Product datasheet

Specifications

variable speed drive ATV11 - 0.75kW - 230V 1-phase supply - IP20

ATV11HU18M2E327

Discontinued on: 5 Sept 2022

Discontinued

EAN Code: 3389118056336

Main

Range of product	Altivar 11
Product or component type	Variable speed drive
Product specific application	Simple machine
Component name	ATV11
Application market	European
Assembly style	With heat sink
EMC filter	Integrated
Built-in fan	Without
Network number of phases	1 phase
[Us] rated supply voltage	200...240 V - 15...10 %
Supply frequency	50...60 Hz - 5...5 %
Motor power kW	0.75 kW
Line current	8.6 A at 230 V, Isc = 1 kA
Nominal output current	3.6 A 230 V motor 4 kHz
Maximum transient current	5.4 A for 60 s
Power dissipation in W	37 W at nominal load
Switching frequency	2...16 kHz adjustable 4...16 kHz with derating factor
Braking torque	150 % of nominal motor torque with braking resistor at high inertia 20 % of nominal motor torque without braking resistor at no load 80 % of nominal motor torque with braking resistor at no load
Asynchronous motor control profile	Sensorless flux vector control with PWM type motor control signal
Electrical connection	Terminal, clamping capacity: 1.5 mm², AWG 14 (AI1, RA-RC, LI1...LI4, DO) Terminal, clamping capacity: 1.5 mm², AWG 14 (L1, L2, L3, U, V, W, PA, PC)
Supply	Internal supply for logic inputs: 15 V (+/- 15 %) 100 A, protection type: overload and short-circuit protection Internal supply for reference potentiometer (2.2 to 10 kOhm): 5...5.25 VDC 10 A, protection type: overload and short-circuit protection
Analogue input type	Configurable current AI1 4...20 mA 250 Ohm without adding resistor Configurable voltage AI1 0...5 V 40000 Ohm only with internal supply Configurable current AI1 0...20 mA 250 Ohm Configurable voltage AI1 0...10 V 40000 Ohm
Sampling duration	AI1: 20 ms analog LI1...LI4: 20 ms discrete
Response time	20 ms DO

Linearity error	DO: +/- 1 % for output AI: +/- 5 % for input
Discrete input type	Assignable LI1 forward 5000 Ohm 15 V 24 V Assignable LI2 reverse 5000 Ohm 15 V 24 V Assignable LI3/LI4 4 preset speeds 5000 Ohm 15 V 24 V
Discrete input logic	Positive logic (source) (LI1...LI4), < 5 V (state 0), > 11 V (state 1)
Discrete output type	Assignable as external voltage DO 30 V max, 30 mA Assignable as open collector logic output DO 100 Ohm, 50 mA max Factory set as PWM open collector output DO at 2 kHz 10 mA max Protected relay logic RA-RC 1 NO Assignable as internal voltage DO
Minimum switching current	RA-RC 10 mA at 24 V DC
Maximum switching current	2 A 250 V AC inductive cos phi = 0.4 0 ms RA-RC 2 A 30 V DC inductive cos phi = 0.4 0 ms RA-RC 5 A 250 V AC resistive cos phi = 1 7 ms RA-RC 5 A 30 V DC resistive cos phi = 1 7 ms RA-RC
Protection type	Line supply overvoltage: drive Line supply undervoltage: drive Overheating protection: drive Short-circuit between motor phases: drive Thermal protection: motor Overcurrent between output phases and earth: drive
Frequency resolution	Display unit: 0.1 Hz Analog input: converter A/D, 10 bits
Electromagnetic compatibility	1.2/50 µs - 8/20 µs surge immunity test level 3 conforming to EN/IEC 61000-4-5 Electrical fast transient/burst immunity test level 4 conforming to EN/IEC 61000-4-4 Electrostatic discharge immunity test level 3 conforming to EN/IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 conforming to EN/IEC 61000-4-3
Maximum motor cable length	10 m without additional EMC filter from 2 to 16 kHz conforming to EN 55011 class A group 1 10 m without additional EMC filter from 2 to 16 kHz conforming to EN 55022 class A group 1 20 m with additional EMC filter from 2 to 16 kHz conforming to EN 55011 class B 5 m without additional EMC filter from 2 to 12 kHz conforming to EN 55011 class B 5 m without additional EMC filter from 2 to 12 kHz conforming to EN 55022 class B 50 m with additional EMC filter from 2 to 16 kHz conforming to EN 55011 class A group 1
Vibration resistance	1 gn (f= 13…200 Hz) conforming to EN/IEC 60068-2-6 1.5 mm peak to peak (f= 3…13 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to EN/IEC 60068-2-27
Relative humidity	5…93 % without condensation conforming to IEC 60068-2-3 5…93 % without dripping water conforming to IEC 60068-2-3
Ambient air temperature for operation	-10…40 °C without derating 40…50 °C by removing the protective cover from the top of the drive 50…60 °C by removing the protective cover from the top of the drive with current derating of 2.2 % per °C
Operating altitude	<= 1000 m without derating > 1000 m with current derating 1 % per 100 m

Complementary

Product destination	Asynchronous motors
Supply voltage limits	170…264 V
Network frequency limits	47.5…63 Hz
Speed drive output frequency	0…200 Hz
Nominal switching frequency	4 kHz
Speed range	1…20
Transient overtorque	150...170 % of nominal motor torque

Regulation loop	Adjustable frequency Factory-set with the speed loop stability and gain Possible correction for machines with high resistive torque/inertia/fast cycles
Motor slip compensation	Preset in factory Adjustable
Prospective line Isc	1 kA
Output voltage	<= power supply voltage
Insulation	Electrical between power and control
Analogue input number	1
Discrete input number	4
Discrete output number	2
Acceleration and deceleration ramps	Linear from 0 to 99.9 s
Braking to standstill	By DC injection
Insulation resistance	> 500 MOhm
Marking	CE
Operating position	Vertical +/- 10 degree
CAD overall width	72 mm
CAD overall height	142 mm
CAD overall depth	138 mm
Outer dimension	142 x 72 x 138 mm
Net weight	1.1 kg

Environment

Standards	EN 50178
Product certifications	UL N998 C-Tick CSA
IP degree of protection	IP20
Ambient air temperature for storage	-25…65 °C

Contractual warranty

Warranty	18 months