Product data sheet
Characteristics

ATV61HC63N4
variable speed drive ATV61 - 630kW 900HP - 380...480V - IP20

Green Premium

Product availability: Stock - Normally stocked in distribution facility

Price*: 76722.00 USD

⚠ This Product is Obsolete

Commercial status

This Product is Obsolete : JAN 01, 2017

Main

Range of product	Altivar 61
Product or component type	Variable speed drive
Product specific application	Pumping and ventilation machine
Component name	ATV61
Motor power kW	560 KW, 3 phase 380...480 V 630 KW, 3 phase 380...480 V
Maximum Horse Power Rating	800 Hp, 3 phase 380...480 V 900 Hp, 3 phase 380...480 V
[Us] rated supply voltage	380...480 V - 15...10 %
Phase	3 phase
Line current	1091 A 380 V 3 phase 630 kW / 900 hp 858 A 480 V 3 phase 560 kW / 800 hp 964 A 480 V 3 phase 630 kW / 900 hp 978 A 380 V 3 phase 560 kW / 800 hp
EMC filter	Level 3 EMC filter
Assembly style	With heat sink
Apparent power	718 KVA 380 V 3 phase 630 kW / 900 hp 643.6 KVA 380 V 3 phase 560 kW / 800 hp
Prospective line Isc	50 KA 3 phase
Maximum transient current	1425.6 A 60 s, 3 phase
Nominal switching frequency	2.5 kHz
Switching frequency	2...8 kHz adjustable 2.5...8 kHz with derating factor
Asynchronous motor control profile	Voltage/Frequency ratio, 5 points Flux vector control without sensor, standard Voltage/Frequency ratio, 2 points Voltage/Frequency ratio - Energy Saving, quadratic U/f
Synchronous motor control profile	Vector control without sensor, standard
Communication port protocol	Modbus CANopen

Type of polarization	No impedance Modbus
Option card	Communication card APOGEE FLN Communication card BACnet Communication card CC-Link Controller inside programmable card Communication card DeviceNet Communication card Ethernet/IP Communication card Fipio I/O extension card Communication card Interbus-S Communication card LonWorks Communication card METASYS N2 Communication card Modbus Plus Communication card Modbus TCP Communication card Modbus/Uni-Telway Multi-pump card Communication card Profibus DP Communication card Profibus DP V1

Complementary

Product destination	Synchronous motors Asynchronous motors
Supply voltage limits	323…528 V
Supply frequency	50...60 Hz - 5...5 %
Network frequency	47.5...63 Hz
Continuous output current	1188 A 2.5 kHz, 380 V - 3 phase 1188 A 2.5 kHz, 460 V - 3 phase
Output frequency	0.1…500 Hz
Speed range	1…100 in open-loop mode, without speed feedback
Speed accuracy	+/- 10 % of nominal slip 0.2 Tn to Tn without speed feedback
Torque accuracy	+/- 15 % in open-loop mode, without speed feedback
Transient overtorque	130 % of nominal motor torque +/- 10 % 60 s
Braking torque	<= 125 % with braking resistor 30 % without braking resistor
Regulation loop	Frequency PI regulator
Motor slip compensation	Can be suppressed Not available in voltage/frequency ratio (2 or 5 points) Adjustable Automatic whatever the load
Local signalling	Drive voltage 1 LED red)
Output voltage	<= power supply voltage
Isolation	Between power and control terminals
Type of cable	With an IP21 or an IP31 kit 3 IEC cable 104 °F (40 °C), copper 70 °C / PVC With UL Type 1 kit 3 UL 508 cable 104 °F (40 °C), copper 75 °C / PVC Without mounting kit 1 IEC cable 113 °F (45 °C), copper 70 °C / PVC Without mounting kit 1 IEC cable 113 °F (45 °C), copper 90 °C / XLPE/EPR
Electrical connection	Terminal 2.5 m- m² / AWG 14 AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) Terminal 8 x 185 mm² / 5 x 500 kcmil PC/-, PO, PA/+) Terminal 2 x 4 x 185 mm² / 2 x 3 x 500 kcmil- R/L1.1, S/L2.1, T/L3.1, R/L1.2, S/L2.2, T/L3.2) Terminal 6 x 185 mm² / 5 x 500 kcmil U/T1, V/T2, W/T3)
Tightening torque	5.31 Lbf.In (0.6 N.m) AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) 362.88 Lbf.In (41 N.m), 360 lb.in PC/-, PO, PA/+) 362.88 Lbf.In (41 N.m), 360 lb.in R/L1.1, S/L2.1, T/L3.1, R/L1.2, S/L2.2, T/L3.2) 362.88 Lbf.In (41 N.m), 360 lb.in U/T1, V/T2, W/T3)
Supply	Internal supply for reference potentiometer (1 to 10 kOhm) 10.5 V D- C, +/- 5 %, <10 mA overload and short-circuit protection Internal supply 24 V DC 21…27 V), <200 mA overload and short-circuit protection External supply 24 V DC 19…30 V)
Analogue input number	2
Analogue input type	AI1-/AI1+ bipolar differential voltage +/- 10 V DC 24 V max 11 bits + sign AI2 software-configurable current 0...20 mA 242 Ohm 11 bits AI2 software-configurable voltage 0...10 V DC 24 V max 30000 Ohm 11 bits

Sampling duration	2 Ms +/- 0.5 ms AI1-/AI1+) - analog input 2 Ms +/- 0.5 ms AI2) - analog input 2 Ms +/- 0.5 ms AO1) - analog output 2 Ms +/- 0.5 ms LI1...LI5) - discrete input 2 Ms +/- 0.5 ms LI6)if configured as logic input - discrete input
Accuracy	+/- 0.6 % AI1-/AI1+) for a temperature variation 60 °C +/- 0.6 % AI2) for a temperature variation 60 °C +/- 1 % AO1) for a temperature variation 60 °C
Linearity error	+/- 0.15 % of maximum value AI1-/AI1+) +/- 0.15 % of maximum value AI2) +/- 0.2 % AO1)
Analogue output number	1
Analogue output type	AO1 software-configurable current 0...20 mA 500 Ohm 10 bits AO1 software-configurable voltage 0...10 V DC 470 Ohm 10 bits AO1 software-configurable logic output 10 V, 20 mA
Discrete output number	2
Discrete output type	Configurable relay logic R1A, R1B, R1C) NO/NC - 100000 cycles Configurable relay logic R2A, R2B) NO - 100000 cycles
Response time	<= 100 ms in STO (Safe Torque Off) R1A, R1B, R1C <= 7 ms +/- 0.5 ms R2A, R2B <= 7 ms +/- 0.5 ms
Minimum switching current	3 MA 24 V DC configurable relay logic
Maximum switching current	R1, R2 2 A 250 V AC inductive, cos phi = 0.4 7 ms R1, R2 2 A 30 V DC inductive, cos phi = 0.4 7 ms R1, R2 5 A 250 V AC resistive, cos phi = 1 0 ms R1, R2 5 A 30 V DC resistive, cos phi = 1 0 ms
Discrete input number	7
Discrete input type	Programmable LI1...LI5) 24 V DC <= 30 V)level 1 PLC - 3500 Ohm Switch-configurable LI6) 24 V DC <= 30 V)level 1 PLC - 3500 Ohm Switch-configurable PTC probe LI6)0…6 - 1500 Ohm Safety input PWR) 24 V DC <= 30 V) - 1500 Ohm
Discrete input logic	Negative logic (sink) LI1...LI5), > 16 V, < 10 V Positive logic (source) LI1...LI5), < 5 V, > 11 V Negative logic (sink) LI6)if configured as logic input, > 16 V, < 10 V Positive logic (source) LI6)if configured as logic input, < 5 V, > 11 V
Acceleration and deceleration ramps	S, U or customized Linear adjustable separately from 0.01 to 9000 s Automatic adaptation of ramp if braking capacity exceeded, by using resistor
Braking to standstill	By DC injection
Protection type	Against exceeding limit speed drive Against input phase loss drive Break on the control circuit drive Input phase breaks drive Line supply overvoltage drive Line supply undervoltage drive Overcurrent between output phases and earth drive Overheating protection drive Overvoltages on the DC bus drive Power removal drive Short-circuit between motor phases drive Thermal protection drive Motor phase break motor Power removal motor Thermal protection motor
Insulation resistance	> 1 mOhm 500 V DC for 1 minute to earth
Frequency resolution	Analog input 0.024/50 Hz Display unit 0.1 Hz
Connector type	1 RJ45 on front face)Modbus 1 RJ45 on terminal)Modbus Male SUB-D 9 on RJ45CANopen
Physical interface	2-wire RS 485 Modbus
Transmission frame	RTU Modbus
Transmission rate	4800 bps, 9600 bps, 19200 bps, 38.4 Kbps Modbus on terminal 9600 bps, 19200 bps Modbus on front face 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps CANopen

Data format	8 bits, 1 stop, even parity Modbus on front face 8 bits, odd even or no configurable parity Modbus on terminal
Number of addresses	1…127 CANopen 1…247 Modbus
Method of access	Slave CANopen
Marking	CE
Operating position	Vertical +/- 10 degree
Product weight	959.01 Lb(US) (435 kg)
Width	44.09 In (1120 mm)
Height	54.72 In (1390 mm)
Depth	14.84 In (377 mm)

Environment

Noise level	71 DB 86/188/EEC
Dielectric strength	3535 V DC between earth and power terminals 5092 V DC between control and power terminals
Electromagnetic compatibility	Conducted radio-frequency immunity test level 3 IEC 61000-4-6 Electrical fast transient/burst immunity test level 4 IEC 61000-4-4 Electrostatic discharge immunity test level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 IEC 61000-4-3 Voltage dips and interruptions immunity test IEC 61000-4-11
Standards	EN/IEC 61800-3 EN 61800-3 environments 1 category C3 IEC 60721-3-3 class 3C2 UL Type 1 EN 55011 class A group 2 EN/IEC 61800-5-1 EN 61800-3 environments 2 category C3
Product certifications	UL GOST DNV CSA C-Tick NOM 117
Pollution degree	3 EN/IEC 61800-5-1 3 UL 840
IP degree of protection	IP41 on upper part EN/IEC 60529 IP41 on upper part EN/IEC 61800-5-1 IP00 EN/IEC 60529 IP00 EN/IEC 61800-5-1 IP30 on side parts EN/IEC 60529 IP30 on side parts EN/IEC 61800-5-1 IP30 on the front panel EN/IEC 60529 IP30 on the front panel EN/IEC 61800-5-1
Vibration resistance	0.6 gn 10…200 Hz)EN/IEC 60068-2-6 1.5 mm peak to peak 3…10 Hz)EN/IEC 60068-2-6
Shock resistance	4 gn 11 ms EN/IEC 60068-2-27
Relative humidity	5…95 % without condensation IEC 60068-2-3 5…95 % without dripping water IEC 60068-2-3
Ambient air temperature for operation	14…113 °F (-10…45 °C) without) 113…140 °F (45…60 °C) with derating factor)
Ambient air temperature for storage	-13…158 °F (-25…70 °C)
Operating altitude	<= 3280.84 ft (1000 m) without 3280.84...9842.52 ft (1000...3000 m) with current derating 1 % per 100 m

Ordering and shipping details

Category	22140 - ATV61 500 THRU 900 HP DRIVES
Discount Schedule	CP4C
GTIN	00785901749189
Package weight(Lbs)	434.09 Kg (957 lb(US))
Returnability	Yes
Country of origin	IN

Offer Sustainability

Sustainable offer status	Green Premium product
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 Carcinogen & Reproductive-harm. For more information go to www.p65warnings.ca.gov
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	No need of specific recycling operations 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.

Contractual warranty

Warranty	18 months

Product Life Status : End of commercialisation