Product data sheet

Specifications



variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20

ATV930C16N4

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Altivar Process ATV900
Product Specific Application	Process for industrial
Product or Component Type	Variable speed drive
Variant	Standard version With braking chopper
Device Application	Industrial Application
Product destination	Synchronous motors Asynchronous motors
Phase	3 phase Single phase
Mounting Mode	Wall mount
Continuous output current	302 A 4 kHz normal duty 250 A 4 kHz heavy duty
Communication Port Protocol	Ethernet IP/Modbus TCP Modbus
option module	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
[Us] rated supply voltage	380...480 V - 15...10 %
[Us] rated supply voltage	380...480 V
Relative symmetric mains voltage tolerance	10 %
Relative symmetric network frequency tolerance	5 %
nominal output current	302.0 A
Motor power kW	160.0 kW normal duty 132.0 kW heavy duty
EMC filter	Integrated With EMC plate option
IP degree of protection	IP21
Degree of protection	UL type 1

Complementary

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Electrical connection	Line side screw terminal 2 x 95...3 x 120 mm² 2 x 3/0 AWG...2 x 300 kcmil DC bus screw terminal 0.5...1.5 mm² 20 AWG...16 AWG Control screw terminal 0.5...1.5 mm² 20 AWG...16 AWG
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
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
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
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
Switching frequency	1...8 kHz adjustable 2.5...8 kHz with derating factor
Nominal switching frequency	2.5 kHz
Braking to standstill	By DC injection
Brake chopper integrated	True
Line current	284.0 A 380 V normal duty) 237.0 A 380 V heavy duty) 262.0 A 480 V normal duty) 213.0 A 480 V heavy duty)

Maximum Input Current per Phase	284.0 A
Maximum output voltage	480.0 V
Apparent power	201.3 kVA 380...480 V normal duty) 161.4 kVA 380...480 V heavy duty)
Maximum transient current	362 A 60 s normal duty) 375 A 60 s heavy duty)
Network Frequency	50-60 Hz
Prospective line Isc	50 kA
Base load current at high overload	250.0 A
Base load current at low overload	302.0 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	12.6 in (320 mm)
Height	47.4 in (1205 mm)
Depth	15.5 in (393 mm)
Product Weight	229.3 lb(US) (104 kg)

Environment

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 (f= 2…13 Hz) conforming to IEC 60068-2-6 1 gn (f= 13…200 Hz) conforming to 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)
Operating position	Vertical +/- 10 degree
Product Certifications	UL CSA 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 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)	150 m/s² at 11 ms
Maximum acceleration under vibrational stress (during operation)	10 m/s² 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
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)

Ordering and shipping details

Category	US1CP4E22277
Discount Schedule	CP4E
GTIN	3606481490407
Returnability	Yes
Country of origin	CN

Packing Units

Unit Type of Package 1	PCE

Nbr. of units in pkg.	1
Package 1 Height	27.559 in (70.000 cm)
Package 1 Width	19.291 in (49.000 cm)
Package 1 Length	57.087 in (145.000 cm)
Package weight(Lbs)	287.703 lb(US) (130.500 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**104 ton CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**884 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**16 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**7 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**103 ton CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**17 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**No**
SCIP Number	**2a36d170-61d5-4546-b212-5be0d10219ac**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
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**

Energy efficiency

Product contributes to saved and avoided emissions	**Yes**

Use Longer

Lifetime extension

Repair	**No**

Use Again

Repack and remanufacture

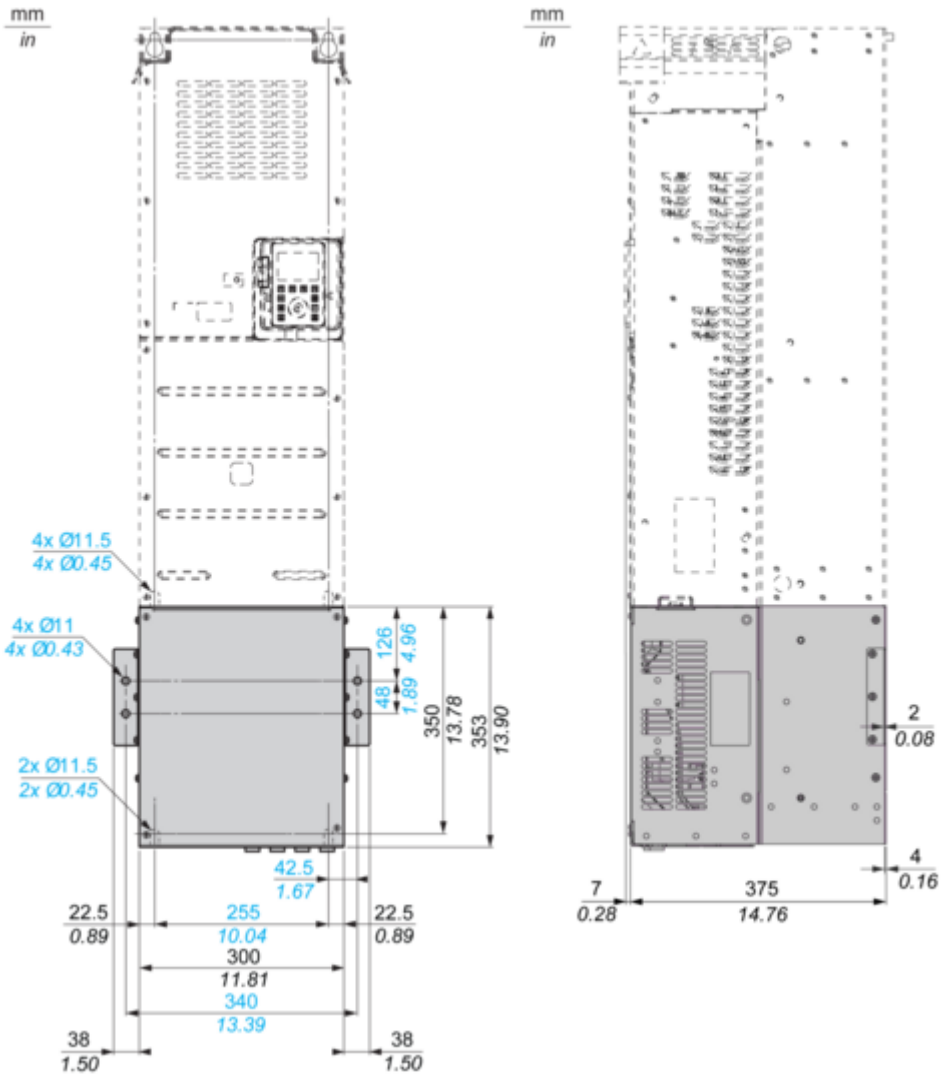
Recyclability potential, in %	**70**
Circularity Profile	**End of Life Information**
Removable battery	**Yes**

Take-back	**No**
WEEE Label	 **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.**

Dimensions Drawings

Dimensions

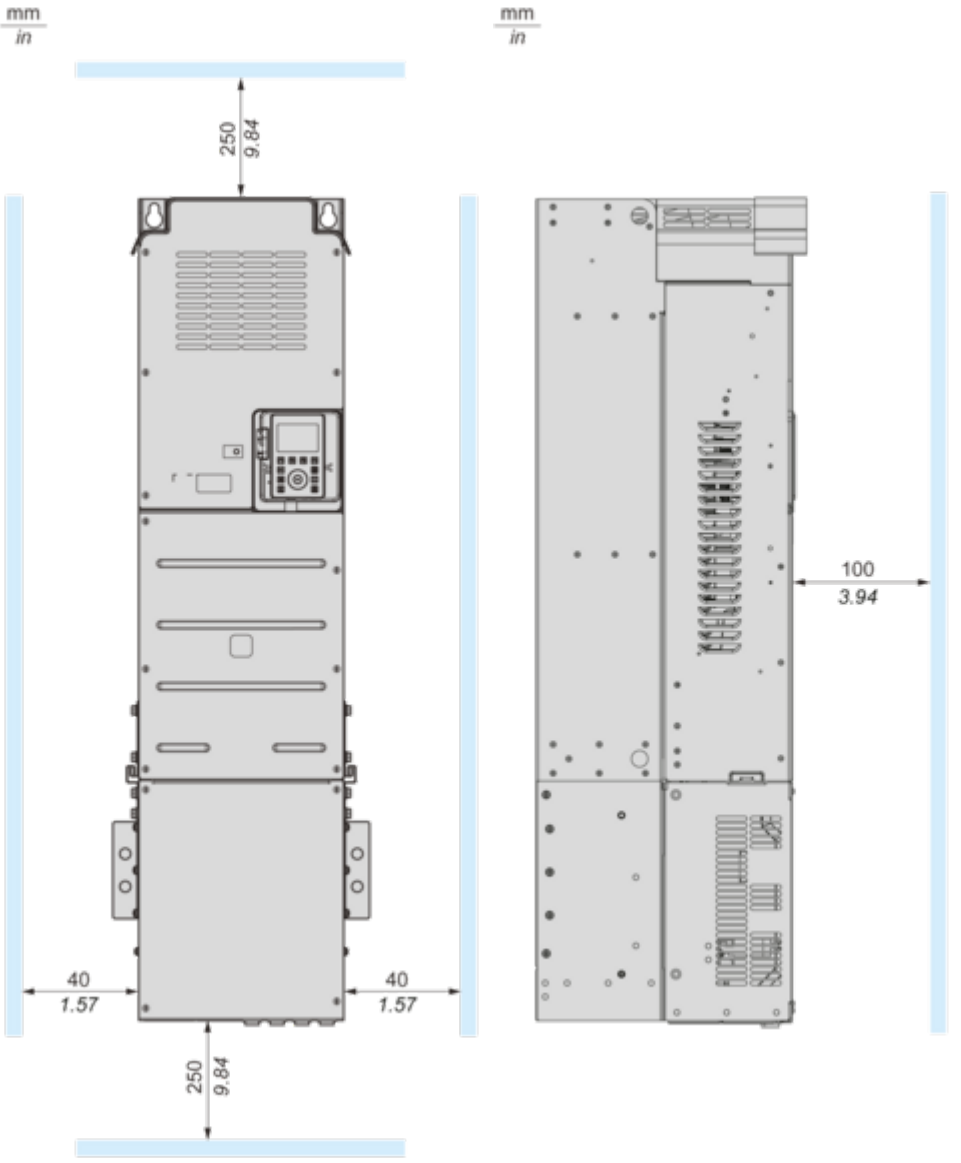
Front and Side Views



Mounting and Clearance

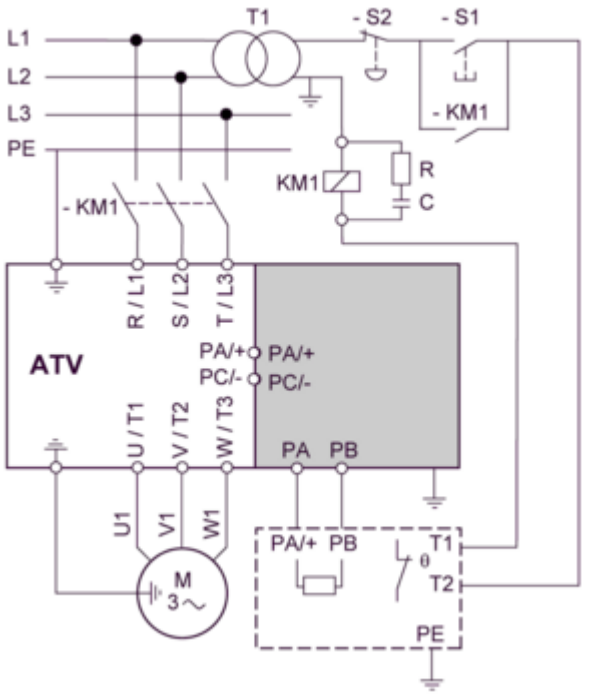
Dimensions

Front and Side Views



Connections and Schema

Standard Connection Diagram



Technical Illustration

Dimensions

