

# Product datasheet

Specifications



soft starter for asynchronous motor,  
Altistart U01, TeSys U, ATSU01, 9A,  
200 to 480V, 1.5 to 4kW

ATSU01N209LT

## Main

Range of product	Altistart U01 and TeSys U
Product destination	Asynchronous motors
Product or component type	Soft starter
Product specific application	Simple machine
Device short name	ATSU01
Network number of phases	3 phases
[Us] rated supply voltage	200...480 V - 10...10 %
Motor power kW	4 kW, 3 phases at 400 V 1.5 kW, 3 phases at 230 V
Motor power hp	2 hp, 3 phases at 230 V 5 hp, 3 phases at 460 V
IcL starter rating	9 A
Utilisation category	AC-53B conforming to EN/IEC 60947-4-2
Current consumption	65 mA
Type of start	Start with voltage ramp
Power dissipation in W	1.5 W at full load and at end of starting 91.5 W in transient state

## Complementary

Assembly style	With heat sink
Function available	Integrated bypass
Supply voltage limits	180...528 V
Supply frequency	50...60 Hz - 5...5 %
Network frequency	47.5...63 Hz
Output voltage	<= power supply voltage
[Uc] control circuit voltage	24 V DC +/- 10 %
Starting time	1 s / 100 5 s / 20 10 s / 10 Adjustable from 1 to 10 s
Deceleration time symb	Adjustable from 1 to 10 s
Starting torque	30...80 % of starting torque of motor connected directly on the line supply
Discrete input type	Logic (L11, L12, BOOST) stop, run and boost on start-up functions <= 8 mA 27 kOhm
Discrete input voltage	24...40 V

Excluding VAT and subject to change. Please check with your local distributor through "Where to buy"

<b>Input output isolation</b>	Galvanic between power and control
<b>Discrete input logic</b>	Positive L11, L12, BOOST at State 0: < 5 V and <= 0.2 mA at State 1: > 13 V, >= 0.5 mA
<b>Discrete output current</b>	2 A DC-13 3 A AC-15
<b>Discrete output type</b>	Open collector logic LO1 end of starting signal Relay outputs R1A, R1C NO
<b>Discrete output voltage</b>	24 V (voltage limits: 6...30 V) open collector logic
<b>Minimum switching current</b>	10 mA at 6 V DC for relay outputs
<b>Maximum switching current</b>	Relay outputs: 2 A at 30 V DC cos phi = 0.5 and L/R = 20 ms inductive load Relay outputs: 2 A at 250 V AC AC-15 cos phi = 0.5 and L/R = 20 ms inductive load
<b>Maximum switching voltage</b>	440 V relay outputs
<b>Display type</b>	1 LED (green) for starter powered up 1 LED (yellow) for nominal voltage reached
<b>tightening torque</b>	0.5 N.m 1.9...2.5 N.m
<b>Electrical connection</b>	4 mm screw clamp terminal - rigid 1 1...10 mm <sup>2</sup> AWG 8 power circuit Screw connector - rigid without cable end 1 0.5...2.5 mm <sup>2</sup> AWG 14 control circuit 4 mm screw clamp terminal - rigid 2 1...6 mm <sup>2</sup> AWG 10 power circuit Screw connector - rigid 2 0.5...1 mm <sup>2</sup> AWG 17 control circuit Screw connector - flexible with cable end 1 0.5...1.5 mm <sup>2</sup> AWG 16 control circuit 4 mm screw clamp terminal - flexible without cable end 1 1.5...10 mm <sup>2</sup> AWG 8 power circuit Screw connector - flexible without cable end 1 0.5...2.5 mm <sup>2</sup> AWG 14 control circuit 4 mm screw clamp terminal - flexible with cable end 2 1...6 mm <sup>2</sup> AWG 10 power circuit 4 mm screw clamp terminal - flexible without cable end 2 1.5...6 mm <sup>2</sup> AWG 10 power circuit Screw connector - flexible without cable end 2 0.5...1.5 mm <sup>2</sup> AWG 16 control circuit
<b>Marking</b>	CE
<b>Operating position</b>	Vertical +/- 10 degree
<b>Height</b>	234 mm
<b>Width</b>	45 mm
<b>Depth</b>	150 mm
<b>Net weight</b>	0.34 kg
<b>Power range</b>	1.1...2 kW at 200...240 V 3 phases 2.2...3 kW at 380...440 V 3 phases 4...6 kW
<b>Motor starter type</b>	Soft starter

## Environment

<b>Electromagnetic compatibility</b>	Conducted and radiated emissions level B conforming to CISPR 11 Conducted and radiated emissions level B conforming to IEC 60947-4-2 Damped oscillating waves level 3 conforming to IEC 61000-4-12 Electrostatic discharge level 3 conforming to IEC 61000-4-2 EMC immunity conforming to EN 50082-1 EMC immunity level B conforming to EN 50082-2 Harmonics level 3 conforming to IEC 1000-3-2 Harmonics level 3 conforming to IEC 1000-3-4 Immunity to electrical transients level 4 conforming to IEC 61000-4-4 Immunity to radiated radio-electrical interference level 3 conforming to IEC 61000-4-3 Voltage/current impulse level 3 conforming to IEC 61000-4-5 Conducted and radiated emissions level 3 conforming to IEC 61000-4-6 Immunity to conducted interference caused by radio-electrical fields level 4 conforming to IEC 61000-4-11
<b>Standards</b>	EN/IEC 60947-4-2

<b>Product certifications</b>	UL C-Tick CSA CCC
<b>IP degree of protection</b>	IP20
<b>Pollution degree</b>	2 conforming to EN/IEC 60947-4-2
<b>Vibration resistance</b>	1 gn (f= 13...150 Hz) conforming to EN/IEC 60068-2-6 1.5 mm peak to peak (f= 3...13 Hz) conforming to EN/IEC 60068-2-6
<b>Shock resistance</b>	15 gn for 11 ms conforming to EN/IEC 60068-2-27
<b>Relative humidity</b>	5...95 % without condensation or dripping water conforming to EN/IEC 60068-2-3
<b>Ambient air temperature for operation</b>	-10...40 °C (without derating) 40...50 °C (with current derating of 2 % per °C)
<b>Ambient air temperature for storage</b>	-25...70 °C conforming to EN/IEC 60947-4-2
<b>Operating altitude</b>	<= 1000 m without derating > 1000 m with current derating of 2.2 % per additional 100 m

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	6.500 cm
<b>Package 1 Width</b>	18.500 cm
<b>Package 1 Length</b>	16.500 cm
<b>Package 1 Weight</b>	454.000 g
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	14
<b>Package 2 Height</b>	30.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	6.905 kg

## Contractual warranty

<b>Warranty (in months)</b>	18
-----------------------------	----



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Use Better



#### Materials and Substances

Packaging made with recycled cardboard

Yes

Packaging without single use plastic

Yes

[EU RoHS Directive](#)

Pro-active compliance (Product out of EU RoHS legal scope)

REACH Regulation

[REACH Declaration](#)

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

Take-back

No

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

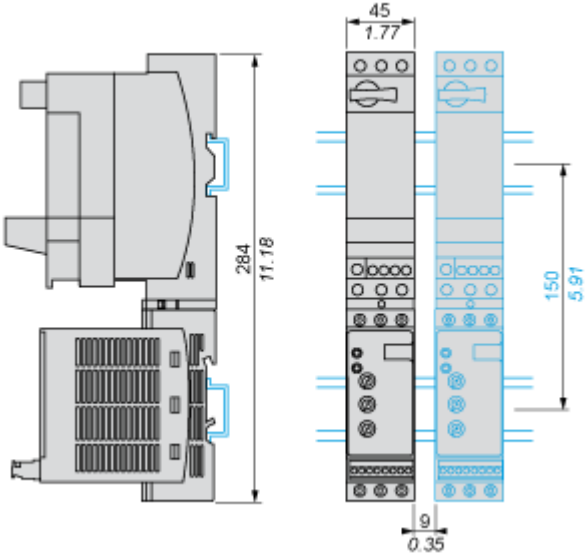
Dimensions Drawings

Dimensions

**With TeSys U Combination (Non Reversing Power Base)**

Mounting on symmetrical (35 mm) rail with power connector between ATS and TeSys U.

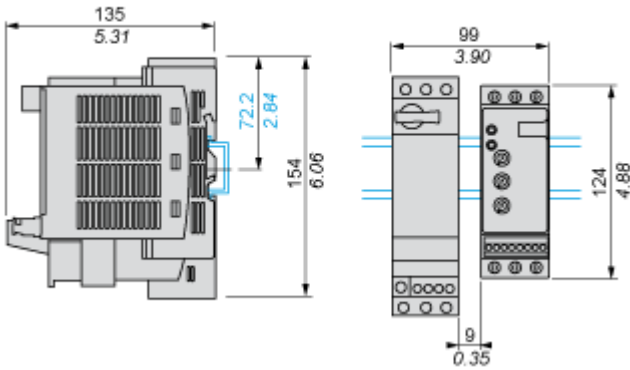
mm  
in.



**With TeSys U Combination (Non Reversing or Reversing Power Base)**

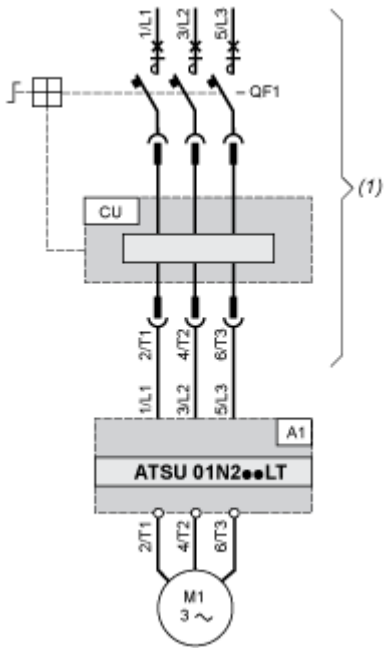
Side by side mounting

mm  
in.



Connections and Schema

Power Wiring



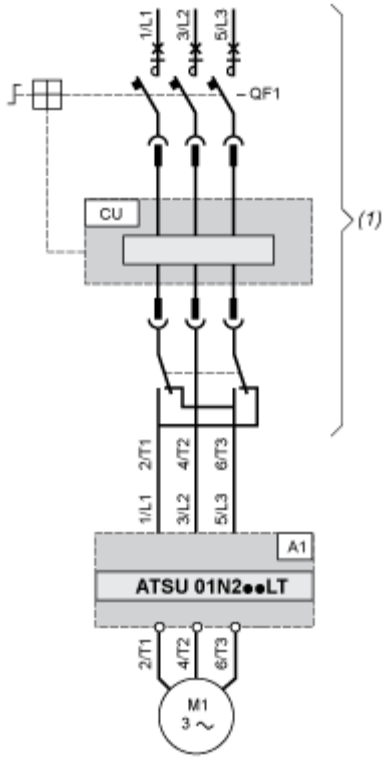
(1) TeSys U

A1 : Soft start/soft stop unit

QF1 : TeSys U controller-starter

CU : TeSys U control unit

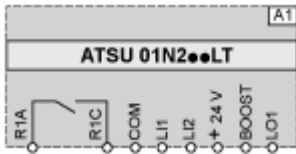
With Reversing Unit



- (1) TeSys U with reversing unit
- A1 : Soft start/soft stop unit
- QF1 : TeSys U controller-starter
- CU : TeSys U control unit

**Control Wiring**

---



A1 : Soft start/soft stop unit

R1A, R1C : Relay output NO

COM : Commun

LI1, LI2 : Logic inputs (stop and run functions)

BOOST : Logic input (boost on start-up function)

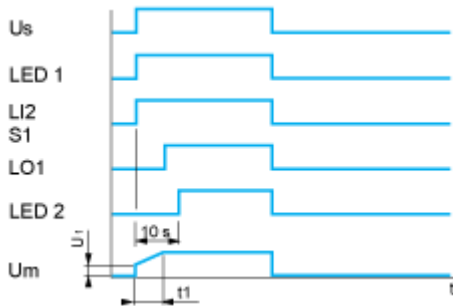
LO1 : Logic output

Technical Description

Functional Diagram Automatic 2-wire Control

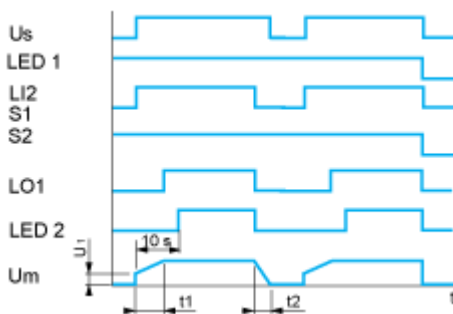
---

Without Deceleration



- $U_s$  : Power supply voltage
- $LED 1$  : Green LED
- $LI2$  : Logic input
- $S1$  : Pushbutton
- $LED 2$  : Yellow LED
- $U_m$  : Motor voltage
- $t_1$  : Acceleration time can be controlled by a potentiometer
- $U_1$  : Starting time can be controlled by a potentiometer

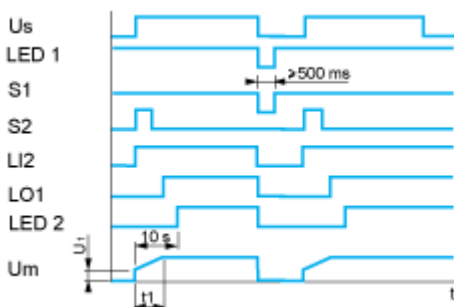
With and without Deceleration



- $U_s$  : Power supply voltage
- $LED 1$  : Green LED
- $LI2$  : Logic input
- $S1, S2$  : Pushbuttons
- $LO1$  : Logic output
- $LED 2$  : Yellow LED
- $U_m$  : Motor voltage
- $t_1$  : Acceleration time can be controlled by a potentiometer
- $t_2$  : Deceleration time can be controlled by a potentiometer
- $U_1$  : Starting time can be controlled by a potentiometer

Functional Diagram Automatic 3-wire Control

Without Deceleration



Us : Power supply voltage

LED 1 : Green LED

S1, S2 : Pushbuttons

LI2 : Logic input

LO1 : Logic output

LED 2 : Yellow LED

Um : Motor voltage

t1 : Acceleration time can be controlled by a potentiometer

U1 : Starting time can be controlled by a potentiometer

With Deceleration



Us : Power supply voltage

LED 1 : Green LED

S1, S2 : Pushbuttons

LI1, LI2 : Logic inputs

LO1 : Logic output

LED 2 : Yellow LED

Um : Motor voltage

t1 : Acceleration time can be controlled by a potentiometer