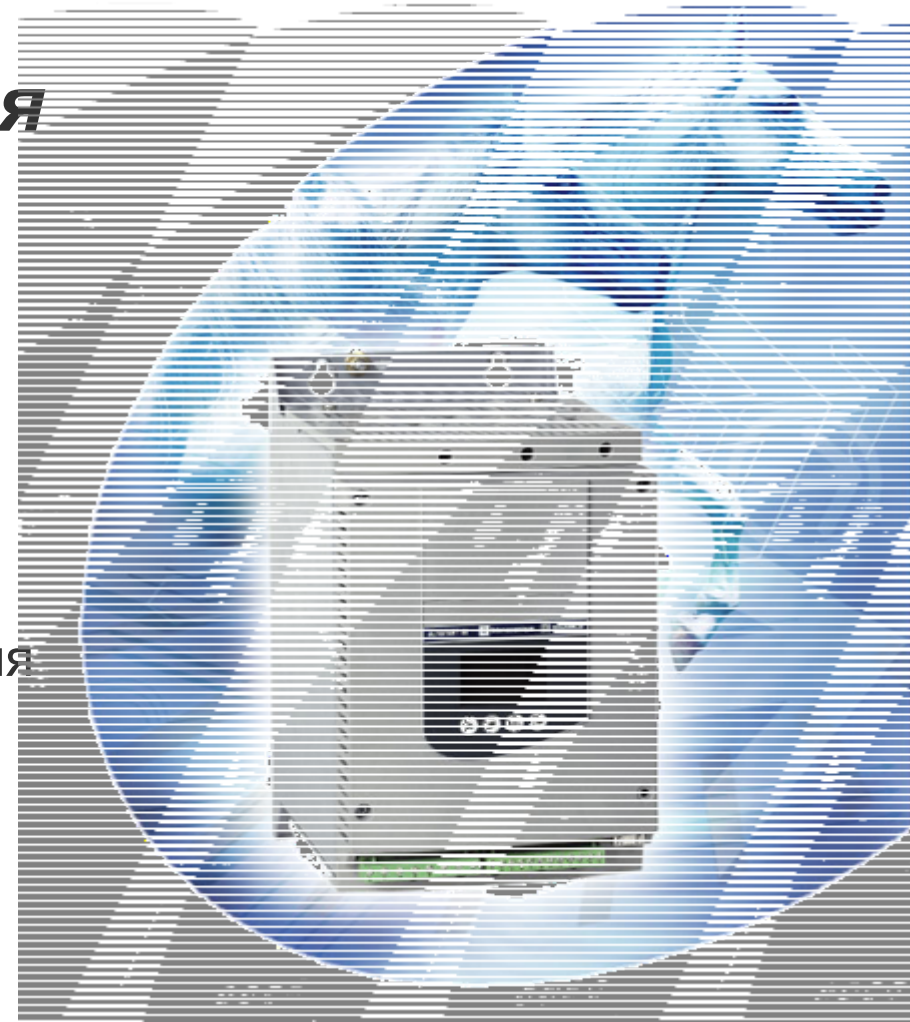


# Altistart 48

## Укращенная энергия

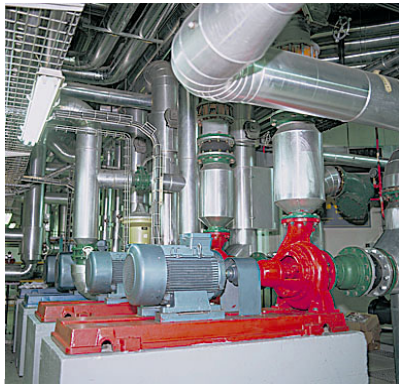


Устройства  
плавного пуска для  
асинхронных  
двигателей

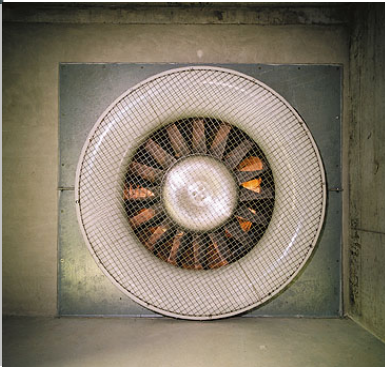


**Telemecanique**

# Altistart 48, *в сердце вашей установки*



▲ Насосы



▼ Компрессоры



▲ Вентиляторы и инерционные машины



▲ Конвееры



Altistart 48 разработан для улучшения работы Ваших механизмов:

- снижение механических и гидравлических ударов,
- снижение бросков тока в сети питания (пиков напряжения, превышений тока).
- Снижение потерь электроэнергии, перегревов, и т.д....

# Summary

## Новая гамма с расширенными возможностями...

### Altistart 48 в сердце of *applications*



- Насосы,
- Fans и high inertia machines,
- Компрессоры,
- Конвейеры...



- Полный спектр модификаций под различные стандарты.



- Преимущество уникальной концепции TCS

- Защита на всех уровнях

### ... и такой простой:



- Простая интеграция :

- в шкафы
- в системы управления.

# A complete range *with an international vocation*



## ■ Two voltage ranges :

230 to 415 V\*.  
208 to 690 V.

## ■ For 50 и 60 Hz

Wide tolerance range  
for generators.

## ■ From 17 to 1200 A

415 V: 7.5 to 630 kW.  
690 V: 15 to 1200 kW.

## ■ International standards и approvals :

- IEC 60947-4-2.
- CE Marking.
- EMC : classes A и B.
- UL / CSA
- DNV (морской, off-shore)
- C-TICK / GHOST / CCIB / NOM.

## **Altistart 48, ready-to-use :**

Factory set, the Altistart 48 is operational immediately.

**Wire it, connect и start...**

\* Connection in the motor  
delta terminal is possible

**Su***mmary*



# High performance with the *exclusive TCS\* concept*

**\*TCS :  
МОМЕНТ Control  
System**

With **motor момент control**,  
**Altistart 48** provides perfect  
control of the machine starting и stopping.

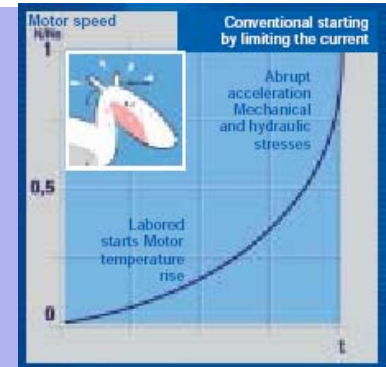
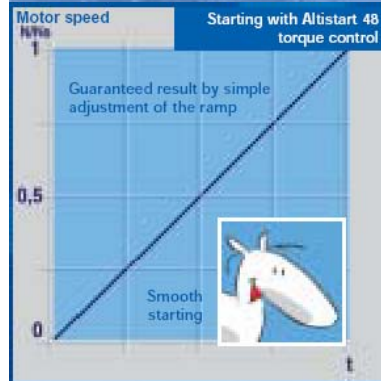
**To limit stress  
on the drive  
chain**

**The Altistart 48  
« TCS system »**  
Это единственная  
система enabling to:

- Maintain gradual acceleration up to nominal speed, even incase of high starting момент.
- Увеличить срок службы of the belts и machinery.

*With conventional starting by limiting the ток :*

- *Difficult starting causing motor temperature rise.*
- *Sudden end of acceleration causing mechanical stress*
- *Difficult adjustment compromise.*



**Summary**



# High performance with the *exclusive TCS\* concept*

**\*TCS :  
MOMENT  
Control  
System**

With **motor MOMENT control**,  
**Altistart 48** provides perfect  
control of the machine starting и stopping

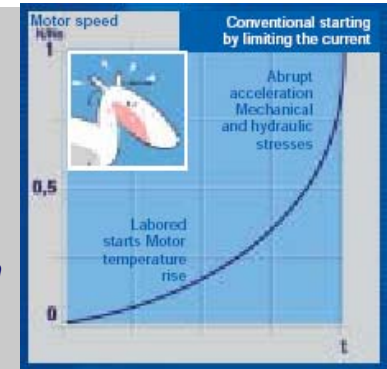
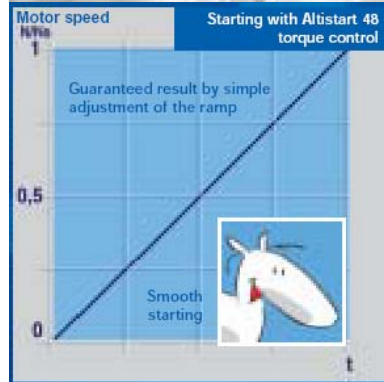
To reduce  
hydraulic  
transients

The Altistart 48  
« TCS system »  
is the only system  
enabling to:

*With conventional  
starting by limiting  
mOK :*

- Very effectively reduce pressure surges и valve surges whatever the load conditions of the pump, while maintaining smooth deceleration, from full speed to stop.

- *Abrupt acceleration at the end of the ramp, causing sudden pressurization of the hydraulic lines.*
- *Uncontrolled deceleration which may lead to pressure surges...*



**Su**mmary



# Защита на любом уровне



**Strength**  
on lines subject to  
interference

## ■ двигатель

- Thermal protection :  
by calculation of the  $I^2t$   
in accordance with IEC  
60947-4-2.  
by using PTC probes.
- Preheating function  
preventing condensation.
- Detection of phase failure.

## ■ механизм

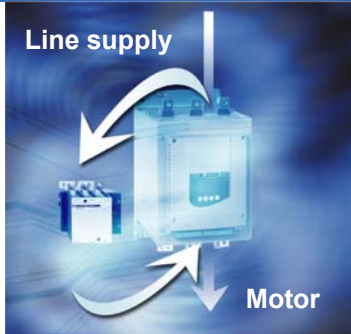
- Underload protection :  
running dry, broken transmission,
- Overload protection :  
clogging, incident...  
with adjustable thresholds и  
times.
- Stalled rotor.
- Control of the direction of  
rotation.
- Excessive acceleration time.

Some protections can be handled like alarms  
without interrupting the machine operation

**Su***mmary*



# Простая интеграция в комплектный шкаф



Motor terminals и  
by-pass contactor  
on all ratings.



- **Simplified wiring** with through connections on all models.
- **Altistart 48 controls** :
  - a starter by- pass contactor at the end of starting with all protective functions maintained (thermal, underload, overload, etc...)
    - > Elimination of heat **dissipations in enclosure.**
  - a **line contactor.**
- **Вентилятор включается и выключается** according to the heatsink temperature.
  - Avoids unnecessary noise и circulation of dust,
  - Increases the lifecycle of the fans.
- **Test function** for testing the electrical equipment on a small motor.

**Su***mmary*





# Простая интеграция в систему управления



## Functions to aid the operation of your installations :

- Configuration of a second motor with different characteristics.
- Cascaded starting and deceleration of several motors.
- Maintenance of operator dialog due to a separate control circuit supply.



Display			
Start.	Status	Run	
COS	Power factor		0,90
LCR	motor current	A	51,0
LTR	Motor torque	%	100
RNT	Time since Reset	h	10000
THR	motor therm val	%	50
LAP	Active power KW	kW	500
kWh	Active power kWh	kWh	262
LFT	Last fault	No fault	
THP	Mot therm prot	Class 10	
PHE	Phase rot sense	No protection	

Test Run Test Stop

- Display of electrical values (ток, power, etc), load conditions and operating time.
- Numerous configurable inputs/outputs (4 logic inputs, 2 logic outputs, 3 relay outputs and 1 analog output).

**Su**mmary



# Простая интеграция в систему управления

Several operator dialogue tools available

For an easy implementation

- **Factory pre-adjusted** to Start up standard applications.

- **Optimisation** by simple и intuitive adjustment menus.



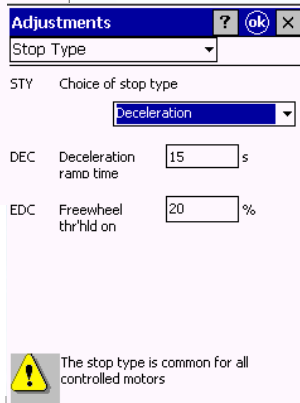
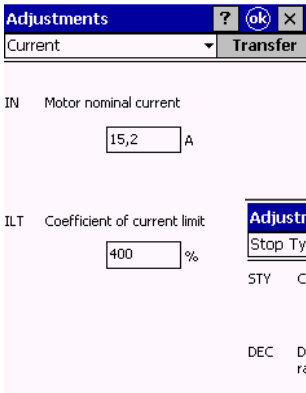
Just follow the **Power Suite software**

User-friendly software for configuring the various parameters.


**Su**mmary



# Программное обеспечение Power Suite Just follow...



Pocket PC.

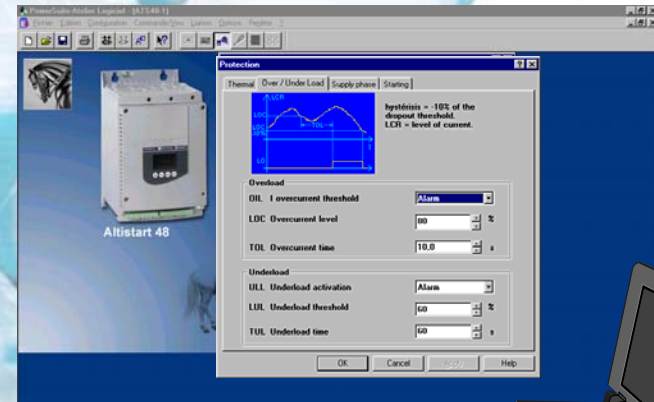
 The stop type is common for all controlled motors

paramètres	
Modèle	ATS48
Version	Valeur
Classification	
Modèle de référence	ATS48D17Q
Tension d'alimentation	230/400 V
Réglages	
IN	Courant nominal moteur 14,8 A
ILT	Coeff de limitation de courant 403 %
ACC	Temps rampe accélération 15 s
TQ0	Couple initial de décollage 20 %
STY	Choix type d'arrêt Arrêt roue libre
DEC	Temps rampe décélération 15 s
EDC	Seuil passage roue libre (déc) 20 %
BRC	Niv. couple freinage interne 50 %

< List of parameters

Software which is common to the Altivar range of variable speed drives Altivar.

Available in French, English, German, Spanish u Italian



Data transfers are made simply from the PC to the pocket PC и vice-versa

To prepare, memorise, print, compare files...

**Su**mmary



# Простая интеграция в систему управления

## A wide range of communication functions



For remote access to control, monitoring and adjustment functions

- Integrated Modbus.
- Communication modules :
  - Ethernet.
  - Fipio,
  - Profibus DP,
  - DeviceNet,



Ethernet TCP/IP for setting up  
Transparent Factory : open control systems platform based on Internet technology.

**Su**mmary

Transparent  
**FACTORY**<sup>™</sup>  
Open for Business



# Altistart 48 для *насосов*

With the *момент Control...*



- Better control of hydraulic transients :
  - Gradual pressurization of fluid in lines.
  - Reduction of pressure surges и valve surges (in presence of line supply).
  - Elimination of damage to filters or spouts (irrigation) и premature wear of lines, etc.
  - Less stress on pipes with the reduction of pressure-over pressure phenomena.

и Altistart 48 *functions* :

- Independent adjustment of the load conditions.
- Protection against underload (running dry), loss or inversion of phases и in the event of a stalled rotor.
- Автоматическое переключение of the motor to freewheel mode on stopping, when the flow rate of the pump drops to a low level, to prevent overheating.



**Su** *mmary*



# Altistart 48 для *вентиляторов* и *инерционных механизмов*

With the *момент Control...*



- Smooth starting, preventing stress on the drive chain и slippage of belts.
- Limitation of ток и voltage drops on starting.
- Adjustable breakaway момент for presses or crushers.



и Altistart 48 *functions* :

- Подхват on the fly of a fan rotating in reverse.
- Regenerative braking.
- Detection of overload caused by clogging or underload (broken fan motor transmission).
- Braking момент on stopping.
- «Smoke extraction » function.

**Su** *mmary*



# Altistart 48 для *компрессоров*

With the *момент Control...*



- Elimination of belt slippage.
- Reduction of ток peaks.



и Altistart 48 *functions* :

- Protection even for special motors.
- Detection of inversion of phase rotation direction.
- Contact for automatic emptying on stopping.
- Operating hours indicator for maintenance.
- Remote diagnostic.

**Su**mmary



# Altistart 48 для *конвейеров*

С *момента Control...*



- Gradual starting, reducing shocks and slippage of belts.



и Altistart 48 *functions* :

- Контроль перегрузки to detect faults, hard spots or jamming, или контроль недогрузки для обнаружения разрывов.



**Su***mmary*





# A comprehensive range of *Motor Starters*

Increased **performances**  
with the associated TeSys components



- **Altistart 48**  
17 to 1 200 A



- **LH4**  
6 to 85 A for  
simple applications



- Circuit-breakers,
- Contactors,
- Fuses...

up to the highest  
powers

The type 1 or type 2 associations  
including circuit breakers, contactors,  
fuses и Altistart 48 enable to :

- ensure **service continuity** of the  
installation with **optimum safety**.
- **reduce the** maintenance **costs** in case  
of short-circuit by shortening the  
intervention times и lowering the  
equipment replacement expenses.

**Su**mmary

Appendix :

## Altistart 48 : *more functionalities*

- 📄 Adjustment of the initial starting момент.
- 📄 Adjustment of the acceleration ramp time.
- 📄 момент и/or ток limit.
- 📄 Voltage boost.
- 📄 Three types of stop :
  - Freewheel stop.
  - Deceleration stop via момент control (Pumps).
  - Dynamic breaking stop (High inertia machines)
- 📄 Reset kWh и operating time.
- 📄 Return to factory settings.
- 📄 2-wire и 3-wire control.
- 📄 Treatment of an external fault.
- 📄 Forcing in local control mode (in case of control via a serial link).
- 📄 Freewheel forcing on stopping.
- 📄 « Smoke extraction » function.
- 📄 Reset faults.
- 📄 Terminal locking code.
- 📄 Automatic restart.
- 📄 Adjustment of a time before restarting.



**Su** *mmary*