Soft starters for asynchronous motors
Altistart 01

PF140052A

ATS01N1●●●

PF140051A

ATS01N2●●●

Presentation

The Altistart 01 soft starter operates either as a torque limiter on starting, or as a soft start/soft stop unit for asynchronous motors.
Using the Altistart 01 starter enhances the starting performance of asynchronous motors by allowing them to start gradually, smoothly, and in a controlled manner. It helps to prevent mechanical shocks, which cause wear and tear, and subsequent maintenance work and production downtime.
The Altistart U01 limits the starting torque and current peaks on starting on machines that do not require a high starting torque.
It is designed for the following simple applications:

- conveyors
- conveyor belts
- pumps
- fans
- compressors
- automatic doors and gates
- small cranes
- belt-driven machinery, etc.

The Altistart 01 is compact, easy to install, and can be mounted side-by-side. It complies with standards IEC/EN 60947-4-2, and carries UL, CSA, C-Tick, and CCC certifications, and CE marking.
The Altistart 01 soft start/soft stop unit offer comprises 3 ranges:

■ **ATS01N1●●●** soft starters
□ These control one phase of the motor power supply (single-phase or three-phase) to limit the starting torque.
□ They feature an internal bypass relay.
□ Motor power ratings range from 0.37 kW to 11 kW.
□ Motor supply voltages range from 110 V to 480 V, 50/60 Hz. An external power supply is required for controlling the starter.
A contactor is always required to shut off power to the motor.

■ **ATS01N2●●●** soft start/soft stop units
□ These control two phases of the motor power supply to limit the starting current and for deceleration.
□ They feature an internal bypass relay.
□ Motor power ratings range from 0.75 kW to 15 kW.
□ The motor supply voltages are as follows: 230 V, 400 V, and 480 V, 50/60 Hz.
The use of a line contactor is not necessary on machines where electrical isolation is not required.

■ **ATSU01N2●●●** soft start/soft stop units
See page 60550/2.

Description

■ Altistart 01 soft starters (ATS01N1●●●) are equipped with:
□ a potentiometer **1** for setting the starting time
□ a potentiometer **2** for adjusting the starting voltage threshold according to the motor load
□ 2 inputs **3**:
- 1 x 24 V ⎓ input or 1 x 110…240 V ∿ input for powering the control part that controls the motor

■ Altistart 01 soft start/soft stop units (ATS01N2●●●) are equipped with:
□ a potentiometer **6** for setting the starting time
□ a potentiometer **8** for setting the deceleration time
□ a potentiometer **7** for adjusting the starting voltage threshold according to the motor load
□ 1 green LED **4** to indicate that the unit is powered up
□ 1 yellow LED **5** to indicate that the motor is powered at nominal voltage, if it is connected to the starter
□ a connector **9** for:
- 2 logic inputs for Run/Stop commands
- 1 logic input for the BOOST function
- 1 logic output to indicate the end of starting
- 1 relay output to indicate the motor has reached a standstill at the end of the deceleration stage

References:
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Soft starters for asynchronous motors
Altistart 01

Description *(continued)*

Equivalence table for contact references

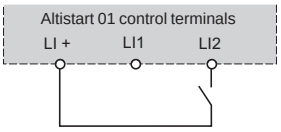
Functions	ATS01N2●●LU/QN/RT
Relay outputs	R1A
	R1C
External power supply 0 V	C0M
Stop command	LI1
Run command	LI2
Control section power supply	LI + (+ 24 V positive logic)
BOOST	BOOST
End of starting	LO1
115 V external power supply	–

Functions

■ 2-wire control

The run and stop commands are controlled by a single logic input. State 1 of logic input LI2 controls starting and state 0 controls stopping.

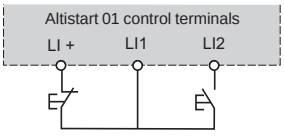
ATS01N2●●LU/QN/RT



Wiring diagram for 2-wire control

■ 3-wire control

The run and stop commands are controlled by 2 different logic inputs.
Stopping is achieved when logic input LI1 opens (state 0).
The pulse on input LI2 is stored until input LI1 opens.



Wiring diagram for 3-wire control

■ Starting time

Controlling the starting time means that the time of the voltage ramp applied to the motor can be adjusted to obtain a gradual starting time, dependent on the motor load.

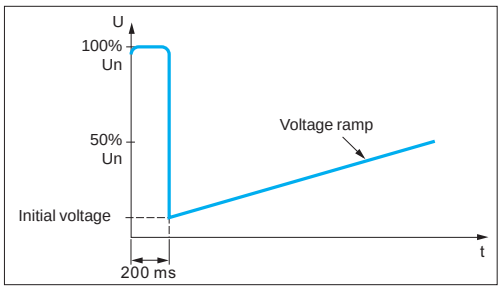
■ Voltage boost function via logic input

Activating the BOOST logic input enables the function for supplying a starting overtorque capable of overcoming any mechanical friction.
When the input is at state 1, the function is active (input connected to the + 24 V) and the starter applies a fixed voltage to the motor for a limited time before starting.

■ End of starting

□ Application function via logic output LO1

ATS01N206●● to ATS01N232●● soft start/soft stop units are equipped with an open collector logic output LO, which indicates the end of starting when the motor has reached nominal speed.



Application of a voltage boost equal to 100% of the nominal motor voltage

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