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| Range of product | Altivar Machine ATV340 |
| Product or component type | Variable speed drive |
| Device application | Machine |
| Device short name | ATV340 |
| Variant | Standard version |
| Product destination | Asynchronous motors Synchronous motors |
| EMC filter | Integrated 20 m EN/IEC 61800-3 category C3 |
| IP degree of protection | IP20IEC 61800-5-1 IP20IEC 60529 |
| Type of cooling | Forced convection |
| Supply frequency | 50...60 Hz +/- 5 % |
| Network number of phases | 3 phases |
| [Us] rated supply voltage | 380...480 V - 15...10 % |
| Motor power kW | 2,2 KW normal duty 1,5 kW heavy duty |
| Motor power hp | 3 Hp normal duty 2 hp heavy duty |
| Line current | 6 A 380 V without line choke heavy duty) 4,9 A 480 V without line choke heavy duty) 5,1 A 380 V with external line choke normal duty) 4,1 A 480 V with external line choke normal duty) 3,5 A 380 V with external line choke heavy duty) 2,8 A 480 V with external line choke heavy duty) |
| Prospective line I _{sc} | 5 kA |
| Apparent power | 3,8 KVA 480 V normal duty) 4,1 kVA 480 V heavy duty) |
| Continuous output current | 5,6 A 4 kHz normal duty 4 A 4 kHz heavy duty |
| Maximum transient current | 6,2 A 60 s normal duty) 6 A 60 s heavy duty) 7,6 A 2 s normal duty) 7,2 A 2 s heavy duty) |
| Asynchronous motor control profile | Optimized torque mode Constant torque standard Variable torque standard |
| Synchronous motor control profile | Reluctance motor Permanent magnet motor |
| Speed drive output frequency | 0,1...599 Hz |
| Nominal switching frequency | 4 kHz |
| Switching frequency | 2...16 kHz adjustable 8...16 kHz with derating factor |
| Safety function | STO (safe torque off) SIL 3 |

Complementary

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| Number of preset speeds | 16 preset speeds |
| Communication port protocol | Modbus serial |
| Option card | Slot GP-FB communication module Profibus DP V1 Slot GP-FB communication module Profinet Slot GP-FB communication module DeviceNet Slot GP-FB communication module CANopen daisy chain RJ45 Slot GP-FB communication module CANopen SUB-D 9 Slot GP-FB communication module CANopen screw terminals Slot GP-FB communication module EtherCAT Slot GP-X digital and analog I/O extension module Slot GP-X output relay extension module Slot GP-ENC 5/12 V digital encoder interface module Slot GP-ENC analog encoder interface module Slot GP-ENC resolver encoder interface module |
| Output voltage | <= power supply voltage |
| Permissible temporary current boost | 1.1 x In 60 s normal duty) 1.35 x In 2 s normal duty) 1.5 x In 60 s heavy duty) 1.8 x In 2 s heavy duty) |
| Motor slip compensation | Can be suppressed Adjustable Not available in permanent magnet motor law Automatic whatever the load |
| Acceleration and deceleration ramps | Linear adjustable separately from 0.01...9999 s S, U or customized |
| Braking to standstill | By DC injection |
| Protection type | Thermal protection motor Safe torque off motor Motor phase loss motor Thermal protection drive Safe torque off drive Overheating drive Overcurrent drive Output overcurrent between motor phase and earth drive Output overcurrent between motor phases drive Short-circuit between motor phase and earth drive Short-circuit between motor phases drive Motor phase loss drive DC Bus overvoltage drive Line supply overvoltage drive Line supply undervoltage drive Input supply loss drive Exceeding limit speed drive Break on the control circuit drive |
| Frequency resolution | Display unit 0.1 Hz Analog input 0.012/50 Hz |
| Electrical connection | Line side screw terminal 1.5...4 mm ² AWG 14...AWG 12 DC bus screw terminal 4...6 mm ² AWG 12...AWG 10 Motor screw terminal 1.5...4 mm ² AWG 14...AWG 12 Control screw terminal 0.2...2.5 mm ² AWG 24...AWG 12 |
| Connector type | 1 x RJ45, Modbus serial on front face 1 x RJ45, Modbus serial HMI on front face |
| Physical interface | 2-wire RS 485 Modbus serial |
| Transmission frame | RTU Modbus serial |
| Transmission rate | 4800 bps, 9600 bps, 19200 bps, 38.4 Kbps Modbus serial |
| Data format | 8 bits, configurable odd, even or no parity Modbus serial |
| Type of polarization | No impedance Modbus serial |
| Number of addresses | 1...247 Modbus serial |
| Method of access | Slave Modbus RTU |
| Supply | External supply for digital inputs 24 V DC 19...30 V), <1,25 mA overload and short-circuit protection Internal supply for reference potentiometer (1 to 10 kOhm) 10.5 V DC +/- 5 %, <10 mA overload and short-circuit protection Internal supply for digital inputs and STO 24 V DC 21...27 V), <200 mA overload and short-circuit protection |
| Local signalling | Local diagnostic 4 LED mono/dual colour) Communication module status 4 LED dual colour) |
| Maksimalna širina | 85 mm |

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| Maksimalna visina | 270 mm |
| Maksimalna dubina | 232,5 mm |
| Neto težina | 1,7 kg |
| Analogue input number | 2 |
| Analogue input type | AI1 software-configurable current 0...20 mA 250 Ohm 12 bits AI1 software-configurable temperature probe or water level sensor AI1 software-configurable voltage 0...10 V DC 31.5 kOhm 12 bits AI2 software-configurable voltage - 10...10 V DC 20 kOhm 12 bits |
| Discrete input number | 8 |
| Discrete input type | PTI programmable as pulse input 0...30 kHz, 24 V DC <= 30 V) STOA, STOB safe torque off, 24 V DC <= 30 V)> 2.2 kOhm DI1...DI5 programmable, 24 V DC <= 30 V)4.4 kOhm |
| Input compatibility | DI1...DI5 discrete input level 1 PLC EN/IEC 61131-2 PTI pulse input level 1 PLC IEC 65A-68 STOA, STOB discrete input level 1 PLC EN/IEC 61131-2 |
| Discrete input logic | Positive logic (source) DI1...DI5), < 5 V, > 11 V Negative logic (sink) DI1...DI5), > 16 V, < 10 V Positive logic (source) PTI), < 0.6 V, > 2.5 V Positive logic (source) STOA, STOB), < 5 V, > 11 V |
| Analogue output number | 1 |
| Analogue output type | Software-configurable voltage AQ1 0...10 V DC 470 Ohm 10 bits Software-configurable current AQ1 0...20 mA 500 Ohm 10 bits |
| Input/output type | Programmable as logic input/output DQ1 0...1 kHz, <= 30 V DC, 100 mA Programmable as logic input/output DQ2 0...1 kHz, <= 30 V DC, 100 mA |
| Sampling duration | 2 Ms +/- 0.5 ms DI1...DI5) - discrete input 5 Ms +/- 1 ms PTI) - pulse input 1 Ms +/- 1 ms AI1, AI2) - analog input 5 Ms +/- 1 ms AQ1) - analog output 2 ms +/- 0.5 ms DQ1, DQ2) - discrete input/output |
| Accuracy | +/- 0.6 % AI1, AI2 for a temperature variation 60 °C analog input +/- 1 % AQ1 for a temperature variation 60 °C analog output |
| Linearity error | AI1, AI2 +/- 0.15 % of maximum value analog input AQ1 +/- 0.2 % analog output |
| Relay output number | 2 |
| Relay output type | Configurable relay logic R1 fault relay NO/NC 100000 cycles Configurable relay logic R2 sequence relay NO 100000 cycles |
| Refresh time | Relay output R1, R2)5 ms +/- 0.5 ms) |
| Minimum switching current | Relay output R1, R2 5 mA 24 V DC |
| Maximum switching current | Relay output R1 resistive, cos phi = 1 3 A 250 V AC Relay output R1 resistive, cos phi = 1 3 A 30 V DC Relay output R1 inductive, cos phi = 0,4 7 ms 2 A 250 V AC Relay output R1 inductive, cos phi = 0,4 7 ms 2 A 30 V DC Relay output R2 resistive, cos phi = 1 5 A 250 V AC Relay output R2 resistive, cos phi = 1 5 A 30 V DC Relay output R2 inductive, cos phi = 0,4 7 ms 2 A 250 V AC Relay output R2 inductive, cos phi = 0,4 7 ms 2 A 30 V DC |
| Mounting mode | Cabinet mount |

Environment

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| Isolation | Between power and control terminals |
| Insulation resistance | > 1 MOhm 500 V DC for 1 minute to earth |
| Noise level | 55,4 dB 86/188/EEC |
| Power dissipation in W | Natural convection 46 W 380 V 4 kHz heavy duty) Forced convection 46 W 380 V 4 kHz heavy duty) Natural convection 59 W 380 V 4 kHz normal duty) Forced convection 59 W 380 V 4 kHz normal duty) |
| Operating position | Vertical +/- 10 degree |
| Electromagnetic compatibility | Electrostatic discharge immunity test level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 IEC 61000-4-3 Electrical fast transient/burst immunity test level 4 IEC 61000-4-4 1.2/50 µs - 8/20 µs surge immunity test level 3 IEC 61000-4-5 Conducted radio-frequency immunity test level 3 IEC 61000-4-6 |
| Pollution degree | 2 EN/IEC 61800-5-1 |
| Vibration resistance | 1.5 mm peak to peak 2...19 Hz)EN/IEC 60721-3-3 class 3M3 1 gn 9...200 Hz)EN/IEC 60721-3-3 class 3M3 |

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| Shock resistance | 15 gn 11 ms, class 3M3 EN/IEC 60721-3-3 |
| Relative humidity | 5...95 % without condensation EN/IEC 60721-3-3 class 3K3 |
| Ambient air temperature for operation | -15...50 °C without current derating heavy duty) -15...40 °C without current derating normal duty) 50...60 °C with current derating heavy duty) 40...60 °C with current derating normal duty) |
| Ambient air temperature for storage | -40...70 °C |
| Operating altitude | <= 1000 m without derating 1000...3000 m with current derating 1 % per 100 m |
| Environmental characteristic | Chemical pollution resistance class 3C3 EN/IEC 60721-3-3 Dust pollution resistance class 3S3 EN/IEC 60721-3-3 |
| Standards | EN/IEC 61800-3 Environment 1 category C2 EN/IEC 61800-3 Environment 2 category C3 EN/IEC 61800-3 EN/IEC 61800-5-1 IEC 60721-3 IEC 61508 IEC 13849-1 UL 618000-5-1 |
| Product certifications | CSA REACH TÜV UL |
| Marking | CE |

Offer Sustainability

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| Status održive ponude | Proizvod Green Premium |
| Uredba REACH | Izjava REACH |
| Direktiva EU RoHS | Proaktivna sukladnost (proizvod izvan zakonskog okvira direktive EU RoHS) Izjava EU RoHS |
| Bez žive | Da |
| Informacije o RoHS izuzeću | Da |
| Propis RoHS za Kinu | Izjava RoHS Za Kinu |
| Izjava o očuvanju okoliša | Ekološki Profil Proizvoda |
| Profil cirkularnosti | Informacije O Kraju Vijeka Trajanja |
| WEEE | Proizvod se na tržištima EU mora odlagati u skladu sa specifičnim propisima o prikupljanju otpada; nikako se ne smije odlagati s komunalnim otpadom. |