Specifications



# Variable speed drive, Altivar Machine ATV320, 5.5 kW, 380...500 V, 3 phases, compact

ATV320U55N4C

### Main

wan	
Range of product	Altivar Machine ATV320
Product or component type	Variable speed drive
Product specific application	Complex machines
Variant	Standard version
Format of the drive	Compact
Mounting mode	Wall mount
Communication port protocol	Modbus serial CANopen
Option card	Communication module, CANopen Communication module, EtherCAT Communication module, Profibus DP V1 Communication module, PROFINET Communication module, Ethernet Powerlink Communication module, EtherNet/IP Communication module, DeviceNet
[Us] rated supply voltage	380500 V - 1510 %
Nominal output current	14.3 A
Motor power kW	5.5 kW for heavy duty
EMC filter	Integrated
IP degree of protection	IP20

### Complementary

Discrete input number	7
Discrete input type	STO safe torque off, 24 V DC, impedance: 1.5 kOhm DI1DI6 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+ 01 kHz 30 V DC 100 mA Open collector DQ- 01 kHz 30 V DC 100 mA
Analogue input number	3
Analogue input type	Al1 voltage: 010 V DC, impedance: 30 kOhm, resolution 10 bits Al2 bipolar differential voltage: +/- 10 V DC, impedance: 30 kOhm, resolution 10 bits Al3 current: 020 mA (or 4-20 mA, x-20 mA, 20-x mA or other patterns by configuration), impedance: 250 Ohm, resolution 10 bits
Analogue output number	1

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



Analogue output typeSubset configurable current AU 10 - 20 mA repetation 800 Cmir resolution 10 bitsReiny output typeConfigurable sitey type R1A 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R1B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R1B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R1B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R2B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R2B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R2B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R2B 11 0.0 cleanced stuability 10000 cyclesConfigurable sitey type R2B 11 0.0 cleanced stuability 10000 cyclesMainum switching currentRelay cycles R1R, R1C R2R, R2D cmiratixe bad, cop pt - 1: 3 At 320 V DCMethod of accessBite chAspen4 quadrati operation possibilityTrueA guadrati Cycles Conservative actic cop pt - 1: 5 At 30 V DCMethod of accessBite chAspen4 quadrati operation possibilityTrueA guadrati Cycle Conservative actic cop pt - 1: 5 At 30 V DCMethod of accessBite chAspen4 quadrati operation possibilityTrueA stuability Diversion controlVoltagetfrequency stab. 2 pointsA stuability Diversion controlVoltagetfrequency stab. 2 pointsPortionCleancestity Stab 20 CyclesA stuability Diversion controlVoltagetfrequency stab. 2 pointsPortionCleancestity Stab 20 CyclesRation stab 20 Cycle CyclesCleancestity Stab 20 CyclesRation st		
Configuable reity loge R10   Configuable reity loge R20     Maximum switching current   Resc output R1A, R1B, R1C contractive local, cop bit = 1.3 A et 250 V AC     Maximum switching current   Resc output R1A, R1B, R1C, R2A, R2C on inductive local, cos bit = 0.4 and LR = 7 ms: 2.4 at 250 V     Maximum switching current   Resc output R1A, R1B, R1C, R2A, R2C on inductive local, cos bit = 0.4 and LR = 7 ms: 2.4 at 250 V     Maximum switching current   Resc output R1A, R1B, R1C, R2A, R2C on inductive local, cos bit = 0.4 and LR = 7 ms: 2.4 at 30 V DC     Minimum switching current   Resc output R1A, R1B, R1C, R2A, R2C on inductive local, cos bit = 0.4 and LR = 7 ms: 2.4 at 30 V DC     Maximum oxitot for access   Slaw C2ANopen     4 quadrant operation possible   True     Asynchronous motor control   Voltage/frequency intensis, storta     Vallage/frequency intensis   Softa     Maximum output frequency   0.596 Hz     Transient overtorque   170200 % of normalia materia and with DC lejection     Maximum output frequency   0.596 Hz     Transient overtorque   170200 % of normalia materia and with DC lejection     Maximum output frequency   0.596 Hz     Transient overtorque   170200 % of normalia materia and with DC lejection     Maximum output frequency   0.596 Hz <t< td=""><td>Analogue output type</td><td></td></t<>	Analogue output type	
Maximum awitching current Reley output R1A, R1B, R1C on resistive load, cos pH = 1: 3 A at 230 V AC Reley output R1A, R1B, R1C, CRA, R2C on nature load, cos pH = 0.4 and LR = 7 ms: 2 A at 200 V Company R1A, R1B, R1C, CRA, R2C on nature load, cos pH = 0.4 and LR = 7 ms: 2 A at 200 V Company R1A, R1B, R1C, R2A, R2C on nature load, cos pH = 0.4 and LR = 7 ms: 2 A at 200 V Company R1A, R1B, R1C, R2A, R2C on nature load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 A at 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 At 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 At 200 V AC Reley output R2A, R2C on resistive load, cos pH = 1: 6 At 200 V AC Reley output R2A, R2C on R2A, R2C on resistive load, cos pH = 1: 6 At 200 V AC Reley output R2A, R2C on R2A, R2C on R2A, R2C on R2A,	Relay output type	Configurable relay logic R1B 1 NC electrical durability 100000 cycles Configurable relay logic R1C Configurable relay logic R2A 1 NO electrical durability 100000 cycles
Relay output R1A, R1B, R1C, R2A, R2C on inelative load, do phi = 0.4 and LR = 7 ms: 2 A at 30 V     OC   Relay output R2A, R2C on relative load, do phi = 1: 6 At 250 V AC     Minimum switching current   Relay output R1A, R1B, R1C, R2A, R2C is mA t124 V DC     Method of access   Slave CoAlocon     4 quadrant operation possible   True     Asynchronous motor control   Voltage/frequency ratio. 5 points Flux vector control without sensor, standard Voltage/frequency ratio. 2 points     profile   Voltage/frequency ratio. 2 points Flux vector control without sensor - Energy Saving     Synchronous motor control   Vector control without sensor - Energy Saving     Voltage/frequency ratio. 2 points   Flux vector control without sensor - Energy Saving     Synchronous motor control   Vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Flux vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Vector control without sensor - Energy Saving     Voltage/frequency veloc. 2 points   Vector control without sensor - Energy Saving <tr< td=""><td>Maximum switching current</td><td>Relay output R1A, R1B, R1C on resistive load, cos phi = 1: 3 A at 250 V AC Relay output R1A, R1B, R1C on resistive load, cos phi = 1: 3 A at 30 V DC</td></tr<>	Maximum switching current	Relay output R1A, R1B, R1C on resistive load, cos phi = 1: 3 A at 250 V AC Relay output R1A, R1B, R1C on resistive load, cos phi = 1: 3 A at 30 V DC
Minimum switching current     Relay output R1A, R1B, R1C, R2A, R2C, S MA at 24 V DC       Method of access     Slave CANopon       4 quadrant operation possible     True       Asynchronous motor control profile     Voltage/frequency ratio, 5 points Flux vector control without sensor, standard Voltage/frequency ratio, 2 points       Synchronous motor control profile     Vector control without sensor, standard Voltage/frequency ratio, 2 points       Synchronous motor control profile     Vector control without sensor, standard     Control sensor, standard       Maximum output frequency     0.509 kHz     Transient overforque     170200 % of nominal motor torque       Acceleration and deceleration ramps     Linear U S Clis Framp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration ramp adaptation Acceleration/deceleration and induced sensor     Notice Sensor       Switching frequency     216 kHz adjustable 416 kHz with derating factor     Notice Sensor       Switching frequency     216 kHz adjustable 416 kHz with derating factor     Notice Sensor       Switching frequency     416 kHz with derating factor     Nominal switching frequency     416 kHz with advalue 416 kHz wit		Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 30 V DC Relay output R2A, R2C on resistive load, cos phi = 1: 5 A at 250 V AC
Method of access     Slave CANopen       4 quadrant operation possible     True       Asynchronous motor control profile     Voltage/frequency ratio, 5 points (No vector control whoto sensor, standard Voltage/frequency ratio, 2 points       Synchronous motor control profile     Voltage/frequency ratio, 2 points       Synchronous motor control profile     Voltage/frequency ratio, 2 points       Synchronous motor control profile     Voltage/frequency ratio, 2 points       Maximum output frequency     0 599 kHz       Transient overforque     170200 % of nominal metor torque       Acceleration and deceleration ramps     Linear U S Cost Ramp euriching Acceleration/deceleration ramp adaptation Acceleration/deceleration and/deceleration Acceleration/deceleration and/deceleration Acceleration/deceleration and/deceleration Acceleration/deceleration and/deceleration Acceleration and features to pwith DC injection       Motor slip compensation Acceleration and features to pwith DC injection     4 utoratic whatever the load Acjustable 4300 % Host available feator       Nominal switching frequency 4 kHz     216 kHz avdit derating feator       Nominal switching frequency 4 kHz     4 kHz       Braking to standstill     By DC injection       Brake chopper integrated     True       Line current     20.7 A at 380 V (heavy duty)       Maximum input current	Minimum switching current	
Asynchronous motor control profile   Voltage/frequency ratio. 5 points Flux vector control without sensor - Energy Saving, quadratic Utf Flux, vector control without sensor - Energy Saving, quadratic Utf Flux, vector control without sensor - Energy Saving, quadratic Utf Flux, vector control without sensor     Synchronous motor control profile   Vector control without sensor     Maximum output frequency   0.599 kHz     Transient overtorque   170200 % of nominal motor torque     Acceleration and deceleration ramps   Linear U g Guis Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection     Motor slip compensation   Automatic whatever the load Adjustable 0300 % Not available 0300 %     Switching frequency   2168 kHz with derating factor     Nominal switching frequency   416 kHz with derating factor     Nominal switching frequency   416 kHz     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   20.7 A     Maximum output voltage   500 V     Apparent power   12.8 kVA at 500 V (heavy duty)     Network frequency   5 %     Prospective line lasc   2 kA     Base load current at high overrioad   14.3 A     With safety function Safely Umits safety function		
Asynchronous motor control profile   Voltage/frequency ratio. 5 points Fix vector control without sensor - Energy Saving, quadratic Uf Fixis, vector control without sensor - Energy Saving, voltage/frequency article - Energy Saving     Synchronous motor control profile   Vector control without sensor     Maximum output frequency   0.599 kHz     Transient overtorque   170200 % of nominal motor torque     Acceleration and deceleration ramps   Linear U     U   0     GUS Ramp switching Acceleration/deceleration automatic stop with DC injection     Motor silp compensation Acceleration/deceleration automatic stop with DC injection     Motor silp compensation Automatic whatever the load Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching frequency   216 kHz with derating factor     Nominal switching frequency   4 kHz     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   20.7 A     Maximum input current   20.6 N/L     Apparent power   12.8 kVA at 500 V (heavy duty)     14.5 A at 500 V (heavy duty)   14.5 A at 500 V     Apparent power   12.8 kVA at 500 V (heavy duty)     Network frequency   5 %     Prospective line lac   22 k	4 quadrant operation possible	
profile 0.599 kHz   Transient overtorque 170200 % of nominal motor torque   Acceleration and deceleration ramps Linear U S CUS CUS CUS CUS CUS CUS CUS CUS CUS	-	Flux vector control without sensor, standard Voltage/frequency ratio - Energy Saving, quadratic U/f Flux vector control without sensor - Energy Saving
Transient overtorque   170200 % of nominal motor torque     Acceleration and deceleration ramps   Linear U S CUS Ramp switching Acceleration/deceleration Acceleration/deceleration Acceleration/deceleration Acceleration/deceleration Acceleration/deceleration     Motor slip compensation   Automatic whatever the load Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching frequency   216 kHz adjustable 414 kHz with derating factor     Nominal switching frequency   4 kHz     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)     Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5080 Hz     Relative symmetric network   5 %     Prospective line lsc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe brake management (SBC/SBT)   False		Vector control without sensor
Acceleration and deceleration ramps   Linear U     Sc CUS Ramp switching Acceleration/deceleration Brake chopper integrated     Switching frequency   4 kHz     Brake chopper integrated   True     Line current   20.7 A     Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency learnec   5 %     Prospective line lsc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   <	Maximum output frequency	0.599 kHz
rampsU S CUS Ramp switching Acceleration/deceleration automatic stop with DC injectionMotor slip compensationAdustable 0:.300 % Adustable 0:.300 % Not available in voltage/frequency ratio (2 or 5 points)Switching frequency216 kHz adjustable 416 kHz with derating factorNominal switching frequency4 kHzBraking to standstillBy DC injectionBrake chopper integratedTrueLine current20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)Maximum input current20.7 A20.7 A20.6 HzRelative symmetric network frequency5%Prospective line lsc22 kABase load current at high overload14.3 APower dissipation in WFan: 196.0 W at 380 V, switching frequency 4 kHzWith safety function Safe brake management (SBC/SBT)FalseWith safety function Safe brake management (SBC/SBT)False	Transient overtorque	170200 % of nominal motor torque
Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching frequency   216 kHz adjustable 416 kHz adjustable 500 C injection     Brake chopper integrated   True     Line current   20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)     Maximum input current   20.7 A     Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5 %     Prospective line lsc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe   False		U S CUS Ramp switching Acceleration/deceleration ramp adaptation
416 kHz with derating factor     Nominal switching frequency   4 kHz     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)     Maximum input current   20.7 A     Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lsc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safely Limited Speed (SLS)   True     With safety function Safe brake management (SBC/SBT)   False	Motor slip compensation	Adjustable 0300 %
Braking to standstill By DC injection   Brake chopper integrated True   Line current 20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)   Maximum input current 20.7 A   Maximum output voltage 500 V   Apparent power 12.6 kVA at 500 V (heavy duty)   Network frequency 5060 Hz   Relative symmetric network frequency tolerance 5 %   Prospective line Isc 22 kA   Base load current at high overload 14.3 A   Power dissipation in W Fan: 195.0 W at 380 V, switching frequency 4 kHz   With safety function Safely Limited Speed (SLS) True   With safety function Safe brake management (SBC/SBT) False   With safety function Safe False	Switching frequency	
Brake chopper integrated   True     Line current   20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)     Maximum input current   20.7 A     Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line Isc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safely Limited Speed (SLS)   True     With safety function Safe   False     With safety function Safe   False	Nominal switching frequency	4 kHz
Line current20.7 A at 380 V (heavy duty) 14.5 A at 500 V (heavy duty)Maximum input current20.7 AMaximum output voltage500 VApparent power12.6 kVA at 500 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line lsc22 kABase load current at high overload14.3 APower dissipation in WFan: 195.0 W at 380 V, switching frequency 4 kHzWith safety function Safely Limited Speed (SLS)FalseWith safety function Safe management (SBC/SBT)False	Braking to standstill	By DC injection
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Maximum output voltage   500 V     Apparent power   12.6 kVA at 500 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lsc   22 kA     Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safely Limited Speed (SLS)   True     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe   False	Line current	
Apparent power12.6 kVA at 500 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line Isc22 kABase load current at high overload14.3 APower dissipation in WFan: 195.0 W at 380 V, switching frequency 4 kHzWith safety function Safely management (SBC/SBT)FalseWith safety function Safe management (SBC/SBT)False	Maximum input current	20.7 A
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Base load current at high overload   14.3 A     Power dissipation in W   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safely Limited Speed (SLS)   True     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe   False		5 %
overload   Fan: 195.0 W at 380 V, switching frequency 4 kHz     With safety function Safely   True     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe   False	Prospective line Isc	22 kA
With safety function Safely   True     With safety function Safe brake   False     With safety function Safe   False     With safety function Safe   False	_	14.3 A
Limited Speed (SLS)     With safety function Safe brake management (SBC/SBT)     With safety function Safe     False	Power dissipation in W	Fan: 195.0 W at 380 V, switching frequency 4 kHz
management (SBC/SBT)   With safety function Safe False		True
		False
		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	150 mm
Height	232.0 mm
Depth	178.0 mm
Net weight	3.5 kg
Environment	
Operating position	Vertical +/- 10 degree
Product certifications	CE ATEX NOM GOST EAC RCM KC
Marking	CE ATEX UL CSA EAC RCM
Standards	EN/IEC 61800-5-1
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 Voltage dips and interruptions immunity test conforming to 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/s² at 11 ms
Maximum acceleration under vibrational stress (during operation)	10 m/s² at 13200 Hz
Maximum deflection under vibratory load (during operation)	1.5 mm at 213 Hz
Permitted relative humidity (during operation)	Class 3K5 according to EN 60721-3
Volume of cooling air	60 m3/h
Overvoltage category	111

Regulation loop	Adjustable PID regulator
Speed accuracy	+/- 10 % of nominal slip 0.2 Tn to Tn
Pollution degree	2
Ambient air transport temperature	-2570 °C
Ambient air temperature for operation	-1050 °C without derating 5060 °C with derating factor
Ambient air temperature for storage	-2570 °C

### **Packing Units**

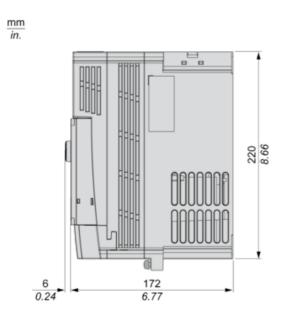
PCE
1
19.500 cm
22.500 cm
33.000 cm
4.696 kg
P06
10
75.000 cm
60.000 cm
80.000 cm
57.500 kg

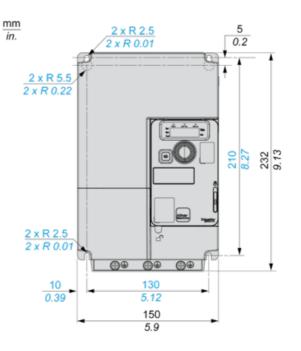
### Offer Sustainability

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     Environmental Disclosure   Product Environmental Profile     Circularity Profile   End of Life Information     WEEE   The product must be disposed on European Union markets following sprever end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead a known to the State of California to cause cancer and birth defects or other	
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     Environmental Disclosure   Product Environmental Profile     Circularity Profile   End of Life Information     WEEE   The product must be disposed on European Union markets following spinever end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead and the spine of the product can expose you to chemicals including: Lead and the spine of the product can expose you to chemicals including: Lead and the spine of the product can expose you to chemicals including: Lead and the spine of the product can expose you to chemicals including: Lead and the spine of the product can expose you to chemicals including: Lead and the spine of the product can expose you to chemical product product can expose you to chemical proposition for the product can expose you to chemical product product can expose you to chemical product product product can expose you to chemical product product product product can expose you to chemical product produc	
EU RoHS Declaration     Mercury free   Yes     China RoHS Regulation   China RoHS declaration     RoHS exemption information   Yes     Environmental Disclosure   Product Environmental Profile     Circularity Profile   End of Life Information     WEEE   The product must be disposed on European Union markets following sp never end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead at the second	
China RoHS Regulation   China RoHS declaration     RoHS exemption information   Yes     Environmental Disclosure   Product Environmental Profile     Circularity Profile   End of Life Information     WEEE   The product must be disposed on European Union markets following spinever end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead and the spine of the	
RoHS exemption information   Yes     Environmental Disclosure   Product Environmental Profile     Circularity Profile   End of Life Information     WEEE   The product must be disposed on European Union markets following spinever end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead and the spinewer end up in the	
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WEEE   The product must be disposed on European Union markets following spinever end up in rubbish bins     California proposition 65   WARNING: This product can expose you to chemicals including: Lead a	
never end up in rubbish bins     California proposition 65     WARNING: This product can expose you to chemicals including: Lead a	
	ecific waste collection and
information go to www.P65Warnings.ca.gov	
Upgradeability Upgraded components available	

**Dimensions Drawings** 

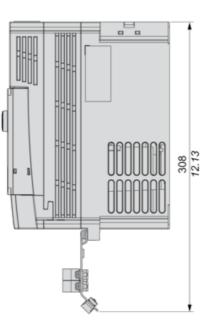
### Right and Front Views without EMC Plate

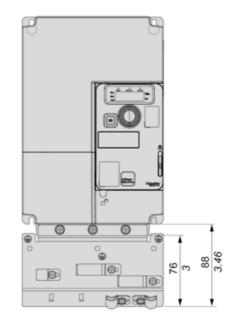




**Right and Front Views with EMC Plate** 

mm in.



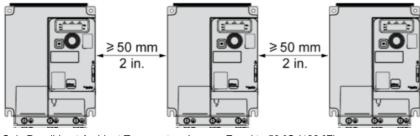


mm in.

Mounting and Clearance

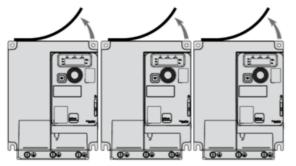
### **Mounting Types**

#### Mounting Type A: Individual with Ventilation Cover

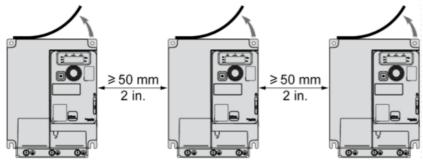


Only Possible at Ambient Temperature Less or Equal to 50 °C (122 °F)

### Mounting Type B: Side by Side, Ventilation Cover Removed



Mounting Type C: Individual, Ventilation Cover Removed



For Operation at Ambient Temperature Above 50  $^\circ\text{C}$  (122  $^\circ\text{F})$ 

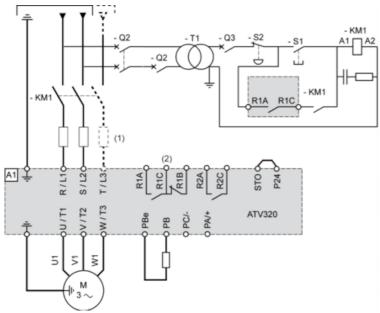
# ATV320U55N4C

Connections and Schema

### **Connection Diagrams**

#### **Diagram with Line Contactor**

Connection diagrams conforming to standards ISO13849 category 1 and IEC/EN 61508 capacity SIL1, stopping category 0 in accordance with standard IEC/EN 60204-1.

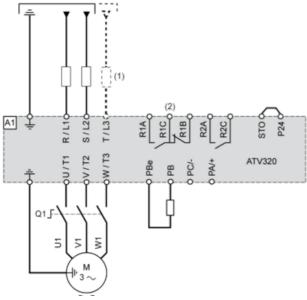


(1) Line choke (if used)

(2) Fault relay contacts, for remote signaling of drive status

#### **Diagram with Switch Disconnect**

Connection diagrams conforming to standards EN 954-1 category 1 and IEC/EN 61508 capacity SIL1, stopping category 0 in accordance with standard IEC/EN 60204-1.

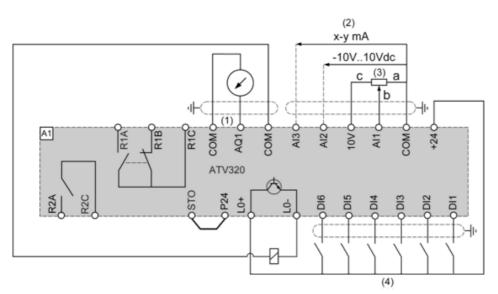


(1) Line choke (if used)

(2) Fault relay contacts, for remote signaling of drive status

Connections and Schema

### Control Connection Diagram in Source Mode



(1) Analog output

(2) Analog inputs

(3) Reference potentiometer (10 kOhm maxi)

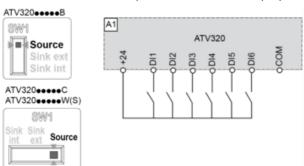
(4) Digital inputs

# ATV320U55N4C

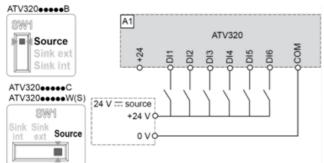
**Connections and Schema** 

### **Digital Inputs Wiring**

The logic input switch (SW1) is used to adapt the operation of the logic inputs to the technology of the programmable controller outputs. Switch SW1 set to "Source" position and use of the output power supply for the DIs.

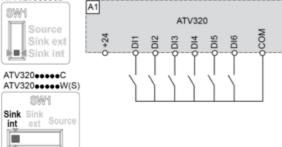


Switch SW1 set to "Source" position and use of an external power supply for the DIs.



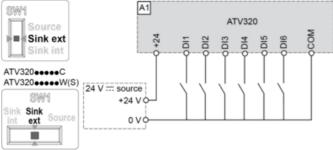
Switch SW1 set to "Sink Int" position and use of the output power supply for the DIs.

### 



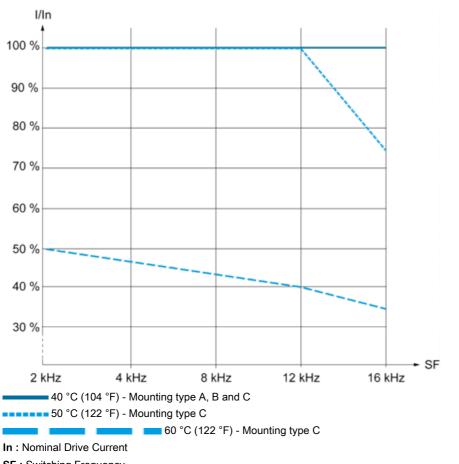
Switch SW1 set to "Sink Ext" position and use of an external power supply for the DIs.

### ATV3200000B



Performance Curves

**Derating Curves** 



SF : Switching Frequency

Recommended replacement(s)