frequency converter-

ATV310HU40N4E

URL:https://www.sxplc.com/frequency-converter-atv310hu40n4e

Product data sheet

Main	Range of product	Easy Altivar 310
	product or component type	Variable speed drive
	Product specific application	Simple machine
	Assembly style	With heat sink
	Device short name	ATV310
	Network number of phases	Three phase
	[Us] rated supply voltage	380...460 V - 15...10 %
	Motor power kW	4 kW for heavy duty 5.5 kW for normal duty
	Motor power hp	5 hp for heavy duty 7.5 hp for normal duty
	Noise level	50 dB

Complementary	Quantity per set	Set of 1
	EMC filter	Without EMC filter
	Type of cooling	Integrated fan
	Communication port protocol	Modbus
	Connector type	RJ45 (on front face) for Modbus

Physical interface	2-wire RS 485 for Modbus
Transmission frame	RTU for Modbus
Transmission rate	4800 bit/s 9600 bit/s 19200 bit/s 38400 bit/s
Number of addresses	1...247 for Modbus
Communication service	Read holding registers (03) 29 words Write single register (06) 29 words Write multiple registers (16) 27 words Read/write multiple registers (23) 4/4 words Read device identification (43)
Line current	13.7 A at 380 V (heavy duty) 18.0 A at 380 V (normal duty) 11.4 A at 460 V (heavy duty) 14.9 A at 460 V (normal duty)
Apparent power	9.1 kVA at 460 V (heavy duty) 15.1 kVA at 460 V (normal duty)
Prospective line Isc	5 kA (heavy duty) 5 kA (normal duty)
Continuous output current	9.5 A heavy duty 12.1 A normal duty
Maximum transient current	14.3 A during 60 s (heavy duty) 13.3 A during 60 s (normal duty)
Power dissipation in W	115.1 W, at In (heavy duty) 158.3 W, at In (normal duty)
Speed drive output frequency	0.5...400 Hz
Nominal switching frequency	4 kHz
Switching frequency	2...12 kHz adjustable
Speed range	1...20 for asynchronous motor

Transient overtorque	170…200 % of nominal motor torque depending on driv and type of motor
Braking torque	Up to 150 % of nominal motor torque with braking resis Up to 70 % of nominal motor torque without braking res
Asynchronous motor control profile	Voltage/frequency ratio (V/f) Voltage/frequency ratio - Energy Saving, quadratic U/f Sensorless vector control (SVC)
Motor slip compensation	Adjustable
Output voltage	380...460 V three phase
Electrical connection	Terminal, clamping capacity: 2.5...4 mm², AWG 14...AW (L1, L2, L3, PA/+, PB, U, V, W)
Tightening torque	1.2…1.4 N.m
Insulation	Electrical between power and control
Supply	Internal supply for reference potentiometer: 5 V (4.75... V)DC, <10 mA with overload and short-circuit protectio Internal supply for logic inputs: 24 V (20.4…28.8 V)DC, mA with overload and short-circuit protection
Analogue input number	1
Analogue input type	Configurable current AI1 0...20 mA 250 Ohm Configurable voltage AI1 0...10 V 30 kOhm Configurable voltage AI1 0...5 V 30 kOhm
Discrete input number	4
Discrete input type	Programmable LI1...LI4 24 V 18...30 V
Discrete input logic	Negative logic (sink), > 16 V (state 0), < 10 V (state 1), impedance 3.5 kOhm Positive logic (source), 0...< 5 V (state 0), > 11 V (state
Sampling duration	10 ms for analogue input 20 ms, tolerance +/- 1 ms for logic input
Linearity error	+/- 0.3 % of maximum value for analogue input
Analogue output number	1

Analogue output type	AO1 software-configurable voltage: 0...10 V AC 0...10 V A, impedance: 470 Ohm, resolution 8 bits AO1 software-configurable current: 0...20 mA, impedan Ohm, resolution 8 bits
Discrete output number	2
Discrete output type	Logic output LO+, LO- Protected relay output R1A, R1B, R1C 1 C/O
Minimum switching current	5 mA at 24 V DC for logic relay
Maximum switching current	2 A at 250 V AC on inductive load cos phi = 0.4 L/R = 7 logic relay 2 A at 30 V DC on inductive load cos phi = 0.4 L/R = 7 r logic relay 3 A at 250 V AC on resistive load cos phi = 1 L/R = 0 ms logic relay 4 A at 30 V DC on resistive load cos phi = 1 L/R = 0 ms relay
Acceleration and deceleration ramps	Linear from 0...999.9 s S U
Braking to standstill	By DC injection, <30 s
Protection type	Line supply overvoltage Line supply undervoltage Overcurrent between output phases and earth Overheating protection Short-circuit between motor phases Against input phase loss in three-phase Thermal motor protection via the drive by continuous calculation of I^2t
Frequency resolution	Analog input: converter A/D, 10 bits Display unit: 0.1 Hz

Time constant	20 ms +/- 1 ms for reference change
Operating position	Vertical +/- 10 degree
Height	184 mm
Width	140 mm
Depth	151 mm
net weight	1.8 kg
Supply frequency	50/60 Hz +/- 5 %