

# Product data sheet

## Characteristics

# ATV32HU15N4

variable speed drive ATV32 - 1.5 kw - 400 V - 3 phase - with heat sink

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

Price\* : 732.00 USD



ⓘ Discontinued

### Main

Range of product	Altivar 32
Product or component type	Variable speed drive
Product destination	Asynchronous motors Synchronous motors
Product specific application	Complex machines
Function available	-
Assembly style	With heat sink
Component name	ATV32
EMC filter	Class C2 EMC filter integrated
Phase	3 phase
[Us] rated supply voltage	380...500 V - 15...10 %
Supply voltage limits	323...550 V
Supply frequency	50...60 Hz - 5...5 %
Network frequency	47.5...63 Hz
Motor power kW	1.5 kW 380...480 V
Maximum Horse Power Rating	2 hp 380...480 V

### Complementary

Line current	4.9 A 500 V 3 phase 1.5 kW / 2 hp 6.5 A 380 V 3 phase 1.5 kW / 2 hp
Apparent power	4.2 kVA 500 V 3 phase 1.5 kW / 2 hp
Prospective line I <sub>sc</sub>	5 kA 3 phase
Nominal output current	4.1 A 4 kHz 500 V 1.5 kW / 2 hp
Maximum transient current	6.2 A 60 s 1.5 kW / 2 hp
Output frequency	0.0005...0.599 kHz
Nominal switching frequency	4 kHz
Switching frequency	2...16 kHz adjustable
Speed range	1...100 asynchronous motor in open-loop mode
Speed accuracy	+/- 10 % of nominal slip 0.2 T <sub>n</sub> to T <sub>n</sub>
Torque accuracy	+/- 15 %

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

Transient overtorque	170...200 %
Braking torque	<= 170 % with braking resistor
Asynchronous motor control profile	Voltage/frequency ratio, 2 points Flux vector control without sensor, standard Voltage/frequency ratio - Energy Saving, quadratic U/f Flux vector control without sensor - Energy Saving, NoLoad law Voltage/frequency ratio, 5 points
Synchronous motor control profile	Vector control without sensor
Regulation loop	Adjustable PID regulator
Motor slip compensation	Not available in voltage/frequency ratio (2 or 5 points) Adjustable 0...300 % Automatic whatever the load
Local signalling	1 LED red drive voltage 1 LED green CANopen run 1 LED red CANopen error 1 LED red drive fault
Output voltage	<= power supply voltage
Noise level	43 dB 86/188/EEC
Insulation	Electrical between power and control
Electrical connection	Screw terminal 0.5...1.5 mm <sup>2</sup> , AWG 18...AWG 14 control) Removable screw terminals 1.5...2.5 mm <sup>2</sup> , AWG 14...AWG 12 motor/braking resistor) Screw terminal 1.5...4 mm <sup>2</sup> , AWG 14...AWG 10 power supply)
Tightening torque	4.43 lbf.in (0.5 N.m), 4.4 lb/ft control) 6.20 lbf.in (0.7 N.m), 7.1 lb/ft motor/braking resistor) 5.31 lbf.in (0.6 N.m), 5.3 lb/ft power supply)
Supply	Internal supply for reference potentiometer (1 to 10 kOhm) 10.5 V DC +/- 5 %, <10 mA overload and short-circuit protection
Analogue input number	3
Analogue input type	AI1 voltage 0...10 V DC 30000 Ohm 10 bits AI2 bipolar differential voltage +/- 10 V DC 30000 Ohm 10 bits AI3 current 0...20 mA (or 4-20 mA, x-20 mA, 20-x mA or other patterns by configuration) 250 Ohm 10 bits
Sampling duration	2 ms AI1, AI2, AI3) - analog 2 ms AO1) - analog
Response time	LI1...LI6 8 ms +/- 0.7 ms logic R1A, R1B, R1C 2 ms relay R2A, R2C 2 ms relay
Accuracy	+/- 0.2 % AI1, AI2, AI3) for a temperature of -10...60 °C +/- 0.5 % AI1, AI2, AI3) for a temperature of 25 °C +/- 1 % AO1) for a temperature of 25 °C +/- 2 % AO1) for a temperature of -10...60 °C
Linearity error	+/- 0.2...0.5 % of maximum value AI1, AI2, AI3) +/- 0.3 % AO1)
Analogue output number	1
Analogue output type	AO1 software-configurable current 0...20 mA 800 Ohm 10 bits AO1 software-configurable voltage 0...10 V 470 Ohm 10 bits
Discrete output number	3
Discrete output type	Configurable relay logic R1A, R1B, R1C) NO/NC - 100000 cycles Configurable relay logic R2A, R2B) NO - 100000 cycles Logic LO)
Minimum switching current	5 mA 24 V DC configurable relay logic
Maximum switching current	R1 3 A 250 V AC resistive, cos phi = 1 R1 4 A 30 V DC resistive, cos phi = 1 R1, R2 2 A 250 V AC inductive, cos phi = 0.4 R1, R2 2 A 30 V DC inductive, cos phi = 0.4 R2 5 A 250 V AC resistive, cos phi = 1 R2 5 A 30 V DC resistive, cos phi = 1
Discrete input number	7
Discrete input type	Programmable (sink/source) LI1...LI4)24...30 V DC level 1 PLC Programmable as pulse input 20 kpps LI5)24...30 V DC level 1 PLC Switch-configurable PTC probe LI6)24...30 V DC Safe torque off STO)24...30 V DC - 1500 Ohm
Discrete input logic	Negative logic (sink) LI1...LI6), > 19 V, < 13 V Positive logic (source) LI1...LI6), < 5 V, > 11 V

Acceleration and deceleration ramps	Deceleration ramp automatic stop DC injection Ramp switching S CUS U Linear Deceleration ramp adaptation
Braking to standstill	By DC injection
Protection type	Input phase breaks drive Overcurrent between output phases and earth drive Overheating protection drive Short-circuit between motor phases drive Thermal protection drive
Communication port protocol	CANopen Modbus
Connector type	1 RJ45 on front face)Modbus/CANopen
Physical interface	2-wire RS 485 Modbus
Transmission frame	RTU Modbus
Type of polarization	No impedance Modbus
Number of addresses	1...127 CANopen 1...247 Modbus
Method of access	Slave CANopen
Electromagnetic compatibility	1.2/50 $\mu$ s - 8/20 $\mu$ s surge immunity test, level 3 IEC 61000-4-5 Conducted radio-frequency immunity test, level 3 IEC 61000-4-6 Electrical fast transient/burst immunity test, level 4 IEC 61000-4-4 Electrostatic discharge immunity test, level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test, level 3 IEC 61000-4-3 Voltage dips and interruptions immunity test IEC 61000-4-11
Width	1.77 in (45 mm)
Height	12.80 in (325 mm)
Depth	9.65 in (245 mm)
Net Weight	5.51 lb(US) (2.5 kg)
Option card	Communication card CANopen daisy chain Communication card CANopen open style Communication card DeviceNet Communication card Ethernet/IP Communication card Profibus DP V1
Functionality	Mid
Specific application	Other applications

## Environment

Standards	EN 61800-3 environments 2 category C2 EN 61800-3 environments 1 category C2 EN 55011 class A group 1 EN/IEC 61800-5-1 EN/IEC 61800-3
Product certifications	GOST CSA UL C-tick NOM 117
Marking	CE
Pollution degree	2 EN/IEC 61800-5-1
IP degree of protection	IP20 EN/IEC 61800-5-1
Vibration resistance	1 gn 13...200 Hz) EN/IEC 60068-2-6 1.5 mm peak to peak 3...13 Hz) EN/IEC 60068-2-6
Shock resistance	15 gn 11 msEN/IEC 60068-2-27
Relative humidity	5...95 % without condensation IEC 60068-2-3 5...95 % without dripping water IEC 60068-2-3
Ambient air temperature for operation	14...122 °F (-10...50 °C) without derating 122...140 °F (50...60 °C) with derating factor
Ambient air temperature for storage	-13...158 °F (-25...70 °C)

Operating altitude	<= 3280.84 ft (1000 m) without derating 3280.84...9842.52 ft (1000...3000 m) with current derating 1 % per 100 m
Operating position	Vertical +/- 10 degree

### Ordering and shipping details

Category	22152 - ATV320/ATV312/ATV32 (.25 THRU 7.5HP)
Discount Schedule	CP4B
GTIN	00785901951971
Nbr. of units in pkg.	1
Package weight(Lbs)	5.23 lb(US) (2.37 kg)
Returnability	No
Country of origin	ID

### Packing Units

Package 1 Height	0.850 dm
Package 1 width	2.750 dm
Package 1 Length	3.250 dm

### Contractual warranty

Warranty	18 months
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### ATV32HU15N4 is replaced by:



#### Variable speed drives ATV320U15N4B

variable speed drive, ATV320, 1.5 kW, 380...500 V, 3 phases, book

Qty 1

Reason for Substitution: End of life | Substitution date: 03 May 2016