean and simple ways.
This is our contribution for a cleaner power grid with more reserves while maximizing efficiencies and lifespans of compressors around the globe. Will you join us?

100% Clean Power

Thanks to NTC technology, the current remains sinusoidal during the entire run-up process. Resistive current limiting is in principle free from flicker, harmonics, and transients.

Plug & Play

The softstarter is installed directly in the compressor supply line without additional elements. It does not need to be configured or run-in, making it also ideal for retrofitting.
Due to the grid-feedback-free start-up technology, no steep-flank electromagnetic smog is generated. This allows the use of unshielded cables and eliminates the need to install costly line filters or AC/DC-sensitive residual current devices.

Price Advantage

It is our team’s tradition and conviction to invest in unparalleled value engineering and quality control processes, creating high-quality products with an above-average value factor. The results are lower acquisition costs for our customers by a factor of 1.5 to 4.0 compared to alternative softstarter technologies.



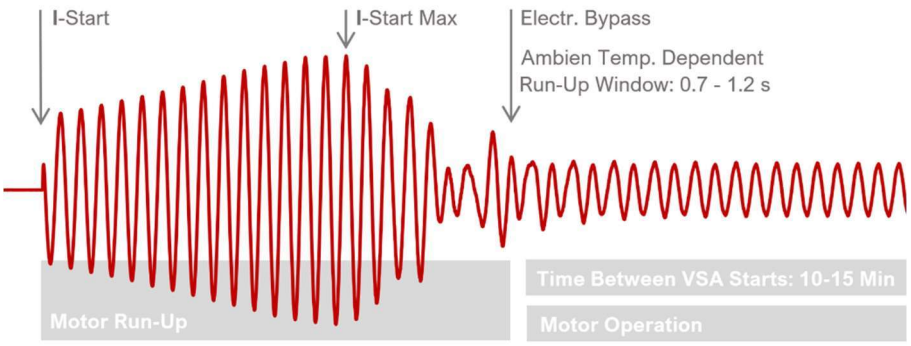
Longevity

Due to its robust and compact design, the VSA is maintenance-free and durable. We avoided specifying semiconductors susceptible to interference, and our softstarters are protected against external transient burst EN 61000-4-4 and surge EN 61000-4-5, resulting in a 5-year 100% warranty on our entire softstarter product line.

The soft run-up protects the compressor also mechanically. The reduced potentially high- and low- frequency vibrations have a positive effect on the motor itself and its nearby components.

NTC Technology

NTC technology reduces the full AC current. This leads to a clean sinusoidal wave throughout the entire run-up phase. After that, the power section of the softstarter is completely bypassed. The result is a lossless on/off type of compressor operation.

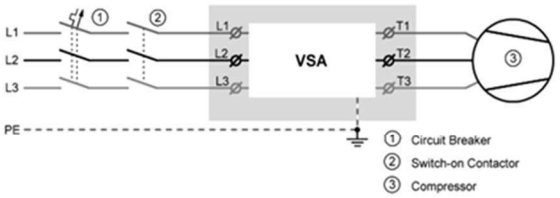


The arrangement of switched NTC thermistors is in its function a full wave softstarter, without any harmonics caused by phase angle control. This allows the softstarter to be integrated into the existing wiring of any on/off climate control compressor setup without additional components such as filters.

Mode of operation: An arrangement of temperature-dependent, ohmic resistors (NTCs) reduces the terminal voltage at the air-conditioning compressor to about 20 to 30 % of the nominal voltage at the time of switch-on. Self-heating reduces the resistance value of the NTC thermistors. The voltage increases continuously until the starting torque is reached. The resulting starting current is therefore free of disturbing mains-feedback in the sense of relevant EMC directives and does not require any filters. VSA models equipped with timed bypass do so automatically after the run-up process has been completed.

Model	VSA 03 VRT-7
Supply Voltage	380-400 VAC
Phase / Hertz	3 Ph / 50 Hz
LRA Max	75 A
I-Oper Max.	15 A
Motor Power	9.3 kW
I-Start Max, Starting Current max	30 A
I-Start, Switch-on Current (20°C)	12 A
Run-up Time	0.7 … 1.2 s
Electr. Bypass Built-In	✓
Time Between Starts (External)	10 … 15 Min
Relative Humidity	≤ 75 %
Operating Temperature	-20 … +45 °C
Storage Temperatur	-25 … +70 °C
Terminal Block Wire Size	4 mm^2
Terminal Block Screw Type	✓
Terminal Block Markers	L1...L3, T1...T3
Weight	0.5 kg
X Overall Dimension	198 mm
Y Overall Dimension	107 mm
Z Overall Dimension	62 mm
X Mounting Dimension	191 mm
Y Mounting Dimension	85 mm
Mounting Hole Dia.	4.8 mm
Mounting Plate Thickness Max	2.5 mm
Mounting Type:	
Snap-In Spacers	✓
DIN-Rail Adapters	✓
Mounting Position:	
Floor	✓
Wall	✓
Ceiling / Overhead	✕
For Natural Convection Cooling:	
Clearance All-Around	80 mm min.





Scope of Delivery:	
Softstarter VSA	1
Cover (Aluminum)	1
Insulating Foil	1
Snap-In Spacers	4
DIN-Rail Adapter Set	1
Installation Instruction	1