

ATSU01N222LT

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



Main

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|------------------------------|---|
| 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 at 400 V 4 KW, 3 phases at 230 V 7.5 KW, 3 phases at 400 V 5.5 kW, 3 phases at 230 V |
| Motor power hp | 5 Hp, 3 phases at 230 V 7.5 Hp, 3 phases at 230 V 10 Hp, 3 phases at 460 V 15 hp, 3 phases at 460 V |
| IcL starter rating | 22 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 222.5 W in transient state |

Complementary

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|------------------------------|--|
| 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 at State 0: < 5 V and <= 0.2 mA at State 1: > 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 (voltage limits: 6...30 V) open collector logic |
| Minimum switching current | 10 mA at 6 V DC for relay outputs |

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| 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 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 |
| Net weight | 0.49 kg |
| Motor power range AC-3 | 4...6 kW at 200...240 V 3 phases 7...11 kW at 380...440 V 3 phases |
| Motor starter type | Soft starter |

Environment

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|---------------------------------------|--|
| 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 | C-Tick CSA UL CCC |
| 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) 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 > 1000 m with current derating of 2.2 % per additional 100 m |

Offer Sustainability

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|----------------------------|---|
| REACH Regulation | REACH Declaration |
| REACH free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

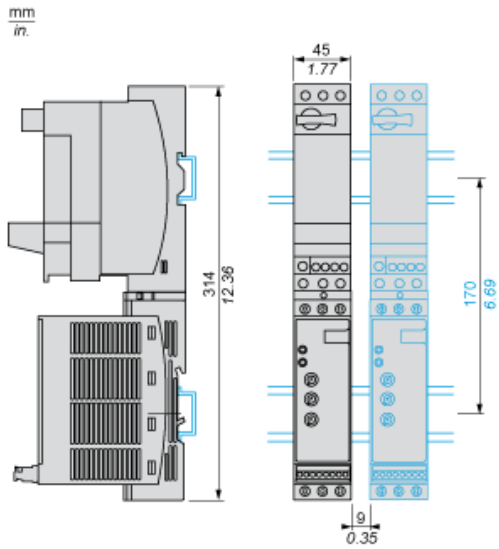
Contractual warranty

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| Warranty | 18 months |
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Dimensions

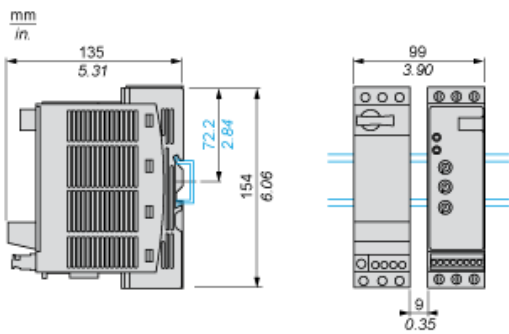
With TeSys U Combination (Non Reversing Power Base)

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

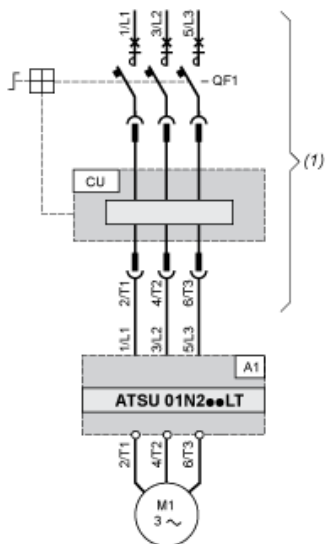


With TeSys U Combination (Non Reversing or Reversing Power Base)

Side by side mounting

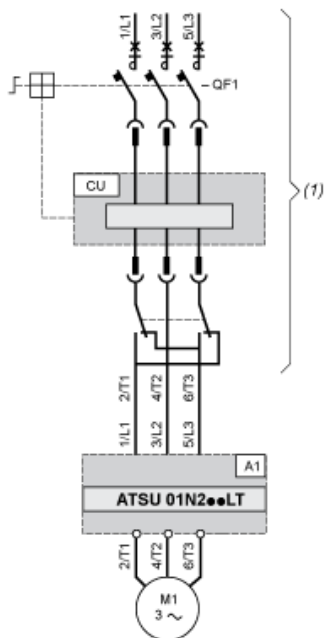


Power Wiring



- (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, Relay output NO

R1C :

COM Commun

LI1, Logic inputs (stop and run functions)

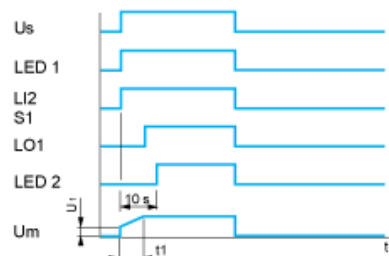
LI2 :

BOOST Logic input (boost on start-up function)

LO1 :Logic output

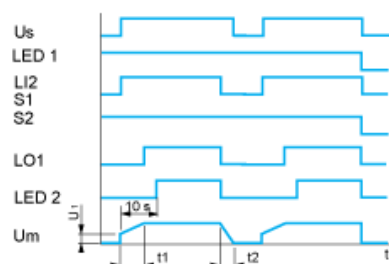
Functional Diagram Automatic 2-wire Control

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

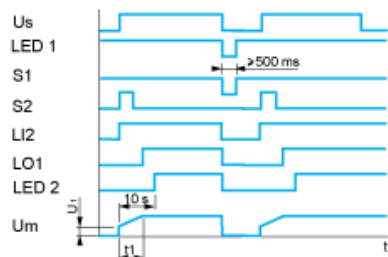
With and without Deceleration



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