

Variable speed drives
Altivar 21
Stimulate your HVAC
solutions!



For 3-phase asynchronous motors from 0,75 to 75 kW

Simply Smart!

Leverage
ingenuity
and intelligence
for **ease of use**

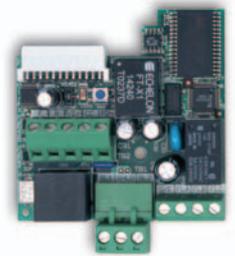
The *essential connection* between you and your HVAC applications!

Thanks to this new range of drives **specifically for HVAC applications**, you can focus on the essentials and avoid the superfluous:

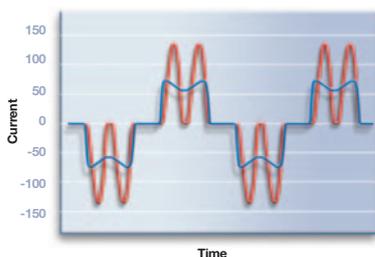
- **Economical**, it is specially designed to optimise your needs. IP54 product with EN 55011 class A or B (IEC/EN 61800-3) **integrated EMC filters**.
- **Simple** “plug and drive” usage, the **Altivar 21** enables immediate start-up following its initial connection. Pressing the “LOC/REM” button provides access to the local controls for testing your application.
- **Compact**, it easily integrates in your machines and can be mounted side by side.

The **Altivar 21** simplifies **integration** in your building management systems:

- Its option cards enable you to connect to the main types of communication bus used in building management (LonWorks, BACnet, METASYS N2 and APOGEE FLN).
- Its design complies with international standards and certifications: CE, UL, CSA, C-Tick...



Reliable and robust, the **Altivar 21** **makes life simpler**:



- Its “harmonic less” technology provides **immediate hassle free operation**, without having to add specialised devices for treating the harmonics (DC choke, AC choke): THDI < 30% (IEC 61000-3-12 < 48%).
- Its usage you with **peace of mind**: adaptive tuning of ramps and motor power supply to optimise energy consumption.
- Its remote terminal increases **user-friendliness**:
 - auto-tuning of functions
 - downloading and saving of configurations.



Start up right with PC *Soft!*

Is a software easy to use for commissioning the ATV21. PC Soft's capabilities include :

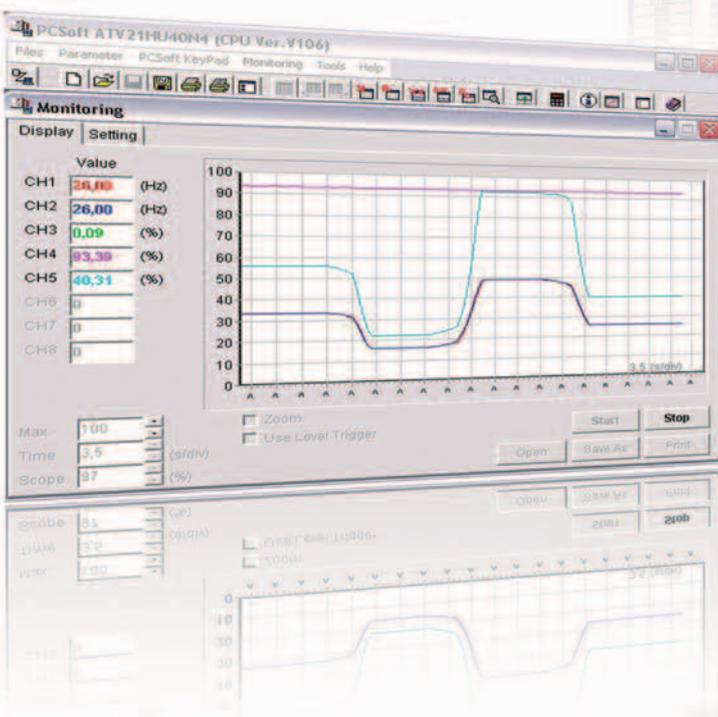
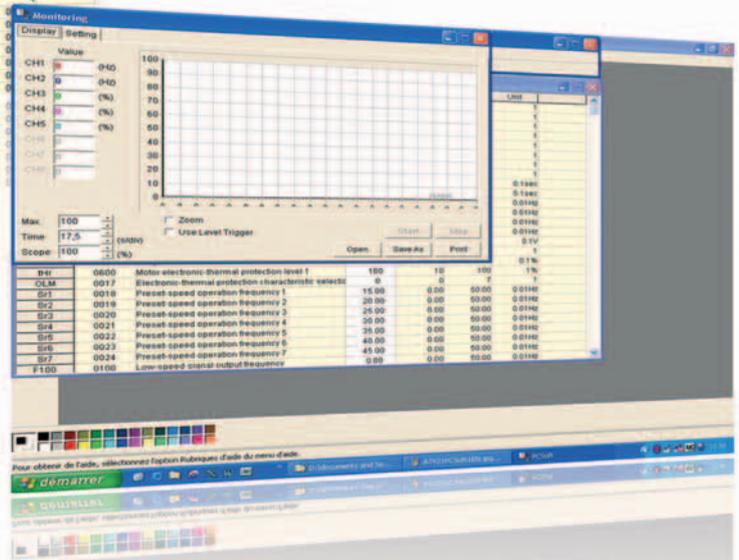
- Upload, download
- Oscilloscope, 8 channels
- On line / off line mode
- Configuration storage
- ...

PC Soft is a free of charge software available on www.telemecanique.com

PCSoft ATV21HD15N4 (CPU Ver. V106)

Parameter Table: ATV21HD15N4 (CPU Ver. V106)

Title	Comm No	Function	Set Val	Low limit	Up limit	Unit
AUT	0000	Automatic acceleration/deceleration	1	0	2	1
AU4	0040	Parameter setting macro function	0	0	4	1
CMoD	0003	Command mode selection	0	0	2	1
FMOd	0004	Frequency setting mode selection 1	1	0	5	1
FMSL	0005	Meter selection	0	0	19	1
FM	0006	Meter adjustment	145	1	1200	1
hP	0007	Default setting	0	0	9	1
Fr	0008	Forward/reverse run selection (Operation panel)	0	0	3	1
ACC	0009	Acceleration time 1	10.0	0.0	3200.0	0.1sec
DEC	0010	Deceleration time 1	10.0	0.0	3200.0	0.1sec
FH	0011	Maximum frequency	50.00	30.00	200.00	0.01Hz
UL	0012	Upper limit frequency	50.00	0.50	50.00	0.01Hz
LL	0013	Lower limit frequency	0.00	0.00	50.00	0.01Hz
vL	0014	Base frequency 1	50.00	25.00	200.00	0.01Hz
vLv	0409	Base frequency voltage 1	400.0	50.0	660.0	0.1V
P1	0015	V/F control mode selection	2.0	0.0	30.0	0.1%
vb	0016	Torque boost 1	1	0	1	1%
THr	0600	Motor electronic thermal protection level 1	100	10	100	1%
OLM	0017	Electronic thermal protection characteristic select	0	0	7	1
Sr1	0018	Preset-speed operation frequency 1	15.00	0.00	50.00	0.01Hz
Sr2	0019	Preset-speed operation frequency 2	20.00	0.00	50.00	0.01Hz
Sr3	0020	Preset-speed operation frequency 3	25.00	0.00	50.00	0.01Hz
Sr4	0021	Preset-speed operation frequency 4	30.00	0.00	50.00	0.01Hz
Sr5	0022	Preset-speed operation frequency 5	35.00	0.00	50.00	0.01Hz
Sr6	0023	Preset-speed operation frequency 6	40.00	0.00	50.00	0.01Hz
Sr7	0024	Preset-speed operation frequency 7	45.00	0.00	50.00	0.01Hz



PCSoft

Language: English

Inverter Type - Rating: ATV21 HD15N4

CPU Ver.: V106

OK

Manage and your buildings

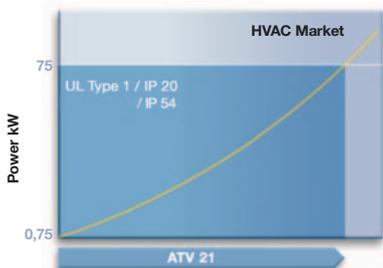
Benefit from all the indispensable
and pump applications.

Ventilation:

- **Detection** of fan belt breakage.
- Automatic **restart**, catch on the fly.
- **Jump frequencies**.

Pumping:

- **Continuity of service** assured in the event of loss of measuring signals: fallback position, automatic/manual operation.
- **Safety and protection of pump:** Detection of current threshold. Limitation of operating time at low speed. PTC probe management.



Heating and air conditioning:

- Adjustment of flow rates on the basis of actual needs for better **energy management**, use of PI regulator.
- **Suppression of mechanical resonance** using jump frequencies and up 16 kHz switching frequency adjustable during operation.
- **Reduction of consumption** using energy saving and quadratic ratios.
- **Installation monitoring:** diagnostics, fault management, alarms.

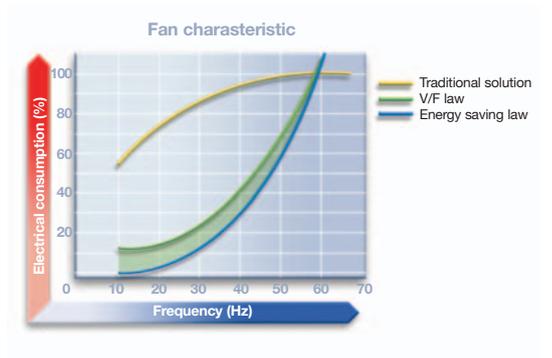
monitor s using Altivar.

functions for fan



Ventilation: Air treatment plant

- Enhanced comfort with reduced noise pollution caused by fan operation: jump frequencies, energy saving ratio, adjustment of switching frequency during operation, variable “white noise” frequency.



Ventilation: safety / smoke extraction

- Drive forced start function with fault inhibition, selection of running direction and speed reference.
- For high inertia applications, braking possible using resistors, catch on the fly by speed search regardless of the direction of rotation.



Pumping: water regulation

- Essential functions for the protection of your installations.
- Detection of underload, overload.
- Detection of absence of fluid.



Selection guide



Motor power		3-phase from 200V to 240V	Dimensions (mm)		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV21H075M3X	107	143	150
1,5	2	ATV21HU15M3X	107	143	150
2,2	3	ATV21HU22M3X	107	143	150
3	-	ATV21HU30M3X	142	184	150
4	5	ATV21HU40M3X	142	184	150
5,5	7,5	ATV21HU55M3X	180	232	170
7,5	10	ATV21HU75M3X	180	232	170
11	15	ATV21HD11M3X	245	329,5	190
15	20	ATV21HD15M3X	245	329,5	190
18,5	25	ATV21HD18M3X	245	329,5	190
22	30	ATV21HD22M3X	240	420	210
30	40	ATV21HD30M3X	320	630	290

Motor power		3-phase from 380V to 480V	Dimensions (mm)		
kW	HP	UL Type 1 / IP20	L	H	P
0,75	1	ATV21H075N4	107	143	150
1,5	2	ATV21HU15N4	107	143	150
2,2	3	ATV21HU22N4	107	143	150
3	3	ATV21HU30N4	142	184	150
4	5	ATV21HU40N4	142	184	150
5,5	7,5	ATV21HU55N4	142	184	150
7,5	10	ATV21HU75N4	180	232	170
11	15	ATV21HD11N4	180	232	170
15	20	ATV21HD15N4	245	329,5	190
18,5	25	ATV21HD18N4	245	329,5	190
22	30	ATV21HD22N4	240	420	210
30	40	ATV21HD30N4	240	420	210
37	50	ATV21HD37N4	240	550	244
45	60	ATV21HD45N4	240	550	244
55	75	ATV21HD55N4	320	630	290
75	100	ATV21HD75N4	320	630	290

Selection guide

Motor power		3-phase from 380V to 480V	Dimensions (mm)		
kW	HP	UL Type 1 / IP54	L	H	P
0,75	1	ATV21W075N4 (1)	215	297	192
1,5	2	ATV21WU15N4 (1)	215	297	192
2,2	3	ATV21WU22N4 (1)	230	340	208
3	-	ATV21WU30N4 (1)	230	340	208
4	5	ATV21WU40N4 (1)	230	340	208
5,5	7,5	ATV21WU55N4 (1)	230	340	208
7,5	10	ATV21WU75N4 (1)	230	340	208
11	15	ATV21WD11N4 (1)	290	560	315
15	20	ATV21WD15N4 (1)	290	560	315
18,5	25	ATV21WD18N4 (1)	310	665	315
22	30	ATV21WD22N4 (1)	284	720	315
30	40	ATV21WD30N4 (1)	284	720	315
37	50	ATV21WD37N4 (1)	284	880	343
45	60	ATV21WD45N4 (1)	284	880	343
55	75	ATV21WD55N4 (1)	362	1000	364
75	100	ATV21WD75N4 (1)	362	1000	364

(1) with integrated EMC class A filters. To order a product with integrated EMC class B filters, add the letter "C" to the end of the reference.

PC Soft software workshop for PC
 free of charge available on Telemecanique.com
 connection kit for PC

VW3A8106



The efficiency of Telemecanique branded *solutions*

Used in combination, Telemecanique products provide quality solutions, meeting all your **Automation** and **Control** applications requirements.



Simple machines
Altistart 01: 0,37 to 75 kW
Altivar 11: 0,18 to 2,2 kW
Altivar 31: 0,18 to 15 kW



Complex, high power machines
Altivar 71: 0,37 to 500 kW



Pumping and ventilation machines
Altistart 48: 4 to 1 200 kW
Altivar 11...347: 0,18 to 2,2 kW
Altivar 21: 0,75 to 75 kW
Altivar 61: 0,75 to 630 kW

A worldwide presence

Constantly available

- More than 5 000 points of sale in 130 countries.
- You can be sure to find the range of products that are right for you and which complies fully with the standards in the country where they are used.

Technical assistance wherever you are

- Our technicians are at your disposal to assist you in finding the optimum solution for your particular needs.
- Schneider Electric provides you with all necessary technical assistance, throughout the world.

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