

# ATSU01N222LT

soft starter for asynchronous motor, Altistart U01, TeSys U, ATSU01, 22A, 200 to 480V, 4 to 11kW



## 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	11 KW, 3 phase 400 V 4 KW, 3 phase 230 V 7.5 KW, 3 phase 400 V 5.5 kW, 3 phase 230 V
Maximum Horse Power Rating	5 Hp, 3 phase 230 V 7.5 Hp, 3 phase 230 V 10 Hp, 3 phase 460 V 15 hp, 3 phase 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	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
Display type	1 LED Green)starter powered up 1 LED Yellow)nominal voltage reached
Tightening torque	16.82...22.13 Lbf.In (1.9...2.5 N.m) 4.43 lbf.in (0.5 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	12.36 in (314 mm)
Width	1.77 in (45 mm)
Depth	6.69 in (170 mm)
Net Weight	1.08 lb(US) (0.49 kg)
Motor power range AC-3	4...6 kW 200...240 V 3 phase 7...11 kW 380...440 V 3 phase
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	C-tick[RETURN]CSA[RETURN]UL[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	3389110667110
Returnability	Yes
Country of origin	DE

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.97 in (5.000 cm)
Package 1 Width	5.91 in (15.000 cm)
Package 1 Length	6.77 in (17.200 cm)
Package 1 Weight	19.54 oz (554.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	14
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	18.53 lb(US) (8.405 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	112
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	23.62 in (60.000 cm)
Package 3 Length	31.50 in (80.000 cm)
Package 3 Weight	169.84 lb(US) (77.036 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.

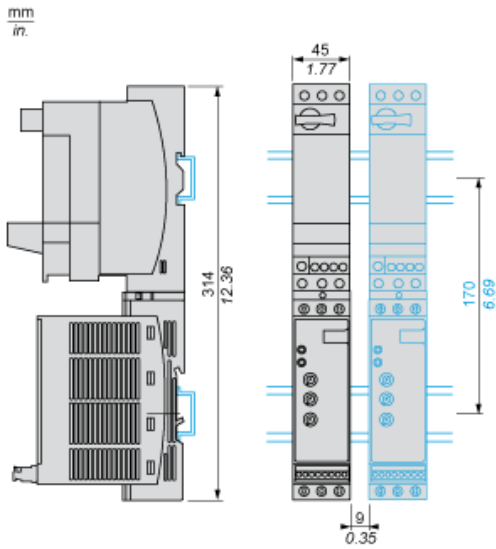
## Contractual warranty

Warranty	18 months
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Dimensions

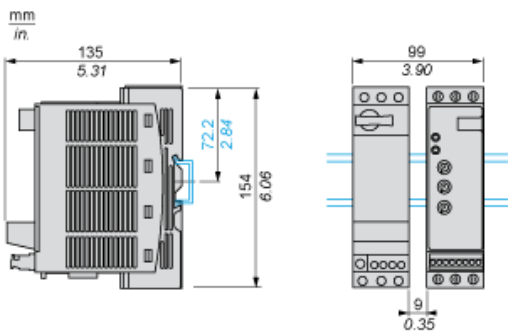
With TeSys U Combination (Non Reversing Power Base)

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

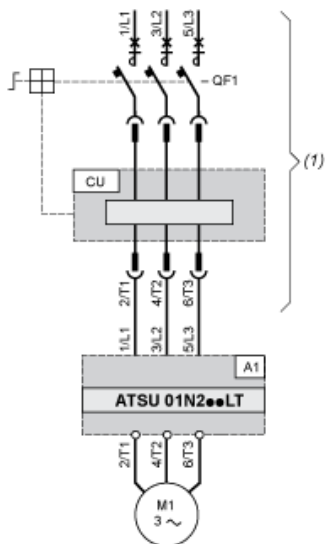


With TeSys U Combination (Non Reversing or Reversing Power Base)

Side by side mounting

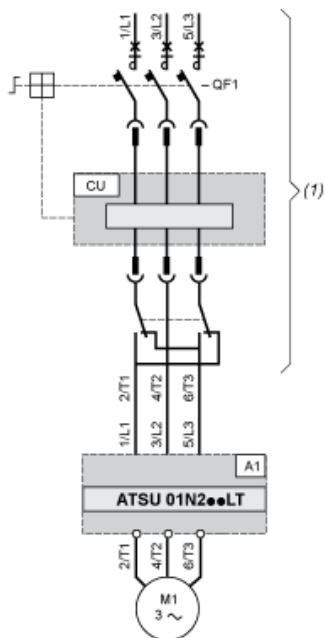


Power Wiring



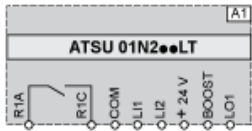
- (1) TeSys U  
A1 : Soft start/soft stop unit  
QF1 :TeSys U controller-starter  
CU : TeSys U control unit

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)

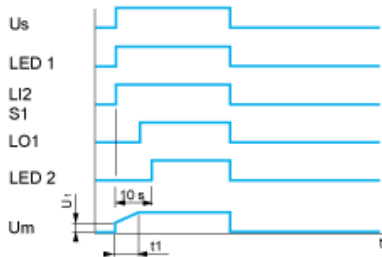
LO1 :Logic output

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Functional Diagram Automatic 2-wire Control

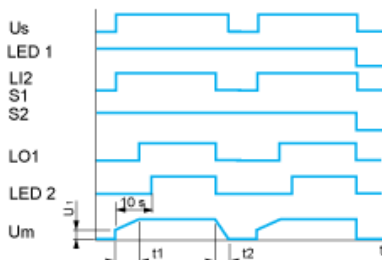
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Without Deceleration



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



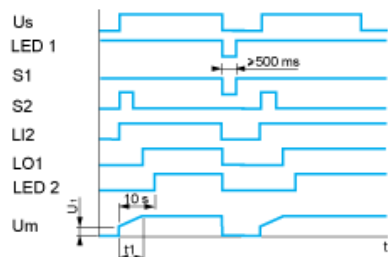
Us : Power supply voltage  
LED Green LED  
1 :  
LI2 : Logic input  
S1, Pushbuttons  
S2 :  
LO1 : Logic output  
LED Yellow LED  
2 :  
Um : Motor voltage  
t1 : Acceleration time can be controlled by a potentiometer  
t2 : Deceleration time can be controlled by a potentiometer  
U1 : Starting time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

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Functional Diagram Automatic 3-wire Control

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## 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