

V6

The V6 is manufactured to the highest standards of quality and mechanical robustness, and is supplied with hardware and software designed for continuous operation with the even most demanding of applications.

V6

User experience. The V6 starter has an intuitive user interface that makes setup and operation easier. The LCD screen displays important information such as engine status, temperature, current... The buttons and menus are easy to understand and use, even for inexperienced users.

Reliability. The V6 starter is equipped with a series of safety features that protect the engine and the starter. These features include overloading protection, overheating protection, short-circuit protection, and ground fault protection, among others. The V6 starter also has a feature to continue working even with a damaged phase if necessary.

Versatility. The V6 starter can be used with a wide range of engines and applications thanks to its wide current range of 16-1250A. It includes functions such as adaptive control, pump cleaning, DC break, reverse direction, etc., to cover the wide range of possibilities for pump control operation.

Communications. Compatible with a multitude of standardized communication protocols to interact with any monitoring and control system: Modbus RTU, Modbus TCP, Profibus, Profinet, Devicenet, and Ethernet/IP.

Efficiency. The entire range of V6 starters includes integrated bypass, meaning the permanent regime efficiency is over 99%. Additionally, the starter offers several start and stop options to maximize efficiency throughout its operation time.

Pumping applications. For pressure control pumping applications, the starter features a SmartPump expansion card that has extra dedicated digital and analog I/O for the application.

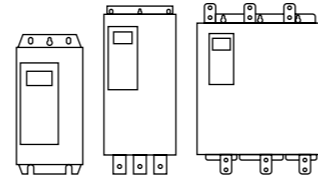




200 - 690 V

From 7.5 kW to 1200 kW

V6



INPUT	Current range ^[1]	16A – 1250A (7.5kW – 1200kW)		
	Voltage range	200 – 525 VAC (±10%) 380 – 690 Vac (-5/+10%)		
	Control voltage	110 - 240 VAC (+10%/-15%), 600mA		
	Input frequency	50Hz/60Hz (±5%)		
OUTPUT	Output voltage	0 to 100% Supply voltage		
	Output frequency	Equal to input		
	Efficiency (At full load)	≥ 99%		
ENVIRONMENTAL CONDITIONS	Operation ambient temperature	Minimum: -10°C Maximum: +60°C ^[2]		
	Storage temperature	Minimum: -25°C Maximum: +60°C		
	Altitude ^[1]	> 1000m, 1% PN(kW) each 100m; 3000m maximum		
	Ambient humidity	< 95%, non-condensing		
	Degree of protection	IP20 (Frame 1) IP00 (Frames 2 y 3) ^[3]		
	Vibration	According IEC 60068-2-6		
	Conformal Coated Electronics	Class 3C3		
PROTECTIONS	Motor protections	Phase sequence		
		Locked rotor		
		Phase imbalance		
		Overload and underload		
		Low power and over power		
		Motor temperature (thermal model)		
		Motor overtemperature (PTC)		
		Excessive starting time		
		Maximum number of starts per hour		
		Softstarter protections	SCR short circuit	
	Ground fault current			
	Heatsink temperature			
	Input phase loss			
	Low input voltage			
	High input voltage			
	Equipment thermal model			
	Ground fault			
	Loss of signal from analog inputs settings functions			
	SETTINGS		Functions	Parameter lock
		Second motor setting		
Scheduled start/stop (days of the week and time)				
DC brake				
Pump cleaning cycle				
Adaptive stop control				
Operation at reduced speed (Jog)				
Operation with a damaged phase (PowerThrough)				
HARDWARE		Digital inputs		2 fixed (Start/Stop and Reset)
				2 programmable

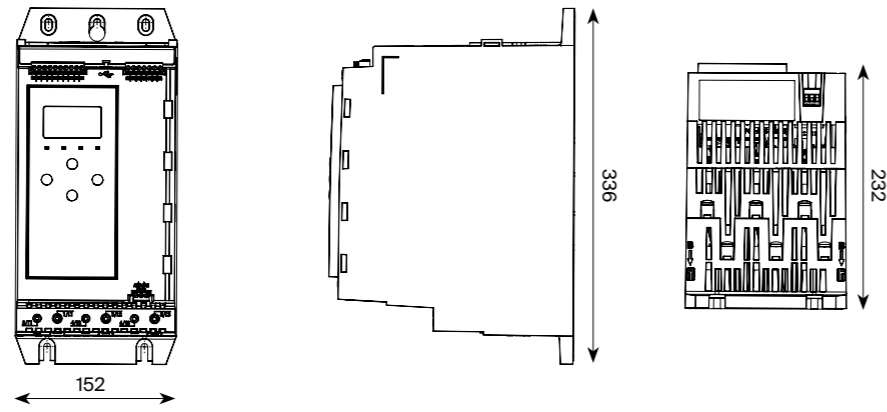
NOTES

- [1] Consult availability with Power Electronics.
 [2] Above 40°C with power reduction.
 [3] Optional IP20 for sizes 2 and 3.

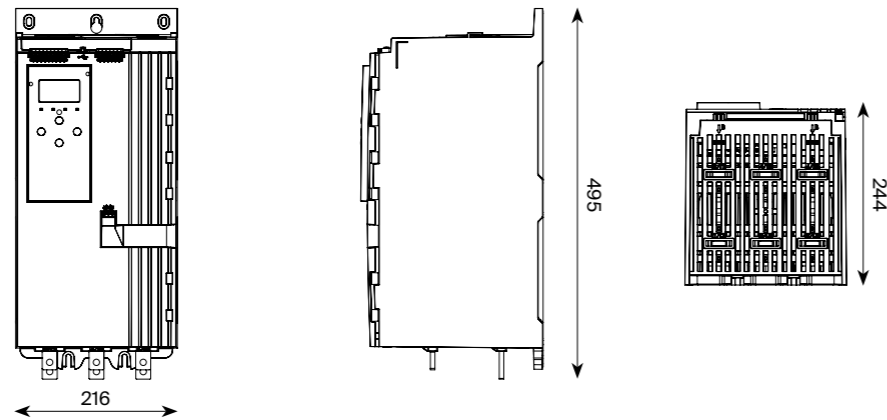
HARDWARE	Digital outputs	2 fixed relays (Main contactor and bypass) 1 configurable switch (NO/NC) 1 configurable relay (NO)	
	Analog outputs	1 analog output (0-20mA or 4-20mA)	
	Ptc input	Trip > 3.6kΩ, reset < 1.6kΩ	
	Expansion slots	1	
OPTIONALS ^[4]	Optional hardware	Remote Keypad	
		IP20 Conversion Kit (Sizes 2 and 3)	
		Disassembly tool (V6TOOL)	
	Serial communication	"Pumping Smart Card" board: - 3 digital inputs - 3 analog inputs 4-20mA - 1 RTD input - 1 USB-B port	
		DeviceNET	
		Modbus RTU ^[5]	
	Ethernet communication	Profibus-DP	
		Modbus-TCP ^[5]	
		Ethernet/IP ^[5]	
		Profinet ^[5]	
CONTROL PANEL	Type	Fixed	
	Length ^[6]	3 meters	
	Connectivity	PC software through Modbus RTU, Modbus TCP, or USB.	
		LCD display with 4 lines of information	
	Lcd display	LED indicators (Ready, Run, Trip, Local)	
		Keypad with 4 keys (Menu, Back, Up, Down)	
	Remote keypad (opcional)	LCD display with four lines of information	
		LED indicators (Ready, Run, Trip, Local)	
		Keypad with 11 keys (Start, Stop, Reset, Local/Remote, Menu, Back, Up, Down, Logs, Graph, and Tools)	
	Display information	Software version	
Current in the three phases			
Voltage in the three phases and average voltage			
Mains frequency			
Motor power factor			
Motor power			
Motor temperature (%)			
Operating hours			
Number of starts			
I/O value			
REGULATIONS	Certifications	CE, RCM, RoHS, UKCA, WEEE	
		Directive EMC (2014/35/EU)	
	Electromagnetic compatibility	IEC60947-4-2	
		Design and construction	IEC 60068-2-6 – Vibration
	NOTES	[4] All optional cards have a connector for the remote keypad. [5] Includes "Ground Fault" for ground fault detection. [6] It only affects the remote keypad.	Heatsink temperature
			Bypass model (%)
			SCR temperature
			Load capacity (%)
			Ground fault current (only with Ground Fault cards)
			Information from the last start: duration, starting current, motor temperature (thermal model).
Date and time (RTC)			
Recording of up to 384 events (starts, stops, configuration changes...)			

FRAMES

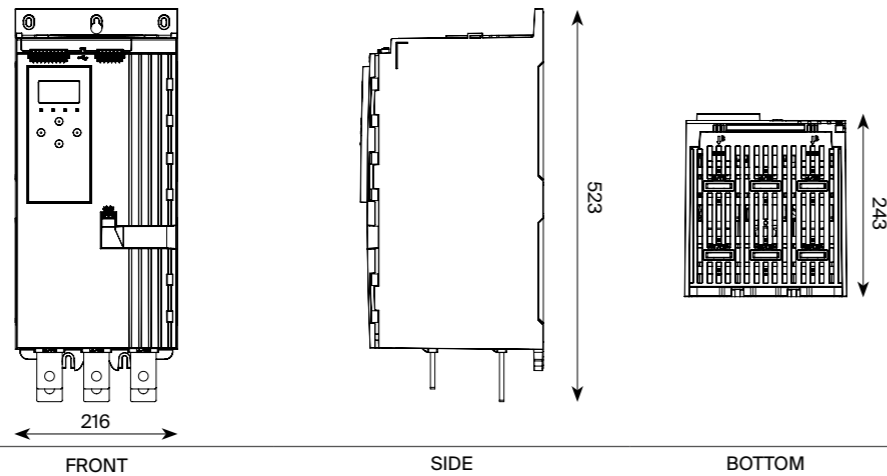
Frame 1



Frame 2A



Frame 2B



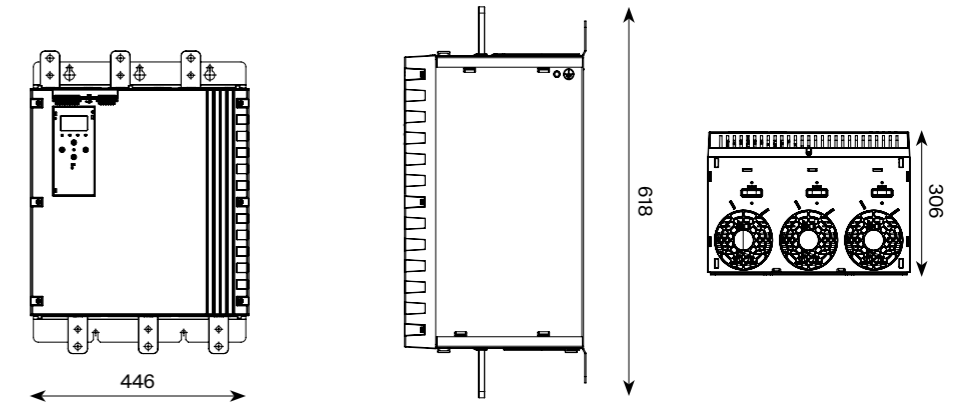
FRONT

SIDE

BOTTOM

FRAMES

Frame 3



FRONT

SIDE

BOTTOM

V6 - ACCESORIES

CODE	DESCRIPTION
V6DN	DeviceNet communications module
V6ET	Ethernet I/P + Ground Fault communications module
V6FG1	Fingerguard, Frame 2
V6FG2	Fingerguard, Frame 3
V6TCP	Modbus TCP + Ground Fault communications module
V6RTU	Modbus RTU + Ground Fault communications module
V6PB	Profibus communications module
V6PN	Profinet + Ground Fault communications module
V6CF1	Remote Keypad Card
V6CF3	Remote, Keypad Card + Keypad
V6CF2	Remote Keypad
V6PUMP	Pumping Smart Card, Pump Applicaton
V6TOOL	Enclosure Opening Tools

NOTES

STANDARD RATINGS

DIRECT CONNECTION						
Frame	Model	3.0-10:350	3.5-15:345	4.0-10:350	4.0-20:340	5.0-5:355
1	V60024xB	24	20	19	16	16
	V60042xB	42	34	34	27	31
	V60052xB	52	41	39	34	34
	Model	3.0-10:390	3.5-15:585	4.0-10:590	4.0-20:580	5.0-5:595
	V60064xB	64	62	60	50	53
	V60105xB	105	86	84	68	76
	V60115xB	115	107	104	86	95
2	V60135xB	135	129	126	103	115
	V60200xB	200	170	165	138	150
	V60229xB	229	194	187	157	170
	V60250xB	250	244	230	200	202
	V60352xB	352	285	277	234	257
	V60410xB	410	410	410	379	400
3	V60550xB	550	526	505	427	462
	V60835xB	835	654	630	535	592
	V61070xB	1070	950	905	785	834
	V61230xB	1230	1154	1090	959	989
	V61250xB	1250	1250	1250	1155	1250

INTERNAL TRIANGLE						
Frame	Model	3.0-10:350	3.5-15:345	4.0-10:350	4.0-20:340	5.0-5:355
1	V60024xB	36	30	29	24	24
	V60042xB	63	51	51	41	47
	V60052xB	78	62	59	51	51
	Model	3.0-10:390	3.5-15:585	4.0-10:590	4.0-20:580	5.0-5:595
	V60064xB	96	93	90	75	80
	V60105xB	158	159	126	102	114
	V60115xB	173	161	156	129	143
2	V60135xB	203	194	189	155	173
	V60200xB	300	255	248	207	225
	V60229xB	344	291	281	236	255
	V60250xB	375	366	345	300	303
	V60352xB	528	428	415	351	386
	V60410xB	615	615	615	568	600
3	V60550xB	825	789	758	640	694
	V60835xB	1253	981	945	803	888
	V61070xB	1605	1425	1358	1178	1251
	V61230xB	1845	1731	1635	1439	1484
	V61250xB	1875	1875	1875	1733	1875

NOTES