Specifications



Variable speed drive, Altivar Machine ATV320, 0.37 kW, 200...240 V, 1 phase, compact

ATV320U04M2C

Main

| wain | |
|------------------------------|---|
| 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 | 200240 V - 1510 % |
| Nominal output current | 3.3 A |
| Motor power kW | 0.37 kW for 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, 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 |



| Analogue output type Sobheme configurable current A(1): 002 AV impedance 200 Cmr., resolution 10 bits Relay output type Configurable relay type (R1 A) type existed durability 100000 syckes Configurable relay type (R1 C) Maximum ewitching current Relay output A(1, R1); R1C or relative load, outp P = 1: 3 A # 200 VAC Relay output R(1, R1); R1C or relative load, outp P = 1: 3 A # 200 VAC Relay output R(1, R1); R1C or relative load, outp P = 1: 3 A # 200 VAC Relay output R(1, R1); R1C RC R2, R2C or inductive load, com P = 0 A and LR = 7 ms; 2 A # 200 VCC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A and LR = 7 ms; 2 A # 200 VCC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A and LR = 7 ms; 2 A # 200 VCC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A and LR = 7 ms; 2 A # 200 VCC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A and LR = 7 ms; 2 A # 200 VCC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 1: 3 A # 200 VAC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A # # 20 VAC Relay output R(1, R1); R1C, R2A, R2C or inductive load, com P = 0 A # # 20 VAC Relay output R(1, R1); R1C, R2A, R2C or inductive load, R2A, R2C or i | | |
|--|-------------------------------|---|
| Configurable entry logic RT1 INC electrical durability 100000 cycles Configurable entry logic RT2 Maximum switching current Relay output RTA, RT8, RT0, RT0, RT2, RT2, RT2, RT2, RT2, RT2, RT2, RT2 | Analogue output type | |
| Resign output RA, RHB, RHC, CAR ZRC on inductive load, cos phi = 0.4 and LR = 7 ms; 2.4 at 250 V/C Resign output RA, RHB, RHC, CAR ZC on inductive load, cos phi = 0.4 and LR = 7 ms; 2.4 at 250 V/C Resign output RA, RHB, RHC, CAR ZRC on inductive load, cos phi = 0.4 and LR = 7 ms; 2.4 at 30 V/C Minimum switching current Relay output RA, RHB, RHC, CAR, R2C on inductive load, cos phi = 1.5 at 250 V/AC Relay output RA, RHB, RHC, R2A, R2C on inductive load, cos phi = 0.4 and LR = 7 ms; 2.4 at 30 V/DC Method of access Slave CANopen 4 quadrant operation possible True Asynchronous motor control Voltop/fineumory ratio. 5 points France Vector control without sensor Environmental term or standard voltop/fineumory ratio. 5 points Synchronous motor control Voltop/fineumory ratio. 2 more yoang, quadrant out // Fixe vector control without sensor Profile Maximum output frequency Acceleration and deceleration Linear V Rate and the deceleration Automatic whatever the load Adjustable 0. 300 % Note and term or and adjustion Acceleration and deceleration Automatic whatever the load Adjustable 0. 300 % Rate adjustion Acceleration ramp adjustion Acceleration ramp adjustion Acceleration ramp adjustion Acceleration ramp adjustion <td>Relay output type</td> <td>Configurable relay logic R1B 1 NC electrical durability 100000 cycles Configurable relay logic R1C Configurable relay logic R2A 1 NO electrical durability 100000 cycles</td> | 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 True Asynchronous motor control profile Wildspelfrequency ratio. 5 points Synchronous motor control profile Wildspelfrequency ratio. 2 points Synchronous motor control profile Vector control without sensor Voltage/frequency ratio. 2 points Synchronous motor control profile Vector control without sensor Voltage/frequency ratio. 2 points Acceleration and deceleration ranges Innear U S Signer sensor Voltage/frequency ratio. 2 points Acceleration and deceleration ranges Linear U S Signer Voltage/frequency ratio. 2 points Switching frequency 216 kHz adjustation Acceleration and deceleration range senticing Acceleration/deceleration range adaptation Acceleration/deceleration range adaptation Acceleration/deceleration range adaptation Acceleration/deceleration range adaptation Acceleration/deceleration range adaptation Acceleration senticing Acceleration and setter the load Adjustation & Ja00 Signer Range senticing Acceleration/deceleration range adaptation Acceleration and setter the load Adjustation & Ja00 Signer Range senticing Acceleration and setter the load Adjustation & Ja00 Signer Range senticing Acceleration and setter the load Adjustation & Ja00 V (heavy duty) Switching frequency 4 | 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 profile Voltage/frequency ratio. 5 points Flux vector control without sensor - Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/frequency Factor, 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/frequency Factor, 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/Factor, 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/Factor, 2 Energy Saving, Voltage/frequency ratio. 2 Energy Saving, Voltage/Factor, 2 Energy Saving, Voltage/frequency Acceleration and deceleration ramps Lineer U U Voltage/frequency Lineer U Voltage/frequency Switching frequency 2.16 KHz witching Acceleration automatic stop with DC injection Motor silp compensation Automatic whatever the lead Augustable an voltage/frequency ratio (2 or 5 points) Switching frequency 2.16 KHz with derating factor Nominal switching frequency 4 kHz Braking to standstill By DC injection Maximum input current 5.9 A Maximum output voltage 240 V Apparent power 12 kVA at 240 V (heavy duty) Network frequency 5% Prospective line lsc 1 kA Base load current at high overload 3.7 A Vith safety function Safe brake, Vith safety function Safe brake, Vith safety funct | Minimum switching current | Relay output R1A, R1B, R1C, R2A, R2C: 5 mA at 24 V DC |
| Asynchronous motor control profile Voltage/frequency ratio. 5 points Flux vector control without sensor, standard Voltage/frequency ratio. Energy Saving Voltage/frequency ratio. Energy Saving Voltage/frequency ratio. Energy Saving Voltage/frequency ratio. Energy Saving Voltage/frequency ratio. Provide Ratio vector control Synchronous motor control profile Vector control without sensor Maximum output frequency and control without sensor Vector control without sensor Acceleration and deceleration ramps Linear U U U U U U U U U U U U U U U U U U U | Method of access | Slave CANopen |
| profile Flux vector control without sensor, standard updatate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Profile Synchronous motor control profile Vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate Utf Flux vector control without sensor - Inergy Saving, quadrate - Intergy Saving Saving, quadrate - Intergy Saving Saving - Intergy Saving Saving Saving Saving - Intergy Saving Saving Saving - Intergy Saving Saving Saving Savi | 4 quadrant operation possible | True |
| profile Maximum output frequency 0.599 kHz Transient overtorque 170200 % of nominal motor torque Acceleration and deceleration ramps Linear U S CUS 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 416 kHz with derating factor Nominal switching frequency 4 kHz Braking to standstill By DC injection Brake chopper integrated True Line current 5.9 A 1200 V (heavy duty) 4.9 A at 240 V (heavy duty) Maximum output voltage 240 V Apparent power 1.2 kVA at 240 V (heavy duty) Network frequency 5% Frequency tolerance 5 % Prospective line lsc 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 W at 200 V, switching frequency 4 kHz With safety function Safe brake management (SBC/SBT) False | - | 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 svitching 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 416 kHz Braking to standstill By DC injection Brake chopper integrated True Line current 5.9 A at 200 V (neavy duty) 49 A at 240 V (neavy duty) Maximum input current 5.9 A Maximum output voltage 240 V Apparent power 1.2 kVA at 240 V (heavy duty) Network frequency 5060 Hz Relative symmetric network frequency tolerance 5 % Prospective line Is c 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 W at 200 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 S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection Motor slip compensation Automatic whetever 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 5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty) Maximum output voltage 240 V Apparent power 1.2 kVA at 240 V (heavy duty) Network frequency 5060 Hz Relative symmetric network frequency tolerance 5 % Prospective line Is to 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 W at 200 V, switching frequency 4 kHz With safety function Safeb y Links Safety function Safeb y Links Safety function Safe brake management (SBC/SBT) False | Maximum output frequency | 0.599 kHz |
| ramps U S CUS Ramp switching Acceleration/deceleration ramp adaptation Acceleration/deceleration automatic stop with DC injection 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 Nominal switching frequency 4 kHz Braking to standstill By DC injection Brake chopper integrated True Line current 5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty) 4.9 A at 240 V (heavy duty) Asymmetric network 5.% Relative symmetric network 5.% Frequency tolerance 5.% Prospective line lsc 1 kA Base load current at high overload 3.7 A Overload Self-cooled: 30 W at 200 V, switching frequency 4 kHz With 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 with derating factor Nominal switching frequency 4 kHz Braking to standstill By DC injection Brake chopper integrated True Line current 5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty) Maximum input current 5.9 A Maximum output voltage 240 V Apparent power 1.2 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 3.7 A Power dissipation in W Self-cooled: 30 W at 200 V, switching frequency 4 kHz With safety function Safe brake management (SBC/SBT) 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 5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty) Maximum input current 5.9 A A at 240 V A Apparent power 1.2 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 3.7 A Power dissipation in W Self-cooled: 30 W at 200 V, switching frequency 4 kHz With safety function Safe brake management (SBC/SBT) False 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 5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty) Maximum input current 5.9 A Maximum output voltage 240 V Apparent power 1.2 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 3.7 A Power dissipation in W Self-cooled: 30 W at 200 V, switching frequency 4 kHz With safety function Safe brake management (SBC/SBT) False | Switching frequency | |
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| Line current5.9 A at 200 V (heavy duty) 4.9 A at 240 V (heavy duty)Maximum input current5.9 AMaximum output voltage240 VApparent power1.2 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line lsc1 kABase load current at high overload3.7 APower dissipation in WSelf-cooled: 30 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 |
| 4.9 A at 240 V (heavý dutý) Maximum input current 5.9 A Maximum output voltage 240 V Apparent power 1.2 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 3.7 A Power dissipation in W Self-cooled: 30 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 | Brake chopper integrated | True |
| Maximum output voltage240 VApparent power1.2 kVA at 240 V (heavy duty)Network frequency5060 HzRelative symmetric network frequency tolerance5 %Prospective line Isc1 kABase load current at high overload3.7 APower dissipation in WSelf-cooled: 30 W at 200 V, switching frequency 4 kHzWith safety function Safe brake management (SBC/SBT)FalseWith safety function Safe brakeFalse | Line current | |
| Apparent power 1.2 kVA at 240 V (heavy duty) Network frequency 5060 Hz Relative symmetric network 5 % frequency tolerance 5 % Prospective line lsc 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 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 | 5.9 A |
| Network frequency 5060 Hz Relative symmetric network frequency tolerance 5 % Prospective line lsc 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 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 | Maximum output voltage | 240 V |
| Relative symmetric network frequency tolerance 5 % Prospective line lsc 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 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 | 1.2 kVA at 240 V (heavy duty) |
| frequency tolerance Prospective line lsc 1 kA Base load current at high overload 3.7 A Power dissipation in W Self-cooled: 30 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 overload3.7 APower dissipation in WSelf-cooled: 30 W at 200 V, switching frequency 4 kHzWith safety function Safely Limited Speed (SLS)TrueWith safety function Safe brake management (SBC/SBT)FalseWith safety function SafeFalse | | 5 % |
| overload Power dissipation in W Self-cooled: 30 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 management (SBC/SBT) False With safety function Safe False | - | 3.7 A |
| Limited Speed (SLS) With safety function Safe brake management (SBC/SBT) With safety function Safe False | Power dissipation in W | Self-cooled: 30 W at 200 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 | 72.0 mm |
| Height | 143.0 mm |
| Depth | 128.0 mm |
| Net weight | 1 kg |
| Environment | |
| Operating position | Vertical +/- 10 degree |
| Product certifications | CE |
| Froduct certifications | 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 |
| Overvoltage category | III |
| 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 | 11.500 cm |
| Package 1 Width | 18.700 cm |
| Package 1 Length | 19.000 cm |
| Package 1 Weight | 1.200 kg |
| Unit Type of Package 2 | P06 |
| Number of Units in Package 2 | 45 |
| Package 2 Height | 75.000 cm |
| Package 2 Width | 60.000 cm |
| Package 2 Length | 80.000 cm |
| Package 2 Weight | 66.145 kg |

Offer Sustainability

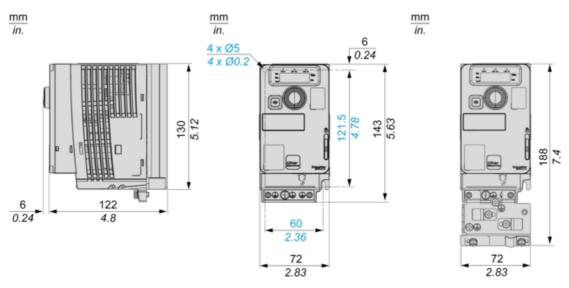
| Sustainable offer status | Green Premium product |
|----------------------------|---|
| REACh Regulation | REACh Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS declaration |
| 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 |
| | |

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Dimensions Drawings

Dimensions

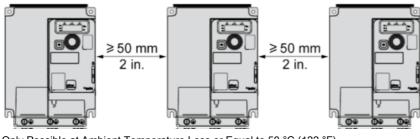
Right View, Front View and Front View with EMC Plate



Mounting and Clearance

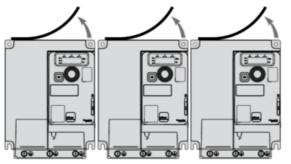
Mounting Types

Mounting Type A: Individual with Ventilation Cover

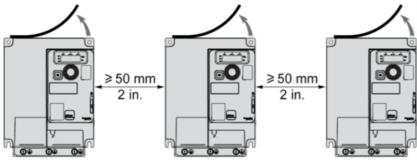


Only Possible at Ambient Temperature Less or Equal to 50 $^\circ\text{C}$ (122 $^\circ\text{F})$

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 $^\circ\text{F})$

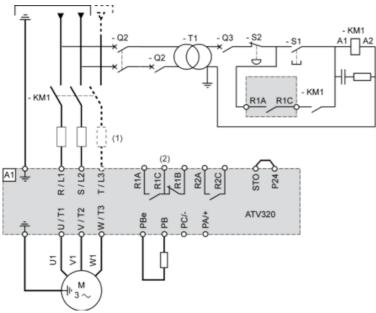
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Connections and Schema

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.

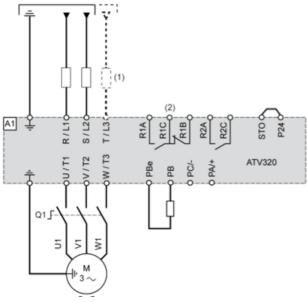


(1) Line choke (if used)

(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.

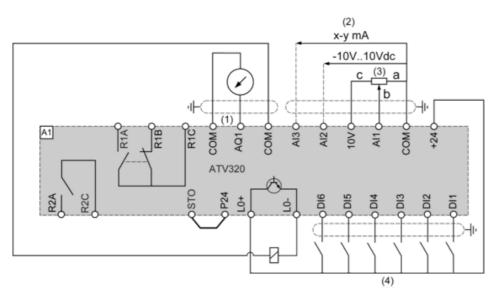


(1) Line choke (if used)

(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)

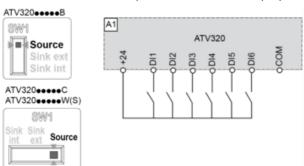
(4) Digital inputs

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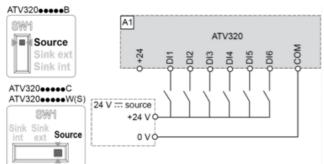
Connections and Schema

Digital Inputs Wiring

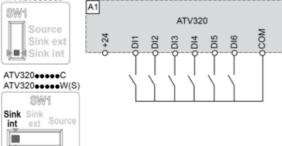
The logic input switch (SW1) is used to adapt the operation of the logic inputs to the technology of the programmable controller outputs. Switch SW1 set to "Source" position and use of the output power supply for the DIs.



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

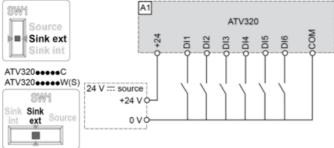


Switch SW1 set to "Sink Int" position and use of the output power supply for the DIs.



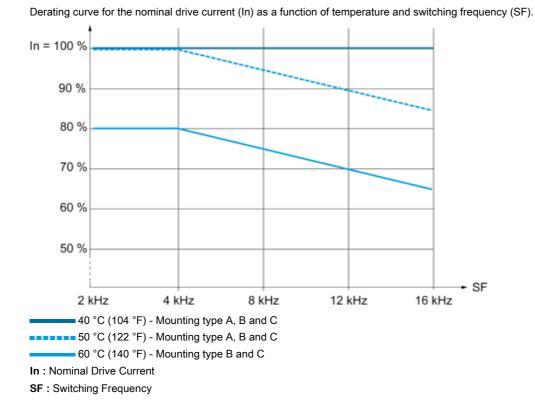
Switch SW1 set to "Sink Ext" position and use of an external power supply for the DIs.

ATV320



Derating Curves

Performance Curves



Recommended replacement(s)