



## Main

Range of product	Altivar Machine ATV320
Product or component type	Variable speed drive
Product specific application	Complex machines
Variant	Standard version With disconnect switch
Mounting mode	Wall mount
Communication port protocol	Modbus serial CANopen
[Us] rated supply voltage	380...500 V - 15...10 %
Relative symmetric mains voltage tolerance	10 %
Relative symmetric network frequency tolerance	5 %
Nominal output current	8,0 A
Motor power kW	2,2 kW heavy duty
EMC filter	Class C2 EMC filter integrated
IP degree of protection	IP20

## Complementary

Discrete input number	7
Discrete input type	STO safe torque off, 24 V DC 1.5 kOhm DI1...DI6 logic inputs, 24 V DC 30 V) DI5 programmable as pulse input 0...30 kHz, 24 V DC 30 V)
Discrete input logic	Positive logic (source) Negative logic (sink)
Discrete output number	3
Discrete output type	Open collector DQ+ 0...1 kHz 30 V DC 100 mA Open collector DQ- 0...1 kHz 30 V DC 100 mA
Analogue input number	3
Analogue input type	AI1 voltage 0...10 V DC 30 kOhm 10 bits AI2 bipolar differential voltage +/- 10 V DC 30 kOhm 10 bits AI3 current 0...20 mA (or 4-20 mA, x-20 mA, 20-x mA or other patterns by configuration) 250 Ohm 10 bits

Analogue output number	1
Analogue output type	Software-configurable current AQ1 0...20 mA 800 Ohm 10 bits Software-configurable voltage AQ1 0...10 V DC 470 Ohm 10 bits
Relay output type	Configurable relay logic R1A 1 NO 100000 cycles Configurable relay logic R1B 1 NC 100000 cycles Configurable relay logic R1C Configurable relay logic R2A 1 NO 100000 cycles Configurable relay logic R2C
Maximum switching current	Relay output R1A, R1B, R1C resistive, cos phi = 1 3 A 250 V AC Relay output R1A, R1B, R1C resistive, cos phi = 1 3 A 30 V DC Relay output R1A, R1B, R1C, R2A, R2C inductive, cos phi = 0,4 7 ms 2 A 250 V AC Relay output R1A, R1B, R1C, R2A, R2C inductive, cos phi = 0,4 7 ms 2 A 30 V DC Relay output R2A, R2C resistive, cos phi = 1 5 A 250 V AC Relay output R2A, R2C resistive, cos phi = 1 5 A 30 V DC
Minimum switching current	Relay output R1A, R1B, R1C, R2A, R2C 5 mA 24 V DC
Method of access	Slave CANopen
4 quadrant operation possible	True
Asynchronous motor control profile	Voltage/frequency ratio, 5 points Flux vector control without sensor, standard Voltage/frequency ratio - Energy Saving, quadratic U/f Flux vector control without sensor - Energy Saving Voltage/frequency ratio, 2 points
Synchronous motor control profile	Vector control without sensor
Maximum output frequency	0,599 kHz
Transient overtorque	170...200 % of nominal motor torque
Acceleration and deceleration ramps	Linear U S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection
Motor slip compensation	Automatic whatever the load Adjustable 0...300 % Not available in voltage/frequency ratio (2 or 5 points)
Switching frequency	2...16 kHz adjustable 4...16 kHz with derating factor
Nominal switching frequency	4 kHz
Braking to standstill	By DC injection
Brake chopper integrated	True
Line current	8,7 A 380 V heavy duty) 6,6 A 500 V heavy duty)
Maximum input current	8,7 A
Maximum output voltage	500 V
Apparent power	5,7 kVA 500 V heavy duty)
Network frequency	50...60 Hz
Prospective line I <sub>sc</sub>	5 kA
Base load current at high overload	8,0 A
Power dissipation in W	Fan 74,0 W 380 V 4 kHz
With safety function Safely Limited Speed (SLS)	True
With safety function Safe brake management (SBC/SBT)	False
With safety function Safe Operating Stop (SOS)	False
With safety function Safe Position (SP)	False
With safety function Safe programmable logic	False
With safety function Safe Speed Monitor (SSM)	False
With safety function Safe Stop 1 (SS1)	True

With sft fct Safe Stop 2 (SS2)	False
With safety function Safe torque off (STO)	True
With safety function Safely Limited Position (SLP)	False
With safety function Safe Direction (SDI)	False
Protection type	Input phase breaks drive Overcurrent between output phases and earth drive Overheating protection drive Short-circuit between motor phases drive Thermal protection drive
Width	140 mm
Height	184,0 mm
Depth	158,0 mm
Net weight	2,1 kg

## Environment

Operating position	Vertical +/- 10 degree
Product certifications	CE ATEX NOM GOST EAC RCM KC REACH
Marking	CE ATEX UL CSA EAC RCM
Electromagnetic compatibility	Electrostatic discharge immunity test level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 IEC 61000-4-3 Electrical fast transient/burst immunity test level 4 IEC 61000-4-4 1.2/50 $\mu$ s - 8/20 $\mu$ s surge immunity test level 3 IEC 61000-4-5 Conducted radio-frequency immunity test level 3 IEC 61000-4-6 Voltage dips and interruptions immunity test IEC 61000-4-11
Environmental class (during operation)	Class 3C3 according to IEC 60721-3-3 Class 3S2 according to IEC 60721-3-3
Maximum acceleration under shock impact (during operation)	150 m/s <sup>2</sup> at 11 ms
Maximum acceleration under vibrational stress (during operation)	10 m/s <sup>2</sup> at 13...200 Hz
Permitted relative humidity (during operation)	Class 3K5 according to EN 60721-3
Volume of cooling air	37,7 m <sup>3</sup> /h
Overvoltage category	III
Regulation loop	Adjustable PID regulator
Speed accuracy	+/- 10 % of nominal slip 0.2 T <sub>n</sub> to T <sub>n</sub>
Pollution degree	2
Ambient air transport temperature	-25...70 °C
Ambient air temperature for operation	-10...50 °C without derating 50...60 °C with derating factor
Ambient air temperature for storage	-25...70 °C

## Pakavimo vienetai

1-os pakuotės vieneto tipas	PCE
Vienetų skaičius 1-oje pakuotėje	1
1 pakuotės svoris	5,298 kg

1 pakuotės aukštis	24,5 cm
1 pakuotės plotis	19,5 cm
1 pakuotės ilgis	26,7 cm
2 pakuotės vieneto tipas	P06
Vienetų skaičius 2-oje pakuotėje	12
2 pakuotės svoris	45,28 kg
2 pakuotės aukštis	80 cm
2 pakuotės plotis	80 cm
2 pakuotės ilgis	60 cm

## Offer Sustainability

ES RoHS direktyva	Aktyvus laikymasis (gaminys nepatenka į ES RoHS teisinę aprėptį) <a href="#">ES RoHS deklaracija</a>
Be gyvsidabrio	Taip
RoHS išimčių informacija	<a href="#">Taip</a>
Kinijos RoHS direktyva	<a href="#">Kinijos RoHS deklaracija</a>
Aplinkosauginės informacijos atskleidimas	<a href="#">Produkto aplinkosaugos profilis</a>
Žiedinės ekonomikos profilis	<a href="#">Eksplotavimo ciklo pabaigos informacija</a>
WEEE	Šį produktą Europos Sąjungos rinkose reikia utilizuoti perduodant į specialias surinkimo vietas ir negalima išmesti su buitinėmis atliekomis.