



## 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	15 kW, 3 phases at 400 V 7.5 kW, 3 phases at 230 V
Motor power hp	10 hp, 3 phases at 230 V 20 hp, 3 phases at 460 V
IcL starter rating	32 A
Utilisation category	AC-53B conforming to 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 322.5 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 / 50 10 s / 5 5 s / 10
Deceleration time symb	Adjustable from 1 to 10 s

Disclaimer: 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

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 $\leq 8$ mA 27 kOhm
Discrete input voltage	24...40 V
Input output isolation	Galvanic between power and control
Discrete input logic	Positive LI1, LI2, BOOST at State 0: $< 5$ V and $\leq 0.2$ mA at State 1: $> 13$ V, $\geq 0.5$ 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 (voltage limits: 6...30 V) open collector logic
Minimum switching current	10 mA at 6 V DC for relay outputs
Maximum switching current	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
Maximum switching voltage	440 V relay outputs
Display type	1 LED (green) for starter powered up 1 LED (yellow) for nominal voltage reached
Tightening torque	1.9...2.5 N.m 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 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	314 mm
Width	45 mm
Depth	170 mm
Product weight	0.49 kg
Motor power range AC-3	7...11 kW at 200...240 V 3 phases 15...25 kW at 380...440 V 3 phases
Motor starter type	Soft starter

## Environment

Electromagnetic compatibility	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 conforming to EN 50082-2 Harmonics conforming to IEC 1000-3-2 Harmonics 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 conforming to IEC 61000-4-11
Standards	EN/IEC 60947-4-2
Product certifications	UL CCC CSA C-Tick
IP degree of protection	IP20
Pollution degree	2 conforming to EN/IEC 60947-4-2
Vibration resistance	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
Shock resistance	15 gn for 11 ms conforming to EN/IEC 60068-2-27

Relative humidity	5...95 % without condensation or dripping water conforming to 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 conforming to EN/IEC 60947-4-2
Operating altitude	<= 1000 m without derating > 1000 m with current derating of 2.2 % per additional 100 m

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	576 g
Package 1 Height	5.5 cm
Package 1 width	15.2 cm
Package 1 Length	17.5 cm
Unit Type of Package 2	S03
Number of Units in Package 2	14
Package 2 Weight	8.41 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm

## Offer Sustainability

RECh Regulation	<a href="#">RECh Declaration</a>
RECh 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
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

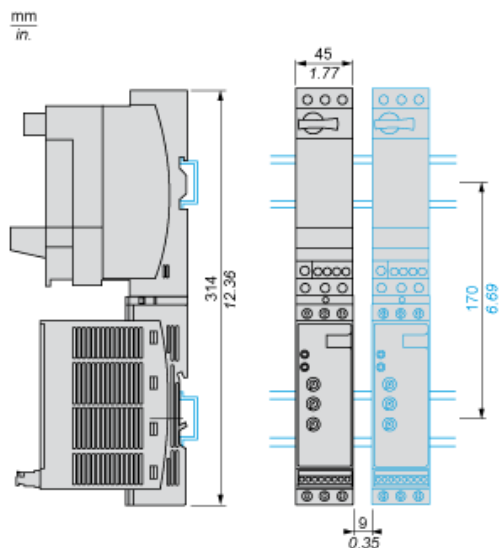
## Contractual warranty

Warranty	18 months
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Dimensions

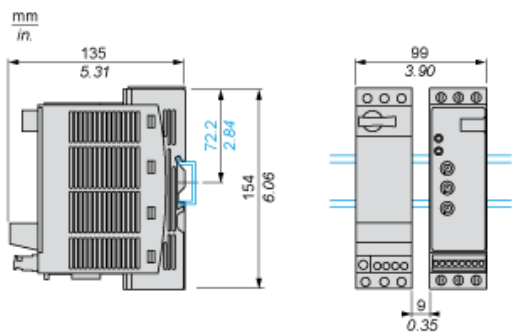
With TeSys U Combination (Non Reversing Power Base)

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

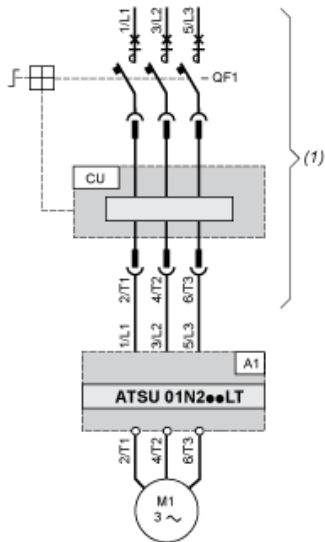


With TeSys U Combination (Non Reversing or Reversing Power Base)

Side by side mounting

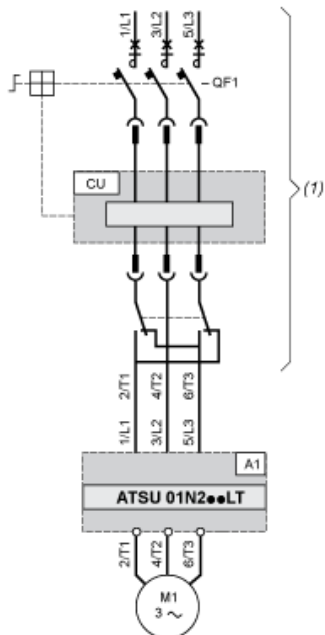


Power Wiring



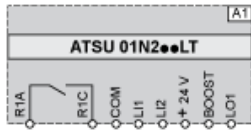
- (1) TeSys U  
A1 : Soft start/soft stop unit  
QF1 : TeSys U controller-starter  
CU : TeSys U control unit

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

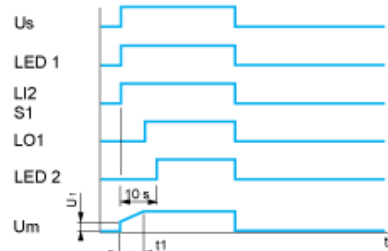
## Control Wiring



- A1 : Soft start/soft stop unit
- R1A, R1C : Relay output NO
- COM : Common
- LI1, LI2 : Logic inputs (stop and run functions)
- BOOST : Logic input (boost on start-up function)
- LO1 : Logic output

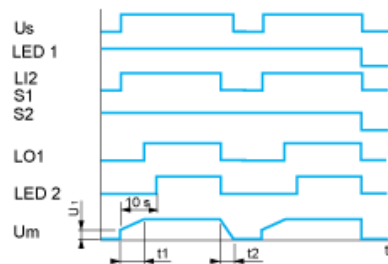
Functional Diagram Automatic 2-wire Control

Without Deceleration



- Us : Power supply voltage
- LED 1 : Green LED
- LI2 : Logic input
- S1 : Pushbutton
- 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 and without Deceleration



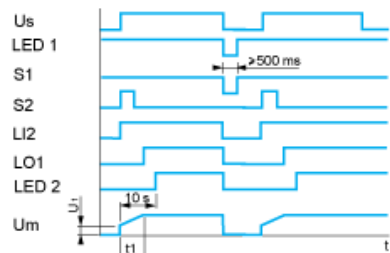
- Us : Power supply voltage
- LED 1 : Green LED
- LI2 : Logic input
- S1, S2 : Pushbuttons
- LO1 : Logic output
- LED 2 : Yellow LED
- Um : Motor voltage
- t1 : Acceleration time can be controlled by a potentiometer
- t2 : Deceleration time can be controlled by a potentiometer
- U1 : Starting time can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

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Functional Diagram Automatic 3-wire Control

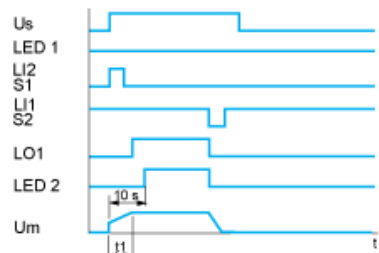
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Without Deceleration



- Us : Power supply voltage
- LED 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