Altistart 48
Укрощенная энергия
Устройства плавного пуска для асинхронных двигателей
Altistart 48, в сердце вашей установки

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....
Новая гамма с расширенными возможностями...

- Полный спектр модификаций под различные стандарты.
- Преимущество уникальной концепции TCS
- Защита на всех уровнях

... и такой простой:

- Простая интеграция:
  - в шкафы
  - в системы управления.

Altistart 48 в сердце of applications

- Насосы.
- Fans и high inertia machines.
- Компрессоры.
- Конвейеры...
A complete range with an international vocation

International standards and 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...

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.

* Connection in the motor delta terminal is possible
High performance with the exclusive *TCS* concept

*TCS: момент Control System

With *motor момент control*, Altistart 48 provides perfect control of the machine starting and 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 in case of high starting момент.
- Увеличить срок службы of the belts and machinery.

With conventional starting by limiting the момент:

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

Summary

Telemecanique
High performance with the exclusive TCS* concept

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

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

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

To reduce hydraulic transients

With conventional starting by limiting момент:

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

Summary
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 and times.
- Stalled rotor.
- Control of the direction of rotation.
- Excessive acceleration time.

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

- **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.
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 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).
Summary

For an easy implementation

- **Factory pre-adjusted** to start up standard applications.
- **Optimisation** by simple and intuitive adjustment menus.

Several operator dialogue tools available

- Pocket PC
- Встроеный дисплей (for panel door, optional)

Just follow the **Power Suite software**
User-friendly software for configuring the various parameters.
**Summary**

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

**Power Suite**

Just follow...

Programmable software PowerSuite Pocket PC.

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

Available in French, English, German, Spanish and Italian.

Data transfers are made simply from the PC to the pocket PC and vice-versa.
A wide range of communication 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.
Altistart 48 для насосов

With the момент Control...

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

Altistart 48 functions:
- Independent adjustment of the load conditions.
- Protection against underload (running dry), loss or inversion of phases and 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.
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.
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.

Summary
Altistart 48 для конвейеров

С момента Control... и Altistart 48 functions:

- Градиуальный старт, снижение ударов и скольжения ремней.
- Контроль перегрузки, чтобы обнаружить неисправности, место с трудами или блокировку. Или контроль недогрузки для обнаружения разрывов
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...

The type 1 or type 2 associations including circuit breakers, contactors, fuses and 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 and lowering the equipment replacement expenses.
Appendix:

**Altistart 48: more functionalities**

- Adjustment of the initial starting момент.
- Adjustment of the acceleration ramp time.
- момент и/или 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.