Produktdatablad
Karakteristikker

ATV340D22N4E
Frekvensomformer 22kW 400V med Ethernet

Teknisk informasjon

Produktspekter	Altivar Machine ATV340
Produkt eller type komponent	Frekvensomformer
Produktspesifikk applikasjon	Machine
Variant	Standard versjon
Monteringsmetode	Cabinet mount
Kommunikasjonsprotokoll	Modbus TCP EtherNet/IP Modbus serial
Funksjonskort	Kommunikasjons modul, Profinet Kommunikasjons modul, DeviceNet Kommunikasjons modul, CANopen Kommunikasjons modul, EtherCAT
Antall faser i nettverket	3 faser
Nettfrekvens	50...60 Hz +/- 5 %
[Us] matespenning	380...480 V - 15...10 %
Nominell utgangsstrøm	46,0 A
Motoreffekt kW	30 KW for normal duty 22 kW for heavy duty
Motoreffekt hk	40 Hp for normal duty 30 hp for heavy duty
EMC filter	Class C3 EMC filter integrated
IP grad av beskyttelse	IP20

Komplementær

Discrete input number	5
Discrete input type	PTI programmerbar puls inngang: 0…30 kHz, 24 V DC (30 V) DI1...DI5 sikkert utkoblet moment, 24 V DC (30 V), impedans: 3.5 kOhm programerbar
Number of preset speeds	16 forhåndsinnstilte hastigheter
Discrete output number	2,0
Digitale utganger	Programmable output DQ1, DQ2 30 V DC 100 mA
Antall analoge innganger	2
Analogue input type	AI1 software-configurable current: 0...20 mA, impedance: 250 Ohm, resolution 12 bits AI1 software-configurable temperature probe or water level sensor AI1 software-configurable voltage: 0...10 V DC, impedance: 31.5 kOhm, resolution 12 bits AI2 software-configurable voltage: - 10...10 V DC, impedance: 31.5 kOhm, resolution 12 bits
Analog utgangsnummer	2
Analog utgangstype	Programvare-konfigurerbar spenning AQ1: 0...10 V DC impedans 470 Ohm, oppløsning 10 bits Software-configurable current AQ1: 0...20 mA impedance 500 Ohm, resolution 10 bits
Relé utgang nummer	2
Utgangsspenning	<= strømforsyningsspenning
Reléutgangstype	Relay outputs R1A Relay outputs R1C electrical durability 100000 cycles Relay outputs R2A Relay outputs R2C electrical durability 100000 cycles

Maximum svitsjestrøm	Relay output R1C on resistive load, cos phi = 1: 3 A at 250 V AC Relay output R1C on resistive load, cos phi = 1: 3 A at 30 V DC Relay output R1C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 250 V AC Relay output R1C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 30 V DC Relay output R2C on resistive load, cos phi = 1: 5 A at 250 V AC Relay output R2C on resistive load, cos phi = 1: 5 A at 30 V DC Relay output R2C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 250 V AC Relay output R2C on inductive load, cos phi = 0.4 and L/R = 7 ms: 2 A at 30 V DC
Minimum brytestrøm	Relay output R1B: 5 mA at 24 V DC Relay output R2C: 5 mA at 24 V DC
Fysisk interface	2-tråds RS 485
Tilkoblingstype	3 RJ45
Tilgangsmetode	Slave Modbus RTU Slave Modbus TCP
Overføringshastighet	4.8 kbit/s 9.6 kbit/s 19.2 kbit/s 38.4 kbit/s
Ramme for overføring	RTU
Antall adresser	1…247
Datoformat	8 bits, konfigurerbar Odd, selv eller ingen paritet
Polarisasjonstype	Ingen impedans
4 quadrant operation possible	True
Motorkontroll metode	Optimalisert dreiemoment-modus Konstant dreiemoment standard Variabelt dreiemoment standard
Synchronous motor control profile	Permanent magnet motor Reluctance motor
Forurensninggrad	2 conforming to EN/IEC 61800-5-1
Maximum output frequency	0,599 kHz
Akselerasjons- og retardasjonsramper	S, U eller tilpasset Linear adjustable separately from 0.01...9999 s
Motor slip kompensasjon	Automatic whatever the load Can be suppressed Justrbar Not available in permanent magnet motor law
Switching frequency	2...16 kHz Justrbar 6...16 kHz with derating factor
Nominell svitsjefrekvens	4 kHz
Bremsing til stillstand	Ved DC-bremsing
Brake chopper integrated	True
Nettstrøm	60.1 A at 380 V (normal duty) 48.6 A at 480 V (normal duty) 63.5 A at 380 V (heavy duty) 50.6 A at 480 V (heavy duty)
Nettstrøm	63.5 A at 380 V without line choke (heavy duty) 50.5 A at 480 V without line choke (heavy duty) 67,9 A på 480 V med ekstern linje choke (normal duty) 54,4 A på 380 V med ekstern linje choke (heavy duty) 64,1 A på 480 V med ekstern linje choke (heavy duty) 50,8 A på 380 V med ekstern linje choke (normal duty)
Maximum input current	63,5 A
Maximum output voltage	480 V
Tilsynelatende effekt	45.1 KVA at 480 V (normal duty) 42.1 kVA at 480 V (heavy duty)
Maksimale transient strøm	68.2 A during 60 s (normal duty) 69 A during 60 s (heavy duty) 83.7 A during 2 s (normal duty) 83 A during 2 s (heavy duty)
Elektrisk tilkobling	Screw terminal, clamping capacity: 0.2...2.5 mm² for control Screw terminal, clamping capacity: 6...25 mm² for motor Screw terminal, clamping capacity: 10...25 mm² for line side Screw terminal, clamping capacity: 10...25 mm² for DC bus
Maks kortslutningsnivå Isc	22 kA
Base load current at high overload	46,0 A

Base load current at low overload	62,0 A
Effekttap i W	Natural convection: 28 W at 380 V, switching frequency 4 kHz (heavy duty) Forced convection: 486 W at 380 V, switching frequency 4 kHz (heavy duty) Natural convection: 39 W at 380 V, switching frequency 4 kHz (normal duty) Forced convection: 631 W at 380 V, switching frequency 4 kHz (normal duty)
Elektrisk tilkobling	Control: screw terminal 0.2...2.5 mm²/AWG 24...AWG 12 Motor: screw terminal 6...25 mm²/AWG 8...AWG 3 Line side: screw terminal 10...25 mm²/AWG 6...AWG 3 DC bus: screw terminal 10...25 mm²/AWG 6...AWG 3
With safety function Safely Limited Speed (SLS)	True
With safety function Safe brake management (SBC/ SBT)	True
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 (SLP)	False
With safety function Safe Direction (SDI)	False
Beskyttelsestype	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
Bredde	180,0 mm
Høyde	385,0 mm
Dybde	249,0 mm
Vekt	10,2 kg
Nominell utgangsstrøm	62 A at 4 kHz for normal duty 46 A at 4 kHz for heavy duty

Miljø

Operating altitude	<= 3000 m with current derating above 1000m
Driftsposisjon	Vertikal +/- 10 grader
Produktsertifikater	UL CSA TÜV EAC CTick
Merking	CE
Standarder	EN/IEC 61800-3 EN/IEC 61800-5-1 IEC 60721-3 IEC 61508 IEC 13849-1 UL 618000-5-1 UL 508C
Monteringsmåte	Med kjølelegeme

Elektromagnetisk kompatibilitet	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
Environmental class (during operation)	Class 3C3 according to IEC 60721-3-3 Class 3S3 according to IEC 60721-3-3
Maximum acceleration under shock impact (during operation)	70 m/s² at 22 ms
Maximum acceleration under vibrational stress (during operation)	5 m/s² at 9...200 Hz
Maximum deflection under vibratory load (during operation)	1.5 mm at 2...9 Hz
Permitted relative humidity (during operation)	Class 3K5 according to EN 60721-3
Volum av kjøleluft	128,0 m3/t
Kjølemetode	Tvangsstyrt konveksjon
Overspenningskategori	Class III
Reguleringssløyfe	Justerbar PID regulator
Støynivå	56,7 dB
Forurensninggrad	2
Ambient air transport temperature	−40…70 °C
Omgivelsestemperatur for drift	-15…50 °C without derating (vertical position) 50…60 °C with derating factor (vertical position)
Omgivelsestemperatur for lagring	−40…70 °C
Skille	Between power and control terminals

Packing Units

Enhetstype forpakning 1	PCE
Antall enheter forpakning 1	1
Forpakning 1 vekt	11,89 kg
Forpakning 1 høyde	29,8 cm
Forpakning 1 bredde	54,8 cm
Forpakning 1 lengde	33,7 cm
Enhetstype forpakning 2	P06
Antall enheter forpakning 2	2
Forpakning 2 vekt	36,78 kg
Forpakning 2 høyde	80 cm
Forpakning 2 bredde	80 cm
Forpakning 2 lengde	60 cm

Offer Sustainability

Produktets miljøstatus	Green Premium miljømerket produkt
REACh-regelverk	REACh-erklæring
EU RoHS-direktiv	Proaktivt i samsvar (Produktet inngår ikke i EUs RoHS direktivet) EU RoHS-erklæring
Kvikksølvfri	Ja
Informasjon om RoHS-unntak	Ja
Kinas RoHS-forskrift	Kinas RoHS–Erklæring
Miljøinformasjon	Produktmiljøprofil
Produktets livssyklus	Informasjon Om Levetidsslutt
WEEE	Innen EU må produktet avhendes i henhold til bestemte regler for avfallshåndtering og aldri kastes som husholdningsavfall.
Oppgraderbarhet	Oppgraderte Komponenter Tilgjengelig

Garantiperiode

Garanti	18 måneder