

# Product datasheet

Specifications



## variable speed drive ATV212 - IP54 - 3 kW 3x380 480 V

Local distributor code:

400939205

ATV212WU30N4CZH28

⚠ Discontinued on: 11 Nov 2022

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### Main

Device short name	ATV212
Product destination	Asynchronous motors
Network number of phases	3 phases
Motor power kW	3 kW
Motor power hp	4 hp
Supply voltage limits	323...528 V
Supply frequency	50...60 Hz - 5...5 %
Line current	6.2 A at 380 V 5 A at 480 V
Range of product	Altivar 212
Product or component type	Variable speed drive
Product specific application	Pumps and fans in HVAC
Communication port protocol	BACnet LonWorks METASYS N2 Modbus APOGEE FLN
[Us] rated supply voltage	380...480 V - 15...10 %
EMC filter	Class C1 EMC filter integrated

### Complementary

Apparent power	5.5 kVA at 380 V
Continuous output current	7.2 A at 380 V 7.2 A at 460 V
Maximum transient current	7.9 A for 60 s
Speed drive output frequency	0.5...200 Hz
Speed range	1...10
Speed accuracy	+/- 10 % of nominal slip 0.2 Tn to Tn
Local signalling	1 LED (red) for DC bus energized
Output voltage	<= power supply voltage
Isolation	Electrical between power and control
Type of cable	Without mounting kit: 1 wire(s)IEC cable at 45 °C, copper 90 °C / XLPE/EPR Without mounting kit: 1 wire(s)IEC cable at 45 °C, copper 70 °C / PVC With UL Type 1 kit: 3 wire(s)UL 508 cable at 40 °C, copper 75 °C / PVC

<b>Electrical connection</b>	VIA, VIB, FM, FLA, FLB, FLC, RY, RC, F, R, RES: terminal 2.5 mm <sup>2</sup> / AWG 14 L1/R, L2/S, L3/T: terminal 6 mm <sup>2</sup> / AWG 10
<b>Tightening torque</b>	1.3 N.m, 11.5 lb.in (L1/R, L2/S, L3/T) 0.6 N.m (VIA, VIB, FM, FLA, FLB, FLC, RY, RC, F, R, RES)
<b>Supply</b>	Internal supply for reference potentiometer (1 to 10 kOhm): 10.5 V DC +/- 5 %, <10 A, protection type: overload and short-circuit protection Internal supply: 24 V DC (21...27 V), <200 A, protection type: overload and short-circuit protection
<b>Sampling duration</b>	2 ms +/- 0.5 ms F discrete 2 ms +/- 0.5 ms R discrete 2 ms +/- 0.5 ms RES discrete 3.5 ms +/- 0.5 ms VIA analog 22 ms +/- 0.5 ms VIB analog
<b>Response time</b>	FM 2 ms, tolerance +/- 0.5 ms for analog output(s) FLA, FLC 7 ms, tolerance +/- 0.5 ms for discrete output(s) FLB, FLC 7 ms, tolerance +/- 0.5 ms for discrete output(s) RY, RC 7 ms, tolerance +/- 0.5 ms for discrete output(s)
<b>Accuracy</b>	+/- 0.6 % (VIA) for a temperature variation 60 °C +/- 0.6 % (VIB) for a temperature variation 60 °C +/- 1 % (FM) for a temperature variation 60 °C
<b>Linearity error</b>	VIA: +/- 0.15 % of maximum value for input VIB: +/- 0.15 % of maximum value for input FM: +/- 0.2 % for output
<b>Analogue output type</b>	FM switch-configurable voltage 0...10 V DC, impedance: 7620 Ohm, resolution 10 bits FM switch-configurable current 0...20 mA, impedance: 970 Ohm, resolution 10 bits
<b>Discrete output type</b>	Configurable relay logic: (FLA, FLC) NO - 100000 cycles Configurable relay logic: (FLB, FLC) NC - 100000 cycles Configurable relay logic: (RY, RC) NO - 100000 cycles
<b>Minimum switching current</b>	3 mA at 24 V DC for configurable relay logic
<b>Maximum switching current</b>	5 A at 250 V AC on resistive load - cos phi = 1 - L/R = 0 ms (FL, R) 5 A at 30 V DC on resistive load - cos phi = 1 - L/R = 0 ms (FL, R) 2 A at 250 V AC on inductive load - cos phi = 0.4 - L/R = 7 ms (FL, R) 2 A at 30 V DC on inductive load - cos phi = 0.4 - L/R = 7 ms (FL, R)
<b>Discrete input type</b>	F programmable 24 V DC, with level 1 PLC, impedance: 4700 Ohm R programmable 24 V DC, with level 1 PLC, impedance: 4700 Ohm RES programmable 24 V DC, with level 1 PLC, impedance: 4700 Ohm
<b>Discrete input logic</b>	Positive logic (source) (F, R, RES), <= 5 V (state 0), >= 11 V (state 1) Negative logic (sink) (F, R, RES), >= 16 V (state 0), <= 10 V (state 1)
<b>Dielectric strength</b>	3535 V DC between earth and power terminals 5092 V DC between control and power terminals
<b>Insulation resistance</b>	>= 1 mOhm 500 V DC for 1 minute
<b>Frequency resolution</b>	Display unit: 0.1 Hz Analog input: 0.024/50 Hz
<b>Communication service</b>	Write single register (06) Time out setting from 0.1 to 100 s Monitoring inhibitible Write multiple registers (16) 2 words maximum Read device identification (43) Read holding registers (03) 2 words maximum
<b>Option card</b>	Communication card for LonWorks
<b>Discrete output number</b>	2
<b>Analogue input number</b>	2
<b>Analogue input type</b>	VIA switch-configurable voltage: 0...10 V DC 24 V max, impedance: 30000 Ohm, resolution 10 bits VIB configurable voltage: 0...10 V DC 24 V max, impedance: 30000 Ohm, resolution 10 bits VIB configurable PTC probe: 0...6 probes, impedance: 1500 Ohm VIA switch-configurable current: 0...20 mA, impedance: 250 Ohm, resolution 10 bits

<b>Analogue output number</b>	1
<b>Physical interface</b>	2-wire RS 485
<b>Connector type</b>	1 RJ45 1 open style
<b>Transmission rate</b>	9600 bps or 19200 bps
<b>Transmission frame</b>	RTU
<b>Number of addresses</b>	1...247
<b>Data format</b>	8 bits, 1 stop, odd even or no configurable parity
<b>Type of polarization</b>	No impedance
<b>Asynchronous motor control profile</b>	Voltage/frequency ratio, automatic IR compensation (U/f + automatic U <sub>0</sub> ) Voltage/frequency ratio, 2 points Voltage/frequency ratio, 5 points Flux vector control without sensor, standard Voltage/frequency ratio - Energy Saving, quadratic U/f
<b>Torque accuracy</b>	+/- 15 %
<b>Transient overtorque</b>	120 % of nominal motor torque +/- 10 % for 60 s
<b>Acceleration and deceleration ramps</b>	Linear adjustable separately from 0.01 to 3200 s Automatic based on the load
<b>Motor slip compensation</b>	Automatic whatever the load Adjustable Not available in voltage/frequency ratio motor control
<b>Switching frequency</b>	6...16 kHz adjustable 12...16 kHz with derating factor
<b>Nominal switching frequency</b>	12 kHz
<b>Braking to standstill</b>	By DC injection
<b>Network frequency</b>	47.5...63 Hz
<b>Prospective line I<sub>sc</sub></b>	5 kA
<b>Protection type</b>	Overheating protection: drive Thermal power stage: drive Short-circuit between motor phases: drive Input phase breaks: drive Overcurrent between output phases and earth: drive Overvoltages on the DC bus: drive Break on the control circuit: drive Against exceeding limit speed: drive Line supply overvoltage and undervoltage: drive Line supply undervoltage: drive Against input phase loss: drive Thermal protection: motor Motor phase break: motor With PTC probes: motor
<b>Width</b>	230 mm
<b>Height</b>	340 mm
<b>Depth</b>	208 mm
<b>Net weight</b>	10.55 kg

## Environment

<b>Pollution degree</b>	3 conforming to IEC 61800-5-1
<b>IP degree of protection</b>	IP54 conforming to EN/IEC 61800-5-1 IP54 conforming to EN/IEC 60529
<b>Vibration resistance</b>	1.5 mm (f= 3...13 Hz) conforming to EN/IEC 60068-2-6 1 gn (f= 13...200 Hz) conforming to EN/IEC 60068-2-8
<b>Shock resistance</b>	15 gn for 11 ms conforming to IEC 60068-2-27

<b>Environmental characteristic</b>	Classes 3C1 conforming to IEC 60721-3-3 Classes 3S2 conforming to IEC 60721-3-3
<b>Noise level</b>	55 dB conforming to 86/188/EEC
<b>Operating altitude</b>	1000...3000 m limited to 2000 m for the Corner Grounded distribution network with current derating 1 % per 100 m <= 1000 m without derating
<b>Relative humidity</b>	5...95 % without condensation conforming to IEC 60068-2-3 5...95 % without dripping water conforming to IEC 60068-2-3
<b>Ambient air temperature for operation</b>	-10...40 °C (without derating) 40...50 °C (with derating factor)
<b>Operating position</b>	Vertical +/- 10 degree
<b>Product certifications</b>	UL CSA C-Tick NOM 117
<b>Marking</b>	CE
<b>Standards</b>	IEC 61800-5-1 IEC 61800-3 environments 2 category C1 IEC 61800-3 IEC 61800-3 environments 1 category C3 EN 61800-3 EN 61800-3 environments 1 category C2 IEC 61800-3 category C1 EN 61800-3 environments 1 category C3 EN 61800-3 environments 2 category C2 IEC 61800-3 environments 1 category C1 IEC 61800-3 environments 1 category C2 EN 61800-3 category C1 EN 61800-3 environments 1 category C1 EN 61800-3 environments 2 category C3 EN 55011 group 1 class B IEC 61800-3 environments 2 category C3 EN 61800-3 environments 2 category C1 IEC 61800-3 environments 2 category C2 EN 61800-5-1
<b>Assembly style</b>	With heat sink
<b>Electromagnetic compatibility</b>	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 Electrical fast transient/burst immunity test level 4 conforming to IEC 61000-4-4 1.2/50 µs - 8/20 µs surge immunity test level 3 conforming to IEC 61000-4-5 Conducted radio-frequency immunity test level 3 conforming to IEC 61000-4-6 Voltage dips and interruptions immunity test conforming to IEC 61000-4-11
<b>Regulation loop</b>	Adjustable PI regulator
<b>Ambient air temperature for storage</b>	-25...70 °C



## Environmental Data

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 Longer



#### Lifetime extension

Repair

No