

# Product datasheet

Specifications



soft starter for asynchronous motor,  
Altistart 01, ATS01, 9A, 380 to  
415V, 4kW

ATS01N209QN

## Main

Range of product	Altistart 01
Product or component type	Soft starter
Product destination	Asynchronous motors
Product specific application	Simple machine
Device short name	ATS01
Network number of phases	3 phases
[Us] rated supply voltage	380...415 V - 10...10 %
Motor power kW	4 kW, 3 phases at 380...415 V
IcL starter rating	9 A
Utilisation category	AC-53B conforming to EN/IEC 60947-4-2
Current consumption	45 A at nominal load
Type of start	Start with voltage ramp
Power dissipation in W	4 W at full load and at end of starting 94 W in transient state

## Complementary

Assembly style	With heat sink
Function available	Integrated bypass
Supply voltage limits	342...456 V
Supply frequency	50...60 Hz - 5...5 %
Network frequency	47.5...63 Hz
Output voltage	<= power supply voltage
[Uc] control circuit voltage	Built into the starter
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

<b>Discrete input logic</b>	Positive LI1, LI2, BOOST at State 0: < 5 V and <= 0.2 mA at State 1: > 13 V, >= 0.5 mA
<b>Discrete output current</b>	2 A DC-13 3 A AC-15
<b>Discrete output type</b>	Open collector logic LO1 end of starting signal Relay outputs R1A, R1C NO
<b>Discrete output voltage</b>	24 V (voltage limits: 6...30 V) open collector logic
<b>Minimum switching current</b>	10 mA at 6 V DC for relay outputs
<b>Maximum switching current</b>	Relay outputs: 2 A at 250 V AC cos phi = 0.5 and L/R = 20 ms inductive load Relay outputs: 2 A at 30 V DC cos phi = 0.5 and L/R = 20 ms inductive load
<b>Display type</b>	1 LED (green) for starter powered up 1 LED (yellow) for nominal voltage reached
<b>Tightening torque</b>	0.5 N.m 1.9...2.5 N.m
<b>Electrical connection</b>	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
<b>Marking</b>	CE
<b>Operating position</b>	Vertical +/- 10 degree
<b>Height</b>	124 mm
<b>Width</b>	45 mm
<b>Depth</b>	131 mm
<b>Net weight</b>	0.42 kg
<b>Compatibility code</b>	ATS01N2
<b>Motor power range AC-3</b>	4...6 kW at 380...440 V 3 phases
<b>Motor starter type</b>	Soft starter
<b>Environment</b>	
<b>Electromagnetic compatibility</b>	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 conducted interference caused by radio-electrical fields level 3 conforming to IEC 61000-4-6 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 Micro-cuts and voltage fluctuation conforming to IEC 61000-4-11 Voltage/current impulse level 3 conforming to IEC 61000-4-5
<b>Standards</b>	EN/IEC 60947-4-2
<b>Product certifications</b>	GOST B44.1-96/ASME A17.5 for starter wired to the motor delta terminal CCC CSA C-Tick UL
<b>IP degree of protection</b>	IP20
<b>Pollution degree</b>	2 conforming to EN/IEC 60947-4-2
<b>Vibration resistance</b>	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
<b>Shock resistance</b>	15 gn for 11 ms conforming to EN/IEC 60068-2-27
<b>Relative humidity</b>	5...95 % without condensation or dripping water conforming to EN/IEC 60068-2-3

<b>Ambient air temperature for operation</b>	-10...40 °C (without derating) 40...50 °C (with current derating of 2 % per °C)
<b>Ambient air temperature for storage</b>	-25...70 °C conforming to EN/IEC 60947-4-2
<b>Operating altitude</b>	<= 1000 m without derating > 1000 m with current derating of 2.2 % per additional 100 m

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	5.300 cm
<b>Package 1 Width</b>	15.200 cm
<b>Package 1 Length</b>	17.300 cm
<b>Package 1 Weight</b>	535.000 g
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	14
<b>Package 2 Height</b>	30 cm
<b>Package 2 Width</b>	30 cm
<b>Package 2 Length</b>	40 cm
<b>Package 2 Weight</b>	8.053 kg
<b>Unit Type of Package 3</b>	P06
<b>Number of Units in Package 3</b>	112
<b>Package 3 Height</b>	75.000 cm
<b>Package 3 Width</b>	60.000 cm
<b>Package 3 Length</b>	80.000 cm
<b>Package 3 Weight</b>	74.124 kg

## Offer Sustainability

<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>REACH free of SVHC</b>	Yes
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Toxic heavy metal free</b>	Yes
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

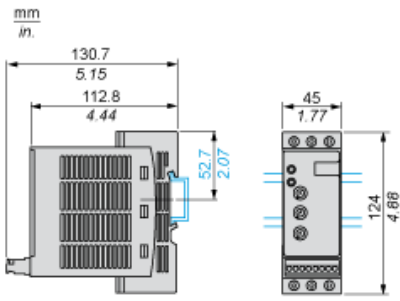
## Contractual warranty

<b>Warranty</b>	18 months
-----------------	-----------

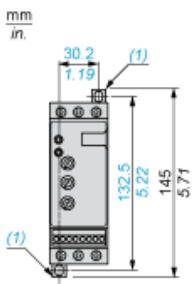
**Dimensions**

---

**Mounting on Symetrical (35 mm) Rail**



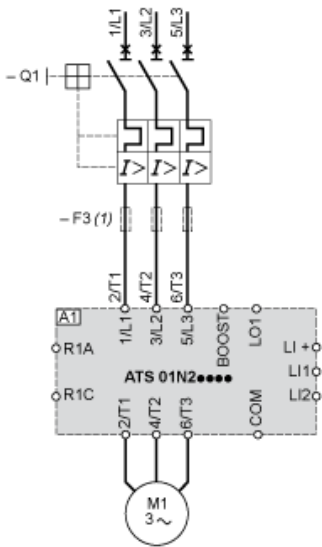
**Screw Fixing**



(1) Retractable fixings

**Example of Manual Control**

---

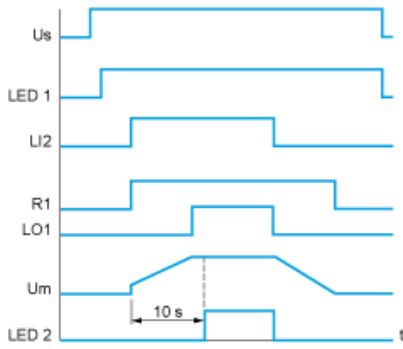


- A1 : Soft start/soft stop unit
- (1) For type 2 coordination
- Q1 : Motor circuit-breaker
- F3 : 3 fast-acting fuses

**Function Diagram**

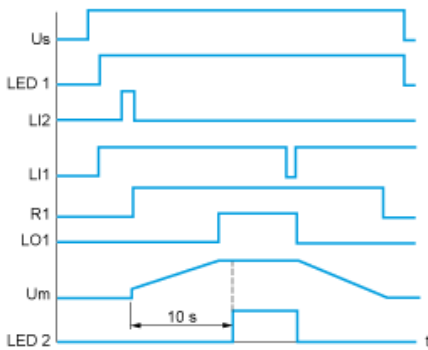
---

**2-wire Control with Deceleration**



- Us :** Power supply voltage
- LED 1 :** Green LED
- LI2 :** Logic input
- R1 :** Relay output
- LO1 :** Logic output
- LED 2 :** Yellow LED

**3-wire Control with Deceleration**



- Us :** Power supply voltage
- LED 1 :** Green LED
- LI2, LI1 :** Logic inputs
- R1 :** Relay output
- LO1 :** Logic output
- Um :** Motor voltage
- LED 2 :** Yellow LED

**Recommended replacement(s)**