

# ATV212WD15N4

variable speed drive ATV212 - 15kW - 20hp -  
480V - 3ph - EMC class C2 - IP55



Product availability: Stock - Normally stocked in distribution facility

Price\*: 1668.00 USD



## Main

Commercial Status	Commercialised
Range of product	Altivar 212
Product or component type	Variable speed drive
Device short name	ATV212
Product destination	Asynchronous motors
Product specific application	Pumps and fans in HVAC
Assembly style	With heat sink
Network number of phases	3 phases
Motor power kW	15 kW
Motor power hp	20 hp
[Us] rated supply voltage	380...480 V (- 15...10 %)
Supply voltage limits	323...528 V
Supply frequency	50...60 Hz (- 5...5 %)
Network frequency	47.5...63 Hz
EMC filter	Class C2 EMC filter integrated
Line current	28.4 A for 380 V 22.6 A for 480 V

## Complementary

Apparent power	23.2 kVA for 380 V
Prospective line I <sub>sc</sub>	22 kA
Continuous output current	30.5 A at 380/460 V
Maximum transient current	33.6 A for 60 s
Speed drive output frequency	0.5...200 Hz
Nominal switching frequency	12 kHz
Switching frequency	12...16 kHz with derating factor 6...16 kHz adjustable
Speed range	1...10
Speed accuracy	+/- 10 % of nominal slip for 0.2 T <sub>n</sub> to T <sub>n</sub> torque variation
Torque accuracy	+/- 15 %
Transient overtorque	120 % of nominal motor torque, +/- 10 % for 60 s
Asynchronous motor control profile	Voltage/Frequency ratio, 2 points Voltage/Frequency ratio, 5 points Flux vector control without sensor, standard Voltage/Frequency ratio - Energy Saving, quadratic U/f Voltage/Frequency ratio, automatic IR compensation (U/f + automatic U <sub>0</sub> )
Regulation loop	Adjustable PI regulator

Motor slip compensation	Adjustable Automatic whatever the load Not available in voltage/frequency ratio motor control
Local signalling	1 LED - red - DC bus energized
Output voltage	<= power supply voltage
Isolation	Electrical between power and control
Type of cable	UL 508 cable with UL Type 1 kit: 3 wire(s) - 104 °F (40 °C), copper 75 °C / PVC IEC cable without mounting kit: 1 wire(s) - 113 °F (45 °C), copper 70 °C / PVC IEC cable without mounting kit: 1 wire(s) - 113 °F (45 °C), copper 90 °C / XLPE/EPR
Electrical connection	Terminal 0.02 in <sup>2</sup> (16 mm <sup>2</sup> ) / AWG 4 (L1/R, L2/S, L3/T) Terminal 0 in <sup>2</sup> (2.5 mm <sup>2</sup> ) / AWG 14 (VIA, VIB, FM, FLA, FLB, FLC, RY, RC, F, R, RES)
Tightening torque	26.55 lbf.in (3 N.m) - 26.5 lb.in (L1/R, L2/S, L3/T) 5.31 lbf.in (0.6 N.m) (VIA, VIB, FM, FLA, FLB, FLC, RY, RC, F, R, RES)
Supply	Internal supply: 24 V (21...27 V) DC - <= 200 A with overload and short-circuit protection Internal supply for reference potentiometer (1 to 10 kOhm): 10.5 V DC, +/- 5 % - <= 10 A with overload and short-circuit protection
Analogue input number	2
Analogue input type	Configurable voltage: (VIB) 0...10 V DC - 24 V max - 30000 Ohm - resolution: 10 bits Switch-configurable current: (VIA) 0...20 mA - 250 Ohm - resolution: 10 bits Switch-configurable voltage: (VIA) 0...10 V DC - 24 V max - 30000 Ohm - resolution: 10 bits Configurable PTC probe: (VIB) 0...6 probes - 1500 Ohm
Sampling duration	22 ms +/- 0.5 ms (VIB) - analog input(s) 3.5 ms +/- 0.5 ms (VIA) - analog input(s) 2 ms +/- 0.5 ms (RES) - discrete input(s) 2 ms +/- 0.5 ms (R) - discrete input(s) 2 ms +/- 0.5 ms (F) - discrete input(s)
Response time	7 ms +/- 0.5 ms (RY, RC) - discrete output(s) 7 ms +/- 0.5 ms (FLB, FLC) - discrete output(s) 7 ms +/- 0.5 ms (FLA, FLC) - discrete output(s) 2 ms +/- 0.5 ms (FM) - analog output(s)
Accuracy	+/- 1 % (FM) for a temperature variation 60 °C +/- 0.6 % (VIB) for a temperature variation 60 °C +/- 0.6 % (VIA) for a temperature variation 60 °C
Linearity error	+/- 0.2 % for output (FM) +/- 0.15 % of maximum value for input (VIB) +/- 0.15 % of maximum value for input (VIA)
Analogue output number	1
Analogue output type	Switch-configurable current: (FM) 0...20 mA - 970 Ohm - resolution: 10 bits Switch-configurable voltage: (FM) 0...10 V DC - 7620 Ohm - resolution: 10 bits
Discrete output number	2
Discrete output type	Configurable relay logic: (RY, RC) NO - 100000 cycles Configurable relay logic: (FLB, FLC) NC - 100000 cycles Configurable relay logic: (FLA, FLC) NO - 100000 cycles
Minimum switching current	3 mA at 24 V DC (configurable relay logic)
Maximum switching current	2 A at 30 V DC on inductive load - cos phi = 0.4 - L/R = 7 ms (FL, R) 2 A at 250 V AC on inductive load - cos phi = 0.4 - L/R = 7 ms (FL, R) 5 A at 30 V DC on resistive load - cos phi = 1 - L/R = 0 ms (FL, R) 5 A at 250 V AC on resistive load - cos phi = 1 - L/R = 0 ms (FL, R)
Discrete input type	Programmable (RES) 24 V DC, with level 1 PLC - 4700 Ohm Programmable (R) 24 V DC, with level 1 PLC - 4700 Ohm Programmable (F) 24 V DC, with level 1 PLC - 4700 Ohm
Discrete input logic	Negative logic (sink) (F, R, RES), >= 16 V (state 0), <= 10 V (state 1) Positive logic (source) (F, R, RES), <= 5 V (state 0), >= 11 V (state 1)
Acceleration and deceleration ramps	Automatic based on the load Linear adjustable separately from 0.01 to 3200 s
Braking to standstill	By DC injection

Protection type	With PTC probes for motor Motor phase break for motor Thermal protection for motor Against input phase loss for drive Line supply undervoltage for drive Line supply overvoltage and undervoltage for drive Against exceeding limit speed for drive Break on the control circuit for drive Overvoltages on the DC bus for drive Overcurrent between output phases and earth for drive Input phase breaks for drive Short-circuit between motor phases for drive Thermal power stage for drive Overheating protection for drive
Dielectric strength	5092 V DC between control and power terminals 3535 V DC between earth and power terminals
Insulation resistance	>= 1 MOhm at 500 V DC for 1 minute
Frequency resolution	0.024/50 Hz for analog input 0.1 Hz for display unit
Communication port protocol	APOGEE FLN BACnet LonWorks METASYS N2 Modbus
Connector type	1 RJ45 1 open style
Physical interface	2-wire RS 485
Transmission frame	RTU
Transmission rate	9600 bps or 19200 bps
Data format	8 bits, 1 stop, odd even or no configurable parity
Type of polarization	No impedance
Number of addresses	1...247
Communication service	Monitoring inhabitable Read device identification (43) Read holding registers (03) 2 words maximum Time out setting from 0.1 to 100 s Write multiple registers (16) 2 words maximum Write single register (06)
Option card	Communication card for LonWorks
Operating position	Vertical +/- 10 degree
Width	11.42 in (290 mm)
Height	22.05 in (560 mm)
Depth	12.4 in (315 mm)
Product weight	66.8 lb(US) (30.3 kg)

## Environment

Electromagnetic compatibility	Voltage dips and interruptions immunity test conforming to IEC 61000-4-11 Conducted radio-frequency immunity test level 3 conforming to IEC 61000-4-6 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 Radiated radio-frequency electromagnetic field immunity test level 3 conforming to IEC 61000-4-3 Electrostatic discharge immunity test level 3 conforming to IEC 61000-4-2
Pollution degree	IEC 61800-5-1
IP degree of protection	IP55 conforming to EN/IEC 60529 IP55 conforming to EN/IEC 61800-5-1
Vibration resistance	1 gn (f = 13...200 Hz) conforming to EN/IEC 60068-2-8 1.5 mm (f = 3...13 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
Environmental characteristic	Classes 3S2 conforming to IEC 60721-3-3 Classes 3C1 conforming to IEC 60721-3-3
Noise level	57.4 dB conforming to 86/188/EEC

Operating altitude	3280.84...9842.52 ft (1000...3000 m) (limited to 2000 m for the Corner Grounded distribution network) with current derating 1 % per 100 m <= 3280.84 ft (1000 m) without derating
Relative humidity	5...95 % without dripping water conforming to IEC 60068-2-3 5...95 % without condensation conforming to IEC 60068-2-3
Ambient air temperature for operation	> 104...122 °F (> 40...50 °C) with derating factor 14...104 °F (-10...40 °C) without derating
Ambient air temperature for storage	-13...158 °F (-25...70 °C)
Standards	EN 55011 class A group 1 EN 61800-3 EN 61800-3 category C2 EN 61800-3 category C3 EN 61800-3 environments 1 category C1 EN 61800-3 environments 1 category C2 EN 61800-3 environments 1 category C3 EN 61800-3 environments 2 category C1 EN 61800-3 environments 2 category C2 EN 61800-3 environments 2 category C3 EN 61800-5-1 IEC 61800-3 IEC 61800-3 category C2 IEC 61800-3 category C3 IEC 61800-3 environments 1 category C1 IEC 61800-3 environments 1 category C2 IEC 61800-3 environments 1 category C3 IEC 61800-3 environments 2 category C1 IEC 61800-3 environments 2 category C2 IEC 61800-3 environments 2 category C3 IEC 61800-5-1
Product certifications	CSA C-Tick NOM 117 UL
Marking	CE

## Ordering and shipping details

Category	22157 - ATV212 1 - 25 HP 460 VOLT
Discount Schedule	CP4D
GTIN	00785901957744
Nbr. of units in pkg.	1
Package weight(Lbs)	61.60
Product availability	Stock - Normally stocked in distribution facility
Returnability	Y
Country of origin	FR

## Offer Sustainability

Sustainable offer status	Green Premium product
RoHS	Compliant - since 1112 - <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference contains SVHC above the threshold - <a href="#">go to CaP for more details</a>
Product environmental profile	Available <a href="#">Download Product Environmental</a>
Product end of life instructions	Available <a href="#">Download End Of Life Manual</a>

## Contractual warranty

Period	18 months
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