Product data sheet

Specifications

variable speed drive ATV11 - 0.37kW - 230V 1-phase supply - IP20

ATV11HU09M2E

Discontinued

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
Phase	1 phase
[Us] rated supply voltage	200...240 V - 15...10 %
Supply frequency	50...60 Hz - 5...5 %
Motor power kW	0.37 kW
Line current	5.3 A 230 V, Isc = 1 kA
Nominal output current	2.1 A 230 V motor 4 kHz
Maximum transient current	3.1 A 60 s
Power dissipation in W	20.5 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 1.5 mm², AWG 14 AI1, RA-RC, LI1...LI4, DO) Terminal 1.5 mm², AWG 14 L1, L2, L3, U, V, W, PA, PC)
Supply	Internal supply for logic inputs 15 V +/- 15 %) 100 A overload and short-circuit protection Internal supply for reference potentiometer (2.2 to 10 kOhm) 5...5.25 VDC 10 A 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

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Linearity error	DO +/- 1 % output AI +/- 5 % 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, > 11 V
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 24 V DC
Maximum switching current	2 A 250 V AC inductive cos phi = 0.4 7 ms RA-RC 2 A 30 V DC inductive cos phi = 0.4 7 ms RA-RC 5 A 250 V AC resistive cos phi = 1 0 ms RA-RC 5 A 30 V DC resistive cos phi = 1 0 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 EN/IEC 61000-4-5 Electrical fast transient/burst immunity test level 4 EN/IEC 61000-4-4 Electrostatic discharge immunity test level 3 EN/IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 EN/IEC 61000-4-3
Maximum motor cable length	32.8 ft (10 m) without additional EMC filter from 2 to 16 kHz EN 55011 class A group 1 32.8 ft (10 m) without additional EMC filter from 2 to 16 kHz EN 55022 class A group 1 65.6 ft (20 m) with additional EMC filter from 2 to 16 kHz EN 55011 class B 16.4 ft (5 m) without additional EMC filter from 2 to 12 kHz EN 55011 class B 16.4 ft (5 m) without additional EMC filter from 2 to 12 kHz EN 55022 class B 164.04 ft (50 m) with additional EMC filter from 2 to 16 kHz EN 55011 class A group 1
Vibration resistance	1 gn 13…200 Hz)EN/IEC 60068-2-6 1.5 mm peak to peak 3…13 Hz)EN/IEC 60068-2-6
Shock resistance	15 gn 11 ms EN/IEC 60068-2-27
Relative humidity	5…93 % without condensation IEC 60068-2-3 5…93 % without dripping water IEC 60068-2-3
Ambient air temperature for operation	14…104 °F (-10…40 °C) without derating 104…122 °F (40…50 °C) by removing the protective cover from the top of the drive 122…140 °F (50…60 °C) by removing the protective cover from the top of the drive with current derating of 2.2 % per °C
Operating altitude	<= 3280.84 ft (1000 m) without derating > 3280.84 ft (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	Factory-set with the speed loop stability and gain Adjustable frequency 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	2.8 in (72 mm)
CAD overall height	5.6 in (142 mm)
CAD overall depth	4.9 in (125 mm)
Outer dimension	142 x 72 x 125 mm
Net Weight	2.2 lb(US) (1 kg)

Environment

Standards	EN 50178
Product Certifications	N998 CSA UL C-tick
IP Degree of Protection	IP20
Ambient Air Temperature for Storage	-13…149 °F (-25…65 °C)
Variable speed drive application selection	Packaging conveyor
Motor power range AC-3	0…0.5 kW 200…240 V 1 phase
Motor starter type	Variable speed drive

Ordering and shipping details

Category	22042-ATV12 DRIVE AND ACCESSORIES
Discount Schedule	CP4B
GTIN	00785901895565
Returnability	No
Country of origin	ID

Contractual warranty

Warranty	18 months