Specifications





# variable speed drive, ATV320, 15 kW, 380...500 V, 3 phases, book

ATV320D15N4B

#### Main

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	Book
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	33.0 A
Motor Power Kw	15.0 kW for heavy duty
Emc Filter	Class C3 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: 030 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

bits       Relay Output Type     Configurable relay logic R1A 1 NO electrical durability 100000 cycles Configurable relay logic R1 1 NC electrical durability 100000 cycles Configurable relay logic R2 1 NO electrical durability 100000 cycles Configurable relay logic R2 NO electrical durability 100000 cycles Configurable relay Control ND electrical durability 100000 cycles Configurable relay Cycle Control ND electrical durability 100000 cycles Configurable relay Cycle Control ND electrical durability 100000 cycles Configurable relay Cycle Control ND electrical durability 100000 cycles Cycles Configurable relay Cycle Control ND electrical Cycles		
Configurable relay logic R16 1 NO electrical durability 100000 cycles       Configurable relay logic R12 1 NO electrical durability 100000 cycles       Configurable relay logic R22       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, R2A, R2C on inductive load, cos phi = 0: 4 and LR =       ms: 2 A at 250 V AC       Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0: 4 and LR =       ms: 2 A at 250 V AC       Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0: 4 and LR =       ms: 2 A at 250 V AC       Relay output R2A, R2C on resistive load, cos phi = 0: 4 and LR =       ms: 2 A at 250 V AC       Relay output R2A, R2C on resistive load, cos phi = 0: 4 and LR =       ms: 2 A at 250 V AC       Relay output R2A, R2C on resistive load, cos phi = 1: 5 A at 250 V AC       Relay output R2A, R2C on resistive load, cos phi = 1: 5 A at 20 V DC       Minimum Switching Current     Relay output R2A, R2C on resistive load, cos phi = 0: 4 and LR =       Agyochronous Motor Control     Violage/frequency ratio. 5 points       Fils vector control without sensor     Fils vector control without sensor       Profile     170200 % of nominal motor torque       Maximum Output Frequency     0.596 kHz <td>Analogue Output Type</td> <td>bits Software-configurable voltage AQ1: 010 V DC impedance 470 Ohm, resolution 10</td>	Analogue Output Type	bits Software-configurable voltage AQ1: 010 V DC impedance 470 Ohm, resolution 10
Configurable relay logic R2C       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 = 0.4 and L/R = ms: 2 A at 250 V AC Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0.4 and L/R = ms: 2 A at 30 V DC Relay output R2A, R2C on resistive load, cos phi = 0.4 and L/R = ms: 2 A at 30 V DC Relay output R2A, R2C on resistive load, cos phi = 1:5 A at 350 V AC Relay output R2A, R2C on resistive load, cos phi = 0.5 At 300 V DC       Minimum Switching Current     Relay output R1A, R1B, R1C, R2A, R2C: 5 mA at 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 - Energy Saving Voltage/frequency ratio, 2 points Flux vector control without sensor Profile       Synchronous Motor Control Profile     Vector control without sensor - Energy Saving Voltage/frequency ratio, 2 points Flux vector control without sensor - Energy Saving Voltage/frequency ratio, 2 points - Cutrol Profile       Synchronous Motor Control Profile     Vector control without sensor - Energy Saving Voltage/frequency - Cutrol Profile       Maximum Output Frequency S CUS CUS CUS Remap switching Acceleration/deceleration automatic stop with DC injection - Acceleration/deceleration (2 or 5 points)       Switching Frequency - A L+	Relay Output Type	Configurable relay logic R1B 1 NC electrical durability 100000 cycles
Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 1:3 A at 30 V DC     Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0.4 and U/R =     Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0.4 and U/R =     Relay output R2A, R2C on resistive load, cos phi = 1:5 A at 30 V DC     Minimum Switching Current   Relay output R2A, R2C on resistive load, cos phi = 1:5 A at 30 V DC     Method Of Access   Slave CANopen     4 Quadrant Operation Possible   True     Asynchronous Motor Control   Vidage/frequency ratio, 5 points     Profile   Vidage/frequency ratio, 5 points     Profile   Vidage/frequency ratio, 5 points     Synchronous Motor Control   Vector control without sensor - Energy Saving     Vidage/frequency ratio, 2 points   Profile     Transient Overtorque   170200 % of nominal motor torque     Maximum Output Frequency   0.599 kHz     Acceleration And Deceleration   Linear     U   S     CUS   Ramp switching     Acceleration And Deceleration   Automatic whatever the load     Adjustable 0300 %   Not available     Switching Frequency   216 kHz with derating factor     Nominal Switching Frequency   4 kHz		
Method Of Access     Slave CANopen       4 Quadrant Operation Possible     True       Asynchronous Motor Control     Voltage/frequency ratio. 5 points Flux vector control without sensor. standard Voltage/frequency ratio. 2 points       Synchronous Motor Control     Vector control without sensor       Profile     Vector control without sensor       Synchronous Motor Control     Vector control without sensor       Profile     170200 % of nominal motor torque       Maximum Output Frequency     0.599 kHz       Acceleration And Deceleration     Linear U S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration usomatic to point DC injection       Motor Slip Compensation     Automatic whatever the load Adjustable in voltage/frequency ratio (2 or 5 points)       Switching Frequency     2 16 kHz adjustable 4 16 kHz adjustable       Switching Frequency     4 kHz       Braking To Standstill     By DC injection       Brake Chopper Integrated     True       Line Current     47.3 A at 380 V (heavy duty) 33.3 A at 500 V       Maximum Input Current     47.3 A       Maximum Input Current     5 %       Prespective Line Isc     2 kA       Base Load Curret AkHingh     4 A	Maximum Switching Current	Relay output R1A, R1B, R1C on resistive load, cos phi = 1: 3 A at 30 V DC Relay output R1A, R1B, R1C, R2A, R2C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 250 V AC 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
4 Quadrant Operation Possible   True     Asynchronous Motor Control   Yottage/frequency ratio. 5 points Flux vector control without sensor. Standard Voltage/frequency ratio. 2 points     Synchronous Motor Control   Vector control without sensor     Profile   170200 % of nominal motor torque     Maximum Output Frequency   0.599 kHz     Acceleration And Deceleration Ramps   Linear U     U   S     Signethronous Motor Signet And Deceleration Ramps   Linear U     S   CUS CUS Ramp switching 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 adjustable 416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A t380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Nutput Voltage   500 V     Apparent Power   28. kVA at 500 V (heavy duty)     Network Frequency   5 %     Frequency   5 %     Prequency Tolerance   5 %     Prospective Line Iso <td>Minimum Switching Current</td> <td>Relay output R1A, R1B, R1C, R2A, R2C: 5 mA at 24 V DC</td>	Minimum Switching Current	Relay output R1A, R1B, R1C, R2A, R2C: 5 mA at 24 V DC
Asynchronous Motor Control   Voltage/frequency ratio. 5 points Flux vector control without sensor. standard Voltage/frequency ratio. 2 points     Synchronous Motor Control   Vector control without sensor     Profile   170200 % of nominal motor torque     Maximum Output Frequency   0.599 kHz     Acceleration And Deceleration   Linear U S CUS Ramps     Motor Silp Compensation   Automatic whatever the load Adjustable 080 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 At 500 V (heavy duty)     Maximum Dutput Vottage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5 %     Prequency   5 %     Prospective Line Iso   22 kA     Base Load Current At High Overload   4 A     Overload   5 %     Prospective Line Iso   22 kA     Base Load Current At High Overload   4 A	Method Of Access	Slave CANopen
Profile   Flux vector control without sensor, standard Voltage/frequency ratio Energy Saving, quadratic Ulf Flux vector control without sensor     Synchronous Motor Control   Vector control without sensor     Profile   Transient Overtorque   170200 % of nominal motor torque     Maximum Output Frequency   0.599 kHz     Acceleration And Deceleration   Linear U U S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection     Motor Silp Compensation   Automatic whatever the load Adjustable in values/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 418 kHz with derating factor     Nominal Switching Frequency   4 kHz     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5 %     Prequency   5 %     Prequency   5 %     Prospective Line Isc   5 W     Prospective Line Isc   5 W     Prospective Line Isc   5 W     Prequency	4 Quadrant Operation Possible	True
Profile   170200 % of nominal motor torque     Maximum Output Frequency   0.599 kHz     Acceleration And Deceleration Ramps   Linear U S CUS Ramp switching Acceleration/deceleration automatic stop with DC injection     Motor Slip Compensation Acceleration/deceleration automatic stop with DC injection   Automatic whatever the load Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Unput Current   47.3 A     Maximum Uvt Voltage   500 V     Apparent Power   28. kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network Frequency Tolerance   5 % Frequency Tolerance     Prospective Line Isc   22 kA     Base Load Current At High Overload   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz		Flux vector control without sensor, standard Voltage/frequency ratio - Energy Saving, quadratic U/f Flux vector control without sensor - Energy Saving
Maximum Output Frequency   0.599 kHz     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 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 0300 % Not available for the load Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 0300 % Not available for the load Adjustable 0300 %     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 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   4 A     Overload   4 A		Vector control without sensor
Acceleration And Deceleration   Linear     Ramps   U     S   CUS     Ramp switching   Acceleration/deceleration ramp adaptation     Acceleration/deceleration automatic stop with DC injection     Motor Slip Compensation   Automatic whatever the load     Adjustable 0300 %     Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable     416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty)     33.3 A at 500 V (heavy duty)   33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network   5 %     Frequency Tolerance   5 %     Prospective Line Isc   22 kA     Base Load Current At High   4 A     Overload   4 A	Transient Overtorque	170200 % of nominal motor torque
Ramps   U     S   CUS     Ramp switching   Acceleration/deceleration automatic stop with DC injection     Motor Slip Compensation   Automatic whatever the load     Adjustable  300 %     Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable     416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty)     33.3 A at 500 V (heavy duty)   33.3 A at 500 V (heavy duty)     Maximum Unput Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network   5 %     Frequency Tolerance   5 %     Prospective Line Isc   22 kA     Base Load Current At High   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Maximum Output Frequency	0.599 kHz
Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)     Switching Frequency   216 kHz adjustable 416 kHz with derating factor     Nominal Switching Frequency   4 kHz     Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network   5 %     Prequency Tolerance   5 %     Prospective Line Isc   22 kA     Base Load Current At High Overload   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz		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   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 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   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Motor Slip Compensation	Adjustable 0300 %
Braking To Standstill   By DC injection     Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 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   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Switching Frequency	
Brake Chopper Integrated   True     Line Current   47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)     Maximum Input Current   47.3 A     Maximum Output Voltage   500 V     Apparent Power   28.8 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   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Nominal Switching Frequency	4 kHz
Line Current47.3 A at 380 V (heavy duty) 33.3 A at 500 V (heavy duty)Maximum Input Current47.3 AMaximum Output Voltage500 VApparent Power28.8 kVA at 500 V (heavy duty)Network Frequency5060 HzRelative Symmetric Network Frequency Tolerance5 %Prospective Line Isc22 kABase Load Current At High Overload4 APower Dissipation In WFan: 452.0 W at 380 V, switching frequency 4 kHz	Braking To Standstill	By DC injection
Anisotia State St	Brake Chopper Integrated	True
Maximum Output Voltage   500 V     Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network   5 %     Frequency Tolerance   5     Prospective Line Isc   22 kA     Base Load Current At High Overload   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Line Current	
Apparent Power   28.8 kVA at 500 V (heavy duty)     Network Frequency   5060 Hz     Relative Symmetric Network   5 %     Frequency Tolerance   5     Prospective Line Isc   22 kA     Base Load Current At High Overload   4 A     Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	Maximum Input Current	47.3 A
Network Frequency 5060 Hz   Relative Symmetric Network 5 %   Frequency Tolerance 22 kA   Prospective Line Isc 22 kA   Base Load Current At High 4 A   Overload Fan: 452.0 W at 380 V, switching frequency 4 kHz	Maximum Output Voltage	500 V
Relative Symmetric Network   5 %     Frequency Tolerance   5 %     Prospective Line Isc   22 kA     Base Load Current At High   4 A     Overload   Pan: 452.0 W at 380 V, switching frequency 4 kHz	Apparent Power	28.8 kVA at 500 V (heavy duty)
Frequency Tolerance 22 kA   Prospective Line Isc 22 kA   Base Load Current At High Overload 4 A   Power Dissipation In W Fan: 452.0 W at 380 V, switching frequency 4 kHz	Network Frequency	5060 Hz
Base Load Current At High 4 A   Overload Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz		5 %
Overload   Power Dissipation In W   Fan: 452.0 W at 380 V, switching frequency 4 kHz	· · · · · · · · · · · · · · · · · · ·	22 kA
		4 A
With Safety Function Safely True	Power Dissipation In W	Fan: 452.0 W at 380 V, switching frequency 4 kHz
Limited Speed (SIs)		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 (SIp)	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	180 mm
Width Height	180 mm 404.0 mm

## Environment

Operating Position	Vertical +/- 10 degree
Product Certifications	CE ATEX NOM GOST EAC RCM KC
Marking	CE ATEX UL CSA EAC RCM
Standards	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	156.0 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**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	23.000 cm
Package 1 Width	42.000 cm
Package 1 Length	27.100 cm
Package 1 Weight	8.777 kg
Unit Type Of Package 2	P06
Number Of Units In Package 2	6
Package 2 Height	75.000 cm
Package 2 Width	60.000 cm
Package 2 Length	80.000 cm
Package 2 Weight	64.984 kg

## Sustainability Screen Premium

**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

#### **Resource performance**

Upgraded Components Available

#### Well-being performance

Mercury Free

Rohs Exemption Information Yes

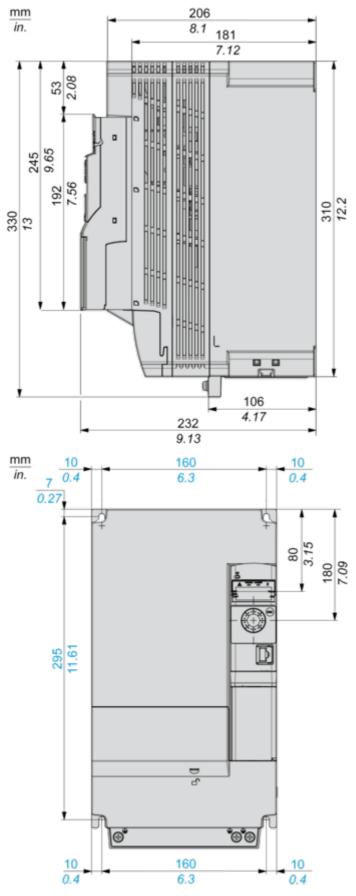
#### **Certifications & Standards**

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

**Dimensions Drawings** 

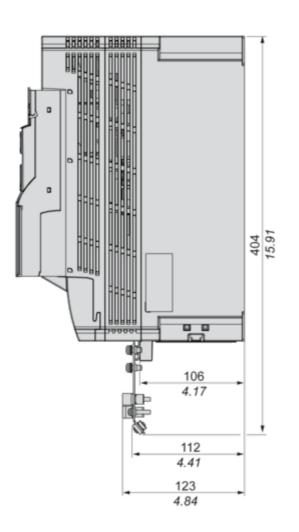
#### Dimensions

#### **Right and Front View**

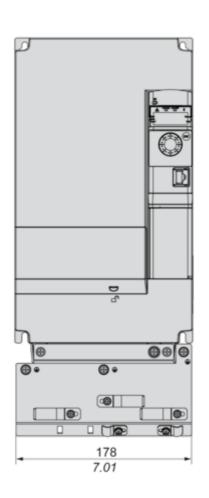


Right and Front View with EMC Plate



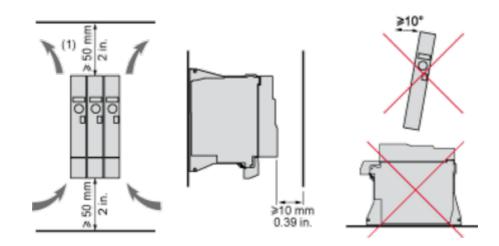






## ATV320D15N4B

Mounting and Clearance



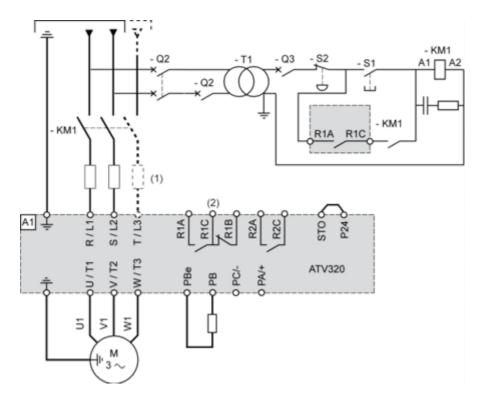
(1) Minimum value corresponding to thermal constraints.

#### 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.

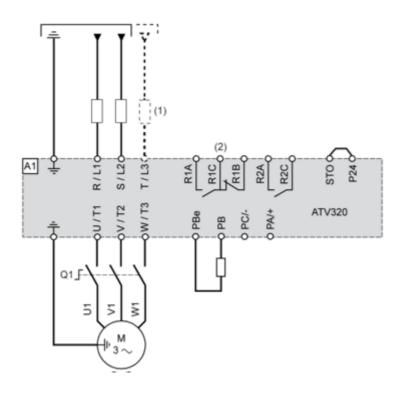


(1) Line choke (if used)

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

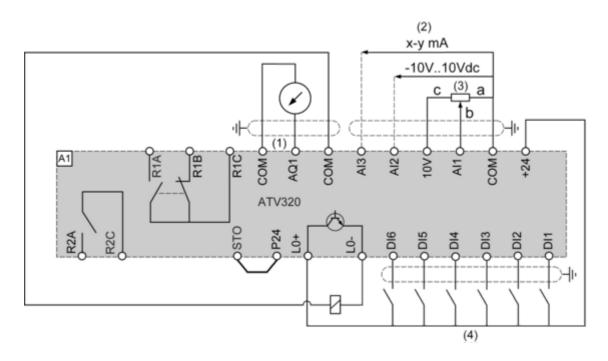
#### **Diagram with Switch Disconnect**

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

#### Control Connection Diagram in Source Mode



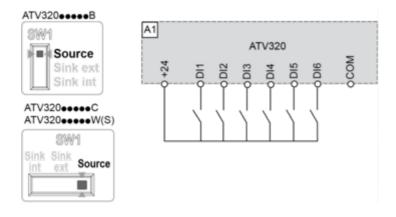
- (1) Analog output
- (2) Analog inputs
- (3) Reference potentiometer (10 kOhm maxi)
- (4) Digital inputs

#### ATV320D15N4B

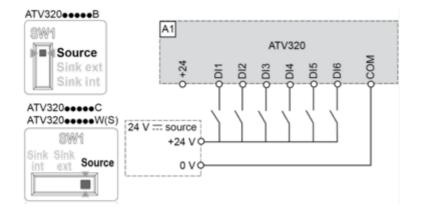
#### **Digital Inputs Wiring**

The logic input switch (SW1) is used to adapt the operation of the logic inputs to the technology of the programmable controller outputs.

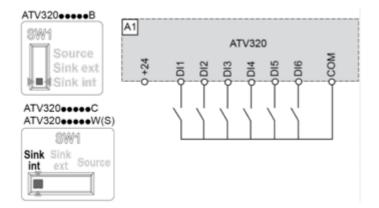
Switch SW1 set to "Source" position and use of the output power supply for the DIs.



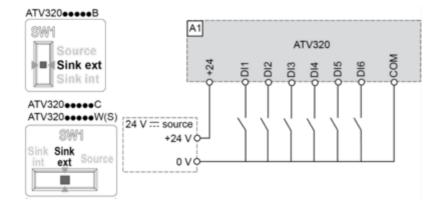
Switch SW1 set to "Source" position and use of an external power supply for the DIs.



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



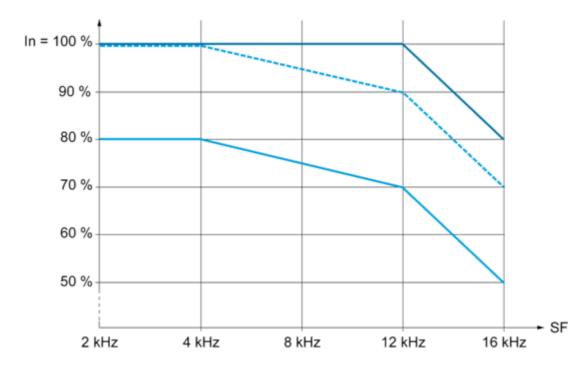
Switch SW1 set to "Sink Ext" position and use of an external power supply for the DIs.



Performance Curves

#### **Derating Curves**

Derating curve for the nominal drive current (In) as a function of temperature and switching frequency (SF).



40 °C (104 °F) - Mounting type A, B and C 50 °C (122 °F) - Mounting type A, B and C 60 °C (140 °F) - Mounting type B and C

SF : Switching Frequency

In : Nominal Drive Current