

# ATV930C13N4

variable speed drive, Altivar Process ATV900,  
ATV930, 110 to 132kW, 380 to 480V, with  
braking unit, IP20





## Main

Range of Product	Altivar Process ATV900
Device Application	Industrial Application
Product or Component Type	Variable speed drive
Product destination	Synchronous motors Asynchronous motors
Product Specific Application	Process for industrial
Variant	Standard version With braking chopper
Phase	3 phase Single phase
Mounting Mode	Wall mount
Communication port protocol	Ethernet IP/Modbus TCP Modbus
[Us] rated supply voltage	380...480 V - 15...10 %
Motor power kW	132.0 KW normal duty 110.0 kW heavy duty
Continuous output current	250 A 4 kHz normal duty 211 A 4 kHz heavy duty
EMC filter	Integrated With EMC plate option
IP degree of protection	IP21
Degree of protection	UL type 1
Option card	Slot A communication module Profibus DP V1 Slot A communication module PROFINET Slot A communication module DeviceNet Slot A communication module EtherCAT Slot A communication module CANopen daisy chain RJ45 Slot A communication module CANopen SUB-D 9 Slot A communication module CANopen screw terminals Slot A/slot B/slot C digital and analog I/O extension module Slot A/slot B/slot C output relay extension module Slot B 5/12 V digital encoder interface module Slot B analog encoder interface module Slot B resolver encoder interface module
Asynchronous motor control profile	Constant torque standard Variable torque standard Optimized torque mode
Synchronous motor control profile	Permanent magnet motor Synchronous reluctance motor
Maximum output frequency	599 Hz
Switching frequency	1...8 kHz adjustable 2.5...8 kHz with derating factor
Nominal switching frequency	2.5 kHz
Line current	237.0 A 380 V normal duty) 201.0 A 380 V heavy duty) 213.0 A 480 V normal duty) 165.0 A 480 V heavy duty)
Apparent power	161.4 KVA 380...480 V normal duty) 121.8 kVA 380...480 V heavy duty)
Maximum transient current	300 A 60 s normal duty) 317 A 60 s heavy duty)
Network Frequency	50-60 Hz
Prospective line I <sub>sc</sub>	50 kA

## Complementary

Discrete input number	10
Relay output type	Configurable relay logic R1 fault relay NO/NC 100000 cycles Configurable relay logic R2 sequence relay NO 1000000 cycles Configurable relay logic R3 sequence relay NO 1000000 cycles
Physical interface	Ethernet 2-wire RS 485
Connector Type	2 RJ45 1 RJ45
Method of access	Slave Modbus TCP
Transmission Rate	10, 100 Mbits 4.8 kbps 9600 bit/s 19200 bit/s
Transmission frame	RTU
Number of addresses	1...247
Data format	8 bits, configurable odd, even or no parity
Type of polarization	No impedance
4 quadrant operation possible	True
Acceleration and deceleration ramps	Linear adjustable separately from 0.01...9999 s S, U or customized
Motor slip compensation	Adjustable Automatic whatever the load Can be suppressed Not available in permanent magnet motor law
Braking to standstill	By DC injection
Brake chopper integrated	True
Maximum Input Current per Phase	237.0 A
Maximum output voltage	480.0 V
Relative symmetric network frequency tolerance	5 %
Base load current at high overload	211.0 A
Base load current at low overload	250.0 A
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
Protection type	Thermal protection motor Safe torque off motor Motor phase break motor Thermal protection drive Safe torque off drive Overheating drive Overcurrent between output phases and earth drive Overload of output voltage drive Short-circuit protection drive Motor phase break drive Overvoltages on the DC bus drive Line supply overvoltage drive Line supply undervoltage drive Line supply phase loss drive Overspeed drive Break on the control circuit drive
Quantity per Set	1
Width	12.60 in (320 mm)
Height	47.44 in (1205 mm)

Depth	15.47 in (393 mm)
Net Weight	229.28 lb(US) (104 kg)
Electrical connection	Line side screw terminal 2 x 70...3 x 120 mm <sup>2</sup> 2 x AWG 2/0...2 x 300 kcmil DC bus screw terminal 0.5...1.5 mm <sup>2</sup> AWG 20...AWG 16 Control screw terminal 0.5...1.5 mm <sup>2</sup> AWG 20...AWG 16
Transmission Rate	10/100 Mbit/s Ethernet IP/Modbus TCP 4.8, 9.6, 19.2, 38.4 kbit/s 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
Local signalling	Local diagnostic 3 LEDs mono/dual colour) 5 LEDs dual colour) 2 LEDs dual colour) 1 LED red)
Isolation	Between power and control terminals

## Environment

Operating position	Vertical +/- 10 degree
Product Certifications	UL[RETURN]CSA[RETURN]TÜV
Marking	CE
Standards	UL 508C IEC 61800-3 IEC 61800-5-1 IEC 61000-3-12 IEC 60721-3 IEC 61508 IEC 13849-1
Maximum THDI	<48 % full load IEC 61000-3-12
Assembly style	Enclosed
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
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)	150 m/s <sup>2</sup> at 11 ms
Maximum acceleration under vibrational stress (during operation)	10 m/s <sup>2</sup> at 13...200 Hz
Maximum deflection under vibratory load (during operation)	1.5 mm at 2...13 Hz
Permitted relative humidity (during operation)	Class 3K5 according to EN 60721-3
Overvoltage category	III
Regulation loop	Adjustable PID regulator
Insulation resistance	> 1 MOhm 500 V DC for 1 minute to earth
Noise level	69.9 dB 86/188/EEC
Vibration resistance	1.5 mm peak to peak 2...13 Hz)IEC 60068-2-6 1 gn 13...200 Hz)IEC 60068-2-6
Shock resistance	6 gn 11 ms IEC 60068-2-27
Environmental characteristic	Chemical pollution resistance class 3C3 IEC 60721-3-3 Dust pollution resistance class 3S3 IEC 60721-3-3
Relative humidity	5...95 % without condensation IEC 60068-2-3
Ambient air temperature for operation	5...122 °F (-15...50 °C) without derating) 122...140 °F (50...60 °C) with derating factor)
Noise level	69.9 dB
Pollution degree	2
Ambient air transport temperature	-13...158 °F (-25...70 °C)
Ambient Air Temperature for Storage	-13...158 °F (-25...70 °C)

## Packing Units

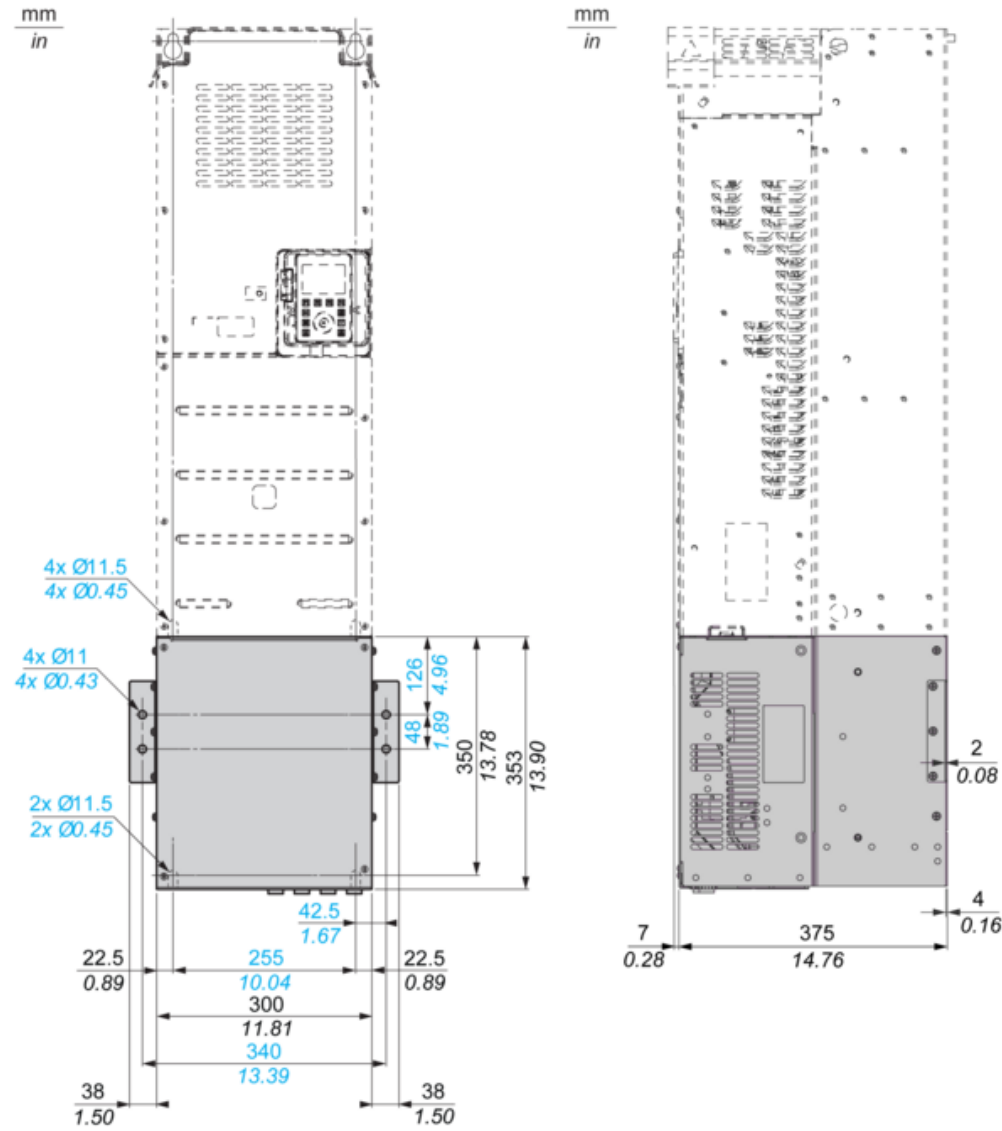
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	27.17 in (69.0 cm)
Package 1 Width	18.90 in (48.0 cm)
Package 1 Length	56.69 in (144.0 cm)
Package 1 Weight	282.19 lb(US) (128.0 kg)

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
Upgradeability	Upgraded components available

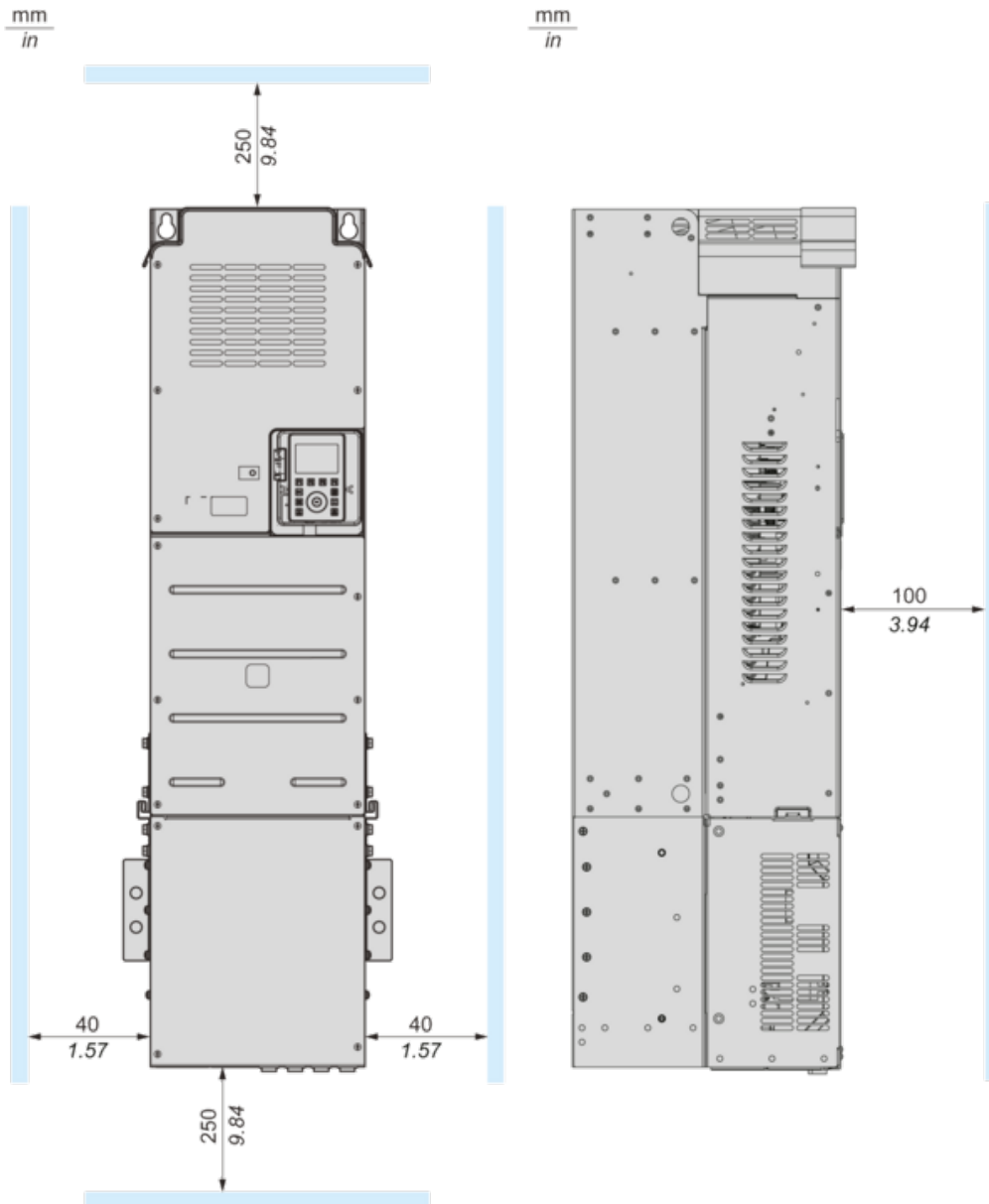
Dimensions

Front and Side Views



Dimensions

Front and Side Views



## Standard Connection Diagram

