

Altivar 212 variable speed drives

for 3-phase asynchronous motors from 0.75 to 75 kW

Catalogue

March 2011



IP 20 or IP 21 variable speed drives for asynchronous and synchronous motors

Type of machine		Simple machines		Pumps and fans (building (HVAC)) (1)	
					
Power range for 50...60 Hz (kW) line supply		0.18...4	0.18...15	0.75...75	
Single-phase 100...120 V (kW)		0.18...0.75	–	–	
Single-phase 200...240 V (kW)		0.18...2.2	0.18...2.2	–	
Three-phase 200...230 V (kW)		–	–	–	
Three-phase 200...240 V (kW)		0.18...4	0.18...15	0.75...30	
Three-phase 380...480 V (kW)		–	–	0.75...75	
Three-phase 380...500 V (kW)		–	0.37...15	–	
Three-phase 500...600 V (kW)		–	–	–	
Three-phase 525...600 V (kW)		–	0.75...15	–	
Three-phase 500...690 V (kW)		–	–	–	
Degree of protection		IP 20		IP 21	
Type of cooling		Heatsink			
Drive		Output frequency		Output frequency	
Type of control		Asynchronous motor		Asynchronous motor	
		Synchronous motor		Synchronous motor	
Transient overtorque		150...170% of the nominal motor torque		120% of the nominal motor torque	
Functions		40		50	
Number of functions		8		16	
Number of preset speeds		1		3	
Number of I/O		4		6	
Analog inputs		1		1	
Logic inputs		1		–	
Analog outputs		1		2	
Logic outputs		–		–	
Relay outputs		1		2	
Communication		Modbus		Modbus and CANopen	
Integrated		–		CANopen Daisy Chain, DeviceNet, PROFIBUS DP, Modbus TCP, Fipio	
Available as an option				Modbus, METASYS N2, APOGEE FLN, BACnet, LonWORKS	
Cards (available as an option)		–			
Dialogue tools		IP 54 or IP 65 remote terminal		IP 54 or IP 65 remote graphic display terminal	
Configuration tools		SoMove		PCSoft for ATV 212	
Setup software		Simple Loader, Multi-Loader		Multi-Loader	
Configuration tools					
Standards and certifications		IEC 61800-5-1		IEC 61800-3 (environments 1 and 2, categories C1 to C3, cat. C1 with option for ATV 212)	
		CE, UL, CSA, C-Tick, NOM, GOST		EN 55011: Group 1, class A and class B with option card. CE, UL, CSA, C-Tick, NOM	
References		ATV 12		ATV 312	
Catalogues		"Altivar 12 variable speed drives"		"Altivar 312 variable speed drives"	
				"Altivar 212 variable speed drives"	

(1) Heating, Ventilation and Air Conditioning

**Pumps and fans
(industrial)**



Complex machines



0.37...800	0.37...630
–	–
0.37... 5.5	0.37... 5.5
–	–
0.75... 90	0.37... 75
0.75... 630	0.75... 500
–	–
2.2... 7.5	1.5... 7.5
–	–
2.2... 800	1.5... 630
IP 20	
Heatsink or water-cooled system	Heatsink, base plate or water-cooled system
0.1...500 Hz for the entire range 0.1...599 Hz up to 37 kW at 200...240 V ~ and 380...480 V ~	0.1...500 Hz for the entire range 0.1...599 Hz up to 37 kW at 200...240 V ~ and 380...480 V ~
Sensorless flux vector control Voltage/frequency ratio (2 or 5 points) Energy saving ratio	Flux vector control with or without sensor Voltage/frequency ratio (2 or 5 points) ENA System
Vector control without speed feedback 120% of the nominal motor torque for 60 seconds	Vector control with or without speed feedback 220% of the nominal motor torque for 2 seconds 170% for 60 seconds
> 100	> 150
8	16
2...4	2...4
6...20	6...20
1...3	1...3
0...8	0...8
2...4	2...4
Modbus and CANopen	
Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link, LONWORKS, METASYS N2, APOGEE FLN, BACnet	Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link
I/O extension cards, "Controller Inside" programmable card, multi-pump cards, encoder interface cards	Interface cards for incremental, resolver, SinCos, SinCos Hiperface®, EnDat® or SSI encoders, I/O extension cards, Controller Inside programmable card
IP 54 or IP 65 remote graphic display terminal	
SoMove	
Simple Loader, Multi-Loader	
IEC 61800-5-1 IEC 61800-3 (environments 1 and 2, categories C1 to C3), IEC 61000-4-2/4-3/4-4/4-5/4-6/4-11	
CE, UL, CSA, DNV, C-Tick, NOM, GOST	
ATV 61	ATV 71
"Altivar 61 variable speed drives"	"Altivar 71 variable speed drives"



More technical information on www.schneider-electric.com

IP 54 or IP 55 variable speed drives for asynchronous and synchronous motors

Type of machine		Simple machines	Pumps and fans (building (HVAC)) (1)
			
Power range for 50...60 Hz (kW) line supply		0.18...15	0.75...75
Single-phase 200...240 V (kW)		0.18...2.2	–
Three-phase 380...480 V (kW)		–	0.75...75
Three-phase 380...500 V (kW)		0.37...15	–
Degree of protection		IP 55	IP 55
Variants		Enclosure user-definable up to 4 kW: Vario switch disconnecter, LEDs, selector switch, potentiometer	–
Drive	Output frequency	0.1...500 Hz	0.1...200 Hz
	Type of control	Asynchronous motor	Sensorless flux vector control Voltage/frequency ratio
		Synchronous motor	–
	Transient overtorque	170...200% of the nominal motor torque	120% of the nominal motor torque for 60 seconds
Functions			
Number of functions		50	50
Number of preset speeds		16	7
Number of I/O	Analog inputs	3	2
	Logic inputs	6	3
	Analog outputs	1	1
	Logic outputs	–	–
	Relay outputs	2	2
Communication	Integrated	Modbus and CANopen	Modbus, METASYS N2, APOGEE FLN, BACnet
	Available as an option	Modbus TCP, Fipio, PROFIBUS DP, DeviceNet	LONWORKS
Cards (available as an option)		–	–
Dialogue tools		IP 65 remote terminal	IP 54 or IP 65 remote graphic display terminal
Configuration tools	Setup software	SoMove	PCSoft for ATV 212 drive
	Configuration tool	Simple Loader	Multi-Loader
Standards and certifications		IEC 61800-5-1, IEC 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST	
References		ATV 31C	ATV 212W
Catalogues		"Altivar 31C variable speed drives"	"Altivar 212 variable speed drives"

(1) Heating, Ventilation and Air Conditioning

**Pumps and fans
(industrial)**



0.75...90

—
0.75... 90

IP 54

— Equipped with a Vario switch disconnecter

0.1...599 Hz from 0.75 to 45 kW
0.1...500 Hz from 55...90 kW

Sensorless flux vector control
Voltage/frequency ratio (2 or 5 points)
Energy saving ratio

Vector control without speed feedback
110% of the nominal motor torque for 60 seconds

>100

8

2...4

6...20

1...3

0...8

2...4

Modbus and CANopen

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link, LONWORKS, METASYS N2, APOGEE FLN, BACnet

I/O extension cards, "Controller Inside" programmable card, multi-pump cards, encoder interface cards

IP 54 or IP 65 remote graphic display terminal

SoMove

Simple Loader, Multi-Loader

IEC 61800-5-1, IEC 61800-3 (environments 1 and 2, categories C1 to C3), IEC 61000-4-2/4-3/4-4/4-5/4-6/4-11
CE, UL, CSA, DNV, C-Tick, NOM, GOST

ATV 61W

ATV 61E5

"Altivar 61 variable speed drives"

Complex machines



0.75...75

0.75... 75

— Equipped with a Vario switch disconnecter

0.1...599 Hz from 0.75 to 37 kW
0.1...500 Hz from 45 to 75 kW

Sensorless flux vector control
Voltage/frequency ratio (2 or 5 points)
ENA System

Vector control with or without speed feedback
220% of the nominal motor torque for 2 seconds
170% for 60 seconds

>150

16

2...4

6...20

1...3

0...8

2...4

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link

Interface cards for incremental, resolver, SinCos, SinCos Hiperface®, EnDat® or SSI encoders, I/O extension cards, Controller Inside programmable card

ATV 71W

ATV 71E5

"Altivar 71 variable speed drives"



More technical information on www.schneider-electric.com

Variable speed drives

Altivar 61 Plus and Altivar 71 Plus

Integrated solutions

Type of machine		Pumps and fans (industrial)		
				
Power range for 50...60 Hz (kW) line supply		90...630	90...800	630...2400
Three-phase 380... 415 V		90...630	90...630	630...1400
Three-phase 500 V		–	90...630	630...1800
Three-phase 690 V		–	110...800	800...2400
Main characteristics		With enhanced protection		With enhanced protection and integrated cooling circuit
Variants		Ready to use	Standard offer Modular with integrated options User-definable on request	
Drive	Output frequency	0.1...500 Hz		
	Type of control	Asynchronous motor	Sensorless flux vector control Voltage/frequency ratio 2 or 5 points Energy saving ratio	
		Synchronous motor	Flux vector control without speed feedback	
	Transient overtorque	120% of the nominal motor torque for 60 seconds		
Communication	Embedded	Modbus and CANopen		
	As an option	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, InterBus, CC-Link, LonWorks, METASYS N2, APOGEE FLN, BACnet		
Cards (available as an option)		"Controller Inside" programmable card Multi-pump cards		
Degree of protection		IP 54 with separate air flows, ATV 61ES5	IP 23 compact version, ATV 61EXC2 IP 54 compact version, ATV 61EXC5 IP 54 with separate air flows, ATV 61EXS5	With integrated air-cooled circuit: IP 23: ATV 61EXA2 IP 54: ATV 61EXA5 With external water-cooled system: IP 55, on request
References		ATV 61 Plus		
Catalogues		"Altivar 61 variable speed drives"		



Complex machines
(industrial and infrastructure)



90...500	90...630	500...2000
90... 500	90... 500	500... 1300
—	90...500	500... 1500
—	110...630	630...2000
With enhanced protection		With enhanced protection and integrated cooling circuit
Ready to use	Standard offer Modular with integrated options User-definable on request	
0.1...500 Hz		
Flux vector control with or without sensor Voltage/frequency ratio (2 or 5 points) ENA System		
Vector control with or without speed feedback		
220% of the nominal motor torque for 2 seconds 170% of the nominal motor torque for 60 seconds		
Modbus and CANopen		
Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, InterBus, CC-Link		
"Controller Inside" programmable card		
IP 54 with separate air flows, ATV 71ES5	IP 23 compact version, ATV 71EXC2 IP 54 compact version, ATV 71EXC5 IP 54 with separate air flows, ATV 71EXS5	IP 23, with integrated air-cooled circuit, ATV 71EXA2 IP 54, with integrated air-cooled circuit, ATV 71EXA5 IP 55, with external water-cooled system (on request)

ATV 71 Plus

"Altivar 71 variable speed drives"



More technical information on www.schneider-electric.com