

# Soft Starters **Altistart 01** The *starting* solution...

Catalogue  
August

# 04



For single-phase and 3-phase asynchronous motors  
from 0.5 to 75 HP / 3 to 85 A.

a brand of  
**Schneider**  
Electric

 **Telemecanique**

# 1 - Alistart 03 soft starters for asynchronous motors

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- Overview ..... *pages 1/2 and 1/3*
- Characteristics ..... *pages 1/4 and 1/5*
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- Combinations ..... *pages 1/16 and 1/17*



# Soft starters for asynchronous motors

## Altistart 01 Functions

### Description (continued)

#### Equivalence table for contact reference

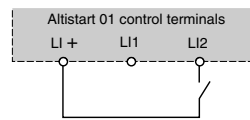
| Functions                   | ATS 01N2●●LU/QN/RT           | ATS 01N2●●LY            | ATS 01N2●●Q             |
|-----------------------------|------------------------------|-------------------------|-------------------------|
| Relay outputs               | R1A                          | 04                      | 04                      |
|                             | R1C                          | 05                      | 05                      |
| 0 V external power supply   | C0M                          | –                       | –                       |
| Stop command                | LI1                          | 02                      | 02                      |
| Run command                 | LI2                          | 03                      | 03                      |
| Control power supply        | LI + (+ 24 V positive logic) | 01 (0 V negative logic) | 01 (0 V negative logic) |
| BOOST                       | BOOST                        | –                       | –                       |
| End of starting             | LO1                          | –                       | –                       |
| 115 V external power supply | –                            | 06                      | –                       |
|                             | –                            | 07                      | –                       |

### Functions

#### ■ 2-wire control

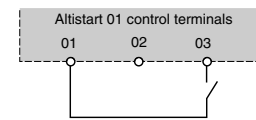
The run and stop commands are controlled by a single logic input. State 1 of logic input LI2 controls the run process and state 0 controls the stop process.

##### ATS 01N2●●LU/QN/RT



Wiring diagram for 2-wire control

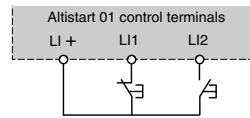
##### ATS 01N2●●LY/Q



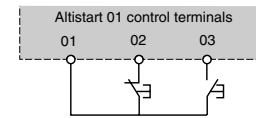
Wiring diagram for 2-wire control

#### ■ 3-wire control

The run and stop commands are controlled by 2 different logic inputs. Stopping is achieved when logic input LI1 opens (state 0). The pulse on input LI2 is stored until input LI1 opens.



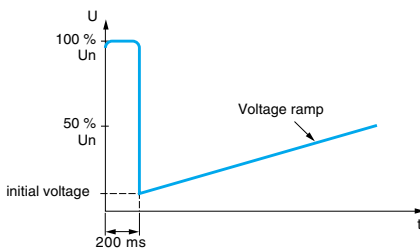
Wiring diagram for 3-wire control



Wiring diagram for 3-wire control

#### ■ Starting time

Controlling the starting time means that the time of the voltage ramp applied to the motor can be adjusted and a gradual starting time achieved, which is dependent on the motor load.



Application of a voltage BOOST equal to 100% of the nominal motor voltage

#### ■ Voltage BOOST function via logic input

Activating the BOOST logic input enables the function for supplying a starting overtorque capable of overcoming any mechanical friction.

#### ■ When the input is at state 1, the function is active (input connected to the + 24 V) and the starter supplies a fixed voltage to the motor for a limited time before starting.

#### ■ End of starting

##### □ Application function via logic output LO1

Soft start/soft stop units ATS 01N206●● to ATS 01N232●● are equipped with an open collector logic output LO, which indicates the end of starting when the motor has reached nominal speed.

##### □ Application function via an option

For ATS01N2●●LY/Q soft start/soft stop units end of starting information can be obtained by adding the option LAD 8N11 with N/O+N/C contacts.

The option can be easily connected to the bypass contactor of the electronic(s) unit without dismantling the product.

#### ■ Fault relay

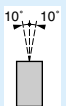
Soft start/soft stop units ATS 01N206●● to ATS 01N232●● have a relay which opens when a fault is detected.

Relay contact R1A-R1C (04-05 for ATS 01N2●●LY/Q) closes with the LI2 command (02-03 for ATS 01N2●●LY/Q) and opens when the motor voltage is around 0 with a decelerated stop or stop immediately on a fault.

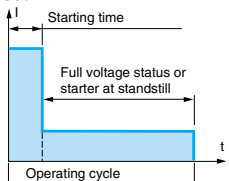
This information can be used for controlling the line contactor and achieving deceleration (by maintaining the line contactor until the motor has stopped).

# Soft starters for asynchronous motors

## Altistart 01

| Environment  |           |   |  |
|--|-----------|---|--|
| Type of starter  |           | ATS 01N1●●FT, ATS 01N2●●LU,<br>ATS 01N2●●QN, ATS 01N2●●RT   | ATS 01N2●●LY and ATS 01N2●●Q   |
| Conformity to standards  |           | Altistart 01 electronic starters have been developed to conform to the strictest international standards and the recommendations relating to electrical industrial control devices (IEC, EN), in particular standard IEC/EN 60947-4-2 |  |
| Electromagnetic compatibility EMC  |           |   |  |
| Conducted and radiated emissions   |           | CISPR 11 level B, IEC 60947-4-2, level B  | CISPR 11 level B (only with Bypass), IEC 60947-4-2, level B                            |
| Harmonics  |           | IEC 1000-3-2, IEC 1000-3-4  |  |
| EMC immunity   |           | EN 50082-2, EN 50082-1  |  |
| Electrostatic discharge  |           | IEC 61000-4-2 level 3   |  |
| Immunity to radiated radio-electrical interference                           |           | IEC 61000-4-3 level 3   |  |
| Immunity to electrical transients  |           | IEC 61000-4-4 level 4   |  |
| Voltage/current impulse  |           | IEC 61000-4-5 level 3   |  |
| Immunity to conducted interference caused by radio-electrical fields         |           | IEC 61000-4-6 level 3   |  |
| Micro-cuts and voltage fluctuation   |           | IEC 61000-4-11  |  |
| Damped oscillating waves   |           | IEC 61000-4-12 level 3  |  |
| CE marking   |           | The starters bear CE marking in accordance with the European low voltage directives IEC/EN 60947-4-2  |  |
| Product certification  |           | UL, CSA and C-Tick<br>B44.1-96/ASME A17.5 for starter wired to the motor delta terminal   |  |
| Degree of protection   |           | IP 20   | IP 20 on front panel   |
| Degree of pollution  |           | 2 conforming to IEC/EN 60947-4-2  | 3 conforming to IEC 60664-1 and UL 508   |
| Vibration resistance   |           | 1.5 mm peak to peak from 3 to 13 Hz,<br>1 gn from 13 to 150 Hz conforming to IEC/EN 60068-2-6   | 2 gn   |
| Shock resistance   |           | 15 gn for 11 ms conforming to IEC/EN 60068-2-27   | 8 gn for 11 ms conforming to IEC/EN 60068-2-27   |
| Relative humidity  |           | 5...95% without condensation or dripping water, conforming to IEC/EN 60068-2-3  |  |
| Ambient air temperature around the device                                    | Storage   | °C  | - 25...+ 70 conforming to IEC/EN 60947-4-2   |
|  | Operation | °C  | - 10...+ 40 without derating, up to 50°C with current derating of 2% per °C above 40°C |
| Maximum operating altitude   | m         |   | 1000 without derating (above this, derate the current by 2.2% per additional 100 m)    |
| Operating position   |           |   |  |
| Maximum permanent angle in relation to the normal vertical mounting position |           |   |     |

| Electrical characteristics        |                           |                      |  |                        |                        |                        |                        |                        |  |
|-----------------------------------|---------------------------|----------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|--|
| Type of starter                   | ATS                       | 01N1●●FT             | 01N2●●LU   | 01N2●●QN               | 01N2●●RT               | 01N2●●LY               | 01N2●●Q                |                        |  |
| Category of use                   | Conforms to IEC 60947-4-2 | Ac-53b               |  |                        |                        |                        |                        |                        |  |
| Rated operating voltage           | Three-phase voltage       | V                    | 200 - 15% to 480 + 10%   | 200 - 15% to 240 + 10% | 380 - 15% to 415 + 10% | 440 - 15% to 480 + 10% | 230 - 15% to 690 + 10% | 400 -15...+ 10%        |  |
| Frequency                         |                           | Hz                   | 50 - 5% to 60 + 5%   |                        |                        |                        |                        |                        |  |
| Output voltage                    |                           |                      | Maximum 3-phase voltage equal to line supply voltage.                      |                        |                        |                        |                        |                        |  |
| Control power supply voltage      |                           | V                    | ~ 110...220 ± 10%<br>~ 24 ± 10%  | Built into the starter |                        |                        | ~ 110 ± 10%            | Built into the starter |  |
| Rated operating current           |                           | A                    | 3...12   | 6...32                 |                        |                        | 32...85                |                        |  |
| Adjustable starting time          |                           | s                    | 1...5  | 1...10                 |                        |                        | 1...25                 |                        |  |
| Adjustable deceleration time      |                           | s                    | -  | 1...10                 |                        |                        | 1...25                 |                        |  |
| Starting torque                   |                           | %                    | 30...80% of starting torque of motor connected directly on the line supply |                        |                        |                        |                        |                        |  |
| Type of starter                   | ATS                       | 01N206●● to 01N222●● | 01N232●●   | 01N2●●LY/01N2●●Q       |                        |                        |                        |                        |  |
| Use                               |                           |                      |  |                        |                        |                        |                        |                        |  |
| Starting time                     | s                         | 1                    | 5  | 1                      | 5                      | 1                      | 12                     |                        |  |
| Maximum number of cycles per hour |                           | 310                  | 20   | 180                    | 10                     | 360                    | 30                     |                        |  |



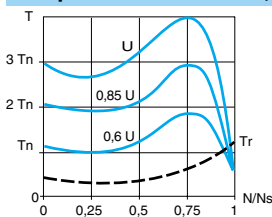
# Soft starters for asynchronous motors Altistart 01

| Electrical characteristics (continued)   |                                 |   |   |            |   |  |            |
|--|---------------------------------|---|---|------------|---|--|------------|
| Type of starter  | ATS 01N1                        |   | 03FT  | 06FT       | 09FT/12FT   |  |            |
| Control power supply consumption   |                                 |   | ≈ 24 V, 25 mA,<br>≈ 110 V, 30 mA<br>≈ 240 V, 65 mA  |            | ≈ 24 V, 30 mA,<br>≈ 110 V, 35 mA,<br>≈ 240 V, 80 mA |  |            |
| Power dissipated   | At full load at end of starting | W | 4   | 1          | 1   | 1  |            |
|  | In transient state              | W | 19  | 31         | 46  | 61   |            |
| Starting current at nominal load (1)   |                                 | A | 15  | 30         | 45  | 60   |            |
| Type of starter  | ATS 01N2                        |   | 06LU/QN/RT  | 09LU/QN/RT | 12LU/QN/RT  | 22LU/QN/RT   | 32LU/QN/RT |
| Power dissipated   | At full load at end of starting | W | 4   | 4          | 4   | 4.5  | 4.5        |
|  | In transient state              | W | 64  | 94         | 124   | 224.5  | 324.5      |
| Starting current at nominal load (1)   |                                 | A | 30  | 45         | 60  | 110  | 160        |
| Type of starter  | ATS 01N2                        |   | 30LY/Q  | 44LY/Q     | 72LY/Q  | 85LY/Q   |            |
| Power dissipated   | At full load at end of starting | W | 22  | 22         | 23  | 23   |            |
|  | In transient state              | W | 184   | 268        | 436   | 514  |            |
| Starting current at nominal load (1)   |                                 | A | 90  | 132        | 216   | 255  |            |
| Type of starter  | ATS 01N2                        |   | ●●LU/QN/RT  |            |   | ●●LY/Q   |            |
| Logic input power supply:<br>(electrically isolated between power and control)<br>LI +, COM                  |                                 |   | 24 V power supply<br>Max. current available 10 mA.<br>No short-circuit and overload protection  |            |   | -  |            |
| Logic inputs<br>LI1, LI2, BOOST (01, 02, 03 for ATS 01N2●●LY/Q)<br>Stop, run and boost on start-up functions |                                 |   | Logic inputs with impedance 27 kohms<br>24 V power supply (U max. 40 V)<br>Max. current consumption 8 mA<br>State 0 if U < 5 V and I < 0.2 mA<br>State 1 if U > 13 V and I > 0.5 mA   |            |   | Input with internal control relay,<br>internal 24 V power supply<br>Max. current 8 mA<br>State 0 if I < = 3 mA<br>State 1 if I > = 10 mA                             |            |
| Logic output LO1<br>End of starting signal   |                                 |   | Open collector logic output<br>External 24 V power supply (min. 6 V, max. 30 V)<br>Max. current 200 mA  |            |   | -  |            |
| Relay outputs<br>R1A R1C (04, 05 for ATS 01N2●●LY/Q)   |                                 |   | Normally open (N/O) contact (contact open in fault mode)<br>Minimum switching capacity: 10 mA for --- 6 V<br>Max. switching capacity on inductive load<br>(cos φ = 0.5 and L/R = 20 ms): 2 A for ~ 250 V or<br>--- 30 V (AC-15)<br>Max. operating voltage 440 V |            |   | Operating category<br>AC-15: Ie 3 A, Ue 250 V,<br>DC-13: Ie 2 A, Ue 24 V,<br>Minimum switching capacity:<br>10 mA for --- 17 V<br>Maximum operating voltage<br>250 V |            |
| LED signalling   | green LED                       |   | Starter powered up  |            |   |  |            |
|  | yellow LED                      |   | Nominal voltage reached   |            |   |  |            |

(1) Acceleration current complying with the maximum conditions of use (see page 60541/2).

| Connections (Maximum connection capacity and tightening torque) |              |                 |                     |   |  |  |
|---|--------------|-----------------|---------------------|---|--|--|
| Type of starter   | ATS          |                 | 01N103FT, 01N106FT  | 01N109FT, 01N112FT,<br>01N206●● to 01N232●● | 01N2●●LY and<br>01N2●●Q                  |  |
| Power circuit   |              |                 | Cage type connector | Connection via Ø 4mm screw clamp            |  |  |
| Flexible wire without cable end                                 | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 1.5...10 8 AWG                              | 6...25                                   |  |
|   | 2 conductors | mm <sup>2</sup> | 1 17 AWG            | 1.5...6 10 AWG                              | 6...25                                   |  |
| Flexible wire with cable end                                    | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 1...6 10 AWG                                | 4...25                                   |  |
|   | 2 conductors | mm <sup>2</sup> | 0.75 18 AWG         | 1...6 10 AWG                                | 4...16                                   |  |
| Rigid wire  | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 1...10 8 AWG                                | 6...35                                   |  |
|   | 2 conductors | mm <sup>2</sup> | 1 17 AWG            | 1...6 10 AWG                                | 6...25                                   |  |
| Tightening torque   |              | N.m             | 0.8                 | 1.9...2.5                                   | 5  |  |
| Control circuit   |              |                 | Cage type connector | Screw connector                             |  |  |
| Flexible wire without cable end                                 | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 0.5...2.5 14 AWG                            | 0.75...1.5                               |  |
|   | 2 conductors | mm <sup>2</sup> | 1 17 AWG            | 0.5...1.5 16 AWG                            | 0.75...1.5                               |  |
| Flexible wire with cable end                                    | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 0.5...1.5 16 AWG                            | 0.75...1.5                               |  |
|   | 2 conductors | mm <sup>2</sup> | 0.75 18 AWG         | 0.5...1.5 16 AWG                            | 0.75...1.5                               |  |
| Rigid wire  | 1 conductor  | mm <sup>2</sup> | 2.5 14 AWG          | 0.5...2.5 14 AWG                            | 0.75...1.5                               |  |
|   | 2 conductors | mm <sup>2</sup> | 1 17 AWG            | 0.5...1 17 AWG                              | 0.75...1.5                               |  |
| Earth connection  |              |                 | -                   | -   | Tinned connector. Fixed using 6 Ø screws |  |
| Tightening torque   |              | N.m             | 0.8                 | 0.5   | 0.7                                      |  |

### Torque characteristics (typical curves)



The diagram opposite shows the torque/speed characteristic of a cage motor in relation to the supply voltage.  
The torque varies in line with the square of the voltage at a fixed frequency.  
The gradual increase in the voltage prevents the instantaneous current peak on power-up.

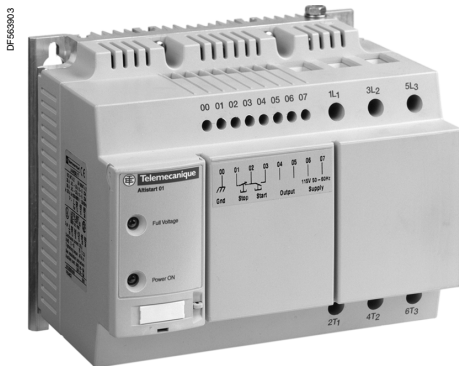
# Soft starters for asynchronous motors Altistart 01



ATS 01N103FT



ATS 01N212QN



ATS 01N230LY

| Soft starter for 0.5 to 7.5 HP motor  |       |         |       |       |       |                 |              |        |
|---|-------|---------|-------|-------|-------|-----------------|--------------|--------|
| Motor   |       |         |       |       |       | Starter         |              |        |
| Motor power (1)   |       | 3-phase |       |       |       | Nominal current | Part number  | Weight |
| 110 V   | 240 V | 230 V   | 230 V | 400 V | 460 V |                 |              |        |
| HP  | HP    | kW      | HP    | kW    | HP    | A               | kg           |        |
| <b>Single phase 110...230 V or 3-phase 200...480 V supply voltage, 50/60 Hz</b> |       |         |       |       |       |                 |              |        |
| 0.16  | 0.5   | 0.37    | 0.5   | 1.1   | 0.5   | 3               | ATS 01N103FT | 0.160  |
|   |       | 0.55    | -     | -     | 1.5   |                 |              |        |
| 0.25  | 1     | 0.75    | 1     | 2.2   | 2     | 6               | ATS 01N106FT | 0.160  |
|   |       | 1.1     | 1.5   | -     | 3     |                 |              |        |
| 0.33  | 1.5   | 1.5     | 2     | 4     | 5     | 9               | ATS 01N109FT | 0.280  |
| 0.5   | 2     | 2.2     | 3     | 5.5   | 7.5   | 12              | ATS 01N112FT | 0.280  |

| Soft start/soft stop unit for 1 to 20 HP motor      |       |  |                 |              |        |
|---|-------|--|-----------------|--------------|--------|
| Motor   |       |  | Starter         |              |        |
| Motor power (1)                                     |       |  | Nominal current | Part number  | Weight |
| kW  | HP    |  | A               |              | kg     |
| <b>3-phase supply voltage: 200...240 V 50/60 Hz</b> |       |  |                 |              |        |
| 0.75/1.1  | 1/1.5 |  | 6               | ATS 01N206LU | 0.420  |
| 1.5   | 2     |  | 9               | ATS 01N209LU | 0.420  |
| 2.2/3   | 3/-   |  | 12              | ATS 01N212LU | 0.420  |
| 4/5.5   | 5/7.5 |  | 22              | ATS 01N222LU | 0.560  |
| 7.5   | 10    |  | 32              | ATS 01N232LU | 0.560  |
| <b>3-phase supply voltage: 380...415 V 50/60 Hz</b> |       |  |                 |              |        |
| 1.5/2.2   | -     |  | 6               | ATS 01N206QN | 0.420  |
| 3/4   | -     |  | 9               | ATS 01N209QN | 0.420  |
| 5.5   | -     |  | 12              | ATS 01N212QN | 0.420  |
| 7.5/11  | -     |  | 22              | ATS 01N222QN | 0.560  |
| 15  | -     |  | 32              | ATS 01N232QN | 0.560  |
| <b>3-phase supply voltage: 440...480 V 50/60 Hz</b> |       |  |                 |              |        |
| -   | 2/3   |  | 6               | ATS 01N206RT | 0.420  |
| -   | 5     |  | 9               | ATS 01N209RT | 0.420  |
| -   | 7.5   |  | 12              | ATS 01N212RT | 0.420  |
| -   | 10/15 |  | 22              | ATS 01N222RT | 0.560  |
| -   | 20    |  | 32              | ATS 01N232RT | 0.560  |

| Soft start/soft stop unit for 7.5 to 75 HP motor |       |         |       |       |       |                 |             |              |       |
|--|-------|---------|-------|-------|-------|-----------------|-------------|--------------|-------|
| 3-phase supply voltage: 230...690 V 50/60 Hz     |       |         |       |       |       |                 |             |              |       |
| Motor  |       |         |       |       |       | Starter         |             |              |       |
| Motor power (1)                                  |       | 3-phase |       |       |       | Nominal current | Part number | Weight       |       |
| 230 V  | 230 V | 400 V   | 400 V | 460 V | 575 V | 690 V           |             |              |       |
| kW   | HP    | kW      | HP    | HP    | HP    | kW              | A           | kg           |       |
| 7.5  | 10    | 15      | 15    | 20    | 30    | 30              | 32          | ATS 01N230LY | 2.400 |
| 11   | 15    | 22      | 25    | 30    | 40    | 37              | 44          | ATS 01N244LY | 2.400 |
| 18.5   | 25    | 37      | 40    | 50    | 60    | 55              | 72          | ATS 01N272LY | 3.800 |
| 22   | 30    | 45      | 50    | 60    | 75    | 75              | 85          | ATS 01N285LY | 3.800 |
| <b>3-phase supply voltage: 400 V 50/60 Hz</b>    |       |         |       |       |       |                 |             |              |       |
| Motor  |       |         |       |       |       | Starter         |             |              |       |
| Motor power (1)                                  |       | 3-phase |       |       |       | Nominal current | Part number | Weight       |       |
| kW   | HP    |         |       |       |       | A               |             | kg           |       |
| 22   | 25    |         |       |       |       | 44              | ATS 01N244Q | 2.400        |       |
| 37   | 40    |         |       |       |       | 72              | ATS 01N272Q | 3.800        |       |
| 45   | 50    |         |       |       |       | 85              | ATS 01N285Q | 3.800        |       |



| Accessories   |                             |             |           |
|---|-----------------------------|-------------|-----------|
| Description   | Used for starter            | Part number | Weight kg |
| Plate for quick mounting on DIN rail                                      | ATS 01N230LY, ATS 01N244●   | VY1 H4101   | -         |
| Adaptor for mounting on □ DZ5 MB rail                                     | ATS 01N103FT, ATS 01N106FT  | RHZ 66      | 0.005     |
| Auxiliary contact, provides information that the motor is at full voltage | ATS 01N2●●●LY, ATS 01N2●●●Q | LAD 8N11    | -         |

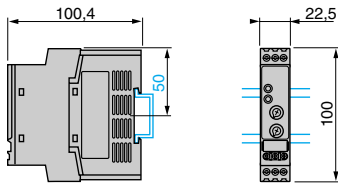
(1) Standard power ratings of motors, HP power ratings indicated according to standard UL 508.

## Dimensions


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### ATS 01N103FT, ATS 01N106FT

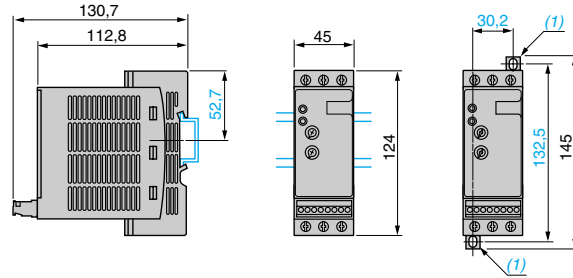
Mounting on  (35 mm) rail or  
 rail with adaptor RHZ 66




### ATS 01N109FT, ATS 01N112FT

Mounting on  (35 mm) rail

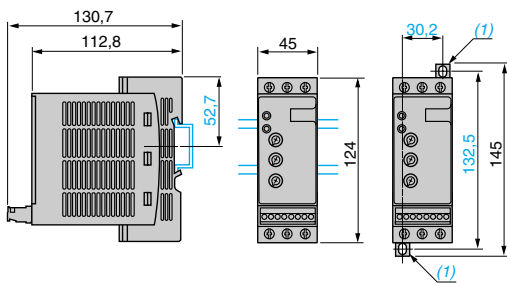
Screw fixing



### ATS 01N206 to ATS 01N212


Mounting on  (35 mm) rail

Screw fixing

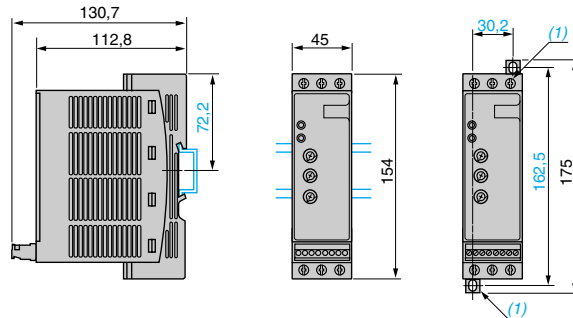


(1) Retractable fixings

### ATS 01N222 to ATS 01N232


Mounting on  (35 mm) rail

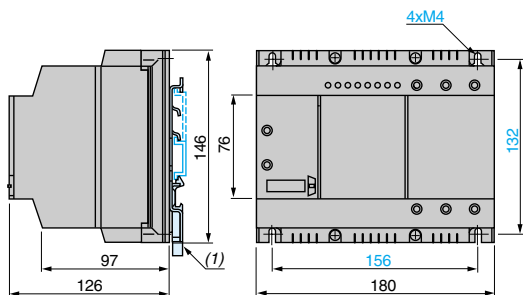
Screw fixing



(1) Retractable fixings

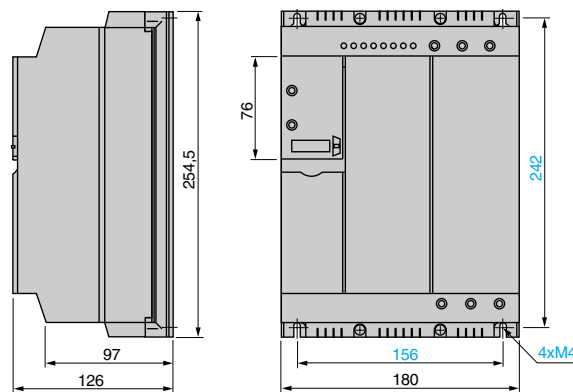
### ATS 01N230LY, ATS 01N244LY, ATS 01N244Q

Quick mounting on  rail (35 or 70 mm) using plate VY1 H4101 (1)



(1) Retractable fixings

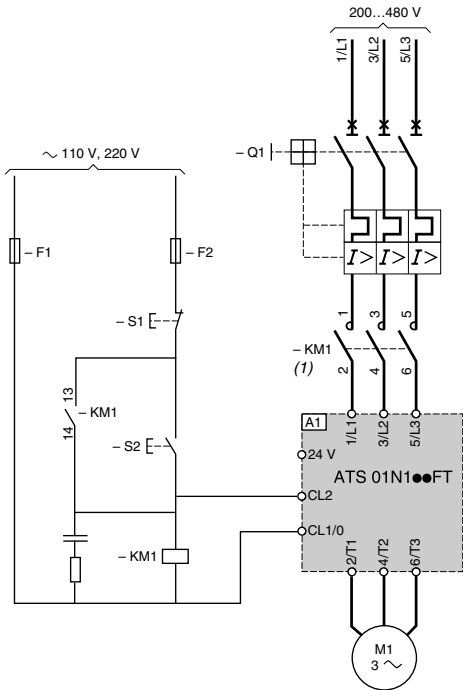
### ATS 01N272LY, ATS 01N285LY, ATS 01N272Q, ATS 01N285Q





## ATS 01N1●●FT soft starters

Single-phase or 3-phase power supply



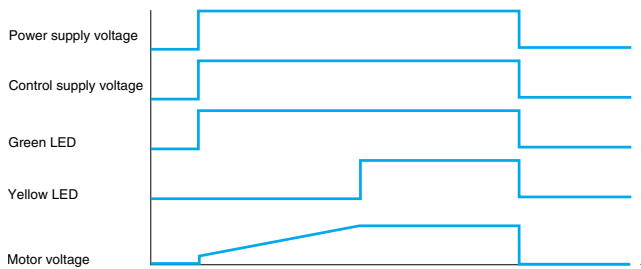
**Note :** For single-phase motors, use the ATS 01N1●●FT without connecting the 2<sup>nd</sup> phase 3/L2, 4/T2. Wait 5 seconds after switching the soft starter off before switching it on again.

(1) A line contactor must be used in the sequence.

**Compatible components** (For complete part numbers, see pages 1//16 and 1//17 or refer to our catalogue: "Industrial Control Products".)

| Code   | Description                 |
|--------|-----------------------------|
| A1     | Soft starter                |
| Q1     | GV2 ME manual motor starter |
| KM1    | LC1 ●●● + LA4 DA2U          |
| F1, F2 | Control protection fuses    |
| S1, S2 | XB4 B or XB5 B pushbuttons  |

## Function chart



# Soft starters for asynchronous motors

Altistart 01  
For 1 to 20 HP motors

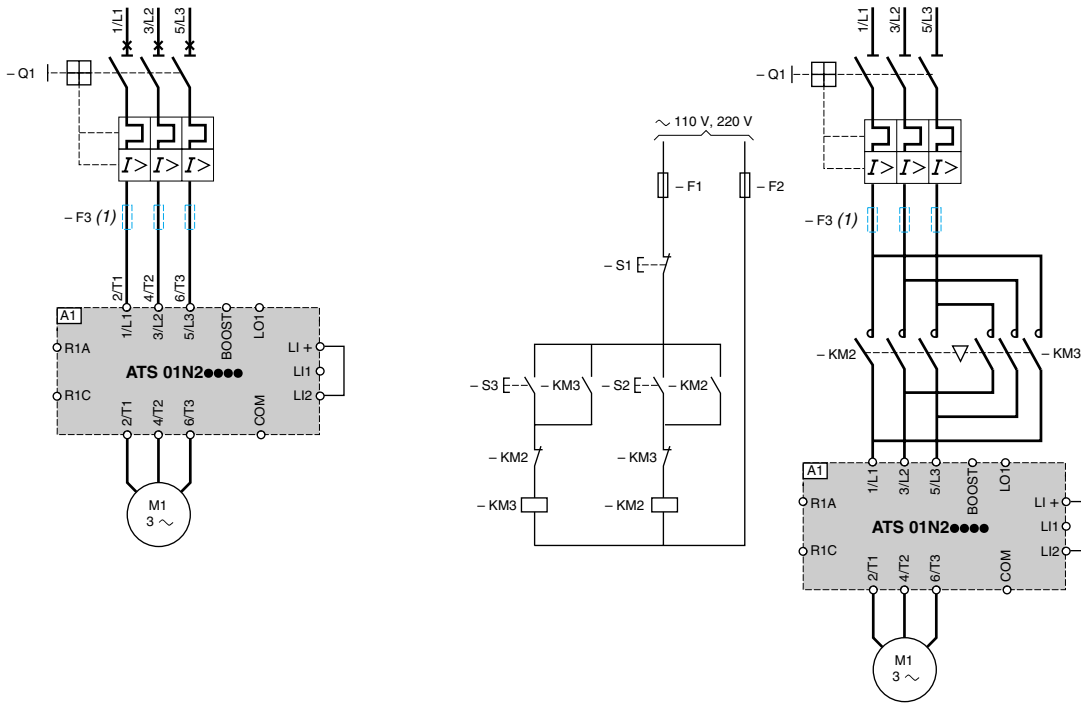
## ATS 01N2●●LU/QN/RT soft start/soft stop units

Manual control without deceleration (freewheel),  
with GV2 and GV3 manual motor starter

ATS 01N206●● to ATS 01N232●●

Automatic control with reversal of operating direction,  
without deceleration (freewheel)

ATS 01N206●● to ATS 01N232●●



(1) For type 2 coordination.

**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

| Code          | Description                 |
|---------------|-----------------------------|
| A1            | Soft start/soft stop unit   |
| Q1            | GV2 ME manual motor starter |
| KM1, KM2, KM3 | LC1 ●● + LA4 DA2U           |
| F1, F2        | Control protection fuses    |
| F3            | 3 fast-acting fuses         |
| S1, S2, S3    | XB4 B or XB5 B pushbuttons  |

# Soft starters for asynchronous motors

## Altistart 01

For 1 to 20 HP motors

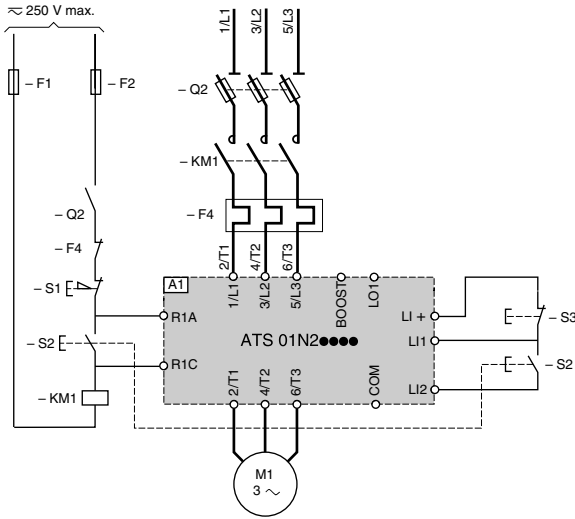
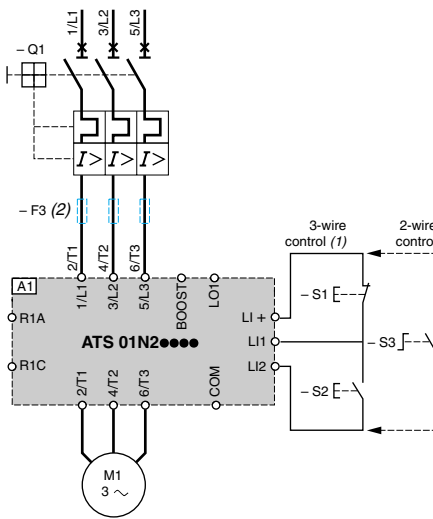
### ATS 01N2●●LU/QN/RT soft start/soft stop units

Automatic control with or without deceleration (freewheel), without contactor

ATS 01N206●● to ATS 01N232●●

Automatic control with or without deceleration (freewheel), with contactor

ATS 01N206●● to ATS 01N232●●



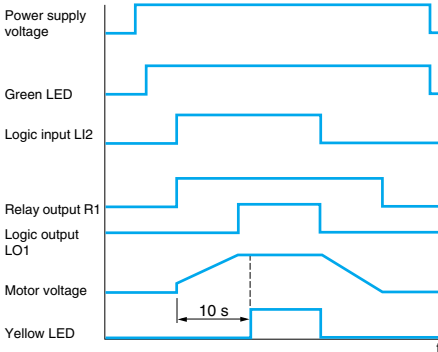
(1) Use shielded wires above 1 m.  
(2) For type 2 coordination.

**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

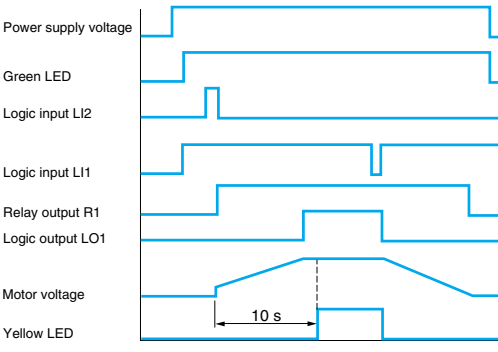
| Code       | Description                 |
|------------|-----------------------------|
| A1         | Soft start/soft stop unit   |
| Q1         | GV2 ME manual motor starter |
| Q2         | Fuse switches               |
| F4         | Thermal overload relay      |
| KM1        | LC1 ●●● + LA4 DA2U          |
| F1, F2     | Control protection fuses    |
| F3         | 3 fast-acting fuses         |
| S1, S2, S3 | XB4 B or XB5 B pushbuttons  |

### Function charts

#### 2-wire control with deceleration



#### 3-wire control with deceleration



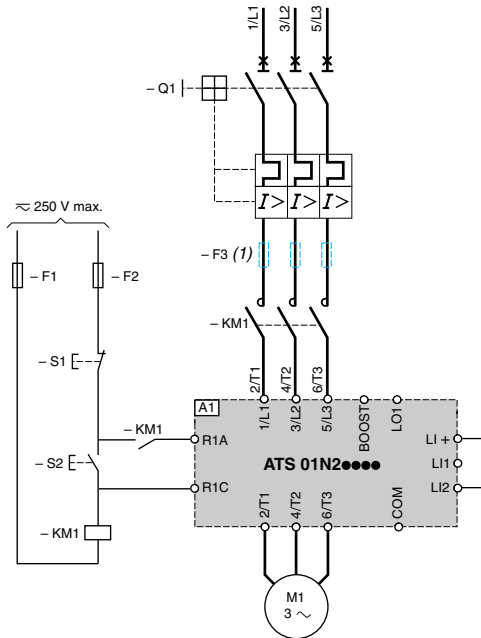
# Soft starters for asynchronous motors

Altistart 01  
For 1 to 20 HP motors

## ATS 01N2●●LU/QN/RT soft start/soft stop units

Automatic control without deceleration (freewheel), with a maintaining function

ATS 01N206●● to ATS 01N232●●



(1) For type 2 coordination.

**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

| Code   | Description                 |
|--------|-----------------------------|
| A1     | Soft start/soft stop unit   |
| Q1     | GV2 ME manual motor starter |
| KM1    | LC1 ●●● + LA4 DA2U          |
| F1, F2 | Control protection fuses    |
| F3     | 3 fast-acting fuses         |
| S1, S2 | XB4 B or XB5 B pushbuttons  |

# Soft starters for asynchronous motors

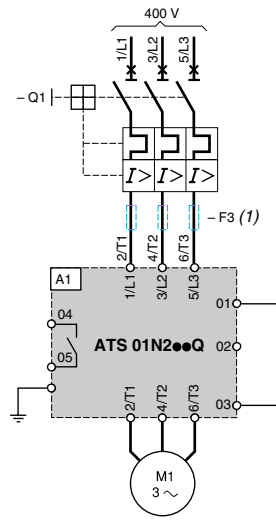
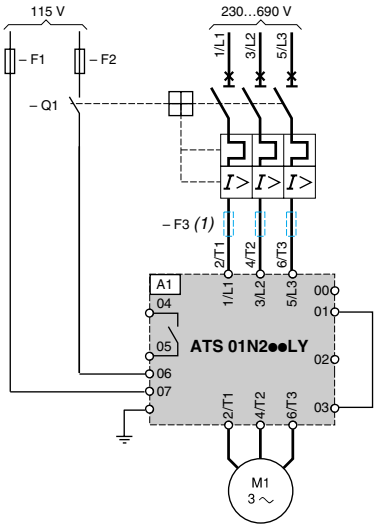
Altistart 01  
For 10 to 75 HP motors

**ATS 01N2●●LY and ATS 01N2●●Q soft start/soft stop units (compatible components, see page 60544/3)**

Manual control without deceleration (freewheel), with GV3 and GV7 manual motor starter

ATS 01N230LY to ATS 01N285LY

ATS 01N244Q to ATS 01N285Q



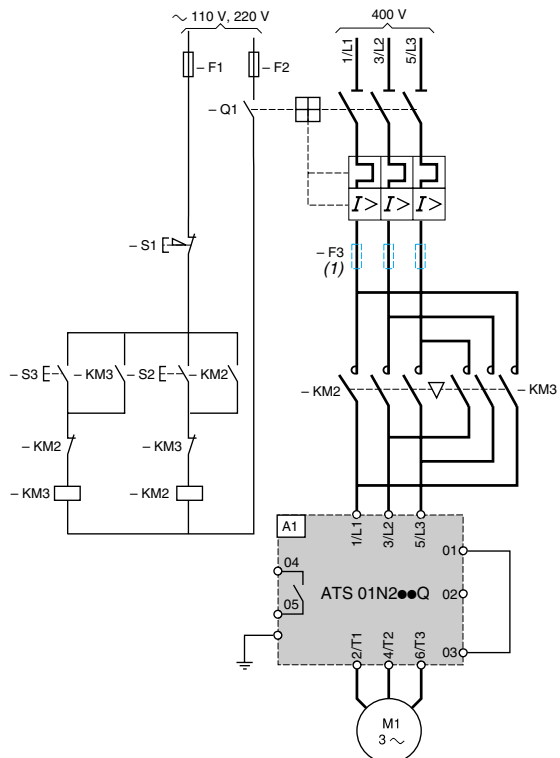
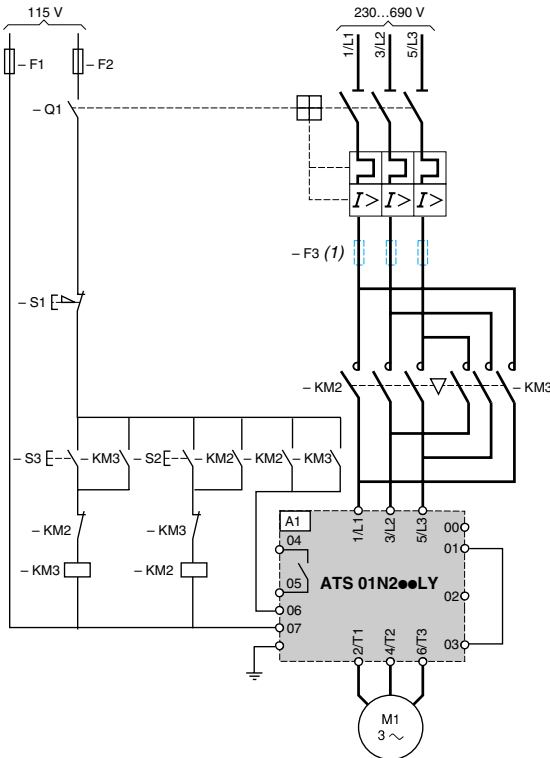
(1) For type 2 coordination.

(1) For type 2 coordination.

**Automatic control with reversal of operating direction, without deceleration (freewheel)**

ATS 01N230LY to ATS 01N285LY

ATS 01N244Q to ATS 01N285Q



(1) For type 2 coordination.

(1) For type 2 coordination.

# Soft starters for asynchronous motors

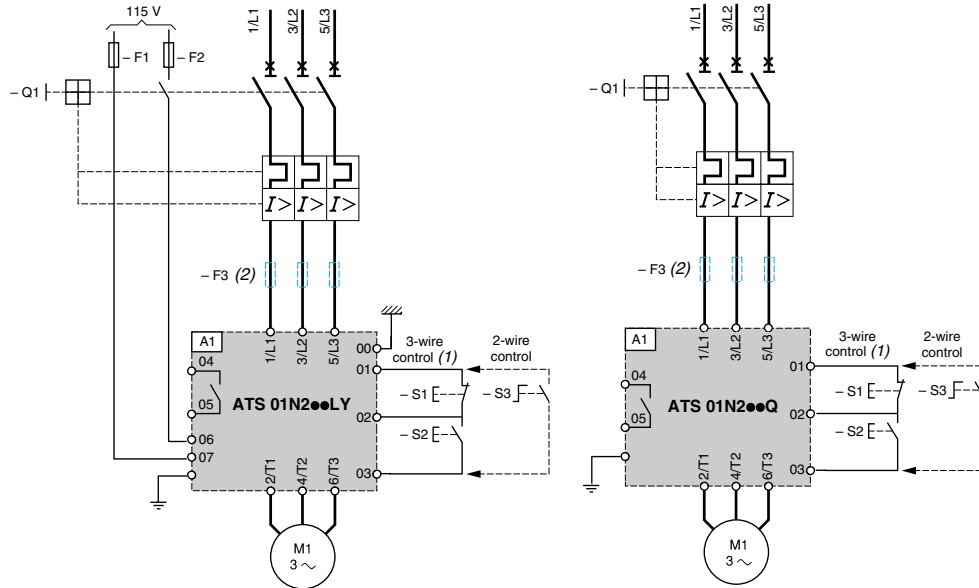
Altistart 01  
For 10 to 75 HP motors

## ATS 01N2●●LY and ATS 01N2●●Q soft start/soft stop units

Automatic control with or without deceleration (freewheel), without contactor

ATS 01N230LY to ATS 01N285LY

ATS 01N244Q to ATS 01N285Q



(1) Use shielded wires above 1 m.  
(2) For type 2 coordination.

(1) Use shielded wires above 1 m.  
(2) For type 2 coordination.

**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

| Code       | Description                     |
|------------|---------------------------------|
| A1         | Soft start/soft stop unit       |
| Q1         | GV3 or GV7 manual motor starter |
| KM2, KM3   | LC1 ●●● + LA4 DA2U              |
| F1, F2     | Control protection fuses        |
| F3         | 3 fast-acting fuses             |
| S1, S2, S3 | XB4 B or XB5 B pushbuttons      |

# Soft starters for asynchronous motors

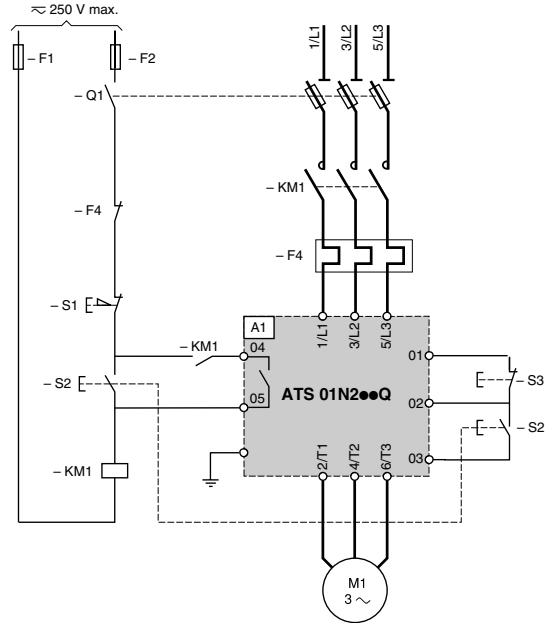
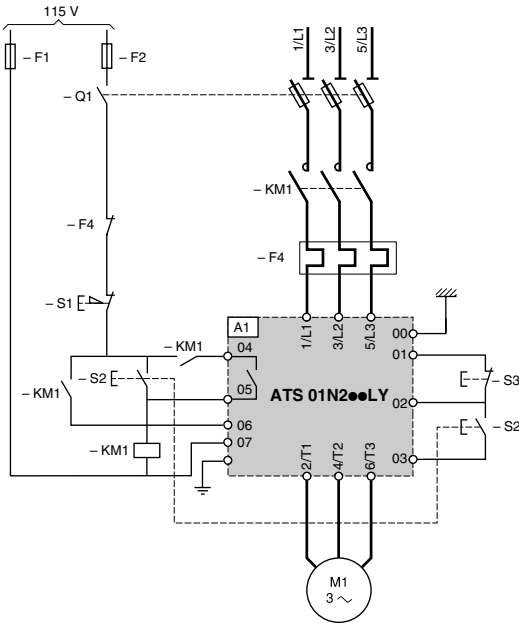
Altistart 01  
For 10 to 75 HP motors

**ATS 01N2●●LY and ATS 01N2●●Q soft start/soft stop units (continued)**

Automatic control with or without deceleration (freewheel), with contactor

ATS 01N230LY to ATS 01N285LY

ATS 01N244Q to ATS 01N285Q



**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

| Code       | Description                  |
|------------|------------------------------|
| A1         | Soft start/soft stop unit    |
| Q1         | GK1 disconnect switch        |
| KM1        | LC1 ●●● + LA4 DA2U           |
| F1, F2     | Control protection fuses     |
| F4         | LR2 D thermal overload relay |
| S1, S2, S3 | XB4 B or XB5 B pushbuttons   |

# Soft starters for asynchronous motors

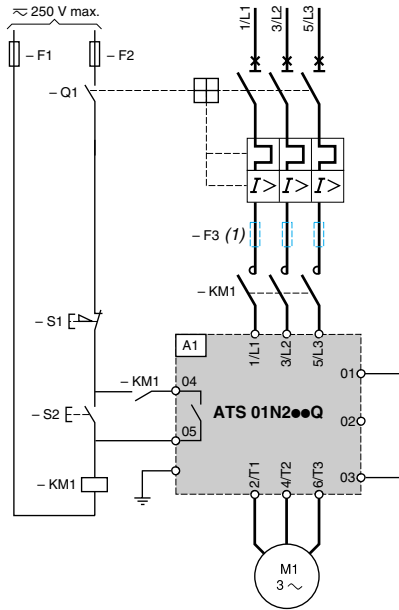
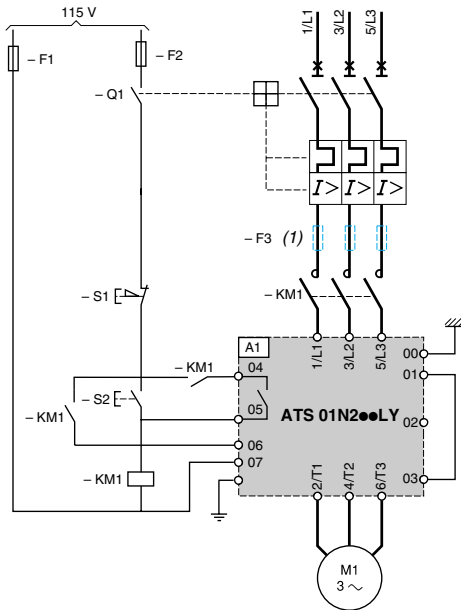
Altistart 01  
For 10 to 75 HP motors

**ATS 01N2●●LY and ATS 01N2●●Q soft start/soft stop units (continued)**

Automatic control without deceleration (freewheel), with a maintaining function

ATS 01N230LY to ATS 01N285LY

ATS 01N244Q to ATS 01N285Q



(1) For type 2 coordination.

**Compatible components** (For complete part numbers, see pages 1/16 and 1/17 or refer to our catalogue: "Industrial Control Products".)

| Code   | Description                |
|--------|----------------------------|
| A1     | Soft starter               |
| Q1     | GV3 manual motor starter   |
| KM1    | LC1 ●●● + LA4 DA2U         |
| F1, F2 | Control protection fuses   |
| F3     | 3 fast-acting fuses        |
| S1, S2 | XB4 B or XB5 B pushbuttons |



# Soft starters for asynchronous motors

Altistart 01  
460 V power supply, type 1 coordination

| Components to be combined in accordance with standards IEC 60947-1 and IEC 60947-4-2                               |      |                  |  |        |                    |                          |                    |        |                  |                        |
|--|------|------------------|--|--------|--------------------|--------------------------|--------------------|--------|------------------|------------------------|
| Combine either manual motor starter, contactor, starter, or switches/fuses (dark blue columns), contactor, starter |      |                  |  |        |                    |                          |                    |        |                  |                        |
| Motor  |      | Starter Class 10 | Type of manual motor starter Telemecanique | Rating | Type of contactor  | Type of fusible switches | Am fuses Reference | Rating | I <sup>2</sup> t | Thermal overload relay |
| kW   | A    |                  |  | A      |                    |                          |                    | A      | A <sup>2</sup> s |                        |
| M1   |      | A1               | Q1   |        | KM1, KM2, KM3      | Q2                       |                    |        |                  | F4                     |
| 0.37   | 0.98 | ATS 01N103FT     | GV2 ME05                                   | 1      | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA02           | 2      | 265              | LR2 K0306 LRD 05       |
| 0.55   | 1.5  | ATS 01N103FT     | GV2 ME06                                   | 1.6    | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA02           | 2      | 265              | LR2 K0307 LRD 06       |
| 0.75   | 2    | ATS 01N103FT     | GV2 ME07                                   | 2.5    | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA02           | 2      | 265              | LR2 K0308 LRD 07       |
| 1.1  | 2.5  | ATS 01N103FT     | GV2 ME08                                   | 4      | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA04           | 4      | 265              | LR2 K0308 LRD 08       |
|  |      | ATS 01N206QN     | GV2 ME08                                   | 4      | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA04           | 4      | 265              | LR2 K0308 LRD 08       |
| 1.5  | 3.5  | ATS 01N106FT     | GV2 ME08                                   | 4      | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA06           | 6      | 265              | LR2 K0310 LRD 08       |
|  |      | ATS 01N206QN     | GV2 ME08                                   | 4      | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA06           | 6      | 265              | LR2 K0310 LRD 08       |
| 2.2  | 5    | ATS 01N106FT     | GV2 ME10                                   | 6.3    | LC1 K06 or LC1 D09 | LS1 D2531                | DF2 CA08           | 8      | 265              | LR2 K0312 LRD 10       |
|  |      | ATS 01N206QN     | GV2 ME10                                   | 6.3    | LC1 K09 or LC1 D09 | LS1 D2531                | DF2 CA08           | 8      | 265              | LR2 K0312 LRD 10       |
| 3  | 6.5  | ATS 01N106FT     | GV2 ME14                                   | 9      | LC1 K09 or LC1 D09 | LS1 D2531                | DF2 CA12           | 12     | 265              | LR2 K0314 LRD 12       |
|  |      | ATS 01N206QN     | GV2 ME14                                   | 9      | LC1 K09 or LC1 D09 | LS1 D2531                | DF2 CA12           | 12     | 265              | LR2 K0314 LRD 12       |
| 4  | 8.4  | ATS 01N109FT     | GV2 ME14                                   | 9      | LC1 K09 or LC1 D09 | LS1 D2531                | DF2 CA12           | 12     | 610              | LR2 K0316 LRD 14       |
|  |      | ATS 01N209QN     | GV2 ME14                                   | 9      | LC1 K09 or LC1 D09 | LS1 D2531                | DF2 CA12           | 12     | 610              | LR2 K0316 LRD 14       |
| 5.5  | 11   | ATS 01N112FT     | GV2 ME16                                   | 13     | LC1 K12 or LC1 D12 | LS1 D2531                | DF2 CA16           | 16     | 610              | LR2 K0321 LRD 16       |
|  |      | ATS 01N212QN     | GV2 ME16                                   | 13     | LC1 K12 or LC1 D12 | LS1 D2531                | DF2 CA16           | 16     | 610              | LR2 K0321 LRD 16       |
| 7.5  | 14.8 | ATS 01N222QN     | GV2 ME20                                   | 17     | LC1 D18            | LS1 D2531                | DF2 CA20           | 20     | 6050             | LRD 21                 |
| 9  | 18.1 | ATS 01N222QN     | GV2 ME21                                   | 21     | LC1 D25            | LS1 D2531                | DF2 CA25           | 25     | 6050             | LRD 21                 |
| 11   | 21   | ATS 01N222QN     | GV2 ME22                                   | 23     | LC1 D25            | LS1 D2531                | DF2 CA25           | 25     | 6050             | LRD 22                 |
| 15   | 28.5 | ATS 01N232QN     | GV2 ME32                                   | 32     | LC1 D32            | GK1 EM                   | DF2 EA40           | 40     | 7200             | LR2 D3353              |
| 18.5   | 35   | ATS 01N244Q      | GV3 ME40                                   | 40     | LC1 D38            | GK1 EM                   | DF2 EA40           | 40     | 8000             | LR2 D3355              |
| 22   | 42   | ATS 01N244Q      | GV3 ME63                                   | 63     | LC1 D50            | GK1 FM                   | DF2 FA63           | 63     | 8000             | LR2 D3357              |
| 30   | 57   | ATS 01N272Q      | GV3 ME63                                   | 63     | LC1 D65            | GK1 FM                   | DF2 FA63           | 63     | 9000             | LR2 D3359              |
| 37   | 69   | ATS 01N272Q      | GV3 ME80                                   | 80     | LC1 D80            | GK1 FM                   | DF2 FA80           | 80     | 9000             | LR2 D3363              |
| 45   | 81   | ATS 01N285Q      | GV7 RE100                                  | 100    | LC1 D95            | GK1 FM                   | DF2 FA100          | 100    | 9000             | LR2 D3365              |

## Soft starters for asynchronous motors

Altistart 01

600/690V power supply, type 1 coordination

| Components to be combined in accordance with standards IEC 60947-1 and IEC 60947-4-2                               |      |                  |   |          |                   |                        |                       |        |                  |                        |
|--|------|------------------|---|----------|-------------------|------------------------|-----------------------|--------|------------------|------------------------|
| Combine either manual motor starter, contactor, starter, or switches/fuses (dark blue columns), contactor, starter |      |                  |   |          |                   |                        |                       |        |                  |                        |
| Motor  |      | Starter Class 10 | Type of manual motor starter<br>Telemecanique | Rating   | Type of contactor | Type of fusible switch | Am fuses<br>Reference | Rating | I <sup>2</sup> t | Thermal overload relay |
| kW   | A    |                  |   | A        |                   |                        |                       | A      | A <sup>2</sup> s |                        |
| M1   |      | A1               | Q1  |          | KM1               | Q2                     |                       |        |                  | F4                     |
| 30   | 33   | ATS 01N230LY     | GV3 ME40 +<br>GV3 A01                         | 25...40  | LC1 D50           | GK1 EM                 | DF2 EA40              | 40     | 7200             | LR2 D3355              |
| 37   | 40   | ATS 01N244LY     | GV3 ME63 +<br>GV3 A01                         | 40...63  | LC1 D65           | GK1 FM                 | DF2 FA63              | 63     | 8000             | LR2 D3359              |
| 55   | 58   | ATS 01N272LY     | GV3 ME80 +<br>GV3 A01                         | 56...80  | LC1 D115          | GK1 FM                 | DF2 FA80              | 80     | 9000             | LR2 D3363              |
| 75   | 75.7 | ATS 01N285LY     | GV7 RE100 +<br>GV7 A11                        | 60...100 | LC1 D150          | GK1 FM                 | DF2 FA100             | 100    | 9000             | LR2 D3365              |

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