# **Product data sheet**

Specification





# variable speed drive ATV312 - 11kW - 25kVA - 257 W - 525..600 V - 3-phase supply

ATV312HD11S6

- Discontinued on: Jan 5, 2021
- ! End-of-service on: Jan 22, 2021

#### Main

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Range Of Product	Altivar 312
Product Or Component Type	Variable speed drive
Product Destination	Asynchronous motors
Product Specific Application	Simple machine
Assembly Style	With heat sink
Component Name	ATV312
Motor Power Kw	11 kW
Motor Power Hp	15 hp
[Us] Rated Supply Voltage	525600 V - 1510 %
Supply Frequency	5060 Hz - 55 %
Network Number Of Phases	3 phases
Line Current	27.8 A 525 V, Isc = 22 kA 24.4 A 600 V
Emc Filter	Without EMC filter
Apparent Power	25 kVA
Maximum Transient Current	25.5 A 60 s
Power Dissipation In W	257 W at nominal load
Speed Range	150
Asynchronous Motor Control Profile	Factory set : constant torque Sensorless flux vector control with PWM type motor control signal
Electrical Connection	Al1, Al2, Al3, AOV, AOC, R1A, R1B, R1C, R2A, R2B, Ll1Ll6 terminal 0.00 in² (2.5 mm²) AWG 14 L1, L2, L3, U, V, W, PA, PB, PA/+, PC/- terminal 0.04 in² (25 mm²) AWG 3
Supply	Internal supply for logic inputs 1930 V 100 mA overload and short-circuit protection Internal supply for reference potentiometer (2.2 to 10 kOhm) 1010.8 V 10 mA overload and short-circuit protection
Communication Port Protocol	Modbus CANopen
Ip Degree Of Protection	IP20 on upper part without cover plate IP21 on connection terminals IP31 on upper part IP41 on upper part

Option Card	Communication card CANopen daisy chain
	Communication card DeviceNet
	Communication card Fipio
	Communication card Modbus TCP
	Communication card Profibus DP

## Complementary

Complementary	
Supply Voltage Limits	446.25660 V
Prospective Line Isc	22 kA
Continuous Output Current	17 A 4 kHz
Output Frequency	0500 Hz
Nominal Switching Frequency	4 kHz
Switching Frequency	216 kHz adjustable
Transient Overtorque	170200 % of nominal motor torque
Braking Torque	150 % 60 s with braking resistor 100 % with braking resistor continuously 150 % without braking resistor
Regulation Loop	Frequency PI regulator
Motor Slip Compensation	Adjustable Suppressable Automatic whatever the load
Output Voltage	<= power supply voltage
Tightening Torque	Al1, Al2, Al3, AOV, AOC, R1A, R1B, R1C, R2A, R2B, Ll1Ll6 5.31 lbf.in (0.6 N.m) L1, L2, L3, U, V, W, PA, PB, PA/+, PC/- 39.83 lbf.in (4.5 N.m)
Insulation	Electrical between power and control
Analogue Input Number	3
Analogue Input Type	Al1 configurable voltage 010 V 30 V max 30000 Ohm Al2 configurable voltage +/- 10 V 30 V max 30000 Ohm Al3 configurable current 020 mA 250 Ohm
Sampling Duration	Al1, Al2, Al3 8 ms analog Ll1Ll6 4 ms discrete
Response Time	AOV, AOC 8 ms analog R1A, R1B, R1C, R2A, R2B 8 ms discrete
Linearity Error	+/- 0.2 % output
Analogue Output Number	1
Analogue Output Type	AOC configurable current 020 mA 800 Ohm 8 bits AOV configurable voltage 010 V 470 Ohm 8 bits
Discrete Input Logic	Logic input not wired LI1LI4), < 13 V Negative logic (source) LI1LI6), > 19 V Positive logic (source) LI1LI6), < 5 V, > 11 V
Discrete Output Number	2
Discrete Output Type	Configurable relay logic R1A, R1B, R1C) 1 NO + 1 NC - 100000 cycles Configurable relay logic R2A, R2B) NC - 100000 cycles
Minimum Switching Current	R1-R2 10 mA 5 V DC
Maximum Switching Current	R1-R2 2 A 250 V AC inductive, cos phi = 0.4 7 ms R1-R2 2 A 30 V DC inductive, cos phi = 0.4 7 ms R1-R2 5 A 250 V AC resistive, cos phi = 1 0 ms R1-R2 5 A 30 V DC resistive, cos phi = 1 0 ms
Discrete Input Number	6
Discrete Input Type	LI1LI6) programmable 24 V, 0100 mA PLC 3500 Ohm

Acceleration And Deceleration Ramps	Linear adjustable separately from 0.1 to 999.9 s S, U or customized
Braking To Standstill	By DC injection
Protection Type	Input phase breaks drive Line supply overvoltage and undervoltage safety circuits drive Line supply phase loss safety function, for three phases supply drive Motor phase breaks drive Overcurrent between output phases and earth (on power up only) drive Overheating protection drive Short-circuit between motor phases drive Thermal protection motor
Insulation Resistance	>= 500 mOhm 500 V DC for 1 minute
Local Signalling	Drive voltage 1 LED red) CANopen bus status four 7-segment display units
Time Constant	5 ms for reference change
Frequency Resolution	Analog input 0.1100 Hz Display unit 0.1 Hz
Connector Type	1 RJ45 Modbus/CANopen
Physical Interface	RS485 multidrop serial link
Transmission Frame	RTU
Transmission Rate	10, 20, 50, 125, 250, 500 kbps or 1 Mbps CANopen 4800, 9600 or 19200 bps Modbus
Number Of Addresses	1127 CANopen 1247 Modbus
Number Of Drive	127 CANopen 31 Modbus
Marking	CE
Operating Position	Vertical +/- 10 degree
Height	12.97 in (329.5 mm)
Width	9.65 in (245 mm)
Depth	7.56 in (192 mm)
Net Weight	22.05 lb(US) (10 kg)

#### **Environment**

Dielectric Strength	2550 V DC between earth and power terminals
3	3600 V AC between control and power terminals
Electromognetic Competibility	4.2/50 up. 0/00 up gurga immunituteat laugi 2.150 04000 4.5
Electromagnetic Compatibility	1.2/50 µs - 8/20 µs surge immunity test level 3 IEC 61000-4-5 Electrical fast transient/burst immunity test level 4 IEC 61000-4-4
	Electrical last transferroust infinitify test level 3 IEC 61000-4-4
	Radiated radio-frequency electromagnetic field immunity test level 3 IEC 61000-4-3
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Standards	IEC 61800-5-1
	IEC 61800-3
Product Certifications	CSA
	DNV
	UL
	GOST
	NOM
	C-Tick
Pollution Degree	2
Protective Treatment	TC
Vibration Resistance	1 gn 13150 Hz)EN/IEC 60068-2-6
	1.5 mm 313 Hz)EN/IEC 60068-2-6
Shock Resistance	15 gn 11 ms EN/IEC 60068-2-27

Relative Humidity	595 % without condensation IEC 60068-2-3 595 % without dripping water IEC 60068-2-3
Ambient Air Temperature For Storage	-13158 °F (-2570 °C)
Ambient Air Temperature For Operation	14122 °F (-1050 °C) without derating with protective cover on top of the drive) 14140 °F (-1060 °C) with derating factor without protective cover on top of the drive)
Operating Altitude	<= 1000 m without derating 10003000 m with current derating 1 % per 100 m

## **Contractual warranty**

Warranty 18 months



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#### Well-being performance



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Rohs Exemption Information

Yes

#### **Certifications & Standards**

Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
	EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information