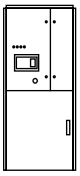
VS70

Easy to drive.
Maximum motor care.
Smooth starts and stops.

VS70



INPUT	Current range	50 A - 500 A
	Power range	165 kW – 10 MW
	Input voltage [1]	2.3 kV a 13.8 kV
	Control voltage	100 - 240 Vac (-15%/+10%) or 90 - 350 Vcc
	Input frequency	50 Hz/60 Hz (±5%)
	Phase sequence	Compatible with any phases sequence
	Cable access	Top or bottom
OUTPUT	Output voltage	0 a 100% Supply voltage
	Output frequency	Same as input
	Efficiency (At full load)	≥ 99.6%, 100% on Bypass
	Cable length	Up to 200 m [1]
	Bypass contactor	Sized for motor start in direct mode
	Cable access	Top or bottom
ENVIRONMENTAL CONDITIONS	Operation ambient temperature	Minimum: -10 °C / Maximum: +60 °C [2]
	Storage temperature	Minimum: -25 °C / Maximum: +70 °C
	Altitude [3]	0-1000 masl, >1000 m with derating
	Ambient humidity	< 95%, non-condensing
	Degree of protection	IP54
	Painting	RAL 7035
	Cooling	Natural
	Vibration	According to IEC 60068-2-6-Fc
	Degree of corrosion	Class 3C3
HARDWARE	Digital inputs	3 fixed (Start, Stop and Reset) 2 programmables (A and B).
	Digital outputs	4 fixed (Main contactor, bypass contactor, Run/PFC, Fan control) 3 programmable (A, B, C)
	Analog outputs	1 analog output (0-20 mA / 4-20 mA).
	PTC Input	Trip > 3.6 kΩ, reset < 1.6 kΩ.
	Expansion slots	1
OPERATION MODES	Start modes	Direct start (DOL)
		Current limit start
		Current ramp and current limit start
		Initial torque pulse start
		Voltage ramp start
	Stop modes	Spin stop
		Voltage ramp stop
PROTECTIONS	Motor protection	Phase sequence
		Locked rotor
		Phase imbalance
		Overload and underload
		Low power and overpower
		Motor temperature (thermal model)
		Motor overtemperature (PTC)
		Excessive starting time
		Maximum number of starts
	Softstarter protections	SCR short circuit
		Bypass fault
		Ground fault current
		Input phase loss
		Low input voltage
		High input voltage
		Equipment thermal model
		Input frequency
		Signal loss of analog inputs

NOTES

[1] Other configurations consult with Power Electronics.
[2] Above 50 °C with power reduction.
[3] Consult availability with Power Electronics.

POWER ELECTRONICS

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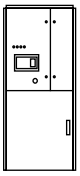

SETTINGS	Functions	Parameter lock
		Second motor setting
		Autoreset
		Emergency run
		Simulation
INCLUDED ITEMS	Mechanical lock	Mechanical door lock included
OPTIONAL	Optional hardware	Power Factor Correction (PFC) [4]
		Cabinet heater
		Motor space heater control
	Serial communication	DeviceNET
		Modbus RTU
		Profibus-DP
	Ethernet communication	Modbus-TCP
		Ethernet/IP
		Profinet
CONTROL PANEL	Type	Fixed
	Display	LCD display with 4 lines of information
		LED indicators (Ready, Run, Trip, Local)
		Keypad with 11 keys (Start, Stop, Reset, Local/Remote, Menu, Back, Up, Down, Logs, Alt, and Tools)
	Display information	99 event logs
		Softstarter state
		Current in the three phases
		Motor power factor
		Frequency
		Motor power (kW)
		Motor power (HP)
		Motor temperature (termal model)
		Energy (kWh)
		Operating hours
		I/O values
		Input Voltage
REGULATIONS	Certifications	CE, UL [5]
	Electromagnetic compatibility	EN 61000-6-2, -4
		IEC 60947-4-2
	Design and construction	EN 62271-1, -200 [6]
		IEC 60068-2-6-Fc – Vibration

NOTES

[4] Up to 600 kVAr. For larger units consult with Power Electronics. Vacuum contactor included.
[5] UL certification in starters ≤ 4.16 kV. Consult with Power electronics.
[6] Classification IAC: AFL 31.5 kA 1 s.

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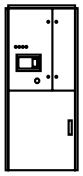

DIMENSIONS

Voltage	Configuration	Width W (mm)	Depth D (mm)	Height H (mm)	Weight (kg)
≤6.6 kV	VS7xxxxxN	1040	1452	2278	1000
	VS7xxxxxS				1200
11 kV	VS7xxxxxN	1190	1453	2278	1200
	VS7xxxxxS	1440	1652	2225	1600
13.8 kV	VS7xxxxxN	1440	1800	2278	1350
	VS7xxxxxS				1700

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