



Main

Range of product	Altivar Process ATV600
Product or component type	Variable speed drive
Product specific application	Process and utilities
Device short name	ATV630
Variant	Standard version
Product destination	Asynchronous motors Synchronous motors
Mounting mode	Wall mount
EMC filter	Integrated EN/IEC 61800-3 category C3 150 m Integrated EN/IEC 61800-3 category C2 50 m
IP degree of protection	IP21 IEC 61800-5-1 IP21 IEC 60529
Degree of protection	UL type 1 UL 508C
Type of cooling	Forced convection
Supply frequency	50...60 Hz - 5...5 %
Network number of phases	3 phases
[Us] rated supply voltage	380...480 V - 15...10 %
Motor power kW	2.2 kW heavy duty 3 kW normal duty
Motor power hp	4 hp normal duty 3 hp heavy duty
Line current	5.8 A 380 V normal duty 4 A 480 V heavy duty 5.1 A 480 V normal duty 4.5 A 380 V heavy duty
Prospective line I _{sc}	50 kA
Apparent power	4.2 kVA 480 V normal duty 3.3 kVA 480 V heavy duty
Continuous output current	5.6 A 4 kHz heavy duty 7.2 A 4 kHz normal duty
Maximum transient current	8.4 A 60 s heavy duty

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

	7.9 A 60 s normal duty
Asynchronous motor control profile	Constant torque standard Variable torque standard Optimized torque mode
Synchronous motor control profile	Permanent magnet motor
Output frequency	0.0001...0.5 kHz
Nominal switching frequency	4 kHz
Switching frequency	4...12 kHz with derating factor 2...12 kHz adjustable
Safety function	STO (safe torque off) SIL 3
Discrete input logic	16 preset speeds
Communication port protocol	Ethernet Modbus serial Modbus TCP
Option card	Output relay extension module slot A/slot B Communication module Profinet slot A Communication module DeviceNet slot A Communication module Modbus TCP/EtherNet/IP slot A Communication module CANopen screw terminals slot A Communication module Profibus DP V1 slot A Communication module CANopen daisy chain RJ45 slot A Communication module CANopen SUB-D 9 slot A Digital and analog I/O extension module slot A/slot B Communication module Ethernet IP/Modbus TCP/MD-Link slot A

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1444 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACH	Reference contains SVHC above the threshold - Go to CaP for more details Go to CaP for more details
Product environmental profile	Available Product environmental
Product end of life instructions	Available End of life manual

Complementary

Output voltage	\leq power supply voltage
Permissible temporary current boost	1.1 x In 60 s normal duty 1.5 x In 60 s heavy duty
Motor slip compensation	Adjustable Automatic whatever the load Can be suppressed Not available in permanent magnet motor law
Acceleration and deceleration ramps	Linear adjustable separately from 0.01 to 9000 s S, U or customized
Braking to standstill	By DC injection
Protection type	Thermal protection motor Safe torque off motor Safe torque off drive Motor phase break drive Line supply undervoltage drive Overspeed drive Overheating drive Short-circuit protection drive Line supply phase loss drive Overcurrent between output phases and earth drive Line supply overvoltage drive Break on the control circuit drive Motor phase break motor Thermal protection drive Overload of output voltage drive

Overvoltages on the DC bus drive

Frequency resolution	0.012/50 Hz analog input 0.1 Hz display unit
Electrical connection	Screw terminal 2.5...6 mm ² AWG 14...AWG 10 motor Screw terminal 2.5...6 mm ² AWG 14...AWG 10 line side Removable screw terminals 0.5...1.5 mm ² AWG 20...AWG 16 control
Type of connector	RJ45 Ethernet/Modbus TCP on the remote graphic terminal RJ45 Modbus serial on the remote graphic terminal
Physical interface	2-wire RS 485 Modbus serial
Transmission frame	RTU Modbus serial
Transmission rate	4.8, 9.6, 19.2, 38.4 kbit/s Modbus serial 10/100 Mbit/s Ethernet IP/Modbus TCP
Exchange mode	Half duplex, full duplex, autonegotiation Ethernet/Modbus TCP
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 TCP
Supply	Internal supply for reference potentiometer (1 to 10 kOhm) 10.5 V DC +/- 5 % <= 10 mA overload and short-circuit protection External supply for digital inputs 24 V DC 19...30 V <= 1.25 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	4 LEDs dual colour communication module status 3 LEDs local diagnostic 3 LEDs dual colour embedded communication status 1 LED red presence of voltage
Width	144 mm
Height	350 mm
Depth	203 mm
Product weight	4.6 kg
Analogue input number	3
Analogue input type	Software-configurable voltage AI1, AI2, AI3 0...10 V DC 30 kOhm 12 bits Software-configurable current AI1, AI2, AI3 0...20 mA 250 Ohm 12 bits
Discrete input number	8
Discrete input type	Programmable as pulse input DI5, DI6 0...30 kHz 24 V DC <= 30 V Programmable DI1...DI6 24 V DC <= 30 V 3.5 kOhm Safe torque off STOA, STOB 24 V DC <= 30 V > 2.2 kOhm
Input compatibility	Level 1 PLC EN/IEC 61131-2 STOA, STOB discrete input Level 1 PLC EN/IEC 61131-2 DI1...DI6 discrete input Level 1 PLC IEC 65A-68 DI5, DI6 discrete input
Discrete input logic	Positive logic (source) DI1...DI6 < 5 V > 11 V Negative logic (sink) DI1...DI6 > 16 V < 10 V Positive logic (source) DI5, DI6 < 0.6 V > 2.5 V Positive logic (source) STOA, STOB < 5 V > 11 V
Analogue output number	2
Analogue output type	Software-configurable current AO1, AO2 0...20 mA 10 bits Software-configurable voltage AO1, AO2 0...10 V DC 470 Ohm 10 bits
Sampling duration	2 ms +/- 0.5 ms DI1...DI4 discrete input 10 ms +/- 1 ms AO1 analog output 5 ms +/- 1 ms DI5, DI6 discrete input 5 ms +/- 0.1 ms AI1, AI2, AI3 analog input
Accuracy	+/- 1 % AO1, AO2 for a temperature variation 60 °C analog output +/- 0.6 % AI1, AI2, AI3 for a temperature variation 60 °C analog input
Linearity error	+/- 0.2 % analog output AO1, AO2 +/- 0.15 % of maximum value analog input AI1, AI2, AI3
Relay output number	3
Relay output type	Configurable relay logic R1 fault relay NO/NC 100000 cycles Configurable relay logic R2 sequence relay NO 100000 cycles Configurable relay logic R3 sequence relay NO 100000 cycles
Refresh time	5 ms +/- 0.5 ms R1, R2, R3 relay output
Minimum switching current	5 mA 24 V DC R1, R2, R3 relay output

Maximum switching current	3 A 30 V DC resistive 1 R1, R2, R3 relay output 2 A 250 V AC inductive 0.4 7 ms R1, R2, R3 relay output 2 A 30 V DC inductive 0.4 7 ms R1, R2, R3 relay output 3 A 250 V AC resistive 1 R1, R2, R3 relay output
Isolation	Between power and control terminals
Specific application	Utility
IP degree of protection	IP21

Environment

Insulation resistance	> 1 mOhm 500 V DC for 1 minute to earth
Noise level	54.5 dB 86/188/EEC
Power dissipation in W	31 W natural convection 380 V 4 kHz 78 W forced convection 380 V 4 kHz
Volume of cooling air	38 m3/h
Operating position	Vertical +/- 10 degree
THDI	<= 48 % full load IEC 61000-3-12
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...13 Hz IEC 60068-2-6 1 gn 13...200 Hz IEC 60068-2-6
Shock resistance	15 gn 11 ms IEC 60068-2-27
Relative humidity	5...95 % without condensation IEC 60068-2-3
Ambient air temperature for operation	-15...50 °C without derating 50...60 °C with derating factor
Ambient air temperature for storage	-40...70 °C
Operating altitude	1000...4800 m with current derating 1 % per 100 m <= 1000 m without derating
Environmental characteristic	Dust pollution resistance class 3S3 EN/IEC 60721-3-3 Chemical pollution resistance class 3C3 EN/IEC 60721-3-3
Standards	UL 508C EN/IEC 61800-3 EN/IEC 61800-3 environment 2 category C3 IEC 61000-3-12 IEC 60721-3 EN/IEC 61800-3 environment 1 category C2 IEC 61508 IEC 13849-1 EN/IEC 61800-5-1
Product certifications	ATEX INERIS ATEX zone 2/22 CSA TÜV UL REACH DNV-GL
Marking	CE
Discrete and process manufacturing	Building - HVAC Food and beverage processing Mining mineral and metal Oil and gas Water and waste water
Application	Compressor centrifugal Fan Compressor Pump Other application
Power range	2.2...3 kW
Voltage range	380...440 V 480...500 V

Network number of phases	3 phases
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