

Variable speed drives

Altivar 58

Programmed performance



For asynchronous motors from 0.37 to 55 kW

Altivar 58

exceptional
adaptability...

Due to its open access to all industrial communication networks and numerous automation system options, the Altivar 58 easily adapts to complex and advanced machines:

- Its performances and robustness,
- open access and user-friendliness,
- suitability for any environment provided by different versions...

... makes the Altivar 58 «the» reference up to 55 kW.

Voltage ranges:

- Single-phase 200...240 V
- 3-phase 200...240 V
/ 380...500 V
- 50/60 Hz

Standards and certifications:

IEC 61800-3, EN 55011,
EN 55022 class A or B with option,
IEC 61000-4-2 / 4-3 / 4-4 / 4-5,
EN 50178,
DNV, GOST.



LISTED 170M
IND.CONT.EQ



L909921



... .. for your applications
from *0.37 to 55 kW*

Mechanical handling, hoisting

- Assured performance:
 - exceptional overtorque (2Tn for 2 seconds),
 - integrated brake sequence,
 - I/O update time: 2 ms.

Production line

- Precision of control and adjustment,
- Integrates perfectly in automation systems:
 - access to all industrial communication networks,
- Ready-assembled IP55 version, closest possible mounting to the machine.



... for your *specific* applications



Elevate with the Altivar 58 Lift:

- Specifically for lift specialists, the Lift version provides open loop performance... in complete comfort and safety.



Excellent precision with the Altivar 58F Flux Vector Control with sensor:

- For your applications requiring torque, precision at low speed and high dynamics.



Additional *functions...* by adding *cards:*

- the **programmable card** (standard IEC 61131-3) **Controller Inside** enables perfect adaptation of the drive to the sizing of your machines. The advantages of **programming** and **automation** system functions add to the **performance** of the drives... and provide you with:

- **total flexibility** and **reduced costs** due to the integration of external functions within the drive,
- **increased performance** due to processing by the drive of all the functions directly linked to the control of the machine.

- the **I/O option cards** enable motor protection using PTC probes, speed correction, etc....

- the «**customer-specific**» **option cards** enable full access to the hardware (inputs / outputs) and software (specific functions) of the Altivar 58.

Cards are available for the following applications:
pump switching, multi-motor function, multi-paramatering, multi-cycles and simple positioning.



Concentrated performance

The exceptional acceleration, low speed torque and powerful braking provided by the Altivar 58 puts it way ahead:

- High dynamic response and wide speed range (from 1 to 100) using sensorless **flux vector control**.
- Powerful braking: up to **100 % T_n** continuously.
- Transient overtorque: up to **2T_n** for **2 seconds**.
- Automatic adaptation to the motor characteristics simplifies setting-up.
- Numerous automation system functions available:
 - PI regulator,
 - brake control for lifting movements (driving loads),
 - + / - speed, S and U ramps, pre-selectable speeds (8), automatic limitation of running time at low speed,
 - different types of stop, d.c. injection, freewheel, fast, etc...

Optimise the drive performances of your machines ...

The **Altivar 58F** flux vector control with sensor drive provides exceptional dynamics and accurate performance at low speed:

- speed range from 1 to 1000 and torque at stop,
- speed of response by pre-fluxing the motor,
- adjustable ramp profiles with increments of 0.01 s,
- PID regulator.



Altivar 58F



Robustness to meet every challenge

Exceptional *endurance*

- Operation without derating from **-10° C** to **+40° C**.
- Reduction in current consumption of the drive due to **integrated line chokes** (power greater than 15 kW).
- **Protection** at all levels:
 - thermal protection of the motor and of the drive,
 - protection against short-circuits.

Exemplary behaviour

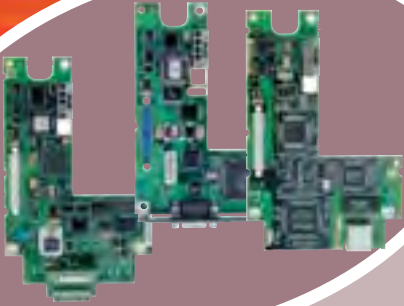
- **EMC** conformity to standards IEC61800-3, EN61800-3 and the European directive without extra cost and in all simplicity, due to integrated filter.
- **Resistance to micro-breaks** on the supply of up to 500 ms.
- **Controlled stop** on supply break.
- **Catch on the fly** gradually following supply break or «downstream» break.

Open access and user-friendliness for improved ease of use

Communication according to the card selected

■ An RS485 serial link as standard (with integrated Modbus protocol) and numerous communication card options simplify integration in your automation systems.

- Fipio
- Modbus Plus
- Uni-Telway
- Modbus
- Interbus-S
- AS-Interface
- Ethernet
- CANopen
- DeviceNet
- N2
- LonWorks
- Profibus DP 12MHz



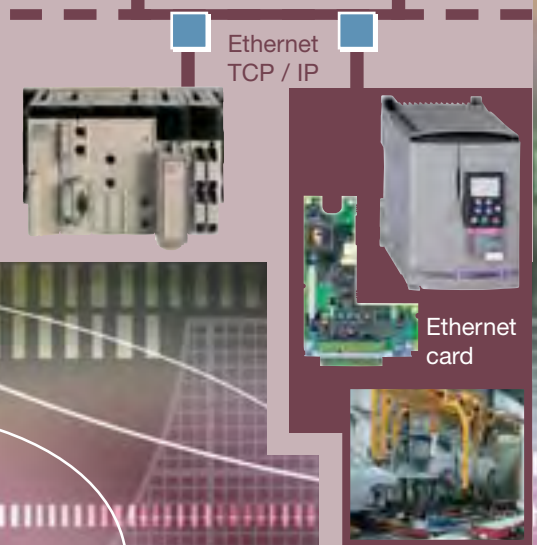
Using the Ethernet card and a simple Web browser, Transparent Factory™ enables you to manage your industrial processes from anywhere, at any time... with complete efficiency.



Connected to the internal Ethernet network, your PC remains in constant contact with your applications



Remote PC Internet connection



Simple and efficient dialogue tools

- The display unit, mounted on the drive or on the enclosure door, provides permanent access for viewing, controlling and adjustment.
- With the PC or Pocket PC, the PowerSuite* software workshop enables, in addition to its user-friendliness and ergonomics for defining and storing your parameters, the backing-up and printing of each configuration.



Graphical display of settings using PowerSuite



* Software which is common to the range of Altivar variable speed drives and Altistart starters. Available in 5 languages (English, French, German, Italian, Spanish).

The *advantage* in any environment

From the harsh environment of the motor to the sensitive environment of the control room, the Altivar 58 is your solution:

The closest possible to the motor...

Optimise your costs and design times with the ready-assembled versions:



Altivar 58 Compact
(0.37 to 5.5 kW).
IP55 enclosure fitted with a drive on base-plate, a circuit-breaker and a downstream contactor.



Altivar 58 Energy
(3 to 75 kW).
IP55 enclosure fitted with a drive and a Vario switch disconnecter.

These 2 versions enable:

- reduced interference and reduced costs linked to EMC (limited length of screened cables),
- keeping a standard compact motor,
- keeping the electronic circuitry nearby, but protected from the immediate environment of the motor,
- making the drive and motor accessible for simplified setting-up and maintenance,
- removable control and power connections,
- local control (potentiometer and start command) available.



Elevate with the Altivar 58 Lift:

- A version specifically for lift specialists
 - comfort and speed using S ramps,
 - suitability for motors specifically for lifts,
 - silent operation (HF switching 16 kHz).
- Open loop performance for applications up to 1.2 m/s: the best simplicity / performance compromise for the retrofit market.
- The Altivar contributes to safety: control of downstream contactors, integrated brake sequence.
- Simplicity of setting-up: special Lift menu, factory settings adapted to the application.

Selection guide

Altivar 58 / 58F

Altivar 58

200 / 240 V 50/60 Hz supply

High torque applications (170% Tn)

Motor power	With heatsink	On baseplate	Ready-assembled Compact
kW/HP			
0.37/0.5	ATV 58HU09M2	ATV 58PU09M2	ATV 58EU09M2
0.75/1	ATV 58HU18M2	ATV 58PU18M2	ATV 58EU18M2
1.5/2	ATV 58HU29M2	ATV 58PU29M2	ATV 58EU29M2
2.2/3	ATV 58HU41M2	ATV 58PU41M2	ATV 58EU41M2
3/-	ATV 58HU54M2 (1)	ATV 58PU54M2	-
4/5	ATV 58HU72M2 (1)(2)	ATV 58PU72M2 (2)	-
5.5/7.5	ATV 58HU90M2 (1)(2)	ATV 58PU90M2 (2)	-
7.5/10	ATV 58HD12M2 (1)(2)	ATV 58PD12M2 (2)	-
11/15	ATV 58HD16M2X (1)(3)	-	-
15/20	ATV 58HD23M2X (1)(3)	-	-
18.5/25	ATV 58HD28M2X (1)(3)	-	-
22/30	ATV 58HD33M2X (1)(3)	-	-
30/40	ATV 58HD46M2X (1)(3)	-	-

380 / 500 V 50/60 Hz supply

High torque applications (170% Cn)

Motor power	With heatsink	On baseplate	Ready-assembled Compact	Energy
kW/HP				
0.75/1	ATV 58HU18N4	ATV 58PU18N4	ATV 58EU18N4	-
1.5/2	ATV 58HU29N4	ATV 58PU29N4	ATV 58EU29N4	-
2.2/3	ATV 58HU41N4	ATV 58PU41N4	ATV 58EU41N4	-
3/-	ATV 58HU54N4 (1)	ATV 58PU54N4	ATV 58EU54N4	ATV 58ED05N4
4/5	ATV 58HU72N4 (1)	ATV 58PU72N4	ATV 58EU72N4	ATV 58ED07N4
5.5/7.5	ATV 58HU90N4 (1)	ATV 58PU90N4	ATV 58EU90N4	ATV 58ED09N4
7.5/10	ATV 58HD12N4 (1)	ATV 58PD12N4	-	ATV 58ED12N4
11/15	ATV 58HD16N4 (1)	ATV 58PD16N4	-	ATV 58ED16N4
15/20	ATV 58HD23N4 (1)	ATV 58PD23N4	-	ATV 58ED23N4
18.5/25	ATV 58HD28N4 (1)(4)	-	-	ATV 58ED28N4
22/30	ATV 58HD33N4 (1)(4)	-	-	ATV 58ED33N4
30/40	ATV 58HD46N4 (1)(4)	-	-	ATV 58ED46N4
37/50	ATV 58HD54N4 (1)(4)	-	-	ATV 58ED54N4
45/60	ATV 58HD64N4 (1)(4)	-	-	ATV 58ED64N4
55/75	ATV 58HD79N4 (1)(4)	-	-	ATV 58ED79N4

Altivar 58F Flux Vector Control with sensor

Motor power	With heatsink	On baseplate
kW/HP		
0.75/1	ATV 58FHU18N4	ATV 58FPU18N4
1.5/2	ATV 58FHU29N4	ATV 58FPU29N4
2.2/3	ATV 58FHU41N4	ATV 58FPU41N4
3/-	ATV 58FHU54N4	ATV 58FPU54N4
4/5	ATV 58FHU72N4	ATV 58FPU72N4
5.5/7.5	ATV 58FHU90N4	ATV 58FPU90N4
7.5/10	ATV 58FHD12N4	ATV 58FPD12N4
11/15	ATV 58FHD16N4	ATV 58FPD16N4
15/20	ATV 58FHD23N4	ATV 58FPD23N4
18.5/25	ATV 58FHD28N4	-
22/30	ATV 58FHD33N4	-
30/40	ATV 58FHD46N4	-
37/50	ATV 58FHD54N4	-
45/60	ATV 58FHD64N4	-
55/75	ATV 58FHD79N4	-

(1) Add "S309" to the end of the reference for a **Altivar 58 Lift** (example: ATV 58HU09M2S309); NB. Note (4) not applicable

(2) Single-phase operation possible by downgrading the drive by 1 power rating and adding a line choke

(3) **Altivar 58** with heatsink, without EMC filters

(4) Add the letter "X" to the end of the reference for an **Altivar 58** without integrated EMC filter (example: ATV 58HD28N4X)

A comprehensive range of *Motor Starters*

Increase your performance with
the associated **TeSys** components*



■ Circuit-breakers,

■ Contactors,

...

**For further details on product combinations,
please refer to our catalogue.*



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

■ Variable speed drives



Altivar 11
0.18 to 2.2 kW



Altivar 38
0.75 to 315 kW



Altivar 28
0.37 to 15 kW



Altivar 68
75 to 630 kW



Altivar 58
0.37 to 55 kW

■ Soft start - soft stop units



LH4
6 to 85 A



Altistart 48
17 to 1200 A

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Production : 3000 NR

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