Specifications



# variable speed drive, Altivar Machine ATV320, 1.1kW, 200 to 240V, 1 phase, enclosed, IP65

ATV320U11M2WS

#### Main

wain	
Range of product	Altivar Machine ATV320
Product or component type	Variable speed drive
Product specific application	Complex machines
Variant	With disconnect switch
Format of the drive	Enclosed
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	200240 V - 1510 %
Nominal output current	6.9 A
Motor power kW	1.1 kW for heavy duty
EMC filter	Class C2 EMC filter integrated
IP degree of protection	IP65

### Complementary

Discrete input number	7
Discrete input type	STO safe torque off, 24 V DC, impedance: 1.5 kOhm DI1Dl6 logic inputs, 24 V DC (30 V) Dl5 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



Analogue output type     Selvence configurable current A(1 0 - 30 mk impedance R00 Chm, reculutor 10 bits       Reizy output type     Configurable rays took RA1 10 - 30 mk impedance R00 Chm, resolution 10 bits       Reizy output type     Configurable rays took RA1 10 - 30 mk impedance R00 Chm, resolution 10 bits       Maximum switching current     Configurable rays took RA1 10 - 30 mk impedance R00 Chm, resolution 10 bits       Maximum switching current     Resy output RA1 R1 R10 m residere took, cos phi - 1 3 A at 350 V DC Resy output RA1 R18 R10, R20, R20, RC0 on modethe load, cos phi - 0 4 and R = 7 ms 2 A at 250 V AC Resy output RA1, R18, R10, R20, R20, RC0 on modethe load, cos phi - 0 4 and R = 7 ms 2 A at 250 V AC Resy output RA1, R18, R10, R20, R20, RC0 on modethe load, cos phi - 0 4 and R = 7 ms 2 A at 250 V AC Resy output RA1, R18, R10, R20, R20, R20 m is 1 = 5 A at 30 V DC       Method of access     Smc CMNpon       4 quadrant operation possible     Tme       Apporthenous motor control     Voltagethecourter (ato. 5 conts       Synchronous motor control     Voltagethecourter (ato. 5 conts       Maximum output frequency     Voltagethecourter (ato. 5 conts       Operation possible     The       Conservation of control     Voltagethecourter (ato. 5 conts       Synchronous motor control     Voltagethecourter (ato. 5 conts       Profile     Voltagethecourter (ato. 5 contres       Profile		
Configuable reity loge R10     Configuable reity loge R20       Maximum switching current     Relex output R1A, R1B, R1C contractive load, cop bit = 1.3 Act 250 VAC bedre output R1A, R1B, R1C, R2A, R2C on inductive load, cos bit = 0.4 and LR = 7 ms: 2 A at 250 V AC active output R1A, R1B, R1C, R2A, R2C on inductive load, cos bit = 0.4 and LR = 7 ms: 2 A at 250 V AC active output R1A, R1B, R1C, R2A, R2C on inductive load, cos bit = 0.4 and LR = 7 ms: 2 A at 250 V AC active output R1A, R1B, R1C, R2A, R2C on inductive load, cos bit = 0.4 and LR = 7 ms: 2 A at 250 V AC active output R1A, R1B, R1C, R2A, R2C on inductive load, cos bit = 0.4 and LR = 7 ms: 2 A at 250 V AC active output R1A, R1B, R1C, R2A, R2C in matchine load to P = 1.1 at 30 V DC       Minimum switching current     Relay output R1A, R1B, R1C, R2A, R2C in matchine load to P = 1.1 at 30 V DC       Method of access     Save CANopen       4 quadrant operation possible     True       Asynchronous motor control Validge/frequency ratio .5 donts Hausebre cannot without sensor profile     Validge/frequency ratio .5 donts Hausebre cannot without sensor profile       Yanchronous motor control Validge/frequency active cannot without sensor profile     Validge/frequency active cannot without sensor profile       Transient overtorque     170, 200 % of nominal motor torque     Maximum output frequency       Acceleration and deceleration ramps adveltage     2.5 at 30 V Acceleration autorates top with DC injection       Maximum output frequency     4 Mic     Autoratio whatever the torat Aquitable in withogeneration autorates t	Analogue output type	
Reisy output RA, R1B, R1C, R2A, R2C on induction cosphile 0.4 and UR = 7 ms. 2 A at 250 V     Very output RA, R1B, R1C, R2A, R2C on induction cosphile 0.4 and UR = 7 ms. 2 A at 250 V     Reisy output R2A, R2C on instative lead. cos phile 1.6 A at 250 V AC     Reisy output R2A, R2C on instative lead. cos phile 1.6 A at 250 V AC     Reisy output R2A, R2C on instative lead. cos phile 1.6 A at 250 V AC     Reisy output R2A, R2C on instative lead. cos phile 1.6 A at 250 V AC     Reisy output R2A, R2C on instative lead. cos phile 1.6 A at 250 V AC     Method of access   Slave CANepon     4 quadrat operation possible   True     Asynchronous motor control   Vitage/frequency ratio. 5 points     Froite   Valtage/frequency ratio. 5 points     Froite   Volder control without sensor     Synchronous motor control   Volder control without sensor     Profile   Volder control without sensor     Synchronous motor control   Using offereguards ratio. 2 points     Maximum output frequency   0.599 Mit     Acceleration and deceleration   Using offereguards to gravital points     Rating to standstill   By DC injection     Switching frequency   2.16 kitz dijustable     -16 kitz dijustable   3.00 %     Nominal switching frequency   3.24 ki	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
Method of access     Slave CANopen       4 quadrant operation possible     Tue       Asynchronous motor control profile     Tue       Synchronous motor control profile     Websgeffrequency ratio. 5 points       Synchronous motor control profile     Vector control without sensor Velageffrequency ratio. 2 points       Synchronous motor control profile     Vector control without sensor Profile       Transient overtorque     170200 % of nominal motor torque       Maximum output frequency     0.599 HHz       Acceleration and deceleration ramps     Linear U 8 U 8 U 8 U 8 U 8 U 8 U 8 U 8 U 8 U 8	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   Twe     Asynchronous motor control profile   Voltage/frequency ratio. 5 points FUX vector control without sensor. Energy Saving Voltage/frequency ratio. Energy Saving Voltage/frequency ratio. Energy Saving Voltage/frequency Fallo. 2 Points     Synchronous motor control profile   Vector control without sensor     Transient overtorque   170200 % of nominal motor torque     Maximum output frequency   0.999 H/z     Acceleration and deceleration ramps   Linear U SUS Ramp switching Acceleration/deceleration automatic stop with DC injection     Motor slip compensation   Automatic whatever the load Adjustable on00 %. Not available in voltage/frequency ratio (2 or 5 points)     Switching frequency   216 H/z available in voltage/frequency ratio (2 or 5 points)     Switching frequency   416 H/z with deraining factor     Nominal switching frequency   417 A     Maximum input current   13.7 A     Maximum output voltage   240 V     Apparent power   2.8.K/A at 240 V (heavy duty)     Network frequency   5.%     Prospective line lac   1MA     Base load current at high overload   3.9. A     With safety function Safe brake, function Safey   3.9. A     With safety function Safe brake, management (BSC/SBT)   False </td <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 profile   Voltage#requency ratio. 5 points Fix vector control without sensor, standard Voltage#requency ratio. Energy Saving, quadratic U/f Fix vector control without sensor     Synchronous motor control profile   Vector control without sensor     Transient overlorque   170200 % of nominal motor torque     Maximum output frequency   0.999 kHz     Acceleration and deceleration ramps   Linear U     U   U     OUS   Ramp switching Acceleration and deceleration ramps     Switching frequency   2.999 kHz     Acceleration and deceleration ramps   Linear U     U   U     OUS   Ramp switching Acceleration/deceleration automatic stop with DC injection     Motor slip compensation Aduratide 0300 % Not available in voltage#requency 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   13.7 A     Maximum output voltage   240 V     Apparent power   2.8 kVA at 240 V (heavy duty)     Netterance   5 %     Prospective line isc   1 kA	Method of access	Slave CANopen
profile   Flux vector control without sensor, standard     Votage/regivency raito, 2-forcely Saving, usdraite Uf     Synchronous motor control   Vector control without sensor     Profile   170200 % of nominal motor torque     Maximum output frequency   0.599 M/z     Acceleration and deceleration   Uses     US   US     Cub   Song M/z     Acceleration and deceleration   Uses     US   Song M/z     Ramp switching   Acceleration and deceleration     Acceleration/deceleration ramp adaptation   Acceleration/deceleration and padaptation     Acceleration/deceleration automatic stop with DL injection   Advantic whatever the load     Motor slip compensation   Advantic whatever the load     Adjustation   -2.16 M/z adjustable     Active adjustable   -2.16 M/z adjustable     Active adjustable   -2.16 M/z adjustable     Maximum input current   13.7 A     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   13.7 A at 200 V (heavy duty)     11.5 A at 240 V (heavy duty)   15.8 at 240 V (heavy duty)     Apparent power   2.8 k/A	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     Acceleration and deceleration ramps   Linear U S CUS     Source intermediation Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection     Motor silp compensation   Aduptable 0200 % Not available in voltage/frequency automatic stop with DC injection     Switching frequency   216 kHz digitable 416 kHz digitable 0.200 % Not available in voltage/frequency at 0.2 or 5 points)     Switching frequency   216 kHz digitable 416 kHz adjustable     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   13.7 A at 200 V (heavy duty)     115 A at 200 V (heavy duty)   115 A at 200 V (heavy duty)     Maximum input current   13.7 A     Maximum output voltage   240 V     Apparent power   2.8 kVA at 240 V (heavy duty)     Network frequency   5%     Prospective line Isc   1 KA     Base load current at high over/doad   39.A     Power dissipation in W   Self-cooled: 61 W at 200 V, switching frequency 4 kHz     With safety function Safely Linet Speed (SLS)   Fa	-	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   Linear     y   S     CUS   S     Ramp switching   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     414 kHz   Braking to standstill     By DC injection   By DC injection     Brake chopper integrated   True     Line current   13.7 A at 200 V (heavy duty)     11.5 A at 240 V (heavy duty)   11.5 A at 240 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network   5%     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Overload   Superiod     Power dissipation in W   Self-cooled: 61 W at 200 V, switching frequency 4 kHz     With safety function Safe brake management (SBC/SBT)   False		Vector control without sensor
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 416 kHz dijustable 0300 %     Nominal switching frequency   4 kHz     Braking to standstill   By DC injection     Brake chopper integrated   True     Line current   13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)     Maximum input current   13.7 A     Maximum output voltage   240 V     Apparent power   2.8 kVA at 240 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lisc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 V, switching frequency 4 kHz     With safety function Safe brake management (SBC/SBT)   False	Transient overtorque	170200 % of nominal motor torque
rampsU S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injectionMotor slip compensationAutomatic whatever the load Adjustable 0300 % 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 current13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)Maximum input current13.7 AMaximum output voltage240 VApparent power2.8 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line Isc1 kABase load current at high overload3.9 AOwer dissipation in WSelf-cooled: 61 W at 200 V, switching frequency 4 kHzWith safety function Safe prake imited Speed (SLS)False	Maximum output frequency	0.599 kHz
Adjustable 0300 % Not available in voltage/frequency ratio (2 or 5 points)Switching frequency216 kHz adjustable 416 kHz adjustable 416 kHz adjustable at adjustable 116 kHz adjustable 416 kHzNominal switching frequency4 kHzBraking to standstillBy DC injectionBrake chopper integratedTrueLine current13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)Maximum input current13.7 AMaximum output voltage240 VApparent power2.8 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line lsc1 kABase load current at high overload3.9 AVith safety function Safe brake management (SBC/SBT)FalseWith safety function Safe FalseFalse		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   13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)     Maximum input current   13.7 A     Maximum output voltage   240 V     Apparent power   2.8 kVA at 240 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line Isc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 V, switching frequency 4 kHz     With safety function Safe brake management (SBC/SBT)   False     With safety function Safe brake   False	Motor slip compensation	Adjustable 0300 %
Braking to standstill By DC injection   Brake chopper integrated True   Line current 13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)   Maximum input current 13.7 A   Maximum output voltage 240 V   Apparent power 2.8 kVA at 240 V (heavy duty)   Network frequency 5060 Hz   Relative symmetric network frequency tolerance 5 %   Prospective line lsc 1 kA   Base load current at high overload 3.9 A   Power dissipation in W Self-cooled: 61 W at 200 V, switching frequency 4 kHz   With safety function Safe brake management (SBC/SBT) False   With safety function Safe False	Switching frequency	
Brake chopper integrated   True     Line current   13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)     Maximum input current   13.7 A     Maximum output voltage   240 V     Apparent power   2.8 kVA at 240 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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 current13.7 A at 200 V (heavy duty) 11.5 A at 240 V (heavy duty)Maximum input current13.7 AMaximum output voltage240 VApparent power2.8 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line lsc1 kABase load current at high overload3.9 APower dissipation in WSelf-cooled: 61 W at 200 V, switching frequency 4 kHzWith safety function Safely Limited Speed (SLS)TrueWith safety function Safe management (SBC/SBT)False	Braking to standstill	By DC injection
11.5 A at 240 V (heavý duťý)Maximum input current13.7 AMaximum output voltage240 VApparent power2.8 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line lsc1 kABase load current at high overload3.9 APower dissipation in WSelf-cooled: 61 W at 200 V, switching frequency 4 kHzWith safety function Safely Limited Speed (SLS)TrueWith safety function Safe management (SBC/SBT)False	Brake chopper integrated	True
Maximum output voltage240 VApparent power2.8 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line Isc1 kABase load current at high overload3.9 APower dissipation in WSelf-cooled: 61 W at 200 V, switching frequency 4 kHzWith safety function Safely imited Speed (SLS)TrueWith safety function Safe management (SBC/SBT)False	Line current	
Apparent power   2.8 kVA at 240 V (heavy duty)     Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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	Maximum input current	13.7 A
Network frequency   5060 Hz     Relative symmetric network frequency tolerance   5 %     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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	Maximum output voltage	240 V
Relative symmetric network   5 %     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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	Apparent power	2.8 kVA at 240 V (heavy duty)
frequency tolerance     Prospective line lsc   1 kA     Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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	Network frequency	5060 Hz
Base load current at high overload   3.9 A     Power dissipation in W   Self-cooled: 61 W at 200 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   Power dissipation in W   Self-cooled: 61 W at 200 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	1 kA
With safety function Safely   True     With safety function Safe brake   False     With safety function Safe   False     With safety function Safe   False	-	3.9 A
Limited Speed (SLS)     With safety function Safe brake management (SBC/SBT)     With safety function Safe     False	Power dissipation in W	Self-cooled: 61 W at 200 V, switching frequency 4 kHz
management (SBC/SBT)   With safety function Safe False		True
•		False
	-	False

False
False
False
True
False
True
False
False
Input phase breaks: drive Overcurrent between output phases and earth: drive Overheating protection: drive Short-circuit between motor phases: drive Thermal protection: drive
250 mm
340 mm
235.0 mm
7.8 kg
Vertical +/- 10 degree
CE ATEX NOM GOST EAC RCM KC
CE ATEX UL CSA EAC RCM
EN/IEC 61800-5-1
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
Class 3C3 according to IEC 60721-3-3 Class 3S2 according to IEC 60721-3-3
150 m/s² at 11 ms
10 m/s² at 13200 Hz
1.5 mm at 213 Hz
Class 3K5 according to EN 60721-3
111
Adjustable PID regulator

Speed accuracy	+/- 10 % of nominal slip 0.2 Tn to Tn
Pollution degree	3
Ambient air transport temperature	-2570 °C
Ambient air temperature for operation	-1040 °C without derating 4060 °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	29.3 cm
Package 1 Width	30.5 cm
Package 1 Length	45.0 cm
Package 1 Weight	9.8 kg

# Offer Sustainability

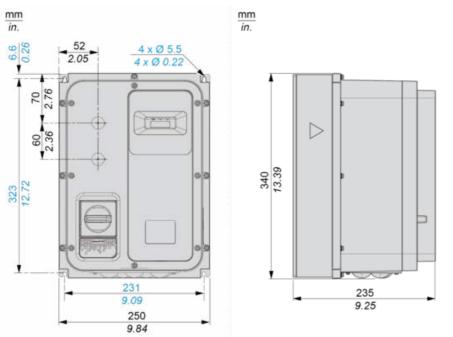
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Upgradeability	Upgraded components available

Dimensions Drawings

# ATV320U11M2WS

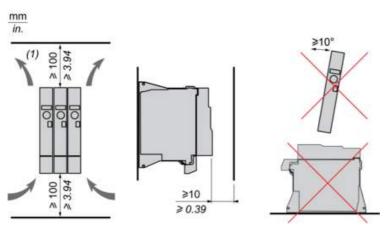
### Dimensions

### Front and Left View



Mounting and Clearance

### Mounting and Clearance



(1) Minimum value corresponding to thermal constraints.

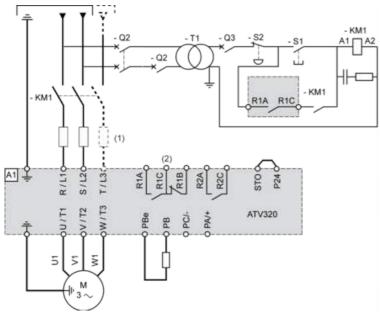
# ATV320U11M2WS

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.

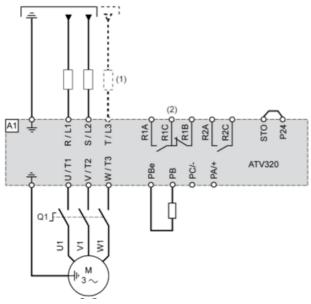


(1) Line choke (if used)

(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.

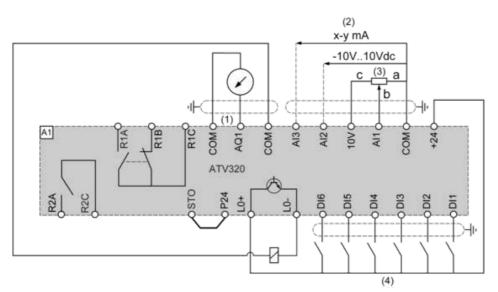


(1) Line choke (if used)

(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)

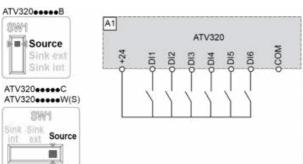
(4) Digital inputs

# ATV320U11M2WS

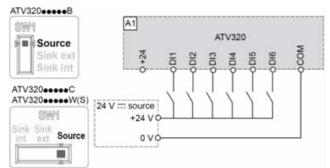
Connections and Schema

### **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.

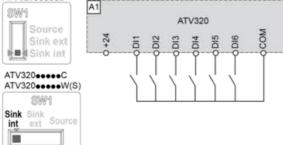


Switch SW1 set to "Source" position and use of an external power supply for the DIs.

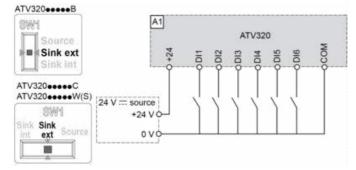


Switch SW1 set to "Sink Int" position and use of the output power supply for the DIs.

### ATV3200000B



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



Recommended replacement(s)