

# ATSU01N209LT

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



## Main

Range of Product	Altistart U01 and TeSys U
Product or Component Type	Soft starter
Product destination	Asynchronous motors
Product Specific Application	Simple machine
Device short name	ATSU01
Phase	3 phase
[Us] rated supply voltage	200...480 V - 10...10 %
Motor power kW	4 KW, 3 phase 400 V 1.5 kW, 3 phase 230 V
Maximum Horse Power Rating	2 Hp, 3 phase 230 V 5 hp, 3 phase 460 V
IcL starter rating	9 A
Utilisation category	AC-53B 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 LI1, LI2, BOOST) stop, run and boost on start-up functions <= 8 mA 27 kOhm
Discrete input voltage	24...40 V
Input output isolation	Galvanic between power and control
Discrete input logic	Positive LI1, LI2, BOOST < 5 V <= 0.2 mA > 13 V, >= 0.5 mA
Discrete output current	2 A DC-13 3 A AC-15
Discrete output type	Open collector logic LO1 end of starting signal Relay outputs R1A, R1C NO
Discrete output voltage	24 V 6...30 V) open collector logic
Minimum switching current	10 mA 6 V DC relay outputs
Maximum switching current	Relay outputs 2 A 30 V DC cos phi = 0.5 20 ms inductive Relay outputs 2 A 250 V AC AC-15 cos phi = 0.5 20 ms inductive
Maximum switching voltage	440 V relay outputs

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Display type	1 LED Green)starter powered up 1 LED Yellow)nominal voltage reached
Tightening torque	4.43 Lbf.In (0.5 N.m) 16.82...22.13 lbf.in (1.9...2.5 N.m)
Electrical connection	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
Marking	CE
Operating position	Vertical +/- 10 degree
Height	9.21 in (234 mm)
Width	1.77 in (45 mm)
Depth	5.91 in (150 mm)
Net Weight	0.75 lb(US) (0.34 kg)
Motor power range AC-3	1.1...2 KW 200...240 V 3 phase 2.2...3 KW 380...440 V 3 phase 4...6 kW
Motor starter type	Soft starter

## Environment

Electromagnetic compatibility	Conducted and radiated emissions level B CISPR 11 Conducted and radiated emissions level B IEC 60947-4-2 Damped oscillating waves level 3 IEC 61000-4-12 Electrostatic discharge level 3 IEC 61000-4-2 EMC immunity EN 50082-1 EMC immunity level B EN 50082-2 Harmonics level 3 IEC 1000-3-2 Harmonics level 3 IEC 1000-3-4 Immunity to electrical transients level 4 IEC 61000-4-4 Immunity to radiated radio-electrical interference level 3 IEC 61000-4-3 Voltage/Current impulse level 3 IEC 61000-4-5 Conducted and radiated emissions level 3 IEC 61000-4-6 Immunity to conducted interference caused by radio-electrical fields level 4 IEC 61000-4-11
Standards	EN/IEC 60947-4-2
Product Certifications	UL[RETURN]C-tick[RETURN]CSA[RETURN]CCC
IP Degree of Protection	IP20
Pollution degree	2 EN/IEC 60947-4-2
Vibration resistance	1 gn 13...150 Hz)EN/IEC 60068-2-6 1.5 mm peak to peak 3...13 Hz)EN/IEC 60068-2-6
Shock resistance	15 gn 11 ms EN/IEC 60068-2-27
Relative humidity	5...95 % without condensation or dripping water EN/IEC 60068-2-3
Ambient air temperature for operation	14...104 °F (-10...40 °C) without derating) 104...122 °F (40...50 °C) with current derating of 2 % per °C)
Ambient air temperature for storage	-13...158 °F (-25...70 °C) EN/IEC 60947-4-2
Operating altitude	<= 3280.84 ft (1000 m) without derating > 3280.84 ft (1000 m) with current derating of 2.2 % per additional 100 m

## Ordering and shipping details

Category	22392-ATSU01/ATS01 LOW HP SOFT STARTERS
Discount Schedule	I11
GTIN	3389110667097
Returnability	Yes
Country of origin	DE

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.56 in (6.5 cm)
Package 1 Width	7.28 in (18.5 cm)
Package 1 Length	6.50 in (16.5 cm)
Package 1 Weight	16.08 oz (456.0 g)
Unit Type of Package 2	S03
Number of Units in Package 2	14
Package 2 Height	11.81 in (30.0 cm)
Package 2 Width	11.81 in (30.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	15.26 lb(US) (6.92 kg)

## Offer Sustainability

California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

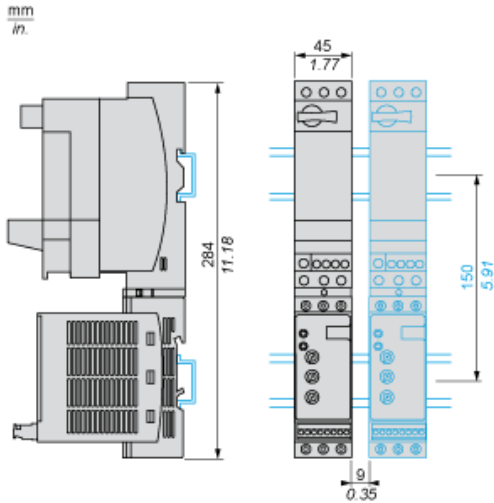
## Contractual warranty

Warranty	18 months
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Dimensions

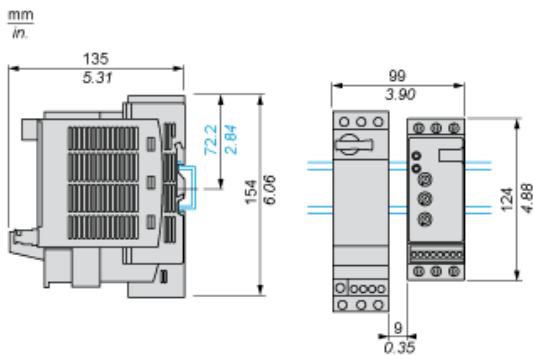
With TeSys U Combination (Non Reversing Power Base)

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

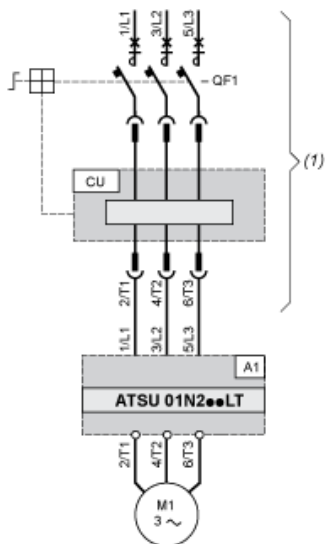


With TeSys U Combination (Non Reversing or Reversing Power Base)

Side by side mounting

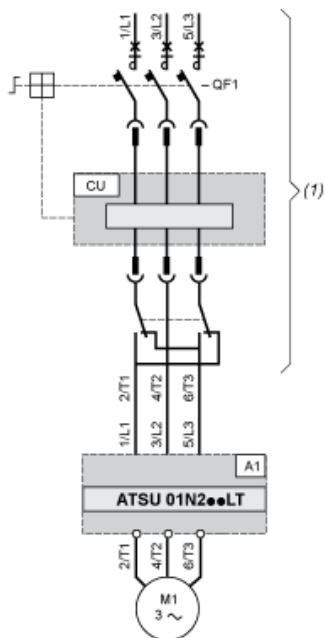


Power Wiring



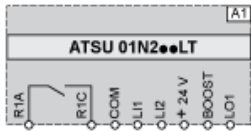
- (1) TeSys U  
A1 : Soft start/soft stop unit  
QF1 : TeSys U controller-starter  
CU : TeSys U control unit

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, Relay output NO

R1C :

COM Commun

LI1, Logic inputs (stop and run functions)

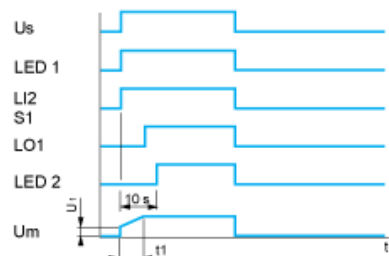
LI2 :

BOOST Logic input (boost on start-up function)

LO1 :Logic output

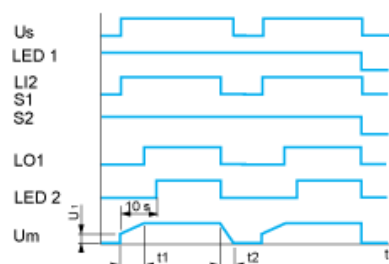
Functional Diagram Automatic 2-wire Control

Without Deceleration



Us : Power supply voltage  
 LED Green LED  
 1 :  
 LI2 : Logic input  
 S1 : Pushbutton  
 LED Yellow LED  
 2 :  
 Um : Motor voltage  
 t1 : Acceleration time can be controlled by a potentiometer  
 U1 : Starting time can be controlled by a potentiometer

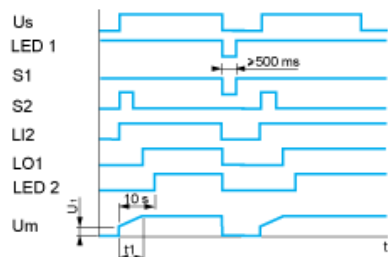
With and without Deceleration



Us : Power supply voltage  
 LED Green LED  
 1 :  
 LI2 : Logic input  
 S1, Pushbuttons  
 S2 :  
 LO1 : Logic output  
 LED Yellow LED  
 2 :  
 Um : Motor voltage  
 t1 : Acceleration time can be controlled by a potentiometer  
 t2 : Deceleration time can be controlled by a potentiometer  
 U1 : Starting time can be controlled by a potentiometer

Functional Diagram Automatic 3-wire Control

## Without Deceleration



Us : Power supply voltage

LED Green LED

1 :

S1, Pushbuttons

S2 :

LI2 : Logic input

LO1 : Logic output

LED Yellow LED

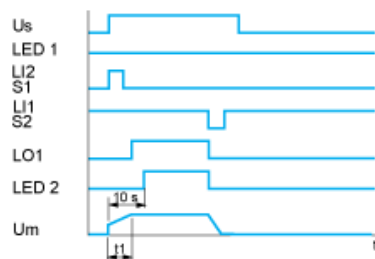
2 :

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 Green LED

1 :

S1, Pushbuttons

S2 :

LI1, Logic inputs

LI2 :

LO1 : Logic output

LED Yellow LED

2 :

Um : Motor voltage

t1 : Acceleration time can be controlled by a potentiometer