

# variable speed drive, ATV312, 15 HP, 25 kVA, 397 W, 380 to 500 V 3 phase supply

ATV312HD11N4

Discontinued on: Nov 25, 2022

(!) Discontinued

Product availability: Non-Stock - Not normally stocked in distribution facility

#### Main

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	
Maximum Horse Power Rating	15 hp	
[Us] rated supply voltage	380500 V - 1510 %	
Supply frequency	5060 Hz - 55 %	
Phase	3 phase	
Line current	37.2 A 380 V, Isc = 22 kA 28.4 A 500 V	
EMC filter	Integrated	
Apparent power	25 kVA	
Maximum transient current	41.6 A 60 s	
Power dissipation in W	397 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, LI1Ll6 terminal 0.004 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	

Price is "List Price" and may be subject to a trade discount - check with your local distributor or retailer for actual price.

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	323550 V	
Prospective line Isc	22 kA	
Continuous output current	27.7 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	Suppressable Automatic whatever the load Adjustable	
Output voltage	<= power supply voltage	
Tightening torque	Al1, Al2, Al3, AOV, AOC, R1A, R1B, R1C, R2A, R2B, Ll1Ll6 5.3 lbf.in (0.6 N.m) L1, L2, L3, U, V, W, PA, PB, PA/+, PC/- 39.8 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	for drive voltage 1 LED (red) for 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	
Outer dimension	555 x 234 x 268 mm 390 x 245 x 190 mm 405 x 234 x 268 mm 330 x 245 x 190 mm	
Height	13.0 in (329.5 mm)	
Width	9.6 in (245 mm)	
Depth	7.6 in (192 mm)	
Net Weight	24.3 lb(US) (11 kg)	
Environment		
Dielectric strength	2410 V DC between earth and power terminals 3400 V AC between control and power terminals	
Electromagnetic compatibility	1.2/50 µs - 8/20 µs surge immunity test level 3 conforming to IEC 61000-4-5 Electrical fast transient/burst immunity test level 4 conforming to IEC 61000-4-4 Electrostatic discharge immunity test level 3 conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 conforming to IEC 61000-4-3	
Standards	IEC 61800-5-1 IEC 61800-3	
Product Certifications	UL CSA NOM C-tick GOST DNV	

DNV

2

pollution degree

Protective treatment	TC	
Vibration resistance 1 gn (f= 13150 Hz) conforming to EN/IEC 60068-2-6 1.5 mm (f= 313 Hz) conforming to 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	<= 3280.84 ft (1000 m) without derating 3280.849842.52 ft (10003000 m) with current derating 1 % per 100 m	

## Ordering and shipping details

Category	US1CP4B22153
Discount Schedule	CP4B
GTIN	3606480077715
Returnability	No
Country of origin	US

# **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	11.02 in (28.0 cm)
Package 1 Width	11.81 in (30.0 cm)
Package 1 Length	15.16 in (38.5 cm)
Package 1 Weight	25.915 lb(US) (11.755 kg)
Unit Type of Package 2	P06
Number of Units in Package 2	4
Package 2 Height	31.50 in (80.0 cm)
Package 2 Width	31.50 in (80.0 cm)
Package 2 Length	23.62 in (60.0 cm)
Package 2 Weight	132.32 lb(US) (60.02 kg)

## **Contractual warranty**

Warranty 18 months



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

#### **Use Better**

EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.

○ Repack and remanufacture	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.