

Product datasheet

Specifications



variable speed drive, Easy Altivar 610, 110kW, 150hp, 380...460V, IP20

ATV610C11N4

Main

Range of product	Easy Altivar 610
X Product or component type	Variable speed drive
Product specific application	Fan, pump, compressor, conveyor
X Device short name	ATV610
X Variant	Standard version
X Product destination	Asynchronous motors
Mounting mode	Cabinet mount نمیخواهد چون معادل فارسی برایش بلد نیستم
X EMC filter	Integrated conforming to EN/IEC 61800-3 category C3 with 50 m
X IP degree of protection	IP20
X Type of cooling	Forced convection سیستم خنک کنندگی فن به روش جابجایی هوا
Supply frequency	50...60 Hz +/-5 %
X Network number of phases	3 phases
X [Us] rated supply voltage	380...460 V -
X Motor power kW	110 kW for normal duty 90 kW for heavy duty
Motor power hp	150 hp for normal duty 125 hp for heavy duty
X Line current	201 A at 380 V (normal duty) 175.7 A at 460 V (normal duty) 170 A at 380 V (heavy duty) 149.1 A at 460 V (heavy duty)
Prospective line Isc	50 kA
X Apparent power	140.0 kVA at 460 V (normal duty) 118.8 kVA at 460 V (heavy duty)
X Continuous output current	211 A at 2.5 kHz for normal duty 173 A at 2.5 kHz for heavy duty
Maximum transient current	232 A during 60 s (normal duty) 260 A during 60 s (heavy duty)
Asynchronous motor control profile	Variable torque standard Optimized torque mode Constant torque standard نمیخواهد
X Output frequency	0.0001...0.5 kHz
X Nominal switching frequency	2.5 kHz
X Switching frequency	1...8 kHz adjustable

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Number of preset speeds	16 preset speeds	اينو بذار
Communication port protocol	Modbus serial	
Option card	Slot A: communication card, Profibus DP V1 Slot A: digital or analog I/O extension card Slot A: relay output card	بذار

Complementary

Output voltage	<= power supply voltage	
Motor slip compensation	Can be suppressed Adjustable Not available in permanent magnet motor law Automatic whatever the load	
Acceleration and deceleration ramps	Linear adjustable separately from 0.01 to 9000 s S, U or customized	
Braking to standstill	By DC injection	
Protection type	Thermal protection: motor Motor phase break: motor Thermal protection: drive Overheating: drive Overcurrent between output phases and earth: drive Overload of output voltage: drive Short-circuit protection: drive Motor phase break: drive Overvoltages on the DC bus: drive Line supply overvoltage: drive Line supply undervoltage: drive Line supply phase loss: drive Overspeed: drive Break on the control circuit: drive	
Frequency resolution	Display unit: 0.1 Hz Analog input: 0.012/50 Hz	
Electrical connection	Control, screw terminal: 0.5...1.5 mm ² Line side, screw terminal: 2 x 50...3 x 120 mm ² Motor, screw terminal: 3 x 50...3 x 120 mm ²	
Connector type	1 RJ45 (on the remote graphic terminal) for Modbus serial	
Physical interface	2-wire RS 485 for Modbus serial	
Transmission frame	RTU for Modbus serial	
Transmission rate	4.8, 9.6, 19.2, 38.4 kbit/s for Modbus serial	
Type of polarization	No impedance for Modbus serial	نمیخواه
Number of addresses	1...247 for Modbus serial	
Method of access	Slave	نمیخواه
Supply	External supply for digital inputs: 24 V DC (19...30 V), <1.25 mA, protection type: overload and short-circuit protection Internal supply for reference potentiometer (1 to 10 kOhm): 10.5 V DC +/- 5 %, <10 mA, protection type: overload and short-circuit protection	
Local signalling	2 LEDs for local diagnostic 1 LED (yellow) for embedded communication status 2 LEDs (dual colour) for communication module status 1 LED (red) for presence of voltage	
Width	300 mm	
Height	850 mm 1161 mm with IP21 conformity kit	
Depth	375 mm	
Net weight	85.5 kg	
Analogue input number	3	
Analogue input type	AI1, AI2, AI3 software-configurable voltage: 0...10 V DC, impedance: 30 kOhm, resolution 12 bits AI1, AI2, AI3 software-configurable current: 0...20 mA, impedance: 250 Ohm, resolution 12 bits AI2, AI3 software-configurable temperature probe or water level sensor	
Discrete input number	6	
Discrete input type	DI1...DI6 programmable as logic input, 24 V DC (<= 30 V), impedance: 3.5 kOhm DI5, DI6 programmable as pulse input: 0...30 kHz, 24 V DC (<= 30 V)	

X Input compatibility	DI1...DI6: logic input level 1 PLC conforming to EN/IEC 61131-2 DI5, DI6: pulse input level 1 PLC conforming to IEC 65A-68	بذار
X Discrete input logic	Positive logic (source): DI1...DI6 configurable logic input, < 5 V (state 0), > 11 V (state 1) Negative logic (sink): DI1...DI6 configurable logic input, > 16 V (state 0), < 10 V (state 1) Positive logic (source): DI5, DI6 configurable pulse input, < 0.6 V (state 0), > 2.5 V (state 1)	
X Analogue output number	2	
X Analogue output type	Software-configurable current AQ1, AQ2: 0...20 mA, resolution 10 bits Software-configurable voltage AQ1, AQ2: 0...10 V DC impedance 470 Ohm, resolution 10 bits	
X Sampling duration	5 ms +/- 0.1 ms (AI1, AI2, AI3) - analog input 2 ms +/- 0.5 ms (DI1...DI6)configurable - discrete input 5 ms +/- 1 ms (DI5, DI6)configurable - pulse input 10 ms +/- 1 ms (AQ1, AQ2) - analog output	
X Accuracy	+/- 0.6 % AI1, AI2, AI3 for a temperature variation 60 °C analog input +/- 1 % AQ1, AQ2 for a temperature variation 60 °C analog output	نمیخواه
X Linearity error	AI1, AI2, AI3: +/- 0.15 % of maximum value for analog input AQ1, AQ2: +/- 0.2 % for analog output	
X Relay output number	3	بذار، فکر کنیم داشتیم
X Relay output type	Configurable relay logic R1: fault relay NO/NC electrical durability 100000 cycles Configurable relay logic R2: sequence relay NO electrical durability 100000 cycles Configurable relay logic R3: sequence relay NO electrical durability 100000 cycles	نمیخواه
X Refresh time	Relay output (R1, R2, R3): 5 ms (+/- 0.5 ms)	نمیخواه
X Minimum switching current	Relay output R1, R2, R3: 5 mA at 24 V DC	
X Maximum switching current	Relay output R1, R2, R3 on resistive load, cos phi = 1: 3 A at 250 V AC Relay output R1, R2, R3 on resistive load, cos phi = 1: 3 A at 30 V DC Relay output R1, R2, R3 on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 250 V AC Relay output R1, R2, R3 on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 30 V DC	
X Isolation	Between power and control terminals	نمیخواه
X Insulation resistance	> 1 MOhm 500 V DC for 1 minute to earth	نمیخواه
Environment		
X Noise level	76 dB conforming to 86/188/EEC	نمیخواه
X Power dissipation in W	2026 W(forced convection) at 380 V, switching frequency 2.5 kHz	
X Operating position	Vertical +/- 10 degree	
X Electromagnetic compatibility	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	
X Pollution degree	2 conforming to EN/IEC 61800-5-1	
X Vibration resistance	1.5 mm peak to peak (f= 2...13 Hz) conforming to IEC 60068-2-6 1 gn (f= 13...200 Hz) conforming to IEC 60068-2-6	نمیخواه
X Shock resistance	6 gn for 11 ms conforming to IEC 60068-2-27	
X Relative humidity	5...95 % without condensation conforming to IEC 60068-2-3	
X Ambient air temperature for operation	-15...45 °C (without derating) 45...60 °C (with derating factor)	
X Operating altitude	<= 1000 m without derating 1000...4800 m with current derating 1 % per 100 m	
X Environmental characteristic	Chemical pollution resistance class 3C3 conforming to EN/IEC 60721-3-3 Dust pollution resistance class 3S3 conforming to EN/IEC 60721-3-3	
X Standards	EN/IEC 61800-3 Environment 2 category C3 EN/IEC 61800-3 EN/IEC 61800-5-1 IEC 60721-3	
X Marking	CE	

Packing Units

Unit Type of Package 1	PCE
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Number of Units in Package 1	1
Package 1 Height	47.0 cm
Package 1 Width	67.0 cm
Package 1 Length	103.0 cm
Package 1 Weight	96.344 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Upgradeability	Upgradeable through digital modules and upgraded components

Recommended replacement(s)