



Main

Range of product	Altistart 01
Product or component type	Soft starter
Product destination	Asynchronous motors
Product specific application	Simple machine
Component name	ATS01
Network number of phases	3 phases
Power supply voltage	460...480 V (- 10...10 %)
Motor power hp	20 hp at 460...480 V 3 phases
Icl nominal current	32 A
Utilisation category	AC-53B conforming to EN/IEC 60947-4-2
Current at nominal load	160 A at nominal load
Type of start	Start with voltage ramp
Power dissipation in W	4.5 W at full load and at end of starting 324.5 W in transient state

Complementary

Assembly style	With heat sink
Function available	Integrated bypass
Power supply voltage limits	414...528 V
Power supply frequency	50...60 Hz (- 5...5 %)
Power supply frequency limits	47.5...63 Hz
Output voltage	<= power supply voltage
Control circuit voltage	Built into the starter
Starting time	Adjustable from 1 to 10 s 5 s / 10 start(s) per hour 10 s / 5 start(s) per hour 1 s / 50 start(s) per hour
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	(LI1, LI2, BOOST) stop, run and boost on start-up functions logic <= 8 mA 27 kOhm
Discrete input voltage	24...40 V
Discrete input logic	(LI1, LI2, BOOST) positive state 0 < 5 V and < 0.2 mA, state 1 > 13 V and > 0.5 mA
Discrete output current	3 A AC-15 2 A DC-13
Discrete output type	(R1A, R1C) relay outputs NO (LO1) open collector logic end of starting signal
Discrete output voltage	24 V (6...30 V) open collector logic
Minimum switching current	Relay outputs 10 mA 6 V DC
Maximum switching current	Relay outputs 2 A 30 V DC inductive load, cos phi = 0.5 L/R = 20 ms Relay outputs 2 A 250 V AC inductive load, cos phi = 0.5 L/R = 20 ms
Display type	1 LED (yellow) for nominal voltage reached 1 LED (green) for starter powered up
Tightening torque	0.5 N.m 1.9...2.5 N.m

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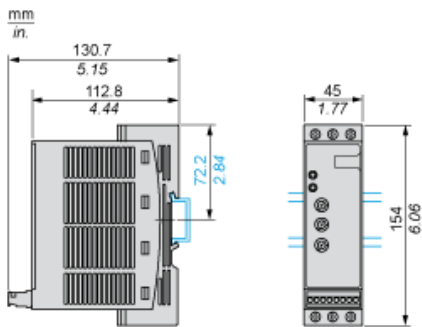
Electrical connection	<p>2 conductor(s) flexible cable without cable end, connection via screw connector 0.5...1.5 mm² / AWG 16 for control circuit</p> <p>2 conductor(s) flexible cable without cable end, connection via 4 mm screw clamp terminal 1.5...6 mm² / AWG 10 for power circuit</p> <p>2 conductor(s) flexible cable with cable end, connection via 4 mm screw clamp terminal 1...6 mm² / AWG 10 for power circuit</p> <p>1 conductor(s) flexible cable without cable end, connection via screw connector 0.5...2.5 mm² / AWG 14 for control circuit</p> <p>1 conductor(s) flexible cable without cable end, connection via 4 mm screw clamp terminal 1.5...10 mm² / AWG 8 for power circuit</p> <p>1 conductor(s) flexible cable with cable end, connection via screw connector 0.5...1.5 mm² / AWG 16 for control circuit</p> <p>2 conductor(s) rigid cable, connection via screw connector 0.5...1 mm² / AWG 17 for control circuit</p> <p>2 conductor(s) rigid cable, connection via 4 mm screw clamp terminal 1...6 mm² / AWG 10 for power circuit</p> <p>1 conductor(s) rigid cable, connection via screw connector 0.5...2.5 mm² / AWG 14 for control circuit</p> <p>1 conductor(s) rigid cable, connection via 4 mm screw clamp terminal 1...10 mm² / AWG 8 for power circuit</p>
Marking	CE
Operating position	Vertical +/- 10 degree
Height	154 mm
Width	45 mm
Depth	131 mm
Product weight	0.56 kg

Environment

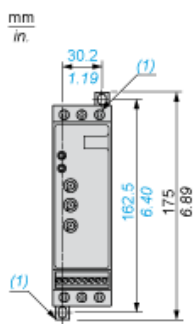
Electromagnetic compatibility	<p>Voltage/Current impulse conforming to IEC 61000-4-5 level 3</p> <p>Micro-cuts and voltage fluctuation conforming to IEC 61000-4-11</p> <p>Immunity to radiated radio-electrical interference conforming to IEC 61000-4-3 level 3</p> <p>Immunity to electrical transients conforming to IEC 61000-4-4 level 4</p> <p>Immunity to conducted interference caused by radio-electrical fields conforming to IEC 61000-4-6 level 3</p> <p>Harmonics conforming to IEC 1000-3-4</p> <p>Harmonics conforming to IEC 1000-3-2</p> <p>EMC immunity conforming to EN 50082-2</p> <p>EMC immunity conforming to EN 50082-1</p> <p>Electrostatic discharge conforming to IEC 61000-4-2 level 3</p> <p>Damped oscillating waves conforming to IEC 61000-4-12 level 3</p> <p>Conducted and radiated emissions conforming to IEC 60947-4-2 level B</p> <p>Conducted and radiated emissions conforming to CISPR 11 level B</p>
Standards	EN/IEC 60947-4-2
Product certifications	<p>B44.1-96/ASME A17.5 for starter wired to the motor delta terminal</p> <p>CCC</p> <p>CSA</p> <p>C-Tick</p> <p>GOST</p> <p>UL</p>
IP degree of protection	IP20
Pollution degree	2 conforming to EN/IEC 60947-4-2
Vibration resistance	<p>1.5 mm peak to peak (f = 3...13 Hz) conforming to EN/IEC 60068-2-6</p> <p>1 gn (f = 13...150 Hz) conforming to EN/IEC 60068-2-6</p>
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	<p>40...50 °C with current derating of 2 % per °C</p> <p>-10...40 °C without derating</p>
Ambient air temperature for storage	-25...70 °C conforming to EN/IEC 60947-4-2
Operating altitude	<p>> 1000 m with current derating of 2.2 % per additional 100 m</p> <p><= 1000 m without derating</p>

Dimensions

Mounting on Symetrical (35 mm) Rail

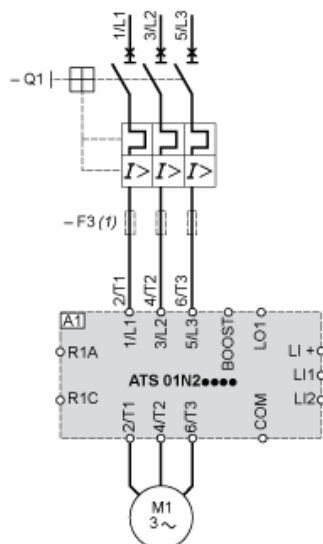


Screw Fixing



(1) Retractable fixings

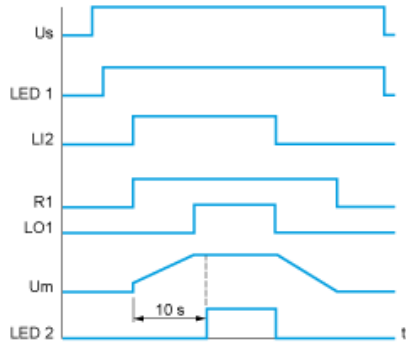
Example of Manual Control



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

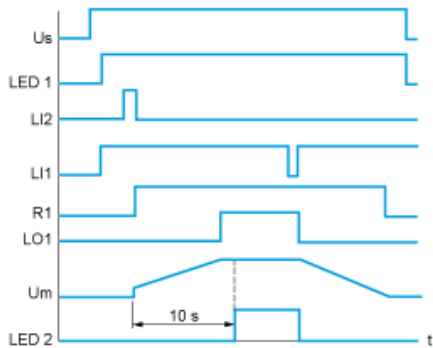
Function Diagram

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 :