

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 31



Presentation



The Altivar 31 drive is a variable speed drive for 3-phase squirrel cage asynchronous motors. The Altivar 31 is robust, compact, easy to use and conforms to EN 50178, IEC/EN 61800-2, IEC/EN 61800-3 standards, UL/CSA certification and to CE marking.

It incorporates functions that are suitable for the most common applications, including:

- Materials handling (small conveyors, hoists, etc)
- Packing and packaging machines
- Specialist machines (mixers, kneaders, textile machines, etc.)
- Pumps, compressors, fans.

Altivar 31 drives communicate on Modbus and CANopen industrial buses. These two protocols are integrated as standard into the drive.

Altivar 31 drives are supplied with a heatsink for normal environments and ventilated enclosures. Multiple units can be mounted side by side to save space.

Drives are available for motor ratings between 0.18 kW and 15 kW, with four types of power supply:

- 200 V to 240 V single phase, 0.18 kW to 2.2 kW
- 200 V to 240 V 3-phase, 0.18 kW to 15 kW
- 380 V to 500 V 3-phase, 0.37 kW to 15 kW
- 525 V to 600 V 3-phase, 0.75 kW to 15 kW.

Characteristics

Drive		ATV 31	
CANopen features	Conformance class	S10	
	Standard	DS 301 V4.02	
	Profile	DS 402 V2.0	
	Specials	-	
Structure	Physical interface	RJ45	
	Data rate	kbps 10, 20, 50, 125, 250, 500 and 1000	
	Medium	Shielded dual twisted pairs	
CANopen communication	Operating temperature	°C -10...+ 60 depends on the model	
	Relative humidity	5...95% non condensing or dripping water	
	Degree of protection	IP 31 and IP 41 on upper part and IP 21 on connection terminals IP 55 for models	
	LED indicators	State display	
	Product certification	UL, CSA, NOM 117 and C-Tick	
	Number of	Logic inputs	6
		Analog inputs	2
Logic/Analog outputs		1	
Relay outputs		2	

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Drives with heatsink (frequency range from 0.5 to 500 Hz)

Motor Power indicated on rating plate (1)	Line supply					Altivar 31			Reference (5)	Weight
	Line current (2)		Apparent power	Max. prospective line Isc (4)	Nominal current	Max. transient current for 60 s	Power dissipated at nominal load			
	at U1	at U2 (3)								
kW	HP	A	A	kVA	kA	A	A	W	kg	

Single phase supply voltage: 200...240 V 50/60 Hz, with integrated EMC filters

0.18	0.25	3.0	2.5	0.6	1	1.5	2.3	24	ATV 31H018M2 (6)	1.500
0.37	0.5	5.3	4.4	1	1	3.3	5	41	ATV 31H037M2 (6)	1.500
0.55	0.75	6.8	5.8	1.4	1	3.7	5.6	46	ATV 31H055M2 (6)	1.500
0.75	1	8.9	7.5	1.8	1	4.8	7.2	60	ATV 31H075M2 (6)	1.500
1.1	1.5	12.1	10.2	2.4	1	6.9	10.4	74	ATV 31HU11M2 (6)	1.800
1.5	2	15.8	13.3	3.2	1	8	12	90	ATV 31HU15M2 (6)	1.800
2.2	3	21.9	18.4	4.4	1	11	16.5	123	ATV 31HU22M2 (6)	3.100

3-phase supply voltage: 200...240 V 50/60 Hz, without EMC filters (7)

0.18	0.25	2.1	1.9	0.7	5	1.5	2.3	23	ATV 31H018M3X (6)	1.300
0.37	0.5	3.8	3.3	1.3	5	3.3	5	38	ATV 31H037M3X (6)	1.300
0.55	0.75	4.9	4.2	1.7	5	3.7	5.6	43	ATV 31H055M3X (6)	1.300
0.75	1	6.4	5.6	2.2	5	4.8	7.2	55	ATV 31H075M3X (6)	1.300
1.1	1.5	8.5	7.4	3	5	6.9	10.4	71	ATV 31HU11M3X (6)	1.700
1.5	2	11.1	9.6	3.8	5	8	12	86	ATV 31HU15M3X (6)	1.700
2.2	3	14.9	13	5.2	5	11	16.5	114	ATV 31HU22M3X (6)	1.700
3	–	19.1	16.6	6.6	5	13.7	20.6	146	ATV 31HU30M3X (6)	2.900
4	5	24.2	21.1	8.4	5	17.5	26.3	180	ATV 31HU40M3X (6)	2.900
5.5	7.5	36.8	32	12.8	22	27.5	41.3	292	ATV 31HU55M3X (6)	6.400
7.5	10	46.8	40.9	16.2	22	33	49.5	388	ATV 31HU75M3X (6)	6.400
11	15	63.5	55.6	22	22	54	81	477	ATV 31HD11M3X (6)	10.500
15	20	82.1	71.9	28.5	22	66	99	628	ATV 31HD15M3X (6)	10.500

3-phase supply voltage: 380...500 V 50/60 Hz, with integrated EMC filters

0.37	0.5	2.2	1.7	1.5	5	1.5	2.3	32	ATV 31H037N4 (6)	1.800
0.55	0.75	2.8	2.2	1.8	5	1.9	2.9	37	ATV 31H055N4 (6)	1.800
0.75	1	3.6	2.7	2.4	5	2.3	3.5	41	ATV 31H075N4 (6)	1.800
1.1	1.5	4.9	3.7	3.2	5	3	4.5	48	ATV 31HU11N4 (6)	1.800
1.5	2	6.4	4.8	4.2	5	4.1	6.2	61	ATV 31HU15N4 (6)	1.800
2.2	3	8.9	6.7	5.9	5	5.5	8.3	79	ATV 31HU22N4 (6)	3.100
3	–	10.9	8.3	7.1	5	7.1	10.7	125	ATV 31HU30N4 (6)	3.100
4	5	13.9	10.6	9.2	5	9.5	14.3	150	ATV 31HU40N4 (6)	3.100
5.5	7.5	21.9	16.5	15	22	14.3	21.5	232	ATV 31HU55N4 (6)	6.500
7.5	10	27.7	21	18	22	17	25.5	269	ATV 31HU75N4 (6)	6.500
11	15	37.2	28.4	25	22	27.7	41.6	397	ATV 31HD11N4 (6)	11.000
15	20	48.2	36.8	32	22	33	49.5	492	ATV 31HD15N4 (6)	11.000

3-phase supply voltage: 525...600 V 50/60 Hz, without EMC filters

0.75	1	2.8	2.4	2.5	5	1.7	2.6	36	ATV 31H075S6X	1.700
1.5	2	4.8	4.2	4.4	5	2.7	4.1	48	ATV 31HU15S6X	1.700
2.2	3	6.4	5.6	5.8	5	3.9	5.9	62	ATV 31HU22S6X	2.900
4	5	10.7	9.3	9.7	5	6.1	9.2	94	ATV 31HU40S6X	2.900
5.5	7.5	16.2	14.1	15	22	9	13.5	133	ATV 31HU55S6X	6.200
7.5	10	21.3	18.5	19	22	11	16.5	165	ATV 31HU75S6X	6.200
11	15	27.8	24.4	25	22	17	25.5	257	ATV 31HD11S6X	10.000
15	20	36.4	31.8	33	22	22	33	335	ATV 31HD15S6X	10.000

(1) These power ratings are for a maximum switching frequency of 4 kHz, in continuous operation. The switching frequency is adjustable from 2 to 16 kHz.

Above 4 kHz, derate the nominal drive current. The nominal motor current should not exceed this value.

(2) Typical value for a 4-pole motor and a maximum switching frequency of 4 kHz, with no additional line choke, for the max. prospective line current.

(3) Nominal supply voltages, min. U1, max. U2 (200-240 V; 380-500 V; 525-600 V).

(4) If line Isc is greater than the values in the table, add line chokes.

(5) To order a drive intended for wire guiding applications, add a **T** to the end of the reference for the selected drive.

Example: **ATV 31H018M2T**.

(6) To order a drive with potentiometer, add an **A** to the end of the reference for the selected drive. Example: **ATV 31H018M2A**.

(7) Optional EMC filter.

Nota : For more precisions about customisable enclosed drives and Drive kits, refer to catalog "Variable speed drives for asynchronous motors".



ATV 31H037M2



ATV 31HU40M3X



ATV 31HU75N4



ATV 31HD15N4A

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 31



Enclosed drives (frequency range from 0.5 to 500 Hz)

Motor		Line supply				Altivar 31			Reference (4)	Weight
Power indicated on rating plate (1)		Line current (2)		Apparent power	Max. prospective line Isc (3)	Nominal current 4 kHz	Max. transient current for 60 s	Power dissipated at nominal load		
kW	HP	A at U1	A at U2						KVA	kA
Single phase supply voltage: 200...240 V (5) 50/60 Hz with integrated EMC filters										
0.18	0.25	3	2.5	0.6	1	1.5	2.3	24	ATV 31C018M2 (6)	6.300
0.37	0.5	5.3	4.4	1	1	3.3	5	41	ATV 31C037M2 (6)	6.300
0.55	0.75	6.8	5.8	1.4	1	3.7	5.6	46	ATV 31C055M2 (6)	6.300
0.75	1	8.9	7.5	1.8	1	4.8	7.2	60	ATV 31C075M2 (6)	6.300
1.1	1.5	12.1	10.2	2.4	1	6.9	10.4	74	ATV 31CU11M2 (6)	8.800
1.5	2	15.8	13.3	3.2	1	8	12	90	ATV 31CU15M2 (6)	8.800
2.2	3	21.9	18.4	4.4	1	11	16.5	123	ATV 31CU22M2 (6)	10.700
3-phase supply voltage: 380...500 V (5) 50/60 Hz with integrated EMC filters										
0.37	0.5	2.2	1.7	1.5	5	1.5	2.3	32	ATV 31C037N4 (6)	8.800
0.55	0.75	2.8	2.2	1.8	5	1.9	2.9	37	ATV 31C055N4 (6)	8.800
0.75	1	3.6	2.7	2.4	5	2.3	3.5	41	ATV 31C075N4 (6)	8.800
1.1	1.5	4.9	3.7	3.2	5	3	4.5	48	ATV 31CU11N4 (6)	8.800
1.5	2	6.4	4.8	4.2	5	4.1	6.2	61	ATV 31CU15N4 (6)	8.800
2.2	3	8.9	6.7	5.9	5	5.5	8.3	79	ATV 31CU22N4 (6)	10.700
3	–	10.9	8.3	7.1	5	7.1	10.7	125	ATV 31CU30N4 (6)	10.700
4	5	13.9	10.6	9.2	5	9.5	14.3	150	ATV 31CU40N4 (6)	10.700
5.5	7.5	21.9	16.5	15.0	22	14.3	21.5	232	ATV 31CU55N4	23.600
7.5	10	27.7	21.0	18.0	22	17.0	25.5	269	ATV 31CU75N4	23.600
11	15	37.2	28.4	25.0	22	27.7	41.6	397	ATV 31CD11N4	32.500
15	20	48.2	36.8	32.0	22	33.0	49.5	492	ATV 31CD15N4	32.500



ATV 31CU22M2



ATV 31CU75N4

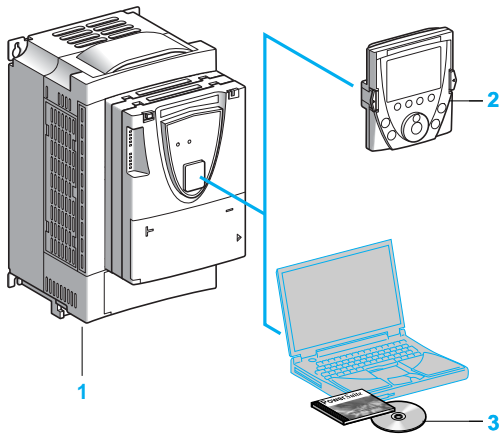
Ready-assembled enclosed drives (frequency range from 0.5 to 500 Hz)

Please consult your Regional Sales Office.

- (1) These power ratings are for a maximum switching frequency of 4 kHz, in continuous operation. The switching frequency is adjustable from 2 to 16 kHz.
Above 4 kHz, derate the nominal drive current. The nominal motor current should not exceed this value.
- (2) Typical value for a 4-pole motor and a maximum switching frequency of 4 kHz, with no additional line choke, for the max. prospective line current.
- (3) If line Isc is greater than the values in the table, add line chokes.
- (4) To order a drive intended for wire guiding applications, add a T to the end of the reference for the selected drive.
Example: **ATV 31C018M2T**.
- (5) Nominal supply voltages, min. U1, max. U2 (200-240 V; 380-500 V).
- (6) ATV 31C18M2 to ATV 31CU40N4 drives are supplied in customizable enclosures for ready-to-use motor starter applications.

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 61



Presentation

Dedicated to pump and fan applications in building and industrial segments, the Altivar 61 variable speed drives adapt effortlessly to simple catalogue machines. The Altivar 61 drive is a frequency inverter for 3-phase asynchronous motors rated between 0.75 kW and 630 kW.

The Altivar 61 range of variable speed drives extends across a range of motor power ratings up to 630 kW with two types of power supply:

- 200_240 V 3-phase, up to 90 kW
- 380_480 V 3-phase, up to 630 kW.

The Altivar 61 drive **1** is supplied with a remote graphic display terminal **2**. The PowerSuite software workshop **3** can be used to configure, adjust and debug the Altivar 61 in just the same way as all other Telemecanique speed drives and starters. It can be used via a direct, Ethernet, modem or wireless Bluetooth® connection.

The Altivar 61 variable speed drives is connected to the Ethernet TCP/IP network via a communication card. This card comes with a basic web server, which users can adapt completely according to the application (Java or FactoryCast development tool).

The Altivar 61 drive incorporates all the application functions for managing your pumps: sleep, wake-up, zero flow detection, fluid absence detection, underload detection, overload detection, PID regulator with preset PID references, ...

The Altivar 61 can be inserted in an installation's safety system. It integrates the "Power Removal" safety function which prohibits any accidental starting of the motor. This function prevents the motor starting accidentally; it meets the requirements of machine safety standard EN 954-1, category 3 and those of operational safety standard IEC/EN 61508, SIL2 (safety control/signalling applied to processes and systems).



ATV 61 without graphic terminal



ATV 61 with graphic terminal

Characteristics

Drive		ATV 61
CANopen features	Conformance class	S10
	Standard	DS 301 V4.02
	Profile	DSP 402
	Specials	Node guarding, Heartbeat
Structure	Physical interface	9-way male SUB-D connector on CANopen adapter. This connects to the Modbus RJ45 network port.
	Data rate	kbps 20, 50, 125, 250, 500 and 1000
	Medium	Shielded dual twisted pairs
CANopen communication	Operating temperature	°C -10...+ 60 (depends on type of model)
	Protection	IP 00, IP 21 and IP 41 on upper part. IP 20 without cover plate on upper part of cover. IP 30 on the front panel and side parts. IP 31 with accessory. The protection depends on the model type and the accessories: refer to catalog "Variable speed drives: Altivar 61".
	Degree of protection	RUN et ERROR on integrated 7-segment display terminal
	LED indicators	UL, CSA, DNV, NOM 117 C-Tick, GOST and CE

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 61

DF534620



ATV 61H075M3

DF534621



ATV 61HU22M3Z

DF534622



ATV 61HD37M3X

UL Type 1/IP 20 drives

Motor		Line supply				Altivar 61		Reference (3)	Weight
		Line current (2)		Apparent power	Maximum prospective line Isc	Max. continuous current (1)	Max. transient current for 60 s		
kW	HP	200 V	240 V	240 V	kA	230 V			kg
		A	A	kVA		A	A		
Single phase supply voltage: 200...240 V 50/60 Hz									
0,37	0,5	6,9	5,8	1,4	5	3	3,6	ATV 61H075M3 (4)	3,000
0,75	1	12	9,9	2,4	5	4,8	5,7	ATV 61HU15M3 (4)	3,000
1,5	2	18,2	15,7	3,7	5	8	9,6	ATV 61HU22M3 (4)	3,000
2,2	3	25,9	22,1	5,3	5	11	13,2	ATV 61HU30M3 (4)	4,000
3	–	25,9	22	5,3	5	13,7	16,4	ATV 61HU40M3 (4) (5)	4,000
4	5	34,9	29,9	7	5	17,5	21	ATV 61HU55M3 (4) (5)	5,500
5,5	7,5	47,3	40,1	9,5	22	27,5	33	ATV 61HU75M3 (4) (5)	5,500
Three phase supply voltage: 200...240 V 50/60 Hz									
0,75	1	6,1	5,3	2,2	5	4,8	5,7	ATV 61H075M3 (4)	3,000
1,5	2	11,3	9,6	4	5	8	9,6	ATV 61HU15M3 (4)	3,000
2,2	3	15	12,8	5,3	5	11	13,2	ATV 61HU22M3 (4)	4,000
3	–	19,3	16,4	6,8	5	13,7	16,4	ATV 61HU30M3 (4)	4,000
4	5	25,8	22,9	9,5	5	17,5	21	ATV 61HU40M3 (4)	4,000
5,5	7,5	35	30,8	12,8	22	27,5	33	ATV 61HU55M3 (4)	5,500
7,5	10	45	39,4	16,4	22	33	39,6	ATV 61HU75M3 (4)	7,000
11	15	53,3	45,8	19	22	54	64,8	ATV 61HD11M3X (4) (6)	16,000
15	20	71,7	61,6	25,6	22	66	79,2	ATV 61HD15M3X (4) (6)	16,000
18,5	25	77	69	28,7	22	75	90	ATV 61HD18M3X (4) (6)	30,000
22	30	88	80	33,3	22	88	105,6	ATV 61HD22M3X (4) (6)	30,000
30	40	124	110	45,7	22	120	144	ATV 61HD30M3X (4) (6)	37,000
37	50	141	127	52,8	22	144	172,8	ATV 61HD37M3X (4) (6)	37,000
45	60	167	147	61,1	22	176	211,2	ATV 61HD45M3X (4) (6)	37,000
55	75	200	173	71,9	35	221	265,2	ATV 61HD55M3X (6) (7) (8)	59,000
75	100	271	232	96,4	35	285	342	ATV 61HD75M3X (6) (7) (8)	72,000
90	125	336	288	119,7	35	359	431	ATV 61HD90M3X (6) (7) (8)	72,000

(1) These values are for a nominal switching frequency of 2,5 or 12 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) The ATV 61HD55M3X...HD90M3X drives come in a reinforced version as standard, enabling them to operate in particular environmental conditions (see catalog "Variable speed drives: Altivar 61").

To order the reinforced version of of the ATV 61H●●●M3 and ATV 61HD11M3X...HD45M3X drives, add at the end of the reference:

- **S337** for ATV 61H●●●M3. Example : ATV 61H075M3 becomes **ATV 61H075M3S337**.

- **337** for ATV 61H●●●M3X. Example : ATV 61HD11M3X becomes **ATV 61HD11M3X337**.

If a reinforced version of the drive is supplied, it must come with a remote graphic display terminal.

(4) All drives come with a remote graphic display terminal as standard.

The ATV 61H●●●M3 and ATV 61HD11M3X...ATV 61HD45M3X drives can be ordered without a graphic display terminal. In this case, add a **Z** at the end of the reference. They will then come equipped with an integrated 7-segment display terminal.

Example: ATV 61H075M3 without a graphic display terminal becomes **ATV 61H075M3Z**.

(5) A line choke must be used, (see catalog "Variable speed drives: Altivar 61").

(6) Drive supplied without EMC filter. EMC filters are available as an option (see catalog "Variable speed drives: Altivar 61").

(7) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply.

For connections to the DC bus, the drive can be ordered without a DC choke by adding **D** at the end of the reference.

Example : ATV 61HD55M3X becomes **ATV 61HD55M3XD**.

(8) Drive supplied without plate for EMC mounting. It is included in the UL Type 1 or IP 31 conformity kits, to be ordered separately, (see catalog "Variable speed drives: Altivar 61").

Nota : Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 61".

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 61

DF634523



ATV 61HU22N4

DF634624



ATV 61HU40N4Z

DF634684



ATV 61HC31N4

UL Type 1/IP 20 drives

Motor Power indicated on plate (1)	Line supply					Altivar 61			Reference (3)	Weight
	Line current (2)		Apparent power 380 V	Maximum prospective line Isc	Max. continuous current (1)	Max. transient current for 60 s				
	380 V	480 V					380 V	460 V		
kW	HP	A	A	kVA	kA	A	A	A	kg	
Three phase supply voltage: 380...480 V 50/60 Hz										
0,75	1	3,7	3	2,4	5	2,3	2,1	2,7	ATV 61H075N4 (4)	3,000
1,5	2	5,8	5,3	3,8	5	4,1	3,4	4,9	ATV 61HU15N4 (4)	3,000
2,2	3	8,2	7,1	5,4	5	5,8	4,8	6,9	ATV 61HU22N4 (4)	3,000
3	–	10,7	9	7	5	7,8	6,2	9,3	ATV 61HU30N4 (4)	4,000
4	5	14,1	11,5	9,3	5	10,5	7,6	12,6	ATV 61HU40N4 (4)	4,000
5,5	7,5	20,3	17	13,4	22	14,3	11	17,1	ATV 61HU55N4 (4)	5,500
7,5	10	27	22,2	17,8	22	17,6	14	21,1	ATV 61HU75N4 (4)	5,500
11	15	36,6	30	24,1	22	27,7	21	33,2	ATV 61HD11N4 (4)	7,000
15	20	48	39	31,6	22	33	27	39,6	ATV 61HD15N4 (4)	16,000
18,5	25	45,5	37,5	29,9	22	41	34	49,2	ATV 61HD18N4 (4)	16,000
22	30	50	42	32,9	22	48	40	57,6	ATV 61HD22N4 (4)	30,000
30	40	66	56	43,4	22	66	52	79,2	ATV 61HD30N4 (4)	37,000
37	50	84	69	55,3	22	79	65	94,8	ATV 61HD37N4 (4)	37,000
45	60	104	85	68,5	22	94	77	112,8	ATV 61HD45N4 (4)	44,000
55	75	120	101	79	22	116	96	139,2	ATV 61HD55N4 (4)	44,000
75	100	167	137	109,9	22	160	124	192	ATV 61HD75N4 (4)	44,000
90	125	166	143	109,3	35	179	179	214,8	ATV 61HD90N4 (5) (6)	60,000
110	150	202	168	133	35	215	215	258	ATV 61HC11N4 (5) (6)	68,000
132	200	239	224	157,3	35	259	259	310,8	ATV 61HC13N4 (5) (6)	74,000
160	250	289	275	190,2	50	314	314	376,8	ATV 61HC16N4 (5) (6)	80,000
200	300	357	331	235	50	427	427	512,4	ATV 61HC22N4 (5) (6)	110,000
220	350	396	383	260,6	50					
250	400	444	435	292,2	50	481	481	577,2	ATV 61HC25N4 (5) (6)	140,000
280	450	494	494	325,1	50	616	616	739,2	ATV 61HC31N4 (5) (6)	140,000
315	500	555	544	365,3	50					
355	–	637	597	419,3	50	759	759	910,8	ATV 61HC40N4 (5) (6)	215,000
400	600	709	644	466,6	50					
500	700	876	760	576,6	50	941	941	1129,2	ATV 61HC50N4 (5) (6)	225,000
560	800	978	858	643,6	50	1188	1188	1425,6	ATV 61HC63N4 (5) (6)	300,000
630	900	1091	964	718	50					

(1) These values are for a nominal switching frequency of 2.5 or 4 or 12 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) The ATV 61HD90N4...HC63N4 drives come in a reinforced version as standard, enabling them to operate in particular environmental conditions (see catalog "Variable speed drives: Altivar 61").

To order the reinforced version of the ATV 61H075N4...ATV 61HD75N4 drives, add **S337** at the end of the reference:
Example : ATV 61H075N4 becomes **ATV 61H075N4S337**.

If a reinforced version of the drive is supplied, it must come with a remote graphic display terminal.

The ATV 61HD90N4...HC63N4 drives come in the reinforced version as standard.

(4) All drives come with a remote graphic display terminal as standard.

The ATV 61H075N4...ATV 61HD75N4 drives can be ordered without a graphic display terminal. In this case, add a **Z** at the end of the reference. They will then come equipped with an integrated 7-segment display terminal.

Example: ATV 61H075N4 without a graphic display terminal becomes **ATV 61H075N4Z**.

(5) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply (see catalog "Variable speed drives : Altivar 61"). For connections to the DC bus, the drive can be ordered without a DC choke by adding **D** at the end of the reference.

Example: ATV 61HD90N4 becomes **ATV 61HD90N4D**.

(6) Drive supplied without plate for EMC mounting. Depending on the rating, the plate is included in the UL Type 1 conformity kit and/or in the IP 31 conformity kit, to be ordered separately (see catalog "Variable speed drives: Altivar 61").

Nota : Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 61".

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 61

DF544665



ATV 61W075N4

UL Type 12/IP 54 drives with an integrated class A EMC filter

Motor		Line supply				Altivar 61			Reference (3) (4) (5)	Weight
Power indicated on plate (1)		Line current (2)		Apparent power	Maximum prospective line Isc	Max. continuous current (1)		Max. transient current for 60 s		
kW	HP	380 V	480 V	380 V		380 V	460 V			
		A	A	kVA	kA	A	A	A		kg
Three phase supply voltage: 380...480 V 50/60 Hz										
0,75	1	1,8	1,5	1,2	5	2,3	2,1	2,5	ATV 61W075N4	13,000
1,5	2	3,5	3	2,3	5	4,1	3,4	4,5	ATV 61WU15N4	13,000
2,2	3	5	4,1	3,3	5	5,1	4,8	5,6	ATV 61WU22N4	13,000
3	—	6,7	5,6	4,4	5	7,2	6,2	7,9	ATV 61WU30N4	14,000
4	5	8,8	7,4	5,8	5	9,1	7,6	10	ATV 61WU40N4	16,000
5,5	7,5	11,4	9,2	7,5	22	12	11	13,2	ATV 61WU55N4	16,000
7,5	10	15,8	13,3	10,4	22	16	14	17,6	ATV 61WU75N4	22,000
11	15	21,9	17,8	14,4	22	22,5	21	24,7	ATV 61WD11N4	22,000
15	20	30,5	25,8	20	22	30,5	27	33,5	ATV 61WD15N4	28,000
18,5	25	37,5	32,3	24,7	22	37	34	40,7	ATV 61WD18N4	36,000
22	30	43,6	36,6	28,7	22	43,5	40	47,8	ATV 61WD22N4	36,000
30	40	56,7	46,2	37,3	22	58,5	52	64,3	ATV 61WD30N4	51,000
37	50	69,5	56,8	45,7	22	71,5	65	78,6	ATV 61WD37N4	64,000
45	60	85,1	69,6	56	22	85	77	93,5	ATV 61WD45N4	65,000
55	75	104,8	87	69	35	103	96	113,3	ATV 61WD55N4	92,000
75	100	140,3	113,8	92,3	35	137	124	150,7	ATV 61WD75N4	92,000
90	125	171,8	140,9	113	35	163	156	179,3	ATV 61WD90N4	92,000

(1) These values are for a nominal switching frequency of 4 or 8 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) ATV 61W●●●N4 drives can be ordered with a --- 24 V power supply, thus allowing an additional consumption of 250 mA.
In this case, add **A24** at the end of the reference.

Example: ATV 61W075N4 becomes **ATV 61W075N4A24**.

This **ATV 61W●●●N4A24** drives also have the reinforced version treatment, enabling them to operate in particular environmental conditions (see catalog "Variable speed drives : Altivar 61").

(4) Drives supplied with a European version EMC plate fitted, for IP 54 conformity.

(5) To obtain UL Type 12 conformity, add **U** at the end of the reference.

Example: ATV 61W075N4 becomes **ATV 61W075N4U**.

Nota : Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 61".

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 61

UL Type 12/IP 54 drives with an integrated class B EMC filter

Motor		Line supply				Altivar 61			Reference (3) (4) (5)	Weight
Power indicated on plate (1)		Line current (2)		Apparent power	Maximum prospective line Isc	Max. continuous current (1)		Max. transient current for 60 s		
		380 V	480 V	380 V		380 V	460 V			
kW	HP	A	A	kVA	kA	A	A	A	kg	
Three phase supply voltage: 380...480 V 50/60 Hz										
0.75	1	1.8	1.5	1.2	5	2.3	2.1	2.5	ATV 61W075N4C	19.000
1.5	2	3.5	3	2.3	5	4.1	3.4	4.5	ATV 61WU15N4C	19.000
2.2	3	5	4.1	3.3	5	5.1	4.8	5.6	ATV 61WU22N4C	20.000
3	—	6.7	5.6	4.4	5	7.2	6.2	7.9	ATV 61WU30N4C	20.000
4	5	8.8	7.4	5.8	5	9.1	7.6	10	ATV 61WU40N4C	23.000
5.5	7.5	11.4	9.2	7.5	22	12	11	13.2	ATV 61WU55N4C	23.000
7.5	10	15.8	13.3	10.4	22	16	14	17.6	ATV 61WU75N4C	32.000
11	15	21.9	17.8	14.4	22	22.5	21	24.7	ATV 61WD11N4C	32.000
15	20	30.5	25.8	20	22	30.5	27	33.5	ATV 61WD15N4C	40.000
18.5	25	37.5	32.3	24.7	22	37	34	40.7	ATV 61WD18N4C	51.000
22	30	43.6	36.6	28.7	22	43.5	40	47.8	ATV 61WD22N4C	50.000
30	40	56.7	46.2	37.3	22	58.5	52	64.3	ATV 61WD30N4C	68.000
37	50	69.5	56.8	45.7	22	71.5	65	78.6	ATV 61WD37N4C	85.000
45	60	85.1	69.6	56	22	85	77	93.5	ATV 61WD45N4C	85.000
55	75	104.8	87	69	35	103	96	113.3	ATV 61WD55N4C	119.000
75	100	140.3	113.8	92.3	35	137	124	150.7	ATV 61WD75N4C	119.000
90	125	171.8	140.9	113	35	163	156	179.3	ATV 61WD90N4C	119.000

(1) These values are for a nominal switching frequency of 4 or 8 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) Drives supplied with a European version EMC plate fitted, for IP 54 conformity.

(4) To obtain UL Type 12 conformity, add U at the end of the reference.

Example: ATV 61W075N4C becomes **ATV 61W075N4CU**.

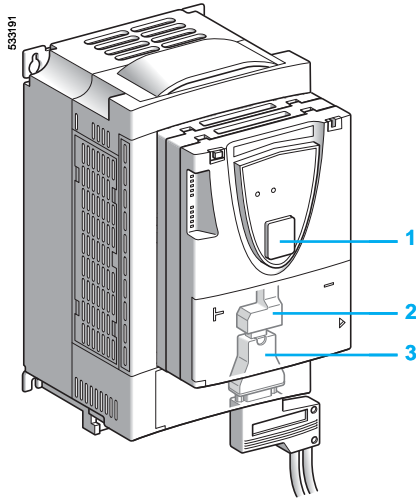
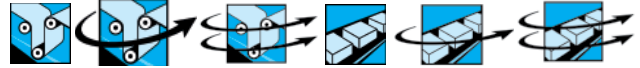
Nota : Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 61".



ATV 61WD30N4C

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 71



Presentation

The Altivar 71 drive is designed to suit all configurations found in communicating industrial installations.

It includes Modbus and CANopen communication protocols as standard.

The Modbus protocol can be accessed directly by means of 2 integrated communication ports:

- One RJ45 Modbus terminal port **1**, located on the drive front panel, for connecting:
 - the remote graphic display terminal
 - a Magelis industrial HMI terminal
 - the PowerSuite software workshop
- One RJ45 Modbus network port **2**, located on the drive control terminals. It is dedicated to control and signalling by a PLC or other type of controller. It can also be used to connect a terminal or the PowerSuite software workshop.

The CANopen protocol can be accessed from the Modbus network port via the CANopen adaptor **3**. In this case, terminal port **1** must be used to access the Modbus protocol.

The Altivar 71 drive can also be connected to other industrial communication buses and networks using one of the communication option cards:

- Ethernet TCP/IP
- Modbus/Uni-Telway. This card can offer functions in addition to those of the integrated ports: Modbus ASCII and 4-wire RS 485
- Fipio
- Modbus Plus
- Profibus DP
- DeviceNet
- INTERBUS.

The option of powering the control part separately enables communication to be maintained (monitoring, diagnostics) even if there is no power supply to the power part.

Characteristics

Drive		ATV 71
CANopen features	Conformance class	S10
	Standard	DS 301 V4.02
	Profile	DSP 402
	Specials	Node guarding, Heartbeat
Structure	Physical interface	9-way male SUB-D connector on CANopen adapter. This connects to the Modbus RJ45 network port.
	Data rate	kbps 20, 50, 125, 250, 500 and 1000
	Medium	Shielded dual twisted pairs
CANopen communication	Operating temperature	°C -10...+ 60 (depends on type of model)
	Protection	IP 00, IP 21 and IP 41 on upper part. IP 20 without cover plate on upper part of cover. IP 30 on the front panel and side parts. IP 31 with accessory. The protection depends on the model type and the accessories: refer to catalog "Variable speed drives: Altivar 71".
	Degree of protection	RUN et ERROR on integrated 7-segment display terminal
	LED indicators	UL, CSA, DNV, NOM 117 C-Tick, GOST and CE

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 71



UL Type 1/IP 20 drives

Motor Power indicated on plate (1)		Line supply				Altivar 71			Reference	Weight
		Line current (2)	Apparent power	Maximum prospective line Isc	Maximum continuous current (1)	Max. transient current for	Reference			
							230 V	60 s		
kW	HP	A	A	kVA	kA	A	A	A	kg	
Single phase supply voltage: 200...240 V 50/60 Hz										
0.37	0.5	6.9	5.8	1.4	5	3	4.5	4.9	ATV 71H075M3 (3) (4)	3.000
0.75	1	12	9.9	2.4	5	4.8	7.2	7.9	ATV 71HU15M3 (3) (4)	3.000
1.5	2	18.2	15.7	3.7	5	8	12	13.2	ATV 71HU22M3 (3) (4)	3.000
2.2	3	25.9	22.1	5.3	5	11	16.5	18.1	ATV 71HU30M3 (3) (4)	4.000
3	–	25.9	22	5.3	5	13.7	20.6	22.6	ATV 71HU40M3 (3) (4) (5)	4.000
4	5	34.9	29.9	7	5	17.5	26.3	28.8	ATV 71HU55M3 (3) (4) (5)	5.500
5.5	7.5	47.3	40.1	9.5	22	27.5	41.3	45.3	ATV 71HU75M3 (3) (4) (5)	5.500



ATV 71HU22M3Z



ATV 71H037M3



ATV 71HD37M3X

3-phase supply voltage: 200...240 V 50/60 Hz										
kW	HP	A	A	kVA	kA	A	A	A	Reference	kg
0.37	0.5	3.5	3.1	1.3	5	3	4.5	4.9	ATV 71H037M3 (3) (4)	3.000
0.75	1	6.1	5.3	2.2	5	4.8	7.2	7.9	ATV 71H075M3 (3) (4)	3.000
1.5	2	11.3	9.6	4	5	8	12	13.2	ATV 71HU15M3 (3) (4)	3.000
2.2	3	15	12.8	5.3	5	11	16.5	18.1	ATV 71HU22M3 (3) (4)	4.000
3	–	19.3	16.4	6.8	5	13.7	20.6	22.6	ATV 71HU30M3 (3) (4)	4.000
4	5	25.8	22.9	9.5	5	17.5	26.3	28.8	ATV 71HU40M3 (3) (4)	4.000
5.5	7.5	35	30.8	12.8	22	27.5	41.3	45.3	ATV 71HU55M3 (3) (4)	5.500
7.5	10	45	39.4	16.4	22	33	49.5	54.5	ATV 71HU75M3 (3) (4)	7.000
11	15	53.3	45.8	19	22	54	81	89.1	ATV 71HD11M3X (3) (4) (6)	9.000
15	20	71.7	61.6	25.6	22	66	99	109	ATV 71HD15M3X (3) (4) (6)	9.000
18.5	25	77	69	28.7	22	75	112	124	ATV 71HD18M3X (3) (6)	19.000
22	30	88	80	33.3	22	88	132	145	ATV 71HD22M3X (3) (6)	19.000
30	40	124	110	45.7	22	120	180	198	ATV 71HD30M3X (3) (6)	39.000
37	50	141	127	52.8	22	144	216	238	ATV 71HD37M3X (3) (6)	39.000
45	60	167	147	61.1	22	176	264	290	ATV 71HD45M3X (3) (6)	39.000
55	75	200	173	71.9	35	221	332	365	ATV 71HD55M3X (6) (7) (8)	59.000
75	100	271	232	96.4	35	285	428	470	ATV 71HD75M3X (6) (7) (8)	72.000

(1) These values are given for a nominal switching frequency of 2.5 or 4 kHz depending on the rating, for use in continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) ATV 71HD55M3X and ATV HD75M3X are supplied as standard in a reinforced version for operation in specific environmental conditions (see catalog "Variable speed drives : Altivar 71").

To order ATV 71H●●●M3 and ATV 71HD11M3X...ATV 71HD45M3X drives in a reinforced version for specific environmental conditions, add the following at the end of the reference:

S337 for ATV 71H●●●M3. For example, ATV 71H037M3 becomes **ATV 71H037M3S337**.

337 for ATV 71H●●●M3X. For example, ATV 71HD11M3X becomes **ATV 71HD11M3X337**.

If a reinforced version of the drive is supplied for particular environmental conditions, it will feature a remote graphic display terminal.

(4) All drives come with a remote graphic display terminal as standard. To order an ATV 71H●●●M3, ATV 71HD11M3X or ATV 71HD15M3X drive without a graphic display terminal, add a **Z** at the end of the reference.

The drive will then come equipped with an integrated 7-segment display terminal.

For example, ATV 71H037M3 becomes **ATV 71H037M3Z**.

(5) A line choke must be used, (see catalog "Variable speed drives : Altivar 71").

(6) Drive supplied without EMC filter. EMC filters are available as an option, (see catalog "Variable speed drives : Altivar 71").

(7) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply.

For connections to the DC bus, the drive can be ordered without a DC choke by adding a **D** at the end of the reference.

For example, ATV 71HD55M3X becomes **ATV 71HD55M3XD**.

(8) Drive supplied without plate for EMC mounting.

A choke appropriate for the drive rating is supplied in a UL Type 1, IP 21 or IP 31 kit, which must be ordered separately:

- For ATV 71H037M3...HD45M3X, order the kit for IP 21 conformity, (see catalog "Variable speed drives : Altivar 71"),

- For ATV 71HD55M3X and HD75M3X, order the kit for UL Type 1 or IP 31 conformity, (see catalog "Variable speed drives : Altivar 71").

Nota : Consult the summary tables of possible drives, option and accessory combinations, on catalog "Variable speed drives : Altivar 71".

CANopen

in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 71



UL Type 1/IP 20 drives

Motor		Line supply				Altivar 71				Reference	Weight
		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for			
kW	HP	380 V	480 V	380 V	kA	380 V 460 V		60 s	2 s		kg
		A	A	kVA		A	A	A	A		
3-phase supply voltage: 380...480 V 50/60 Hz											
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71H075N4 (3) (4)	3.000
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71HU15N4 (3) (4)	3.000
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71HU22N4 (3) (4)	3.000
3	–	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71HU30N4 (3) (4)	4.000
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71HU40N4 (3) (4)	4.000
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71HU55N4 (3) (4)	5.500
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71HU75N4 (3) (4)	5.500
11	15	36.6	30	24.1	22	27.7	21	41.6	45.7	ATV 71HD11N4 (3) (4)	7.000
15	20	48	39	31.6	22	33	27	49.5	54.5	ATV 71HD15N4 (3) (4)	16.000
18.5	25	45.5	37.5	29.9	22	41	34	61.5	67.7	ATV 71HD18N4 (3) (4)	16.000
22	30	50	42	32.9	22	48	40	72	79.2	ATV 71HD22N4 (3) (4)	19.000
30	40	66	56	43.4	22	66	52	99	109	ATV 71HD30N4 (3) (4)	26.000
37	50	84	69	55.3	22	79	65	118.5	130	ATV 71HD37N4 (3) (4)	26.000
45	60	104	85	68.5	22	94	77	141	155	ATV 71HD45N4 (3) (4)	44.000
55	75	120	101	79	22	116	96	174	191	ATV 71HD55N4 (3) (4)	44.000
75	100	167	137	109.9	22	160	124	240	264	ATV 71HD75N4 (3) (4)	44.000
90	125	166	134	109.3	35	179	179	269	295	ATV 71HD90N4 (5) (6)	60.000
110	150	202	163	133	35	215	215	323	355	ATV 71HC11N4 (5) (6)	74.000
132	200	239	192	157.3	35	259	259	388	427	ATV 71HC13N4 (5) (6)	80.000
160	250	289	233	190.2	50	314	314	471	518	ATV 71HC16N4 (5) (6)	110.000
200	300	357	286	235	50	387	387	580	638	ATV 71HC20N4 (5) (6)	140.000
220	350	396	320	260.6	50	427	427	640	704	ATV 71HC25N4 (5) (6)	140.000
250	400	444	357	292.2	50	481	481	721	793		
280	450	494	396	325.1	50	550	550	825	907	ATV 71HC28N4 (5) (6)	140.000
315	500	555	444	365.3	50	616	616	924	1016	ATV 71HC31N4 (5) (6)	215.000
355	–	637	512	419.3	50	671	671	1006	1107	ATV 71HC40N4 (5) (6)	225.000
400	600	709	568	466.6	50	759	759	1138	1252		
500	700	876	699	576.6	50	941	941	1411	1552	ATV 71HC50N4 (5) (6)	300.000

PF121610-13-M



ATV 71HU22N4

PF105773-15-M



ATV 71HU40N4Z

PF105761-32-M



ATV 71HC28N4

- (1) These values are for a nominal switching frequency of 2.5 or 4 kHz, depending on the rating, for continuous operation.
 (2) Typical value for the indicated motor power and for the maximum prospective line Isc.
 (3) ATV 71HD90N4...HC50N4 drives are supplied as standard in a reinforced version for operation in specific environmental conditions (see catalog "Variable speed drives : Altivar 71").
 To order the ATV 71H075N4...HD75N4 drives in a reinforced version, add **S337** at the end of the reference.
 For example, ATV 71H075N4 becomes **ATV 71H075N4S337**.
 If a reinforced version of the drive is supplied for specific environmental conditions, it will feature a remote graphic display terminal.
 (4) All drives come with a remote graphic display terminal. To order an ATV 71H075N4...ATV 71HD75N4 drive without a graphic display terminal, add a **Z** at the end of the reference. The drive will then come equipped with an integrated 7-segment display terminal.
 For example, ATV 71H075N4 without a graphic display terminal becomes **ATV 71H075N4Z**.
 (5) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply.
 For connections to the DC bus, the drive can be ordered without a DC choke by adding a **D** at the end of the reference.
 For example, ATV 71HD90N4 becomes **ATV 71HD90N4D**.
 (6) Drive supplied without plate for EMC mounting.
 A choke appropriate for the drive rating is supplied in a UL Type 1, IP 21 or IP 31 kit, which must be ordered separately:
 - For ATV 71H075N4...HD75N4, order the kit for IP 21 conformity, (see catalog "Variable speed drives : Altivar 71").
 - For ATV 71HD90N4...HC50N4, order the kit for UL Type 1 or IP 31 conformity, (see catalog "Variable speed drives : Altivar 71").

Note: Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 71".

CANopen in Machines and Installations

Variable speed drives for asynchronous motors
Altivar 71



UL Type 12/IP 54 drives with an integrated class A EMC filter

Motor		Line supply				Altivar 71				Reference (3)	Weight	
Power indicated on plate (1)	HP	Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)	Max. transient current for		60 s			2 s
		380 V	480 V				380 V	380 V				
		kW	A	A	kVA	kA	A	A	A	A	kg	
3-phase supply voltage: 380...480 V 50/60 Hz												
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71W075N4	12.000	
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71WU15N4	12.000	
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71WU22N4	12.000	
3	—	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71WU30N4	13.000	
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71WU40N4	13.000	
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71WU55N4	16.000	
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71WU75N4	16.000	
11	15	36.6	30	24.1	22	27.7	21	41.6	45.7	ATV 71WD11N4	21.000	
15	20	48	39	31.6	22	33	27	49.5	54.5	ATV 71WD15N4	31.000	
18.5	25	45.5	37.5	29.9	22	41	34	61.5	67.7	ATV 71WD18N4	31.000	
22	30	50	42	32.9	22	48	40	72	79.2	ATV 71WD22N4	30.500	
30	40	66	56	43.4	22	66	52	99	109	ATV 71WD30N4	38.500	
37	50	84	69	55.3	22	79	65	118.5	130	ATV 71WD37N4	38.500	
45	60	104	85	68.5	22	94	77	141	155	ATV 71WD45N4	61.500	
55	75	120	101	79	22	116	96	174	191	ATV 71WD55N4	61.500	
75	100	167	137	109.9	22	160	124	240	264	ATV 71WD75N4	61.500	

(1) These values are for a nominal switching frequency of 2,5 or 4 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) All drives are supplied with a plate for EMC mounting.

Note: Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 71".

UL Type 1/IP 20 drives on base plate with an integrated class A EMC filter

Motor		Line supply				Altivar 71				Reference (3) (4) (5)	Weight	
Power indicated on plate (1)	HP	Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)	Max. transient current for		60 s			2 s
		380 V	480 V				380 V	380 V				
		kW	A	A	kVA	kA	A	A	A	A	kg	
3-phase supply voltage: 380...480 V 50/60 Hz												
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71P075N4Z	2.700	
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71PU15N4Z	2.700	
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71PU22N4Z	2.700	
3	—	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71PU30N4Z	3.600	
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71PU40N4Z	3.600	
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71PU55N4Z	5.000	
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71PU75N4Z	5.000	

(1) These values are for a nominal switching frequency of 4 kHz, depending on the rating, for continuous operation.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) All ATV 71P●●●N4Z drives are equipped with an integrated 7-segment display terminal.

(4) A DC choke must be used, (see catalog "Variable speed drives: Altivar 71").

(5) All drives are supplied with a plate for EMC mounting and a thermal liner for mounting on the machine frame (see catalog "Variable speed drives: Altivar 71").

Note: Please refer to the compatibility tables summarizing the possible combinations for drives, options and accessories on catalog "Variable speed drives: Altivar 71".



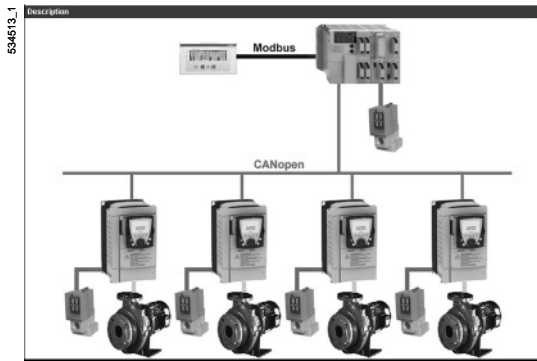
ATV 71W075N4



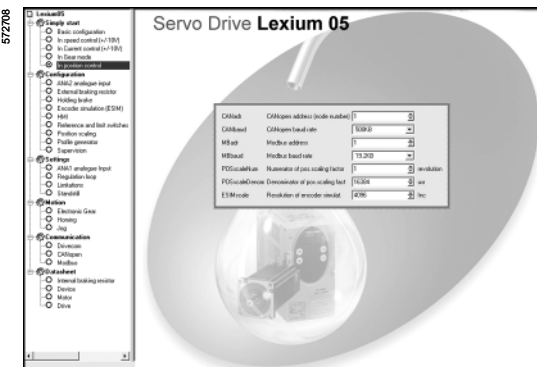
ATV 71PU40N4Z

CANopen in Machines and Installations

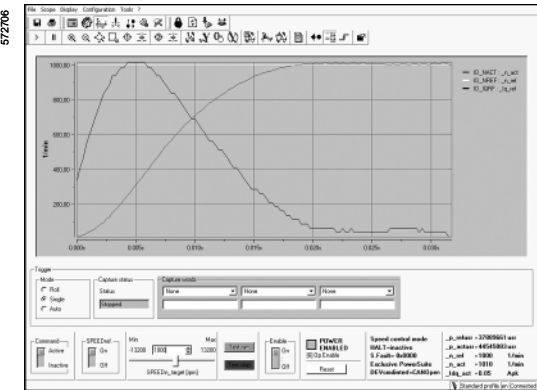
Motor control software
PowerSuite



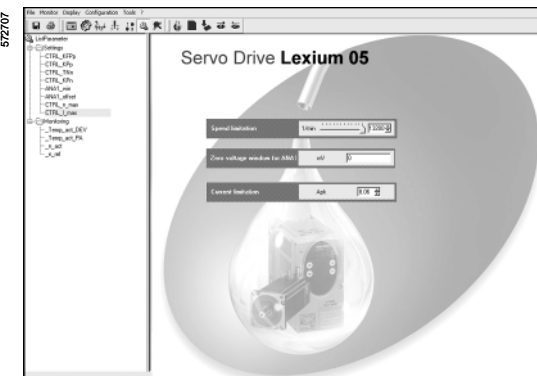
Equipment management



View of "Simply Start" menu



View of FFT oscilloscope function



Monitoring control panel (baragraph)

Presentation

The PowerSuite software workshop is a user-friendly tool designed for setting up control devices for the following Telemecanique brand motors:

- TeSys model U controller-starters
- Altistart soft start/soft stop units
- Altivar variable speed drives
- Lexium 05 servo drives.

It includes various functions designed for setup phases such as:

- Preparing configurations
- Start-up
- Maintenance

In order to simplify the start-up and maintenance phases, the PowerSuite software workshop can use the Bluetooth® wireless link.

Functions

Preparing configurations

The PowerSuite software workshop can be used on its own to generate the device configuration. It can be saved, printed and exported to office automation software. The PowerSuite software workshop can also be used to convert:

- An Altivar 28 drive configuration to an Altivar 31 drive configuration
- An Altivar 58 or Altivar 58F drive configuration to an Altivar 71 drive configuration.

Setup

When the PC is connected to the device, the PowerSuite software workshop can be used to:

- Transfer the generated configuration
- Adjust
- Monitor, this option has been enhanced with new functions such as:
 - the oscilloscope
 - the high speed oscilloscope (minimum time base: 2 ms)
 - the FFT oscilloscope (*Fast Fourier Transform*)
 - display of communication parameters
- Control
- Save the final configuration..

Maintenance

In order to simplify maintenance operations, the PowerSuite software workshop can be used to:

- Compare the configuration of a device currently being used with a saved configuration
- Manage the user's installed base of equipment, in particular:
 - organize the installed base into folders (electrical equipment, machinery, workshops, etc)
 - store maintenance messages
 - simplify Ethernet connection by storing the IP address.

Connections

Modbus communication bus

The PowerSuite software workshop for PC can be connected directly to the device terminal port or Modbus network port via the serial port on the PC.

Two types of connection are possible:

- With a single device (point-to-point connection) via VW3 A8 106 connection kit for PC serial port
- With a number of devices (multidrop connection) via XGS Z24, RS 232/RS 485 interface.

Ethernet TCP/IP communication network

The PowerSuite software workshop for PC can be connected to an Ethernet network. In this case, the devices can be accessed:

- Using a VW3 A3 310 communication card for the Altivar 71 drive
- Using a 174 GEV 300 20 Ethernet/Modbus gateway.

Bluetooth® wireless link

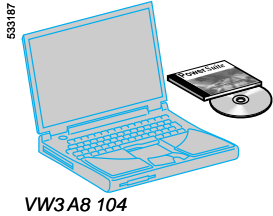
The PowerSuite software workshop for PC can communicate via a Bluetooth® radio link with a device equipped with a Bluetooth®/Modbus VW3 A8 114 adaptor. The adaptor plugs into the device terminal port or Modbus network port, and has a range of 10 m (class 2).

If the PC does not have Bluetooth® technology, use the VW3 A8 115 USB/Bluetooth® adaptor.

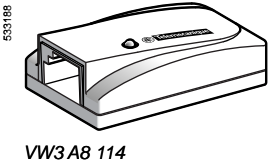
CANopen in Machines and Installations

Motor control software
PowerSuite

References



Description	Composition	Reference	Weight kg
PowerSuite CD-ROM	- 1 program for PC in English, French, German, Italian and Spanish - Technical documentation of variables speed drives, starters and servo drives	VW3 A8 104	0.100
PowerSuite update CD-ROM (1)	- 1 program for PC in English, French, German, Italian and Spanish - Technical documentation of variables speed drives, starters and servo drives	VW3 A8 105	0.100
Connection kit for PC serial port for Modbus point-to-point connection	- 1 x 3 m cable with 2 RJ45 connectors - 1 RS 232/RS 485 converter with one 9-way female SUB-D connector and one RJ45 connector - 1 converter with 4-way male connector and one RJ45 connector for connecting ATV 11 drives - 1 RJ45/9-way SUB-D adaptor for connecting ATV 38/58/58F drives - 1 RJ45/9-way SUB-D adaptor for connecting ATV 68 drives - 1 converter for the ATV 11 drive, with one 4-way male connector and one RJ45 connector	VW3 A8 106	0.350
RS 232/RS 485 interface for Modbus multipoint connection	1 Modbus multidrop converter for connection to screw terminals. Requires a 24 V ~ (20...30 V), 20 mA power supply (2).	XGS Z24	0.105
Modbus/Bluetooth® adaptor (3)	- 1 Bluetooth® adaptor (10 m range, class 2) with 1 RJ45 connector - 1 x 0.1 m cable with 2 RJ45 connectors for PowerSuite - 1 x 0.1 m cable with 1 RJ45 connector and 1 mini-DIN connector, for TwidoSoft - 1 RJ45/9-way SUB-D adaptor for connecting ATV 38/58/58F drives	VW3 A8 114	0.155
USB-Bluetooth® adaptor for PC	This adaptor is required for a PC which is not equipped with Bluetooth® technology. It is connected to a USB port on the PC. Range of 10 m (class 2).	VW3 A8 115	0.290



Compatibility of the PowerSuite software workshop for PC with the following devices (4)

Connection	Controller-starter	Soft start/soft stop unit	Variable speed drives				Servo drives
			TeSys modèle U	ATS 48	ATV 11	ATV 31	
Modbus		V1.30	V1.40	V2.0	V2.2	V2.2	V2.2
Ethernet (device equipped with an Ethernet TCP/IP card)					V2.2	V2.2	
Ethernet via Modbus/Ethernet bridge		V1.50		V2.0	V2.2	V2.2	V2.2
Bluetooth®	V2.2	V2.2		V2.2	V2.2	V2.2	V2.2

Compatible devices and/or software versions
Incompatible devices and/or software versions

Hardware and software environments

The PowerSuite software workshop for PC can operate in the following PC environments and configurations:

- Microsoft Windows® 98 SE, Microsoft Windows® 2000, Microsoft Windows® XP
- Pentium III, 800 MHz, hard disk with 300 Mb available, 128 Mb RAM
- SVGA or higher definition monitor.

(1) Updates a version ≥ V1.40 with the latest available version. For versions < V1.40, you should order the PowerSuite CD-ROM, VW3 A8 104.

(2) Can also be used to communicate between a Twido PLC and the TwidoSoft software workshop.

(3) Please consult our specialist "Interfaces, I/O splitter box and power supply" catalogue.

(4) Software version refer to the current version of commercialized drive.