

ATSU01N222LT

soft starter for asynchronous motor - ATSU01 - 22 A
- 200..480 V - 4..11 kW



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
Network number of phases	3 phases
[Us] rated supply voltage	200...480 V - 10...10 %
Motor power kW	11 kW 3 phases 400 V 4 kW 3 phases 230 V 7.5 kW 3 phases 400 V 5.5 kW 3 phases 230 V
Motor power hp	5 hp 3 phases 230 V 7.5 hp 3 phases 230 V 10 hp 3 phases 460 V 15 hp 3 phases 460 V
IcL starter rating	22 A
Utilisation category	AC-53B EN/IEC 60947-4-2
Current consumption	100 mA
Type of start	Start with voltage ramp
Power dissipation in W	2.5 W at full load and at end of starting 222.5 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	Adjustable from 1 to 10 s 1 s 100 10 s 10 5 s 20
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 and <= 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	2 A 30 V DC inductive cos phi = 0.5 20 ms relay outputs 2 A 250 V AC AC-15 inductive cos phi = 0.5 20 ms relay outputs
Maximum switching voltage	440 V relay outputs
Display type	1 LED green starter powered up 1 LED yellow nominal voltage reached

The information provided in this documentation contains general descriptions and/or technical characteristics 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.

Tightening torque	0.5 N.m 1.9...2.5 N.m
Electrical connection	4 mm screw clamp terminal rigid 1 1...10 mm ² AWG 8 power circuit Screw connector rigid 1 0.5...2.5 mm ² AWG 14 control circuit 4 mm screw clamp terminal rigid 2 1...6 mm ² AWG 10 power circuit Screw connector rigid 2 0.5...1 mm ² AWG 17 control circuit Screw connector flexible with cable end 1 0.5...1.5 mm ² AWG 16 control circuit 4 mm screw clamp terminal flexible without cable end 1 1.5...10 mm ² AWG 8 power circuit Screw connector flexible without cable end 1 0.5...2.5 mm ² AWG 14 control circuit 4 mm screw clamp terminal flexible with cable end 2 1...6 mm ² AWG 10 power circuit 4 mm screw clamp terminal flexible without cable end 2 1.5...6 mm ² AWG 10 power circuit Screw connector flexible without cable end 2 0.5...1.5 mm ² AWG 16 control circuit
Marking	CE
Operating position	Vertical +/- 10 degree
Height	314 mm
Width	45 mm
Depth	170 mm
Product weight	0.49 kg
Power range	7...11 kW at 380...440 V 3 phases 4...6 kW at 200...240 V 3 phases
Motor starter type	Soft starter

Environment

electromagnetic compatibility	EMC immunity EN 50082-1 Damped oscillating waves level 3 IEC 61000-4-12 Electrostatic discharge level 3 IEC 61000-4-2 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 B CISPR 11 Conducted and radiated emissions level B IEC 60947-4-2 EMC immunity EN 50082-2 Harmonics IEC 1000-3-2 Harmonics IEC 1000-3-4 Conducted and radiated emissions level 3 IEC 61000-4-6 Immunity to conducted interference caused by radio-electrical fields IEC 61000-4-11
standards	EN/IEC 60947-4-2
product certifications	CCC CSA C-Tick UL
IP degree of protection	IP20
pollution degree	2 EN/IEC 60947-4-2
vibration resistance	1.5 mm peak to peak 3...13 Hz EN/IEC 60068-2-6 1 gn 13...150 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	-10...40 °C without derating 40...50 °C with current derating of 2 % per °C
ambient air temperature for storage	-25...70 °C EN/IEC 60947-4-2
operating altitude	<= 1000 m without derating > 1000 m with current derating of 2.2 % per additional 100 m

Contractual warranty

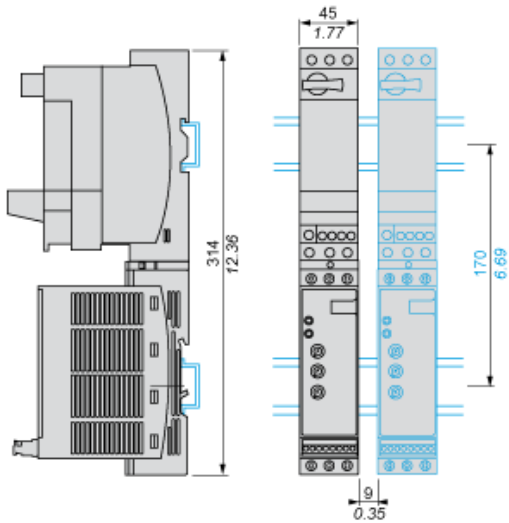
Warranty period	18 months
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Dimensions

With TeSys U Combination (Non Reversing Power Base)

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

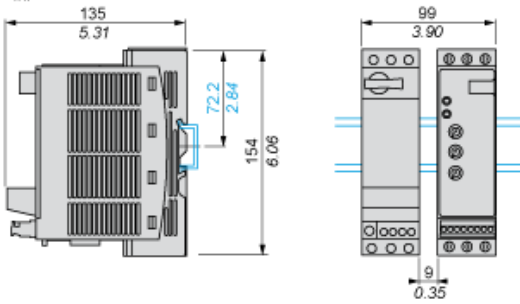
mm
in.



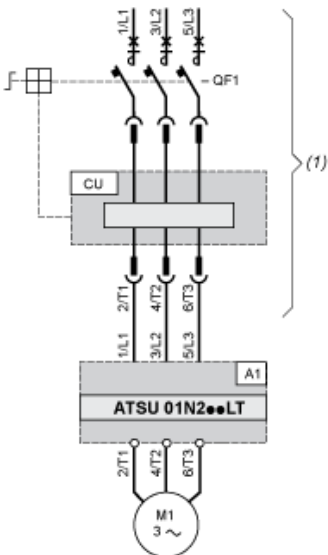
With TeSys U Combination (Non Reversing or Reversing Power Base)

Side by side mounting

mm
in.



Power Wiring



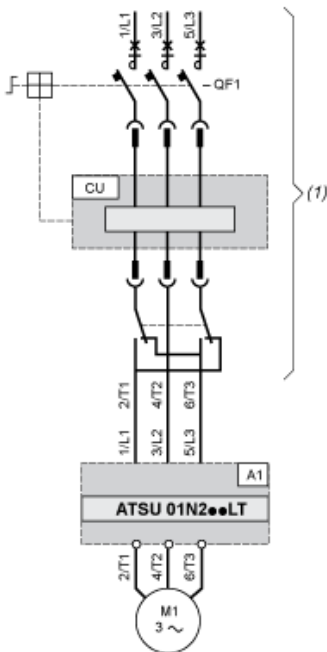
(1) TeSys U

A1 : Soft start/soft stop unit

QF1 : TeSys U controller-starter

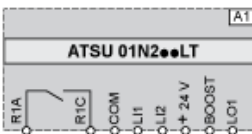
CU : TeSys U control unit

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

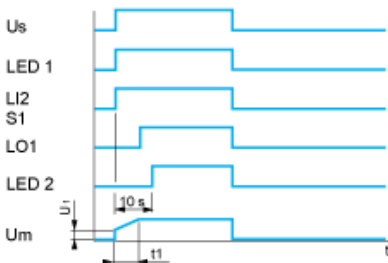
Control Wiring



- 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

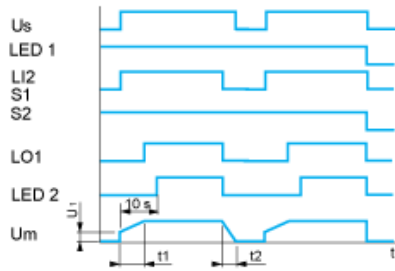


- Us : Power supply voltage
- LED Green LED
- 1 :
- LI2 : Logic input
- S1 : Pushbutton
- LED Yellow LED
- 2 :
- Um :Motor voltage

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

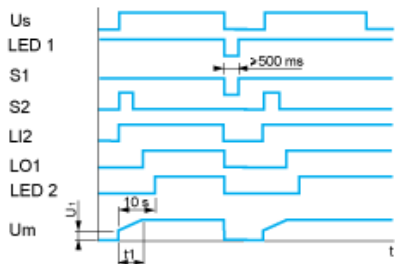
t1 : Acceleration time can be controlled by a potentiometer

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

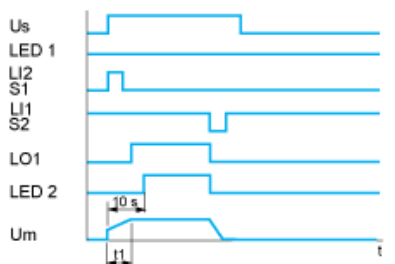
2 :

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