Altistart 01
soft starters
for single-phase and three-phase asynchronous motors

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Altistart 01 & U01 soft starters for asynchronous motors

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Altistart 01 & U01 soft starters for asynchronous motors

Introduction

The Altistart™ 01 soft starter offers enhanced starting and stopping performance for single-phase and three-phase, low horsepower asynchronous motors in a compact package. This highly functional mini soft starter provides a controlled and smooth operation while providing torque surge suppression during both starting and stopping of the motor. It is ideal for applications that do not require high starting torque. By limiting the starting torque, the ATS01 reduces the current inrush experienced with other motor starting methods. This stepless starting method avoids the damaging torque surges associated with other reduced voltage starting methods.

Altistart 01 soft starter helps decrease your maintenance work and production downtime by helping prevent the mechanical shocks that create wear and tear on your motor and machinery. Available in three different performance levels, Altistart 01 soft starters meet the application needs of a wide range of fractional and low horsepower single-phase and three-phase asynchronous motors. A feature-rich alternative to low horsepower electromechanical reduced voltage starters, the Altistart 01 mini soft starters offer many options to fit your application.

The Altistart 01 is compact, easy to install and can be mounted side-by-side. It complies with standards IEC/EN 60947-4-2, carries UL, CSA, C-Tick, CCC certifications and CE marking. Most Altistart 01 models are available in a 45 mm width to match the industry standard for IEC motor starters rated at or below 32 Amps.

Product

The Altistart 01 offer comprises 3 ranges:

- ATS01N1 for soft start operation
- ATS01N2 for soft start and stop operation
- ATS01N2U for soft start and stop operation with TeSys U

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 indicator

Application function via logic output LO1

Soft start/soft stop units ATS01N2 and ATSU01N2 are equipped with an open collector logic output LO, which indicates the end of starting when the motor has reached nominal speed.

Applications

Altistart 01 soft starters are designed for use on simple applications such as:

- Conveyors
- Conveyor belts
- Pumps
- Fans
- Compressors
- Automatic doors and gates
- Small cranes
- Belt-driven machinery, etc.
Introduction

Altistart 01 & U01 soft starters for asynchronous motors

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Product

The Altistart 01 offer comprises 3 ranges:

- **ATS01N1** for soft start operation
- **ATS01N2** for soft start and stop operation
- **ATSU01N2** for soft start and stop operation with TeSys U

Motor starting performance easily adapted to the application

- Dial conveniently located on the front of the Altistart 01 soft starter allow adjustments for starting torque as well as starting and stopping ramp times
- Handles both easy and hard to start load with a selectable kickstart feature
- Compatibility with motor starters such as TeSys U, GV2, GV3, and others

Simple setup and operation

- 3 logic inputs, 1 logic output, 1 relay output
- Adjustment dials and indicator lights

Easy to install and start up

- DIN rail or panel mounting options
- Removable control terminal for simple and easy wiring
- Quick adjustments
- Eliminate power wiring by using custom power connector to TeSys U-line motor starter

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 indicator

- Application function via logic output LO1
  - Soft start/soft stop units ATS01N1 and ATSU01N2 are equipped with an open collector logic output LO, which indicates the end of starting when the motor has reached nominal speed.
**ATS01N1 soft starters**

ATS01N1 torque limiting mini soft starters extend the Altistart 01 product range down into the fractional horsepower area (3 to 12 A, 1/2 to 3 HP at 208 V). They can control the starting ramp of either a single-phase or a three-phase motor.

By reducing the starting torque produced by an asynchronous motor, the ATS01N1 soft start extends the motor’s starting time. The ATS01N1 soft start ramps up the AC voltage applied to one of the motor terminals. The other motor terminal(s) are supplied full motor starting voltage. Hence, starting current is not reduced.

The ATS01N1 is ideal for the following applications:
- Small conveyors for fragile goods, such as bottle conveyors
- Constant power machines, such as drills, where the starting torque must be limited

The ATS01N1 is compatible with the following common motor voltages:
- Single phase: 115 V and 230 V
- Three phase: 208 V, 230 V, and 460 V

The ATS01N1 soft start is compatible with most single-phase motor designs, including split phase induction, capacitor start, and shaded pole.

The ATS01N1 series is one of the smallest soft starts on the market and is available in two frame sizes:
- 0.9 inch (22.5 mm) wide modules, rated for 3 and 6 A
- 1.77 inch (45 mm) wide modules, rated for 9 and 12 A

Both can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starts required.

The ATS01N109FT and ATS01N112FT models offer an internal shorting contactor to eliminate wasted energy and to reduce the heat that must be removed from the control panel. They also offer removable control terminal plugs for ease of wiring and installation.

The ATS01N1 is equipped with:
- One green LED 1 to indicate that soft start power is on
- One yellow LED 2 that illuminates 10 seconds after a start command is given, indicating that the soft starter’s voltage ramp is complete, the internal shorting contactor (09FT & 12FT models only) is closed, and the motor is up to speed
- A potentiometer 3 for setting the starting time
- A potentiometer 4 for adjusting the start voltage threshold according to the motor load
- Two inputs 5:
  - On: 24 V input or one 1...240 V input or one 110...240 V
  - Off: 24 V input or one 110...240 V

ATS01N109FT and ATS01N112FT models offer an internal shorting contactor to limit the starting current. See the diagram below for more detail.

ATS01N101FT and ATS01N103FT models offer an internal shorting contactor to limit the starting current. See the diagram below for more detail.

**Starting and stopping the ATS01N1 soft start:**

The motor starts when both line and control power are supplied to the soft start. The soft start will not stop the motor. When the run command is removed, the motor will coast to a stop. If only line power is removed to stop the motor, reapplying line power will not restart the motor. Soft start control power must also be cycled off and on to restart the motor. In a single-phase application, the soft start will allow the motor to stop when either line or control power is removed.

**Functions**

**Starting**

- Initial voltage
- Initial (or starting) voltage
- Line power
- Control power

**Stopping**

- Coast to stop
- Initial voltage
- Line power
- Control power

**Initial voltage**

The initial voltage applied to the motor (the level at which the voltage ramp begins) can be adjusted by a potentiometer on the front of the ATS01N1 soft start. The initial voltage level can be adjusted from approximately 30 to 80% of the AC line voltage level. See the diagram below. Since the resultant motor torque varies in proportion to the square of the applied voltage, the scale on the front of the soft start is calibrated from A to E rather than from 30 to 80%, with A being the lowest level and E being the highest level. A lower setting will reduce motor torque during starting. Setting this level to the minimum required that will result in motor rotation immediately after a start command.

**Note:** In a 3-phase application, connect line power to the soft start only when soft start control power is present and motor operation is needed. Applying line power when no soft start control power is present will single-phase the connected 3-phase motor.

**Control power**

- Control power can be either:
  - 110 V to 200 Vac (+10%): terminals CL1 and CL2
  - 24 Vac/DC (+10%): terminals CL1 and CL2

**Line power**

- Line power must match the voltage rating of the motor and must not exceed 480 V (+10%).
  - Single-phase motors:
    - Power in: ATS01N1 terminals CL1 and CL2
    - Power out: ATS01N1 terminals CL1 and CL2
  - Three-phase motors:
    - Power in: ATS01N1 terminals CL1, CL2, CL3, CL4, and CL5
    - Power out: ATS01N1 terminals CL1, CL2, and CL3

**Starting time**

The ATS01N1 soft start controls the starting time of the motor by ramping up the voltage applied to one phase of the motor. The starting voltage ramp time can be adjusted from 1 to 5 seconds by means of the potentiometer on the front of the soft start. Since the actual motor starting time is dependent on the level of the applied load, the scale on the front of the soft start is calibrated from A to E rather than from 1 to 5 seconds, with A being the shortest time and E being the longest time. The starting voltage ramp begins at the AC line voltage level set by the Initial Voltage adjustment. See the diagram below for more detail.

**Note:** The ATS01 soft start is internally bypassed at the end of the time set by the start time adjustment. If the motor is not up to speed by that time (due to a heavy load), the internal contactor can be damaged, requiring replacement of the soft start. SET THE START TIME AT A LEVEL ACHIEVABLE WITH THE MOTOR AT ITS HIGHEST LOAD LEVEL.
Introduction

ATS01N soft starters

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Both can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starts required.

The ATS01N109FT and ATS01N112FT models offer an internal shorting contactor to eliminate wasted energy and to reduce the heat that must be removed from the control panel. They also offer removable control terminal plugs for ease of wiring and installation.

The ATS01N1 is equipped with:

- One green LED 1 to indicate that soft start power is on
- One yellow LED 2 and a red LED 3 that illuminates 10 seconds after a start command is given, indicating that the soft start's voltage ramp is complete, the internal shorting contactor (09FT & 12FT models only) is closed, and the motor is up to speed
- A potentiometer 4 for setting the starting time
- A potentiometer 5 for adjusting the starting voltage threshold according to the motor load

Two Inputs 6:
- One 24 V (+) input or one 110…240 V input or one 110…240 V (+) for powering the control circuitry that controls the motor

The ATS01 soft start is internally bypassed at the end of the time set by the start time adjustment. If the motor is not up to speed by that time (due to a heavy load), the internal contactor can be damaged, requiring replacement of the soft start. When the run command is removed, the soft start will not soft stop the motor. Soft start control power must also be cycled off and on to restart the motor. Stop commands from A to E rather than from 30 to 80%, with A being the lowest level and E being the highest level. A lower setting will reduce motor torque during starting. Set this level to 30-80%.

The scale on the front of the soft start is calibrated from A to E rather than from 1 to 5 to indicate that soft start power is on.

The ATS01 soft start must be turned off and on to start the motor again. Soft start control power must also be cycled off and on to restart the motor.

Introduction

ATS01N soft starters for asynchronous motors

ATS01N1 soft starters

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The scale on the front of the soft start is calibrated from A to E rather than from 1 to 5 to indicate that soft start power is on.

The ATS01 soft start must be turned off and on to start the motor again. Soft start control power must also be cycled off and on to restart the motor.
Asynchronous motors

Altistart 01 & U01 soft starters for asynchronous motors

ATS01N2 & ATSU01N2 soft starters

The ATS01N2LUQU00RT and ATSU01N206LU/QN/RT soft starters control the starting and stopping ramps of three-phase motors ranging from 0.5 to 20 HP (0.75 to 15 kW) and have a motor voltage range of 208 V to 460 V.

The ATS01N2LUQU00RT soft start is self-powered from the AC line supply and is compatible with all other control power schemes.

The ATSU01N206LU/QN/RT soft start is optimized for installations offering 24 Vdc control power.

These soft starters control two phases of the AC voltage supplied to the motor in order to limit starting torque and current. This is ideal for applications that do not require high starting torque. It limits starting torque and reduces the current inrush experienced with other motor starting methods. The stepless starting method of the ATS01 soft start avoids the torque surges associated with other reduced voltage starting methods.

These two soft starters are ideal for any of the following applications:
- Material handling conveyors
- Belt-driven machinery
- Fans and pumps
- Small compressors
- Automatic doors and gates
- Process machinery (such as grinders, mixers, and agitators)
- Filling lines
- People movers
- Any other application that can benefit from stepless reduced voltage starting

The ATS01N2 and ATSU01N2 are compatible with these common motor voltages:
- 0.5 to 10 HP @ 200/230 V
- 0.5 to 10 HP @ 230/400 V
- 1.1 to 15 kW @ 400 V
- 0.5 to 20 HP @ 460 V

While Altistart 01 soft starts can be used with almost any motor starter, they now add soft start and soft stop motor control to the TeSys™ U-Line family of motor starters.

ATS01N2 or ATSU01N2 with TeSys U-Line motor starter

When an ATS01N2LUQU00RT or an ATS01N206LU/QN/RT model is combined with the TeSys U-Line motor starter, the result is a unique, innovative motor starting solution. A low power soft start installation now has access to the benefits of the TeSys U-Line motor starter, including:
- Modular design with a standard 45 mm width
- Short-circuit and multi-class overload protection
- Phase loss, phase imbalance, ground fault, jam, underload, and long-start protection
- Fault history
- PC-based programming software
- Optional LCD display
- Networking capabilities (Modbus™, AS-I, DeviceNet™, Ethernet TCP/IP, Profibus DP)
- Monitoring of motor status
- Remote starting and fault reset
- Electronic reversing

The panel space required to install the ATS01 soft start and the TeSys U-Line motor starter is minimal, with a standard 45 mm product width and side-by-side mounting. Please consult the TeSys U-Line motor starter catalog for TeSys U-Line mounting information.

ATS01N2 for soft start and stop operation

- Control two phases of the motor power supply to limit the starting current and deceleration
- Internal bypass relay
- Motor power ratings ranging from 0.5 to 20 HP (0.75 to 15 kW) and 6 to 32 A
- The motor supply voltages range from 230 V - 460 V, 50/60 Hz. The use of a line contactor is not necessary on machines where electrical isolation is not required.

These units are also compatible with motor starters such as TeSys U, GV2, GV3 and others.

Equipped with:
- 1 green LED to indicate that the unit is switched on
- 1 yellow LED to indicate that the motor is powered at nominal voltage, if it is connected to the starter
- A potentiometer for setting the starting time
- A potentiometer for adjusting the start voltage threshold according to the motor load
- A potentiometer for setting the deceleration time
- A connector with 2 logic inputs for Run/Stop commands, 1 logic input for the BOOST function, 1 logic output to indicate the end of starting, and 1 relay output to indicate the motor has reached a standstill at the end of the deceleration stage

ATSU01N2 for soft start and stop operation with TeSys U

Designed especially for use with TeSys U

- When installed with TeSys U-Line family of motor starters, the Altistart 01 becomes the smallest combination soft starter on the market with a full set of motor control and machine protection features

The ATSU01N2 units have the same specifications as the ATS01N2 units, with the added benefits of TeSys-U including but not limited to:
- Motor protection options
- Communication options
- Load management

Equipped with:
- 1 green LED to indicate that the unit is switched on
- 1 yellow LED to indicate that the motor is powered at nominal voltage, if it is connected to the starter
- A potentiometer for setting the starting time
- A potentiometer for adjusting the start voltage threshold according to the motor load
- A potentiometer for setting the deceleration time
- A connector with 2 logic inputs for Run/Stop commands, 1 logic input for the BOOST function, 1 logic output to indicate the end of starting, and 1 relay output to indicate the motor has reached a standstill at the end of the deceleration stage

Example of motor starters/soft start combination

Example of motor starters/soft start combination
ATS01N2 & ATSU01N2 soft starters

The ATS01N2-LU/QN/RT and ATSU01N2-LT soft starters control the starting and stopping ramps of three-phase motors ranging from 0.5 to 20 HP (0.75 to 15 kW) and have a motor voltage range of 208 V to 460 V.

The ATS01N2-LU/QN/RT soft start is self-powered from the AC line supply and is compatible with all other control power schemes.

The ATSU01N2-LT soft start is optimized for installations offering 24 Vdc control power.

These soft starters control two phases of the AC voltage supplied to the motor in order to limit starting torque and current. This is ideal for applications that do not require high starting torque. It limits starting torque and reduces the current inrush experienced with other motor starting methods. The stepless starting method of the ATS01 soft start avoids the torque surges associated with other reduced voltage starting methods.

These two soft starters are ideal for any of the following applications:
- Material handling conveyors
- Belt-driven machinery
- Fans and pumps
- Small compressors
- Automatic doors and gates
- Process machinery (such as grinders, mixers, and agitators)
- Filling lines
- People movers
- Any other application that can benefit from stepless reduced voltage starting

The ATS01N2 and ATSU01N2 are compatible with these common motor voltages:
- 0.5 to 10 HP @ 200/230 V
- 0.5 to 10 HP @ 230/400 V
- 1.1 to 15 kW @ 400 V
- 0.5 to 20 HP @ 460 V

While Altistart 01 soft starts can be used with any motor starter, they now add soft start and soft stop motor control to the TeSys U-Line family of motor starters.

ATS01N2 or ATSU01N2 with TeSys U-Line motor starter

When an ATS01N2-LU/QN/RT or an ATSU01N2-LT model 3 is combined with the TeSys U-Line motor starter 1 or means of a power connector 2 (included with the ATS01N2-LT), the result is a unique, innovative motor starting solution. A low power soft start installation now has access to the benefits of the TeSys U-Line motor starter including:
- Modular design with a standard 45 mm width
- Short-circuit and multi-class overload protection
- Phase loss, phase imbalance, ground fault, jam, underload, and long-start protection
- Fault history
- PC-based programming software
- Optional LCD display
- Networking capabilities: Modbus®, AS-I, DeviceNet®, Ethernet TCP/IP, Profinet/IP
- Monitoring of motor status
- Remote starting and fault reset
- Electronic reversing

The panel space required to install the ATS01 soft start and the TeSys U-Line motor starter is minimal, with a standard 45 mm product width and side-by-side mounting. Please consult the TeSys U-Line motor starter catalog for TeSys U-Line mounting information.
Altistart 01 & U01 soft starters for asynchronous motors

Introduction

ATS01N2 & ATSU01N2 soft starters

Functions

2-wire control

The start and stop commands are provided by a single logic or control input. As soon as the state of logic input 2 (LI2) goes high (connected to LI+ or +24 V terminal), the starting process begins. As soon as the state of LI2 goes low (the connection to LI+ or +24 V is removed), the stopping process begins. No connection to LI1 is required.

3-wire control

The start and stop commands are provided by two different logic or control inputs. While logic input 1 (LI1) is continuously held high (connected to LI+ or +24 V), a momentary high on LI2 will provide a start command. A stop command is issued as soon as LI1 goes low (the connection to LI+ or +24 V is removed). To issue a second start command, reconnect LI1 to LI+ or +24 V and momentarily pull LI2 high.

Starting and stopping times

The ATS01 soft start controls the starting and stopping time of the motor by ramping the applied motor voltage up and down. The starting and stopping voltage ramp times can be adjusted from 1 to 10 seconds by means of two potentiometers on the face of the soft start. Since the actual motor starting and stopping times are dependent on the level of the applied load, the scale on the front of the soft start is marked from A to E rather than from 30 to 80%, with A being the lowest level and E being the highest level. A lower setting will reduce motor current and torque during starting. Set this level to the minimum required that will result in motor rotation immediately after a start command. If no level of adjustment here starts immediate motor rotation, use the Boost function. Refer to diagram on page 10 for more detail.

Functions (continued)

Initial (or starting) voltage

The initial voltage applied to the motor (the level at which the voltage ramp begins) can be adjusted by a potentiometer on the face of the Altistart 01 soft starter. The initial voltage level can be adjusted from approximately 30 to 80% of the AC line voltage. Since the resultant motor torque varies in proportion to the square of the applied voltage (see the Torque Characteristics diagram), the scale on the front of the ATS01 is calibrated from A to E rather than from 30 to 80%, with A being the lowest level and E being the highest level. A lower setting will reduce motor current and torque during starting. Set this level to the minimum required that will result in motor rotation immediately after a start command. If no level of adjustment here starts immediate motor rotation, use the Boost function. Refer to diagram on page 10 for more detail.

Motor up to speed

The ATS01 soft start provides a logic signal to indicate that the starting voltage ramp is complete and the motor is up to speed. This signal is provided by an open collector output illustrated in the diagram below. An external power supply is required to complete this circuit.

Fault/stop

The ATS01 soft start provides a relay contact to indicate either that it has detected a fault or that it has stopped running the motor. The normally-open contact closes when a run command is given, full line voltage will be applied to the motor for the first 200 mS of soft start operation. Thereafter, the normal voltage ramp will resume. Use this function to start high inertia loads or applications with a high level of starting friction. Refer to diagram on page 10 for more detail.

Note: The Altistart 01 soft start is internally bypassed at the end of the time set by the initial voltage adjustment. If the soft start is not up to speed by that time (due to a heavy load), the internal contactor can be damaged, requiring replacement of the soft start. Set the START TIME AT A LEVEL ACHIEVABLE WITH THE MOTOR AT ITS HIGHEST LOAD LEVEL.
## Altistart 01 & U01 soft starters for asynchronous motors

### Introduction

**ATS01N2 & ATSU01N2 soft starters**

#### Functions

- **2-wire control**
  - The start and stop commands are provided by a single logic or control input. As soon as the state of logic input 2 (LI2) goes high (connected to LI+ or +24 V terminal), the starting process begins. As soon as the state of LI2 goes low (the connection to LI+ or +24 V is removed), the stopping process begins. No connection to LI1 is required.

- **3-wire control**
  - The start and stop commands are provided by two different logic or control inputs. While logic input 1 (LI1) is continuously held high (connected to LI+ or +24 V), a momentary high on LI2 will provide a start command. A stop command is issued as soon as LI1 goes low (the connection to LI+ or +24 V is removed). To issue a second start command, reconnect LI1 to LI+ or +24 V and momentarily pull LI2 high.

#### Starting and stopping times

The ATS01 soft start controls the starting and stopping time of the motor by ramping the applied motor voltage up and down. The starting and stopping voltage ramp times can be adjusted from 1 to 10 seconds by means of two potentiometers on the front of the soft start. Since the actual motor starting and stopping times are dependent on the level of the applied load, the scale on the front of the soft start is marked from A to E rather than from 30 to 80%, with A being the lowest level and E being the highest level. A lower setting will reduce motor current and torque during starting. Set this level to the minimum required that will result in motor rotation immediately after a start command. If no level of adjustment here starts immediate motor rotation, use the Boost function. Refer to diagram on page 10 for more detail.

### Functions (continued)

- **Initial (or starting) voltage**
  - The initial voltage applied to the motor (the level at which the voltage ramp begins) can be adjusted by a potentiometer on the face of the Altistart 01 soft starter. The initial voltage level can be adjusted from approximately 30 to 80% of the AC line voltage.

- **Boost (kickstart function)**
  - If the Boost control input is active (connected to LI+ or +24 V) when a start command is given, full line voltage will be applied to the motor for the first 200 ms of soft start operation. Thereafter, the normal voltage ramp will resume. Use this function to start high inertia loads or applications with a high level of starting friction. Refer to diagram on page 10 for more detail.

- **Motor up to speed**
  - The ATS01 soft start provides a logic signal to indicate that the starting voltage ramp is complete and the motor is up to speed. This signal is provided by an open collector output illustrated in the diagrams below. An external power supply is required to complete this circuit.

### Fault/Stop

The ATS01 soft start provides a relay contact to indicate either that it has detected a fault or that it has stopped running the motor. The normally-open contact between terminals R1A and R1C closes when a run command is provided at LI2. The relay contact opens instantly when the soft start detects a fault condition. The contact opens when the motor voltage reaches zero after a stop command.

This information can be used to sequence a contactor if both line isolation and soft stop are needed in the same application.
### Environmental specifications

**Type of starter**

<table>
<thead>
<tr>
<th>Type</th>
<th>ATS01N1</th>
<th>ATS01N2</th>
<th>U01N2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conforming to standards</td>
<td>Altistart 01 soft starters conform to the strictest international standards and recommendations relating to electrical industrial control devices, in particular the standard IEC 60947-4-2.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Electromagnetic compatibility EMC**

<table>
<thead>
<tr>
<th>Type</th>
<th>Conformed to ECE/EN 60068-2-6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonics</td>
<td>IEC 61000-3-2: IEC 61000-3-4.</td>
</tr>
<tr>
<td>EN/UKO 552-2: EN 50581-1</td>
<td></td>
</tr>
</tbody>
</table>

**Power consumption and dissipation**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Control power supply and consumption**
  - 110 Vac, 35 mA
  - 24 Vac/dc, 25 mA
  - 240 Vac, 80 mA
- **Power dissipated**
  - At full load at end of starting: W 4, W 1
  - During starting and stopping at 5 times the rated operating current: W 19, W 31

**Cycles per hour**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Use**
  - Starting time at 5 times the rated operating current
  - Full voltage status or starter at standstill
- **Starting time (s)**
  - 1...5 s
- **Maximum number of cycles per hour**
  - 1...10 s

---

### Electrical specifications

**Soft starter ratings**

<table>
<thead>
<tr>
<th>Type of starter</th>
<th>ATS01N1</th>
<th>ATS01N2</th>
<th>U01N2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category of use</td>
<td>ATS01N1 01N2 U01N2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated AC supply voltage</td>
<td>Three phase: 460-480 Vac, 240 Vac</td>
<td>Single phase: 110-240 Vac</td>
<td></td>
</tr>
<tr>
<td>AC line voltage tolerance</td>
<td>± 10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz ± 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current derating</td>
<td>2.2% per 33 ft (100 m) above 3300 ft (1000 m)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cycles per hour**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Use**
  - Starting time at 5 times the rated operating current
  - Full voltage status or starter at standstill
- **Starting time (s)**
  - 1...5 s
- **Maximum number of cycles per hour**
  - 1...10 s

---

**Electrical specifications**

<table>
<thead>
<tr>
<th>Type of starter</th>
<th>ATS01N1</th>
<th>ATS01N2</th>
<th>U01N2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category of use</td>
<td>ATS01N1 01N2 U01N2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control power supply and consumption</td>
<td>110 Vac, 30 mA 24 Vac/dc, 25 mA 240 Vac, 65 mA</td>
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<td></td>
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<tr>
<td>Power dissipated</td>
<td>At full load at end of starting: W 4, W 1</td>
<td></td>
<td></td>
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<tr>
<td>During starting and stopping at 5 times the rated operating current: W 19, W 31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Electrostatic discharge**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Immunity to radiated radio-frequency electromagnetic field**
  - IEC 61000-4-3 level 3
- **Immunity to electrical transients**
  - IEC 61000-4-4 level 3
- **Immunity to voltage disturbances caused by radio-electrical fields**
  - IEC 61000-4-6 level 3
- **Immunity to conducted interference caused by radio-electrical fields**
  - IEC 61000-4-11

---

**Degree of protection**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Degree of pollution**
  - 2 (conforming to IEC/EN 60947-4-2)
- **Vibration resistance**
  - 1.5 mm peak to peak from 3 to 13 Hz, 1 g from 13 to 150 Hz conforming to IEC 60068-2-6

---

**Ambient air temperature**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Storage**
  - °F: -13…+158 °F (-25…+70 °C)
- **Operation**
  - °F: +14…+104 °F (-10…+40 °C)
  - Without derating, up to 122 °F (50 °C) with current derating of 1.1% per °F above 104 °F (2% per °C above 40 °C)

---

**Maximum operating altitude**

- **Type of starter**: ATS01N1 01N2 U01N2
- **3300 ft (1000 m) without derating Above this, derate the current by 2.2% per additional 3300 ft (100 m)

---

**Operating position**

- **Type of starter**: ATS01N1 01N2 U01N2
- **Maximum permanent angle in relation to the normal vertical mounting position**: ±10°
### Environmental specifications

<table>
<thead>
<tr>
<th>Type of starter</th>
<th>ATS01N1 &amp; U01</th>
<th>Soft starters for asynchronous motors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of starter</td>
<td>ATS01N1</td>
<td>U01N2</td>
</tr>
<tr>
<td>Conforming to standards</td>
<td>Altistart 01 soft starters conform to the strictest international standards and recommendations relating to electrical industrial control devices, in particular the standard IEC 60947-4-2.</td>
<td></td>
</tr>
<tr>
<td>Electromagnetic compatibility EMC</td>
<td>Conducted and radiated emissions</td>
<td>Harmonics</td>
</tr>
<tr>
<td></td>
<td>CSFR1 11 level B; IEC 60947-4-2; level B</td>
<td>IEC 61000-3-3 &amp; IEC 61000-3-4</td>
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<tr>
<td></td>
<td>Immunity to radiated frequency electromagnetic field</td>
<td>IEC 61000-4-3 level 3</td>
</tr>
<tr>
<td></td>
<td>Immunity to electrical/grounds</td>
<td>IEC 61000-4-4 level 4</td>
</tr>
<tr>
<td></td>
<td>Immunity to voltage disturbances</td>
<td>IEC 61000-4-6 level 3</td>
</tr>
<tr>
<td></td>
<td>Immunity to conducted interference caused by radio-electrical fields</td>
<td>IEC 61000-4-11</td>
</tr>
<tr>
<td></td>
<td>Immunity to conducted interference caused by radio-electrical fields</td>
<td></td>
</tr>
<tr>
<td>Power consumption and dissipation</td>
<td>At full load at end of starting</td>
<td>W</td>
</tr>
<tr>
<td></td>
<td>During starting and stopping at 5 times the rated operating current</td>
<td>W</td>
</tr>
<tr>
<td>Environmental specifications</td>
<td>Type of starter</td>
<td>ATS01N1 &amp; U01</td>
</tr>
</tbody>
</table>
**I/O & Control specifications**

**ATS01N1 Control Terminals**

- **CL1/0**: LI1, LI2, Boost
- **CL2**: +24V (positive logic)
- **24V**: LI1, LI2, Boost
- **COM**: LI1, LI2, Boost

**ATS01N2 and ATS01N2 Control Terminals**

- **R1A**, **R1C**, **COM**: LI1, LI2, Boost
- **L1**: 24V
- **L2**: 24V
- **BOOST**: LI1, LI2
- **LO1**: 24V

**Control terminal description**

- **24V and COM or LI+ and COM**: Connect power (electrical isolation between line power and control power)
- **LI+** and **COM**: Connect line to CL2 (LI1 is isolated from CL1)
- **24V**: Connect LI+ to 24V [Connect (-) to CL1/0]

**LED Signaling**

- **Green LED**: Soft starter power on
- **Yellow LED**: Voltage ramp complete, motor up to speed

**Specifications**

- **Type of Soft Starter**: ATS01N1
- **Power circuit**: Cage type connector
- **Connection onto Ø 4 mm screw terminals**
  - **Shaded pole without cable end**: 2 conductors 1 mm² (14 AWG) 0.5 - 2.5 mm² (20 - 14 AWG)
  - **Shaded pole with cable end**: 2 conductors 2.5 mm² (14 AWG) 4 - 6 mm² (14 - 10 AWG)
  - **Solid wire**: 2 conductors 1 mm² (14 AWG) 1 - 2.5 mm² (14 - 10 AWG)

- **Tightening torque**: 0.8 Nm (7 in-lb) 1.9 - 2.5 Nm (16.9 - 22.1 in-lb)

**Control circuit**

- **Logic inputs**: 10 A (ATS01N2)
- **Solid wire**: 1 conductor 1 mm² (18 AWG) 1 - 2.5 mm² (14 - 10 AWG)
- **Tightening torque**: 0.8 Nm (7 in-lb) 1.9 - 2.5 Nm (16.9 - 22.1 in-lb)

**Protection**

- **Terminals**: Screw connector

**Connections**

- **Type of Soft Starter**: ATS01N1
- **Power circuit**: Cage type connector
- **Connection onto Ø 4 mm screw terminals**
  - **Shaded pole without cable end**: 2 conductors 1 mm² (14 AWG) 0.5 - 2.5 mm² (20 - 14 AWG)
  - **Shaded pole with cable end**: 2 conductors 2.5 mm² (14 AWG) 4 - 6 mm² (14 - 10 AWG)
  - **Solid wire**: 2 conductors 1 mm² (14 AWG) 1 - 2.5 mm² (14 - 10 AWG)

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- **Terminals**: Screw connector
**Altistart 01 & U01**

**soft starters for asynchronous motors**

### Specifications

#### I/O & Control

**Contactor reference table**

<table>
<thead>
<tr>
<th>Functions</th>
<th>ATS01N1</th>
<th>ATS01N2</th>
<th>ATSU01N2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relay outputs</td>
<td>R1A</td>
<td>R1A</td>
<td>R1A</td>
</tr>
<tr>
<td>External power supply</td>
<td>0 V</td>
<td>0 V</td>
<td>0 V</td>
</tr>
<tr>
<td>Control section power supply</td>
<td>24 V</td>
<td>24 V</td>
<td>24 V</td>
</tr>
<tr>
<td>LI+</td>
<td>COM</td>
<td>LI+</td>
<td>COM</td>
</tr>
<tr>
<td>LI2</td>
<td>LI2</td>
<td>LI2</td>
<td>LI2</td>
</tr>
<tr>
<td>BOOST</td>
<td>BOOST</td>
<td>BOOST</td>
<td>BOOST</td>
</tr>
</tbody>
</table>

**Control terminal description**

- **CL1/0** and **CL2** (on CL1/0): Connect line input to CL1/0, connect neutral to CL2. (max. operating voltage 440 Vac)
- **24 V** (on LI2 and/or LI1 CL2): Connect the control power to 24 V (electrical isolation between line power and control power)

**LED Signaling**

- **Green LED**: Soft starter power on
- **Yellow LED**: Voltage ramp complete, motor up to speed

**Control Terminals**

**ATS01N1 and ATS01N1L Control Terminals**

<table>
<thead>
<tr>
<th>R1A</th>
<th>R1C</th>
<th>CL1/0</th>
<th>CL2</th>
<th>24V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ATS01N2 and ATS01N2L Control Terminals**

<table>
<thead>
<tr>
<th>R1A</th>
<th>R1C</th>
<th>COM</th>
<th>LI1</th>
<th>LI2</th>
<th>LI4</th>
<th>BOOST</th>
<th>LT1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ATSU01N2 Control Terminals**

<table>
<thead>
<tr>
<th>R1A</th>
<th>R1C</th>
<th>COM</th>
<th>LI1</th>
<th>LI2</th>
<th>LI4</th>
<th>BOOST</th>
<th>LT1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Connections (maximum connection capacity and tightening torque)

**ATS01N1**

- **Type of Soft Starter**: ATS01N1
- **Power circuit**: Cage type connector
- **Connection**: Connection onto Ø 4 mm screw terminals

<table>
<thead>
<tr>
<th>Type of Soft Starter</th>
<th>ATS01N1</th>
<th>09FT/12FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stranded wire without cable end</td>
<td>1 conductor</td>
<td>1 conductor</td>
</tr>
<tr>
<td>Solid wire</td>
<td>1 conductor</td>
<td>1 conductor</td>
</tr>
</tbody>
</table>

**ATS01N2 and ATSU01N2L Control Terminals**

- **R1A, R1C**: Screw connector
- **CL1/0**: Cage type connector

**Control circuits**

- **Stranded wire without cable end**: 1 conductor
- **Solid wire**: 1 conductor

**Cable connection**

- **Power circuit**: Tinned connector
- **Ground connection**: VW3G4104

**Specifications**

**Connections**

**For ATS01N2L/LU01N/RT soft starters, the power connector is available as an option (VW3G4104).**
**ATSO1N1 soft starters**

The ATSO1N1 torque limiting mini soft starts extend the Altistart 01 product range down into the fractional horsepower arena. They can control the starting ramp of either a single-phase motor (115 V, 230 V) or a three-phase motor (208 V, 230 V, and 460 V).

The ATSO1N1 is ideal for the following applications:

- Small conveyors for fragile goods, such as bottle conveyors
- Constant power machines, such as drills, where the starting torque must be limited
- High inertia loads, such as grinders, where stalls are critical
- Equipment starting ramp control
- Protection of synchronous motors
- Protection of asynchronous motors

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- Equipment starting ramp control
- Protection of synchronous motors
- Protection of asynchronous motors

**Selection Table**

**ATSO1N1 soft starters**

<table>
<thead>
<tr>
<th>Motor Power Voltage</th>
<th>Motor Power HP</th>
<th>ATS01N1 Soft Starter</th>
<th>Isolation Contactator with AC Coll</th>
<th>Isolation Contactator with DC Coll</th>
<th>Fast Acting Class J Fuses(3)</th>
<th>Overload Relay(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>115/ 230 V</td>
<td>0.25</td>
<td>ATS01N100FT</td>
<td>LC1D09 or LT1K06</td>
<td>LC1D09 or LT1K06</td>
<td>15 A</td>
<td>LRD10 or LRD312</td>
</tr>
<tr>
<td>0.5</td>
<td></td>
<td>ATS01N105FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>20 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>0.75</td>
<td></td>
<td>ATS01N109FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>25 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>ATS01N112FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>30 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>1.5</td>
<td></td>
<td>ATS01N114FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>35 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>2</td>
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<td>ATS01N116FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>40 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>3</td>
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<td>ATS01N118FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>50 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>3.75</td>
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<td>ATS01N124FT</td>
<td>LC1D12 or LT1K12</td>
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<td>60 A</td>
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<td>7.5</td>
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<td>LRD16 or LRD316</td>
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<td>10</td>
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<td>150 A</td>
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<td>ATS01N132FT</td>
<td>LC1D12 or LT1K12</td>
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<td>200 A</td>
<td>LRD16 or LRD316</td>
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<td>300 A</td>
<td>LRD16 or LRD316</td>
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<td>ATS01N138FT</td>
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<td>400 A</td>
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<td>LC1D12 or LT1K12</td>
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<td>LRD16 or LRD316</td>
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<tr>
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<td>LC1D12 or LT1K12</td>
<td>1000 A</td>
<td>LRD16 or LRD316</td>
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</table>

**Three-phase motors**

<table>
<thead>
<tr>
<th>Motor Power Voltage</th>
<th>Motor Power HP</th>
<th>ATS01N1 Soft Starter</th>
<th>Isolation Contactator with AC Coll</th>
<th>Isolation Contactator with DC Coll</th>
<th>Fast Acting Class J Fuses(3)</th>
<th>Overload Relay(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200/ 400 V</td>
<td>0.75</td>
<td>ATS01N100FT</td>
<td>LC1D09 or LT1K06</td>
<td>LC1D09 or LT1K06</td>
<td>15 A</td>
<td>LRD10 or LRD312</td>
</tr>
<tr>
<td>1</td>
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<td>ATS01N105FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>20 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>1.5</td>
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<td>ATS01N109FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>25 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
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<td>ATS01N112FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>30 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>2.5</td>
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<td>ATS01N115FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>35 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
<td>3</td>
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<td>ATS01N118FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>40 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>3.75</td>
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<td>ATS01N124FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>50 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>5</td>
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<td>ATS01N125FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>70 A</td>
<td>LRD16 or LRD316</td>
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<tr>
<td>7.5</td>
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<td>ATS01N126FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>100 A</td>
<td>LRD16 or LRD316</td>
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<td>ATS01N128FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>150 A</td>
<td>LRD16 or LRD316</td>
</tr>
<tr>
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<td>ATS01N132FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>200 A</td>
<td>LRD16 or LRD316</td>
</tr>
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<td>20</td>
<td></td>
<td>ATS01N136FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>300 A</td>
<td>LRD16 or LRD316</td>
</tr>
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<td>25</td>
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<td>ATS01N138FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>400 A</td>
<td>LRD16 or LRD316</td>
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<td>ATS01N140FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>500 A</td>
<td>LRD16 or LRD316</td>
</tr>
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<td>50</td>
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<td>ATS01N145FT</td>
<td>LC1D12 or LT1K12</td>
<td>LC1D12 or LT1K12</td>
<td>1000 A</td>
<td>LRD16 or LRD316</td>
</tr>
</tbody>
</table>

**Dimensions**

**ATSO1N1 soft starters**

The ATSO1N1 series is one of the smallest soft starts on the market and is available in two frame sizes:

- 0.9 inch (23.5 mm) wide modules, rated for 3 and 6 A
- 1.77 inch (45 mm) wide modules, rated for 9 and 12 A

All ATSO1N soft starters can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starters required.

**Dimensions**

<table>
<thead>
<tr>
<th>Soft Starter</th>
<th>W x H x D</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS01N103FT</td>
<td>0.9 x 3.94 x 3.95</td>
</tr>
<tr>
<td>ATS01N108FT</td>
<td>1.77 x 4.84 x 5.15</td>
</tr>
<tr>
<td>ATS01N112FT</td>
<td>2.2 x 5.12 x 6.22</td>
</tr>
</tbody>
</table>

**Dimensions:**

<table>
<thead>
<tr>
<th>Soft Starter</th>
<th>W x H x D</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS01N108FT</td>
<td>0.9 x 3.94 x 3.95</td>
</tr>
<tr>
<td>ATS01N112FT</td>
<td>1.77 x 4.84 x 5.15</td>
</tr>
</tbody>
</table>

**Mounting on 1/2 (35 mm) DIN rail or L rail with adapter RHZ 66**

**Mounting on L**

**Mounting on L**
Altistart 01 & U01 soft starters for asynchronous motors

### Selection Table

**ATS01N1 soft starters**

**ATS01N1** soft starters extend the Altistart 01 product range down into the fractional horsepower arena. They can control the starting ramp of either a single-phase motor (115 V, 230 V) or three-phase motor (208 V, 230 V, and 460 V).

The ATS01N1 is ideal for the following applications:

- Constant power machines, such as drills, where the starting torque must be limited
- Small conveyors for fragile goods, such as bottle conveyors
- Limited torque/acceleration motors

**ATS01N1** soft starters with AC Coil:

- Contactor
- Isolation
- Fast Acting
- Fuses (1)

**ATS01N1** soft starters with DC Coil:

- Contactor
- Isolated
- Fast Acting
- Fuses (1)

**ATS01N1** series can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starters required.

- **ATS01N1** soft starters can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starters required.

### Dimensions

**ATS01N1** series is one of the smallest soft starts on the market and is available in two frame sizes:

- 0.9 inch (23.5 mm) wide modules, rated for 3 and 6 A
- 1.77 inch (45 mm) wide modules, rated for 9 and 12 A

All ATS01 soft starters can be DIN rail or panel mounted. They can be mounted side-by-side with no gap between soft starters required.

#### Motor Power

<table>
<thead>
<tr>
<th>Power</th>
<th>Voltage</th>
<th>Motor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>0.5</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>0.75</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1.15</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1.5</td>
<td>208 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1.77</td>
<td>400 V</td>
<td>Three-phase motors</td>
</tr>
<tr>
<td>3.0</td>
<td>400 V</td>
<td>Three-phase motors</td>
</tr>
<tr>
<td>4.44</td>
<td>400 V</td>
<td>Three-phase motors</td>
</tr>
</tbody>
</table>

#### Motor Power

<table>
<thead>
<tr>
<th>Power</th>
<th>Voltage</th>
<th>Motor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>0.5</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>0.75</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1.15</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>1.77</td>
<td>460 V</td>
<td>Single-phase motors</td>
</tr>
<tr>
<td>3.0</td>
<td>460 V</td>
<td>Three-phase motors</td>
</tr>
<tr>
<td>4.44</td>
<td>460 V</td>
<td>Three-phase motors</td>
</tr>
</tbody>
</table>

### Supply Voltage

- 200 - 460 V
- 115 - 480 V

### ATS01N1 Product Family

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS01N100FT</td>
<td>1.19 - 2.2</td>
</tr>
<tr>
<td>ATS01N106FT</td>
<td>4 - 11.2</td>
</tr>
<tr>
<td>ATS01N109FT</td>
<td>1.5 - 2.2</td>
</tr>
<tr>
<td>ATS01N112FT</td>
<td>5 - 7.5</td>
</tr>
</tbody>
</table>

### ATS01N1 mounting options

- Mounting on 12 (35 mm) DIN rail or L9 rail with adapter RHZ 66
- Panel Mounting
Altistart 01 & U01 soft starters for asynchronous motors

**Selection Table**

**ATS01N2 & ATSU01N2 soft starters**

The ATS01N2 & ATSU01N2 soft starters control the starting and stopping ramps of three-phase motors ranging from 0.5 to 20 HP (0.75 to 15 kW), and have a motor voltage range of 208 V to 460 V.

The ATS01N2 soft starter is compatible with the ATSU01N2, with the added benefits of the TeSys U-Line motor starter.

### Motor Power (3-phase)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Motor Power (1)</th>
<th>ATS01 Rated Current</th>
<th>ATSU01 Rated Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-208V</td>
<td>0.5 - 10 HP @ 400V</td>
<td>0.75 - 10 HP @ 460V</td>
<td></td>
</tr>
<tr>
<td>230-240V</td>
<td>0.75 - 10 HP @ 480V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400V</td>
<td>1.1 - 10 HP @ 575V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Selection Table

**Tesy U-Line motor starter combinations**

Numerous combination possibilities exist. Consult the Tesys U-Line motor starter catalog for more information.

### Motor Power (2)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Motor Power (3)</th>
<th>ATS01 Rated Current (4)</th>
<th>ATSU01 Rated Current (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-208V</td>
<td>0.5 - 10 HP @ 400V</td>
<td>0.75 - 10 HP @ 460V</td>
<td></td>
</tr>
<tr>
<td>230-240V</td>
<td>0.75 - 10 HP @ 480V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400V</td>
<td>1.1 - 10 HP @ 575V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Example of motor starter/soft start combination:

1. **TeSys U-Line non-reversing power base**
2. **TeSys U-Line control unit**
3. **Power connector (supplied with ATSU01 soft start)**
4. **Altistart 01 soft start**
### Altistart 01 & U01 soft starters for asynchronous motors

#### ATS01N2 & ATS0U1N2 soft starters

The ATS01N2 & ATS0U1N2 soft starters control the starting and stopping ramps of three-phase motors ranging from 0.5 to 20 HP (0.75 to 15 kW) and have a motor voltage range of 208 V to 460 V.

The ATS01N2 & ATS0U1N2 soft starters are compatible with these common motor voltages:
- 0.5 to 10 HP @ 208/240 V
- 1.5 to 20 HP @ 230/460 V
- 1.1 to 15 kW @ 400 V
- 0.5 to 20 HP @ 460 V

#### Selection Table

**ATS01N2 & ATS0U1N2 Soft Starters**

<table>
<thead>
<tr>
<th>Voltage kW</th>
<th>HP</th>
<th>ATS01 Soft Starter</th>
<th>GV Manual Starter</th>
<th>KMI Isolation Contactor</th>
<th>Fast Acting Class J Fuses</th>
<th>Overload Relay</th>
</tr>
</thead>
<tbody>
<tr>
<td>230/240 V</td>
<td>0.5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>10 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>15 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
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<td>2</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>25 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>35 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>50 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td>400 V</td>
<td>0.5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>10 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
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<td>1</td>
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<tr>
<td></td>
<td>1.5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>15 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
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<td>2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>25 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>5.5</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>35 A</td>
<td>LR017 or LR0160</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>ATS01N206LU</td>
<td>GVM027</td>
<td>LC1D209 or LC1D206</td>
<td>50 A</td>
<td>LR017 or LR0160</td>
</tr>
</tbody>
</table>

#### Example of motor starter/soft start combination:

- 11 FU 4-9 3
- 11.5 8-15 15 FU
- 15 10-20 15 FU
- 18 20-30 15 FU
- 22 30-40 15 FU
- 30 40-60 15 FU
- 40 60-90 15 FU

### Altistart 01 & U01 Soft starters for asynchronous motors

#### Selection Table

<table>
<thead>
<tr>
<th>Motor Voltage</th>
<th>kW</th>
<th>ATS01 Soft Starter</th>
<th>TeSys U-Line Motor Starter</th>
<th>Control Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 V</td>
<td>0.5</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.2</td>
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<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td>400 V</td>
<td>0.5</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>LUB18 LUC</td>
<td></td>
</tr>
</tbody>
</table>

### Tesys U-Line motor starter combinations

Numerous combination possibilities exist. Consult the TeSys U-Line motor starter catalog for more information.

#### Selection Table

<table>
<thead>
<tr>
<th>Motor Voltage</th>
<th>kW</th>
<th>ATS01 Soft Starter</th>
<th>TeSys U-Line Motor Starter</th>
<th>Control Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-200 V</td>
<td>0.75</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
<tr>
<td>230 V</td>
<td>0.75</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
<tr>
<td>400 V</td>
<td>0.75</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
<tr>
<td>460 V</td>
<td>0.75</td>
<td>ATS01N206LU</td>
<td>LUB32 LUC</td>
<td></td>
</tr>
</tbody>
</table>

---

1. Standard power rating according to UL508
2. Depending on the configuration of the selected TeSys U-Line motor starter, replace the fuses with A for standard, 6 for advanced, and M for modification.
**Altistart 01 & U01 soft starters for asynchronous motors**

**Dimensions**

ATS01N206 to ATS01N212
ATSU01N206LT to ATSU01N212LT

- **Soft Starter**
  - ATS01N206LU/QN/RT, ATS01N212LU/QN/RT, ATSU01N206LT, ATSU01N212LT

- **Dimensions**
  - **W x H x D**
    - **inches**
      - 1.77 x 4.88 x 5.15
      - 45 x 124 x 130.7

TelSys U-Line combination (non-reversing power base) and ATS01N206 to ATS01N212 or ATSU01N206LT to ATSU01N212LT

Mounting on L (38 mm) DIN rail with VW3G4104 connector

---

**Altistart 01 & U01 soft starters for asynchronous motors**

**Dimensions**

ATS01N222, ATS01N232
ATSU01N222LT, ATSU01N232LT

- **Soft Starter**
  - ATS01N222LU/QN/RT, ATS01N232LU/QN/RT, ATSU01N222LT, ATSU01N232LT

- **Dimensions**
  - **W x H x D**
    - **inches**
      - 1.77 x 6.06 x 5.16
      - 45 x 154 x 131

TelSys U-Line combination (non-reversing or reversing power base) and ATS01N222 to ATS01N232 or ATSU01N222LT to ATSU01N232LT

Mounting on L (38 mm) DIN rail with VW3G4104 connector

---

**Notes:**

1. Gap only required when using a TelSys-U type LUCM multifunction control unit in an ambient temperature above 113°F (45°C). See TeSys U-Line motor starter catalog for more information.
2. Retractable screw tabs

**Panel marking:**

- ATS01 soft start
- U - TelSys U-Line motor starter
### Altistart 01 & U01 Soft Starters for Asynchronous Motors

**Dimensions**

**ATS01N206 to ATS01N212**

**ATSU01N206LT to ATSU01N212LT**

<table>
<thead>
<tr>
<th>Soft Starter</th>
<th>W x H x D (in.)</th>
<th>W x H x D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS01N206LU/QN/RT, ATS01N212LU/QN/RT, ATS01N206LT, ATS01N212LT</td>
<td>1.77 x 4.88 x 5.15</td>
<td>45 x 124 x 130.7</td>
</tr>
</tbody>
</table>

*Telys U-Line combination (non-reversing power base) and ATS01N206 to ATS01N212, ATSU01N206LT to ATSU01N212LT.*

-Mounting on Lj (35 mm) DIN rail with VW3G4104 connector.

----

### Altistart 01 & U01 Soft Starters for Asynchronous Motors

**Dimensions**

**ATS01N222**

**ATS01N232**

**ATSU01N222LT, ATSU01N232LT**

<table>
<thead>
<tr>
<th>Soft Starter</th>
<th>W x H x D (in.)</th>
<th>W x H x D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS01N222LU/QN/RT, ATS01N232LU/QN/RT, ATS01N222LT, ATS01N232LT</td>
<td>1.77 x 6.06 x 5.16</td>
<td>45 x 154 x 131</td>
</tr>
</tbody>
</table>

*Telys U-Line combination (non-reversing or reversing power base) and ATS01N222 to ATS01N232, ATSU01N222LT to ATSU01N232LT.*

-Mounting on Lj (35 mm) DIN rail with VW3G4104 connector.

---

(1) Gap only required when using a Telys-U type LUCM multifunction control unit in ambient temperature above 113°F (45°C). See Telys U-Line motor starter catalog for more information.

(2) Retractable screw tabs.

- A - ATS01 soft start
- U - Telys U-Line motor starter

---

### Dimensions (in mm)

- **ATS01N206LU/QN/RT, ATS01N212LU/QN/RT, ATS01N206LT, ATS01N212LT**
  - W: 130.7 mm
  - H: 124 mm
  - D: 45 mm

- **ATS01N222LU/QN/RT, ATS01N232LU/QN/RT, ATS01N222LT, ATS01N232LT**
  - W: 130.7 mm
  - H: 154 mm
  - D: 45 mm
Altistart 01 & U01 soft starters for asynchronous motors

**Power connector**

This power connector is used to connect the ATS01N2-LU/ON/RT soft starter to the Telley U-Line motor starter. This connection allows the ATS01N2-LU/ON/RT soft starter to access the additional features available with the Telley U-Line motor starter, including:

- Modular design with a standard 46 mm width
- Short-circuit and multi-class overload protection
- Phase loss, phase imbalance, ground fault, jam, underload, and long-start protection
- Fault history
- PC and PDA based programming software
- Optional LCD display
- Networking capabilities: Modbus™, AS-I, DeviceNet™, Ethernet TCP/IP, Profinet® DP
- Monitoring of motor status
- Remote starting and fault reset
- Electronic reversing

This power connector is included with the ATSU01N2LT soft starter offer.

### Accessories

**Power connector**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power connector (included with ATSU01 soft starter)</td>
<td>VW3G4104</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Part number</th>
<th>W x H x D</th>
<th>inches</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>VW3G4104</td>
<td>1.76 x 1.10 x 1.83</td>
<td>44.8 x 28 x 46.6</td>
<td></td>
</tr>
</tbody>
</table>

Example of motor starter/soft start combination

**Motor Installation**

ATS01N2-LU/ON/RT soft starter with GV manual starter or other motor starter

#### Group motor installation

1. Motor
2. ATS01
3. Other motor starter
4. Fuses
5. Overload relay
6. KM1

#### Non-group motor installation

1. Motor
2. ATS01
3. Other motor starter
4. Fuses
5. Overload relay
6. KM1

**Wiring Diagrams**

1. Optional contactor for line isolation and remote control.
2. Other motor starters must provide motor overload protection.

**Note:** Observe national and local electrical codes when selecting the circuit breaker and other motor starters. See the selection table on page 18 for recommendations on the following components:

- ATS01 soft start
- GV manual starter
- KM1 isolation contactor
- Fuses
- Overload relay
Altistart 01 & U01
soft starters for
asynchronous motors

Power connector
This power connector is used to connect the ATS01N2pupLU/QN/RT soft starter to the TeSys U-Line motor starter. This connection allows the ATS01N2pupLU/QN/RT soft starter to access the additional features available with the TeSys U-Line motor starter, including:
- Modular design with a standard 46 mm width
- Short-circuit and multi-class overload protection
- Phase loss, phase imbalance, ground fault, jam, underload, and long-start protection
- Fault history
- PC and PDA based programming software
- Optional LCD display

Networking capabilities: Modbus™, A-S-I, DeviceNet™, Ethernet TCP/IP, Profinet® DF
- Monitoring of motor status
- Remote starting and fault reset
- Electronic reversing

This power connector is included with the ATSU01N2pupLT soft starter offer.

Description | Part number
--- | ---
Power connector (included with ATSU01 soft starter) | VW3G4104

Dimensions
<table>
<thead>
<tr>
<th>Part number</th>
<th>W x H x D</th>
</tr>
</thead>
<tbody>
<tr>
<td>VW3G4104</td>
<td>1.76 x 1.10 x 1.83</td>
</tr>
</tbody>
</table>

ATS01N2pupLU/QN/RT soft starter with GV manual starter or other motor starter

<table>
<thead>
<tr>
<th>Group motor installation</th>
<th>Non-group motor installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit Breaker or Fuses</td>
<td>Circuit Breaker or Fuses</td>
</tr>
<tr>
<td>GV Manual Starter</td>
<td>GV Manual Starter</td>
</tr>
<tr>
<td>KM1 (1)</td>
<td>KM1 (1)</td>
</tr>
<tr>
<td>Fuses</td>
<td>Fuses</td>
</tr>
<tr>
<td>Overload Relay</td>
<td>Overload Relay</td>
</tr>
</tbody>
</table>

Motor starter/soft start combination

Example of motor starter/soft start combination

(1): Optional contactor for line isolation and remote control.
(2): Other motor starters must provide motor overload protection.

Note: Observe national and local electrical codes when selecting the circuit breaker and other motor starters. See the selection table on page 18 for recommendations on the following components:
- ATS01 soft start
- GV manual starter
- KM1 isolation contactor
- Fuses
- Overload relay
Altistart 01 & U01 soft starters for asynchronous motors

ATS01N1•FT soft starter with GV manual starter, fusible disconnect, or other motor starter

Automatic 3-wire control with isolation contactor (single-phase motor)

ATS01N1•FT soft starter with GV manual starter, fusible disconnect, or other motor starter

Automatic 3-wire control with isolation contactor (three-phase motor)

Notes:

A1: ATS01 soft starter
FU1: Control circuit fuse - 120 Vac control power only
FU3: Fast-acting UL Listed Class J fuse
KM1: Isolation contactor
TS: Transient suppressor
OL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2: Momentary pushbuttons
T1: 1 - 5 second adjustable starting time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a TeSys U-Line or GV manual starter. Motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Wait 5 seconds after switching off the soft start before switching it on again.
Altistart 01 & U01 soft starters for asynchronous motors

ATS01N1-FT soft starter with GV manual starter, fusible disconnect, or other motor starter

Automatic 3-wire control with isolation contactor (single-phase motor)

Notes:
- A1: ATS01 soft starter
- FU1: Control circuit fuse - 120 Vac control power only
- FU3: Fast-acting UL Listed Class J fuse
- KM1: Isolation contactor
- TS: Transient suppressor
- OL: Overload relay
- Q1: Manual motor starter or disconnect switch
- S1, S2: Momentary pushbuttons
- T1: 1 - 5 second adjustable starting time
- V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a TeSys U-Line or GV manual starter. Motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Wait 5 seconds after switching off the soft start before switching it on again.

ATS01N1-FT soft starter with GV manual starter, fusible disconnect, or other motor starter

Automatic 3-wire control with isolation contactor (three-phase motor)

Notes:
- A1: ATS01 soft starter
- FU1: Control circuit fuse - 120 Vac control power only
- FU3: Fast-acting UL Listed Class J fuse
- KM1: Isolation contactor
- TS: Transient suppressor
- OL: Overload relay
- Q1: Manual motor starter or disconnect switch
- S1, S2: Momentary pushbuttons
- T1: 1 - 5 second adjustable starting time
- V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a TeSys U-Line or GV manual starter. Motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Wait 5 seconds after switching off the soft start before switching it on again.
Altistart 01 & U01 soft starters for asynchronous motors

### Altistart 01 soft starter and TeSys U-Line motor starter combinations

**Automatic 2-wire control without soft stop**

**Wiring Diagrams**

**ATS01N2 & ATSU01N2***

#### Notes:
- A1: ATS01 soft starter
- LUB: TeSys U-Line motor starter
- LUA1C20: Control circuit contact block for TeSys U-Line motor starter
- S1: Selector switch or maintained pushbutton
- t1: 1 - 10 second adjustable starting time
- t2: 1 - 10 second adjustable stopping time
- V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage
- (1) Optional jumper to select boost
- (2) See page 11 for L01 wiring recommendations
- Use shielded cable if control wiring is longer than 3 feet

---

Altistart 01 & U01 soft starters for asynchronous motors

### Altistart 01 soft starter and TeSys U-Line motor starter combinations

**Automatic 2-wire control with or without soft stop**

**Wiring Diagrams**

**ATS01N2 & ATSU01N2***
Altistart 01 & U01 soft starters for asynchronous motors

**Altistart 01 soft starter and TeSys U-Line motor starter combinations**

**Automatic 2-wire control without soft stop**

---

**Wiring Diagrams**

ATS01N2 & ATSU01N2

---

**Wiring Diagrams**

ATS01N2 & ATSU01N2

---

**Notes:**

A1: ATS01 soft starter  
LUB: TeSys U-Line motor starter  
LUA1C20: Control circuit contact block for TeSys U-Line motor starter  
S1: Selector switch or maintained pushbutton  
S2: Selector switches or maintained pushbuttons  
V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage  
V2: 1 - 10 second adjustable stopping time  
(1) Optional jumper to select boost  
(2) See page 11 for L01 wiring recommendations  
(3) Use shielded cable if control wiring is longer than 3 feet
Altistart 01 & U01
soft starters for
asynchronous motors

Notes:
A1: Altistart 01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations

ATS01N2●●●● & ATS01N2●●●●

ATS01N2●●●●

ATS01N2●●●●

ATS01N2●●●●

ATS01N2●●●●

ATS01N2●●●●
Altistart 01 & U01 soft starters for asynchronous motors

**Altistart 01 soft starter and TeSys U-Line motor starter combinations**

**ATS01N2 & ATSU01N2**

Automatic 3-wire control without soft stop

---

**Wiring Diagrams**

---

Notes:
- **A1:** ATS01 soft starter
- **LUB:** TeSys U-Line motor starter
- **LUA1C20:** Control circuit contact block for TeSys U-Line motor starter
- **S1, S2:** Momentary pushbuttons
- **t1:** 1 - 10 second adjustable starting time
- **V1:** Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage
- **(1)** Optional jumper to select boost
- **(2)** See page 11 for L01 wiring recommendations

---

208-480 V

---

**ATS01N2 & ATSU01N2**

Automatic 3-wire control with soft stop

---

**Wiring Diagrams**

---

Notes:
- **A1:** ATS01 soft starter
- **LUB:** TeSys U-Line motor starter
- **LUA1C20:** Control circuit contact block for TeSys U-Line motor starter
- **S1, S2:** Momentary pushbuttons
- **t1:** 1 - 10 second adjustable starting time
- **t2:** 1 - 10 second adjustable stopping time
- **V1:** Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage
- **(1)** Optional jumper to select boost
- **(2)** See page 11 for L01 wiring recommendations
- **(3)** Use shielded cable if control wiring is longer than 3 feet

---

208-480 V
Altistart 01 & U01 soft starters for asynchronous motors

Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

Altistart 01 soft starter and TeSys U-Line motor starter combinations

Hand-Off-Auto Control with soft stop

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
T1: 1 - 10 second adjustable starting time
T2: 1 - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Use shielded cable if control wiring is longer than 3 feet
(2) From automated control system
(3) Optional jumper to select boost
(4) See page 11 for L01 wiring recommendations

ATS01N2●●●● & ATSU01N2●●●●

Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

Altistart 01 soft starter and TeSys U-Line motor starter combinations

Automatic 3-wire control with reversing without soft stop

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
S3: Momentary pushbutton - must be held for a minimum of 1/2 second
T1: 1 - 10 second adjustable starting time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations
Altistart 01 & U01 soft starters for asynchronous motors

Altistart 01 soft starter and TeSys U-Line motor starter combinations

Hand-Off-Auto Control with soft stop

ATS01N2*** & ATSU01N2***

Wiring Diagrams

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
S3: Momentary pushbutton - must be held for a minimum of 1/2 second
t1: 1 - 10 second adjustable starting time
t2: 1 - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations

ATSU01N2*** & ATSU01N2***

Wiring Diagrams

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
S3: Momentary pushbutton - must be held for a minimum of 1/2 second
t1: 1 - 10 second adjustable starting time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations

Motor voltage

Logic output LO1

Yellow LED

Line voltage

S1 - Hand
Off

Auto

Run/Stop

V1

Motor voltage

S1 - Start forward
S2 - Start reverse
S3 - Stop

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
LUA1C20: Control circuit contact block for TeSys U-Line motor starter
S1, S2: Momentary pushbuttons
S3: Momentary pushbutton - must be held for a minimum of 1/2 second
t1: 1 - 10 second adjustable starting time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Use shielded cable if control wiring is longer than 3 feet
(2) From automated control system
(3) Optional jumper to select boost
(4) See page 11 for L01 wiring recommendations
Altistart 01 & U01 soft starters for asynchronous motors

**Altistart 01 soft starter and TeSys U-Line motor starter combinations**

Automatic 3-wire control with reversing with soft stop

**Function reference table**

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powering down U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Automatic control without soft stop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Stop</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Automatic control with soft stop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Soft stop</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes:

- A1: ATS01 soft starter
- LUB: TeSys U-Line motor starter
- LUA1C20: Control circuit contact block for TeSys U-Line motor starter
- S1, S2, S3: Momentary pushbuttons

**Notes:**

1. Optional jumper to select boost
2. See page 11 for L01 wiring recommendations
3. Use shielded cable if control wiring is longer than 3 feet.
**Altistart 01 & U01**

soft starters for asynchronous motors

**Wiring Diagrams**

ATS01N2�� & ATSU01N2���

**Altistart 01 soft starter**

and TeSys U-Line motor starter combinations

Automatic 3-wire control with reversing with soft stop

---

**Wiring Diagrams**

ATS01N2�� & ATSU01N2���

**Altistart 01 soft starter**

and TeSys U-Line motor starter combinations

Automatic control with Modbus module with or without soft stop

---

**Function reference table**

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powering down U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Automatic control without soft stop</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Run</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Stop</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Automatic control with soft stop</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Notes:**

1. Optional jumper to select boost
2. See page 11 for L01 wiring recommendations
3. Use shielded cable if control wiring is longer than 3 feet.
Altistart 01 & U01 soft starters for asynchronous motors

Altistart 01 soft starter and TeSys U-Line motor starter combinations

Automatic control with Modbus module with reversing with or without soft stop

ATS01N2 & ATSU01N2

Wiring Diagrams

ATS01N2 & ATSU01N2

Function reference table

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powering up U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Powering down U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Powering up U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Powering down U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes:
A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations
Wiring Diagrams

**Altistart 01 & U01 soft starters for asynchronous motors**

- **ATS01N2** & **ATSU01N2**

---

### Wiring Diagrams

**ATS01N2**

```
ATSU01N2
```

**ATSU01N2**

```
ATS01N2
```

---

### Function reference table

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powering up U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Reverse</td>
<td>704</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Powering down U-Line motor starter and ATS01 soft starter</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reverse</td>
<td>704</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Automatic control without deceleration</td>
<td>704</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Stop forward</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Stop reverse</td>
<td>704</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

### Notes:

**A1**: Altistart 01 soft starter

**LUB**: TeSys U-Line motor starter

(1) Optional jumper to select boost

(2) See page 11 for L01 wiring recommendations

---

**ATS01N2**

```
ATSU01N2
```

**ATSU01N2**

```
ATS01N2
```

---

### Function reference table

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-up and automatic control without soft stop</td>
<td>704</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

---

### Notes:

**A1**: Altistart 01 soft starter

**LUB**: TeSys U-Line motor starter

(1) Optional jumper to select boost

(2) See page 11 for L01 wiring recommendations

---

**ATS01N2**

```
ATSU01N2
```

**ATSU01N2**

```
ATS01N2
```

---

### Function reference table

<table>
<thead>
<tr>
<th>Function</th>
<th>Register</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run</td>
<td>D0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Stop</td>
<td>D0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

### Notes:

**A1**: Altistart 01 soft starter

**LUB**: TeSys U-Line motor starter

(1) Optional jumper to select boost

(2) See page 11 for L01 wiring recommendations
Altistart 01 & U01 soft starters for asynchronous motors

Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

Altistart 01 soft starter and TeSys U-Line motor starter combinations

Automatic control with AS-Interface communication module with reversing without soft stop

ATS01N2●●LU/QN/RT

ATS01N2●●LT

ATS01N2●●LU/QN/RT

ATS01N2●●LT

230-460 V

24 Vdc Supply

ATS01N2●●

ATS01N2●●

ATSU01N2●●

ATSU01N2●●

ATS01N2●●LU/QN/RT

ATS01N2●●LT

Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

Altistart 01 & U01 soft starters for asynchronous motors

ATS01N2●●LU/QN/RT soft starter with GV manual starter, or other motor starter

Manual control without soft stop

ATS01N2●●LU/QN/RT

ATSU01N2●●LT

Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

Function reference table

<table>
<thead>
<tr>
<th>Function Description</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-up and automatic control without soft stop</td>
<td>D0</td>
<td>1</td>
</tr>
<tr>
<td>Run forward</td>
<td>D0</td>
<td>1</td>
</tr>
<tr>
<td>Stop</td>
<td>D0</td>
<td>0</td>
</tr>
<tr>
<td>Run reverse</td>
<td>D1</td>
<td>1</td>
</tr>
<tr>
<td>Stop</td>
<td>D1</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes:

A1: ATS01 soft starter
LUB: TeSys U-Line motor starter

(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations

Notes:

A1: ATS01 soft starter
FU3: Fast-acting UL Listed Class J fuse
Q1: Manual motor starter or disconnect switch

(1) - 10 second adjustable starting time
(2) - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost
(4) See page 11 for L01 wiring recommendations

Notes:

A1: ATS01 soft starter
FU3: Fast-acting UL Listed Class J fuse
Q1: Manual motor starter or disconnect switch

(1) - 10 second adjustable starting time
(2) - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost
(4) See page 11 for L01 wiring recommendations
Altistart 01 & U01 soft starters for asynchronous motors

Wiring Diagrams
ATS01N2●●●● & ATSU01N2●●●●

Altistart 01 soft starter and TeSys U-Line motor starter combinations
Automatic control with AS-Interface communication module with reversing without soft stop

ATS01N2●LU/QN/RT
ATS01N2●LT

Function reference table

<table>
<thead>
<tr>
<th>Function Description</th>
<th>Bit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-up and automatic control without soft stop</td>
<td>D0</td>
<td>1</td>
</tr>
<tr>
<td>Run forward</td>
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<td>1</td>
</tr>
<tr>
<td>Stop</td>
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</tr>
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<td>Stop</td>
<td>D1</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes:
A1: ATS01 soft starter
LUB: TeSys U-Line motor starter
(1) Optional jumper to select boost
(2) See page 11 for L01 wiring recommendations

ATS01N2●LU/QN/RT soft starter with GV manual motor starter, or other motor starter
Manual control without soft stop

ATS01N2●LU/QN/RT
ATS01N2●LT

Notes:
A1: ATS01 soft starter
FU3: Fast-acting UL Listed Class J fuse
Q1: Manual motor starter or disconnect switch
T1: 1 - 10 second adjustable starting time
T2: 1 - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage
(1) Fuses are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost
(4) See page 11 for L01 wiring recommendations
Altistart 01 & U01 soft starters for asynchronous motors

ATS01N2LU/QN/RT soft starter with GV manual starter, fusible disconnect, or other motor starter

Hand-Off-Auto control with soft stop and isolation contactor

Notes:

- A1: ATS01 soft starter
- FU1: Control circuit fuse
- FU3: Fast-acting UL Listed Class J fuse
- KM1: Isolation contactor
- OL: Overload relay
- Q1: Manual motor starter or disconnect switch
- S1: Selector switch
- t1: 1 - 10 second adjustable starting time
- t2: 1 - 10 second adjustable stopping time
- V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

1. Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
2. Overload protection is required if not included on device Q1.
3. Optional jumper to select boost.
4. See page 11 for L01 wiring recommendations.
5. Use shielded cable if control wiring is longer than 3 feet.
6. From automated control system.

ATS01N2LU/QN/RT soft starter with GV manual starter, or other motor starter

Hand-Off-Auto control with soft stop without isolation contactor

Notes:

- A1: ATS01 soft starter
- FU1: Control circuit fuse
- FU3: Fast-acting UL Listed Class J fuse
- KM1: Isolation contactor
- OL: Overload relay
- Q1: Manual motor starter or disconnect switch
- S1: Selector switch
- t1: 1 - 10 second adjustable starting time
- t2: 1 - 10 second adjustable stopping time
- V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

1. Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
2. Overload protection is required if not included on device Q1.
3. Optional jumper to select boost.
4. See page 11 for L01 wiring recommendations.
5. Use shielded cable if control wiring is longer than 3 feet.
6. From automated control system.
Altistart 01 & U01 soft starters for asynchronous motors

ATS01N2 & U01 soft starters for asynchronous motors

Hand-Off-Auto control with soft stop and isolation contactor

ATS01N2•LU/QN/RT soft starter with GV manual starter, fusible disconnect, or other motor starter

ATS01N2•LU/QN/RT soft starter with GV manual starter, or other motor starter

Hand-Off-Auto control with soft stop without isolation contactor

Notes:
1. ATS01 soft starter
2. FU1: Control circuit fuse
3. FU3: Fast-acting UL Listed Class J fuse
4. KM1: Isolation contactor
5. OL: Overload relay
6. Q1: Manual motor starter or disconnect switch
7. S1: Selector switch
8. t1: 1 - 10 second adjustable starting time
9. t2: 1 - 10 second adjustable stopping time
10. V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations.
(5) Use shielded cable if control wiring is longer than 3 feet.
(6) From automated control system.
**Altistart 01 & U01**

**soft starters for asynchronous motors**

**ATS01N2***LU/QN/RT soft starter**

with GV manual starter, or other motor starter

**Automatic control (2 or 3-wire) with or without soft stop**

---

**Wiring Diagrams**

**ATS01N2***LU/QN/RT soft starter**

with GV manual starter, or other motor starter

**Automatic 3-wire control with isolation contactor without soft stop**

---

**Notes:**

- **A1:** ATS01 soft starter
- **FU3:** Fast-acting UL Listed Class J fuse
- **OL:** Overload relay
- **Q1:** Manual motor starter or disconnect switch
- **S1, S2:** Momentary pushbuttons
- **S3:** Selector switch
- **t1:** 1 - 10 second adjustable starting time
- **t2:** 1 - 10 second adjustable stopping time
- **V1:** Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
2) Overload protection is required if not included on device Q1.
3) Optional jumper to select boost.
4) See page 11 for LI01 wiring recommendations.
5) Use shielded cable if control wiring is longer than 3 feet.

---

**ATS01N2***LU/QN/RT soft starter**

with GV manual starter, or other motor starter

**Automatic 3-wire control with isolation contactor without soft stop**

---

**Notes:**

- **A1:** ATS01 soft starter
- **FU1:** Control circuit fuse
- **FU3:** Fast-acting UL Listed Class J fuse
- **KM1:** Isolation contactor
- **OL:** Overload relay
- **Q1:** Manual motor starter or disconnect switch
- **S1, S2:** Momentary pushbuttons
- **t1:** 1 - 10 second adjustable starting time
- **V1:** Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
2) Overload protection is required if not included on device Q1.
3) Optional jumper to select boost.
4) See page 11 for LI01 wiring recommendations.
5) Use shielded cable if control wiring is longer than 3 feet.
Wiring Diagrams

ATS01N2●●●● & ATSU01N2●●●●

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 2 (or 3-wire) with or without soft stop

Notes:

A1: ATS01 soft starter
FU3: Fast-acting UL Listed Class J fuse
QL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2: Momentary pushbuttons
S3: Selector switch
T1: 1 - 10 second adjustable starting time
T2: 1 - 10 second adjustable stopping time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations.
(5) Use shielded cable if control wiring is longer than 3 feet.

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 3-wire control with isolation contactor without soft stop

Notes:

A1: ATS01 soft starter
FU1: Control circuit fuse
FU3: Fast-acting UL Listed Class J fuse
KM1: Isolation contactor
QL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2: Momentary pushbuttons
T1: 1 - 10 second adjustable starting time
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations.
Altistart 01 & U01
soft starters for
asynchronous motors

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 3-wire control with isolation contactor with or without soft stop

Notes:
A1: ATS01 soft starter
FU1: Control circuit fuse
FU3: Fast-acting UL Listed Class J fuse
KM1: Isolation contactor
OL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2, S3: Momentary pushbuttons
V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations
(5) Use shielded cable if control wiring is longer than 3 feet.

Wiring Diagrams
ATS01N2●●●● & ATSU01N2●●●●

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 3-wire control with reversing with or without soft stop

Notes:
A1: ATS01 soft starter
FU1: Control circuit fuse
FU3: Fast-acting UL Listed Class J fuse
KM2, KM3: Reversing contactor
OL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2, S3, S4: Momentary pushbuttons
V1: Initial motor voltage - adjustable from 30 to 80% of the motor's rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations
(5) Use shielded cable if control wiring is longer than 3 feet.
Altistart 01 & U01
soft starters for asynchronous motors

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 3-wire control with isolation contactor with or without soft stop

Wiring Diagrams
ATS01N2●●●● & ATSU01N2●●●●

Notes:
A1: ATS01 soft starter
FU1: Control circuit fuse
FU3: Fast-acting UL Listed Class J fuse
KM1: Isolation contactor
OL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2, S3, S4: Momentary pushbuttons
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
(4) See page 11 for L01 wiring recommendations
(5) Use shielded cable if control wiring is longer than 3 feet.

ATS01N2●LU/QN/RT soft starter
with GV manual starter, or other motor starter

Automatic 3-wire control with reversing with or without soft stop

Wiring Diagrams
ATS01N2●●●● & ATSU01N2●●●●

Notes:
A1: ATS01 soft starter
FU1: Control circuit fuse
FU3: Fast-acting UL Listed Class J fuse
KM2: Reversing contactor
OL: Overload relay
Q1: Manual motor starter or disconnect switch
S1, S2, S3: Momentary pushbuttons
V1: Initial motor voltage - adjustable from 30 to 80% of the motor’s rated voltage

(1) Fuses FU3 are not required if device Q1 is a GV manual motor starter installed per local and national electrical codes.
(2) Overload protection is required if not included on device Q1.
(3) Optional jumper to select boost.
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(5) Use shielded cable if control wiring is longer than 3 feet.
Quality Assurance Procedures

This document provides information regarding the quality assurance processes and procedures that are in place for the manufacturing of Altistart 01 (ATS01) soft starters. Schneider Electric utilizes quality assurance processes and procedures to verify the integrity of components and the assembly process. This document provides a summary of these processes and procedures.

Outline of Test Process and Procedures

Data is gathered on each unit and tracked via the unique serial number of each unit. Test during production validates all electrical and software parameters. Final verification sample testing is conducted at various points in the manufacturing process for each soft starter. Test sampling size is 1 commercial reference per size per week.

In addition to the processes and procedures detailed above, the ISO certified manufacturing facility test stations have instructions for visual quality checks and electrical inspection. The visual quality check list includes a physical inspection for proper connections, proper assembly torques, mechanical integrity and proper documentation.

The quality assurance procedures detailed above are in place for the manufacturing of Altistart 01. These procedures are established to monitor and confirm the quality of the product line that has been designed in from the outset.

- Individual unit data tracked by unique serial number
- Electrical parameters
- Software parameters
- Final verification sample testing
- ISO certified visual quality checks
  - Proper connections
  - Proper assembly torques
  - Mechanical integrity
  - Proper documentation
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  - Mechanical integrity
  - Proper documentation

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Schneider Electric™ provides services far beyond meeting your immediate needs for application or equipment repair. We take a long-term, holistic approach to determine your facility and operational needs and develop a strategy for improving the performance of your people, systems, and processes.

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> Software renewals

Access the latest software, firmware, and custom options to ensure you always have the latest functionality available to optimize your system’s life cycle.

> Extended warranty

Extend your Schneider Electric standard manufacturer warranty from one year to five years. Protection plans are tailored to your needs reducing costs and out-of-service time.

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- Increase productivity
- Improve reliability and safety
- Mitigate risk and limit downtime
- Keep equipment up-to-date
- Extend the life of your installed base
- Cut costs and increase savings
- Improve your return on investment

Talk to someone you can trust

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- Improve your up-time by simplifying installation, commissioning and maintenance by providing advanced diagnostics, industry-leading voltage ride thru capability and seismic qualified products.

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Fax: 1-888-778-2733
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