



Main

Range of product	Altivar 12
Product or component type	Variable speed drive
Product destination	Asynchronous motors
Product specific application	Simple machine
Assembly style	On base plate
Component name	ATV12
Quantity per set	Set of 1
EMC filter	Without EMC filter
Built-in fan	Without
Phase	1 phase
[Us] rated supply voltage	100...120 V - 15...10 %
Motor power kW	0.18 kW
Maximum Horse Power Rating	0.25 hp
Communication port protocol	Modbus
Line current	6 A 100 V 5 A 120 V
Speed range	1...20
Transient overtorque	150...170 % of nominal motor torque depending on drive rating and type of motor
Asynchronous motor control profile	Quadratic voltage/frequency ratio Voltage/frequency ratio (V/f) Sensorless flux vector control
IP degree of protection	IP20 without blanking plate on upper part
Noise level	0 dB

Complementary

Supply frequency	50/60 Hz +/- 5 %
Connector type	1 RJ45 on front face)Modbus

Physical interface	2-wire RS 485 Modbus
Transmission frame	RTU Modbus
Transmission rate	4800 bit/s 9600 bit/s 19200 bit/s 38400 bit/s
Number of addresses	1...247 Modbus
Communication service	Read holding registers (03) 29 words Write single register (06) 29 words Write multiple registers (16) 27 words Read/write multiple registers (23) 4/4 words Read device identification (43)
Prospective line I _{sc}	1 kA
Continuous output current	1.4 A 4 kHz
Maximum transient current	2.1 A 60 s
Speed drive output frequency	0.5...400 Hz
Nominal switching frequency	4 kHz
Switching frequency	2...16 kHz adjustable 4...16 kHz with derating factor
Braking torque	Up to 70 % of nominal motor torque without braking resistor
Motor slip compensation	Adjustable Preset in factory
Output voltage	200...240 V 3 phases
Electrical connection	Terminal 3.5 mm ² , AWG 12 L1, L2, L3, U, V, W, PA, PC)
Tightening torque	7.08 lbf.in (0.8 N.m)
Insulation	Electrical between power and control
Supply	Internal supply for reference potentiometer 5 V DC 4.75...5.25 V), <10 mA overload and short-circuit protection Internal supply for logic inputs 24 V DC 20.4...28.8 V), <100 mA overload and short-circuit protection
Analogue input number	1
Analogue input type	Configurable current AI1 0...20 mA 250 Ohm Configurable voltage AI1 0...10 V 30 kOhm Configurable voltage AI1 0...5 V 30 kOhm
Discrete input number	4
Discrete input type	Programmable LI1...LI4 24 V 18...30 V
Discrete input logic	Negative logic (sink), > 16 V, < 10 V 3.5 kOhm Positive logic (source), 0...< 5 V, > 11 V
Sampling duration	20 ms +/- 1 ms logic input 10 ms analogue input
Linearity error	+/- 0.3 % of maximum value analogue input
Analogue output number	1
Analogue output type	AO1 software-configurable voltage 0...10 V 470 Ohm 8 bits AO1 software-configurable current 0...20 mA 800 Ohm 8 bits
Discrete output number	2
Discrete output type	Logic output LO+, LO- Protected relay output R1A, R1B, R1C 1 C/O
Minimum switching current	5 mA 24 V DC logic relay
Maximum switching current	2 A 250 V AC inductive cos phi = 0.4 L/R = 7 ms logic relay 2 A 30 V DC inductive cos phi = 0.4 L/R = 7 ms logic relay 3 A 250 V AC resistive cos phi = 1 L/R = 0 ms logic relay 4 A 30 V DC resistive cos phi = 1 L/R = 0 ms logic relay
Acceleration and deceleration ramps	S U Linear from 0 to 999.9 s
Braking to standstill	By DC injection, <30 s
Protection type	Line supply overvoltage Line supply undervoltage Overcurrent between output phases and earth Overheating protection Short-circuit between motor phases Against input phase loss in three-phase

Thermal motor protection via the drive by continuous calculation of I²t

Frequency resolution	Analog input converter A/D, 10 bits Display unit 0.1 Hz
Time constant	20 ms +/- 1 ms for reference change
Marking	CE
Operating position	Vertical +/- 10 degree
Height	5.63 in (143 mm)
Width	2.83 in (72 mm)
Depth	4.02 in (102.2 mm)
Net weight	1.54 lb(US) (0.7 kg)
Specific application	Commercial equipment
Motor starter type	Variable speed drive

Environment

Electromagnetic compatibility	Voltage dips and interruptions immunity test EN/IEC 61000-4-11 Surge immunity test EN/IEC 61000-4-5 Electrical fast transient/burst immunity test EN/IEC 61000-4-4 Electrostatic discharge immunity test EN/IEC 61000-4-2 Immunity to conducted disturbances EN/IEC 61000-4-6 Radiated radio-frequency electromagnetic field immunity test EN/IEC 61000-4-3
Electromagnetic emission	Radiated emissions environment 1 category C2 EN/IEC 61800-3 2...16 kHz shielded motor cable Conducted emissions with additional EMC filter environment 1 category C1 EN/IEC 61800-3 4...12 kHz shielded motor cable <16.40 ft (5 m) Conducted emissions with additional EMC filter environment 1 category C2 EN/IEC 61800-3 4...12 kHz shielded motor cable <65.62 ft (20 m) Conducted emissions with additional EMC filter environment 2 category C3 EN/IEC 61800-3 4...12 kHz shielded motor cable <65.62 ft (20 m)
Product certifications	UL GOST C-Tick NOM CSA
Vibration resistance	1 gn 13...200 Hz)EN/IEC 60068-2-6 1.5 mm peak to peak 3...13 Hz) - drive unmounted on symmetrical DIN rail - EN/IEC 60068-2-6
Shock resistance	15 gn 11 ms EN/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 storage	-13...158 °F (-25...70 °C)
Ambient air temperature for operation	14...104 °F (-10...40 °C) protective cover from the top of the drive removed 104...140 °F (40...60 °C) with current derating 2.2 % per °C
Operating altitude	> 3280.84...6561.68 ft (> 1000...2000 m) with current derating 1 % per 100 m <= 3280.84 ft (1000 m) without

Ordering and shipping details

Category	22042 - ATV12 DRIVE AND ACCESSORIES
Discount Schedule	CP4B
GTIN	00785901590293
Package weight(Lbs)	0.87 kg (1.91 lb(US))
Returnability	Yes
Country of origin	ID

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
RoHS exemption information	Yes

China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
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.

Contractual warranty

Warranty	18 months
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