

# Product data sheet

## Characteristics

# ATS01N209RT

## soft starter for asynchronous motor - ATS01 - 9 A - 460..480 V



### 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	460...480 V - 10...10 %
Motor power hp	5 hp, 3 phases at 460...480 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	414...528 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
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
Maximum switching current	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
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	124 mm
Width	45 mm
Depth	131 mm
Net weight	0.42 kg
Compatibility code	ATS01N2

## 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 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
Standards	EN/IEC 60947-4-2
Product certifications	CCC B44.1-96/ASME A17.5 for starter wired to the motor delta terminal GOST CSA UL 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	534 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	8.048 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm

### Offer Sustainability

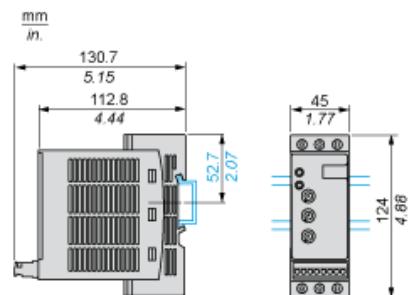
REACH Regulation	<input checked="" type="checkbox"/> <a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <input checked="" type="checkbox"/> <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	<input checked="" type="checkbox"/> Yes
China RoHS Regulation	<input checked="" type="checkbox"/> <a href="#">China RoHS Declaration</a>
Circularity Profile	<input checked="" type="checkbox"/> <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

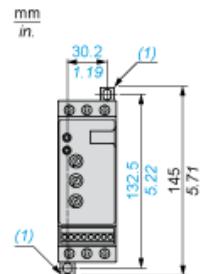
Warranty	18 months
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## Dimensions

### Mounting on Symetrical (35 mm) Rail

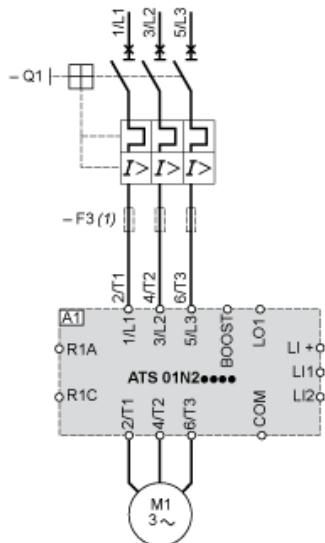


### Screw Fixing



(1) Retractable fixings

## Example of Manual Control



#### A1 : Soft start/soft stop unit

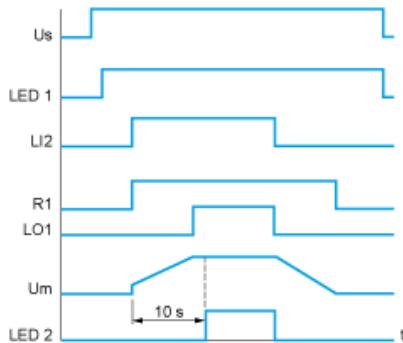
(1) For type 2 coordination

Q1 : Motor circuit-breaker

F3 : 3 fast-acting fuses

### Function Diagram

#### 2-wire Control with Deceleration



Us : Power supply voltage

LED Green LED

1 :

LI2 : Logic input

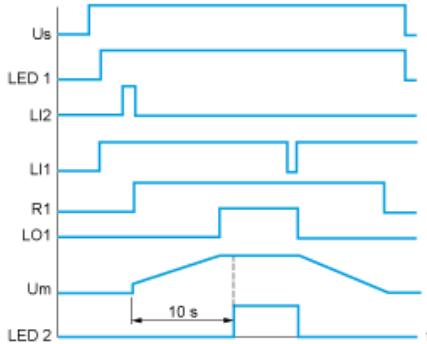
R1 : Relay output

LO1 :Logic output

LED Yellow LED

2 :

#### 3-wire Control with Deceleration



Us : Power supply voltage

LED Green LED

1 :

LI2, Logic inputs

LI1 :

R1 : Relay output

LO1 :Logic output

Um : Motor voltage

LED Yellow LED

2 :