

# SOFT STARTERS ADXT SERIES



# SOFT STARTERS ADXT SERIES

ADXT is the ideal soft starter for applications requiring **high performances, high reliability and robustness**. Packed with **advanced features** and built-in protections, it provides **precise control of motor starting and stopping** and reduces energy consumption for constant speed applications.

## Three-phase control

The three-phase control keeps the currents absorbed by the motor always balanced with each other, a condition that allows a **high starting torque**, indispensable for overcoming the inertia of heavy loads, such as crushers, fans, vertical or inclined conveyors, screw compressors, centrifuges, propellers, mills, band or circular saws, shredders and many other applications.

## Wide line voltage range up to 690VAC

- rated operating voltage **380...690VAC** 50/60Hz
- auxiliary supply voltage:
  - 110...120VAC and 220...240VAC version
  - 24VAC/DC version.

## Integrated bypass

The entire range includes a bypass relay, which deactivates the thyristors once the starting ramp is completed, thereby **reducing energy consumption**, heat generation and power dissipation.

## Multi-language graphic display

- Clear and comprehensive display of soft starter status and electrical measurements
- 8 languages (English, Italian, French, Spanish, Portuguese, German, Chinese, Russian)
- fast configuration with quick setup function.

## cULus certification

ADXT soft starters are cULus certified, essential requirement for sale in the **North American market**.



# HIGH PERFORMANCES, RELIABLE, VERSATILE

## Standard or heavy duty service

The range includes electric sizes **from 34A to 554A**, a value referring to the starting of motors with inrush currents of 4 times rated current, a typical value for the most common loads, and an acceleration time of 10 seconds. The rated value of the soft starter current can also vary depending on the motor inrush current, the starting time and the number of starts per hour. This makes ADXT extremely flexible for all types of applications.



## Wide range of integrated functions

- several modes for motor start and stop control
- integrated protections for motor and soft starter
- emergency functions
- timed and scheduled start-up functions
- and many others.

## USB port and optional communication

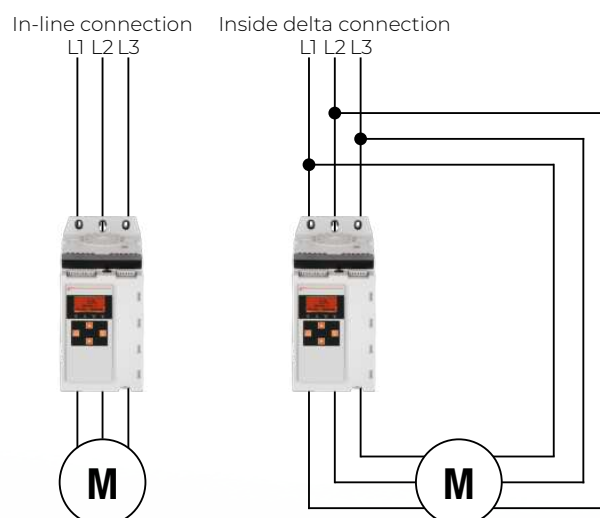
- USB port for exporting parameters and event logs via pen drive, loading a new configuration with ADXTSW software and updating firmware.
- optional communication cards with RS485 port (Modbus-RTU protocol) or Ethernet (Modbus-TCP protocol).



## In-line or inside delta connection

The ADXT soft starters can be installed with either the traditional in-line connection or with the inside delta connection (six-wire connection), with the thyristors connected in series to each motor winding.

In this configuration, only the phase current, which is significantly lower than the line current, flows through the soft starter. This allows the use of a smaller starter, which saves costs and simplifies the replacement of star-delta starters as the existing wiring is retained.



## Several motor control modes



### STARTING:

- constant current
- current ramp
- voltage ramp
- adaptive control
- kick start
- current limit.

### STOPPING:

- controlled stop with ramp
- freewheeling stop
- DC braking
- gradual stop with braking contactor.



## Pump cleaning function

Cycle the motor in forward and reverse direction to remove any residue in the impeller before starting.



## Emergency functions

### EMERGENCY MODE:

running of the motor ignoring alarm conditions

### POWERTHROUGH FUNCTION:

possibility of starting the motor even in the event of a damaged thyristor on one of the phases (two-phase control).



## Kick start

It provides a short extra torque pulse at the beginning of the starting ramp, which is useful for facilitating the start-up of loads requiring high starting torque.

## DC braking



During the deceleration ramp, the soft starter injects a DC current into the motor windings to speed up the stop. Useful for stopping loads with high inertia.



## Reversing contactor control

Output for controlling an external contactor to reverse the motor direction.



## Scheduled start-up

Automatic motor start-up for a defined time or at a specific time or days of the week.



**TIMER MODE:** as long as the start signal remains active, the motor is cyclically started and stopped at programmable time intervals.



**CLOCK MODE:** the soft starter can start and/or stop the motor once a day. For each day, it is possible to individually select the enabling of the automatic start/stop control, the start time and the stop time.

## Graphic display with current trend



- display of main electrical measurements
- motor statistics: number of starts and hours of operation
- user-configurable screens
- real-time trend of motor current.

## Event log with date clock



Recording of the last 384 events (alarms, warnings, commands, configuration changes).



## Jog mode

Starting the motor at reduced speed to allow load alignment or facilitate maintenance.



## Simulation mode

It simulates starting, running and stopping the motor to verify that the soft starter and associated equipment have been correctly installed.

## Typical applications

- |                                      |  |  |
|--------------------------------------|--|--|
| - bow thrusters                      | conveyor belts                           | - bore, centrifugal, hydraulic, positive displacement, submersible pumps |
| - centrifuges                        | - cone, jaw, rotary crushers             | - band or circular saws  |
| - wood chippers                      | - debarkers                              | - shredders.   |
| - screw or reciprocating compressors | - axial, centrifugal, high-pressure fans |  |
| - vertical, horizontal and inclined  | - ball or hammer mills                   |  |





ADXT0034...AXDT0126



ADXT0139...AXDT0554

Order code	In-line connection				
	3*Ie (10s)	3,5*Ie (15s)	4*Ie (10s)	4*Ie (20s)	5*Ie (5s)
	[A]	[A]	[A]	[A]	[A]

For standard and heavy-duty applications.  
Built-in bypass. Rated operational voltage 380...690VAC.  
Auxiliary supply voltage 110...120VAC and 220...240VAC.

ADXT0034	42	34	34	27	31
ADXT0060	64	62	60	50	53
ADXT0084	105	86	84	68	76
ADXT0104	115	107	104	86	95
ADXT0126	135	129	126	103	115
ADXT0139	184	143	139	115	127
ADXT0165	200	170	165	138	150
ADXT0187	229	194	187	157	170
ADXT0230	250	244	230	200	202
ADXT0311	397	322	311	262	288
ADXT0410	410	410	410	379	400
ADXT0506	550	526	506	427	462
ADXT0554	580	578	554	469	507

Auxiliary supply voltage 24VAC/DC.

ADXT003424	42	34	34	27	31
ADXT006024	64	62	60	50	53
ADXT010424	115	107	104	86	95
ADXT013924	184	143	139	115	127
ADXT023024	250	244	230	200	202

Order code	Inside-delta connection				
	3*Ie (10s)	3,5*Ie (15s)	4*Ie (10s)	4*Ie (20s)	5*Ie (5s)
	[A]	[A]	[A]	[A]	[A]

For standard and heavy-duty applications.  
Built-in bypass. Rated operational voltage 380...690VAC.  
Auxiliary supply voltage 110...120VAC and 220...240VAC.

ADXT0034	63	51	51	41	47
ADXT0060	96	93	90	75	80
ADXT0084	158	129	126	102	114
ADXT0104	173	161	156	129	143
ADXT0126	203	194	189	155	173
ADXT0139	276	215	209	173	191
ADXT0165	300	255	248	207	225
ADXT0187	344	291	281	236	255
ADXT0230	375	366	345	300	303
ADXT0311	596	484	466	393	433
ADXT0410	615	615	615	568	600
ADXT0506	825	789	758	640	694
ADXT0554	870	868	832	704	760

Auxiliary supply voltage 24VAC/DC.

ADXT003424	63	51	51	41	47
ADXT006024	96	93	90	75	80
ADXT010424	173	161	156	129	143
ADXT013924	276	215	209	173	191
ADXT023024	375	366	345	300	303

## Accessories



ADXTC01KIT



ADXTFG

Order code	Description
Communication cards	
ADXTRTU	RS485 communication card, Modbus-RTU protocol ⓘ
ADXTTCP	Ethernet communication card, Modbus-TCP protocol ⓘ
Accessories	
ADXTC01KIT	Remote keypad kit composed by IP65 type 12 remote keypad ADXTC01, connection card to ADXT... and connection cable 3m length
ADXTFG	IP20 fingerguards kit for ADXT0139...AXDT0554

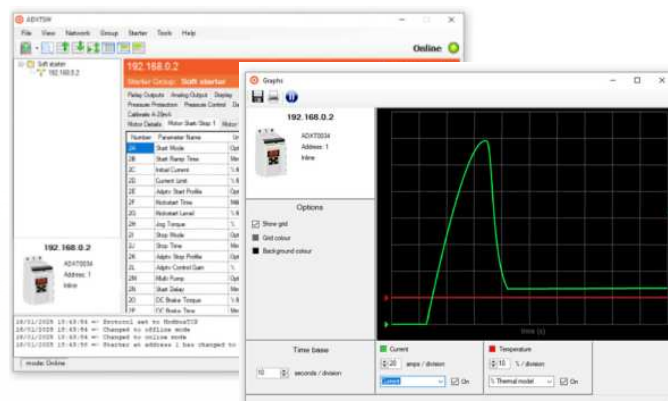
ⓘ The communication cards integrate the port for the connection of the optional ADXTC01 remote keypad.

## Software ADXTSW

ADXTSW is the software for controlling and monitoring ADXT series soft starters, ideal for parameter management during commissioning.

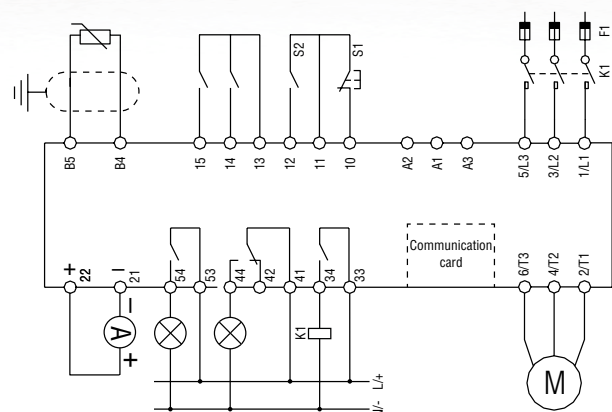
It offers the following functionalities:

- control functions (start, stop, reset, quick stop)
- monitoring of soft starter status (ready, started, running, stopped, alarm)
- performance control (motor current, motor temperature)
- parameters download.

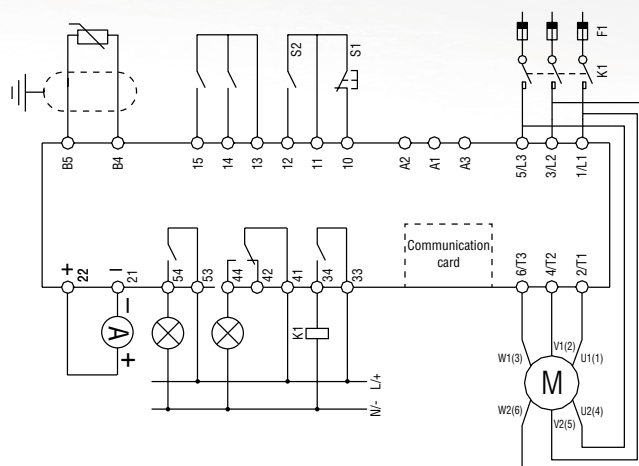


ADXTSW can be freely downloaded from [www.LovatoElectric.com](http://www.LovatoElectric.com)

### In-line connection

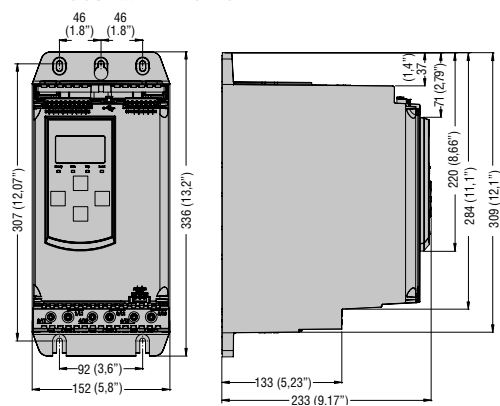


### Inside delta connection

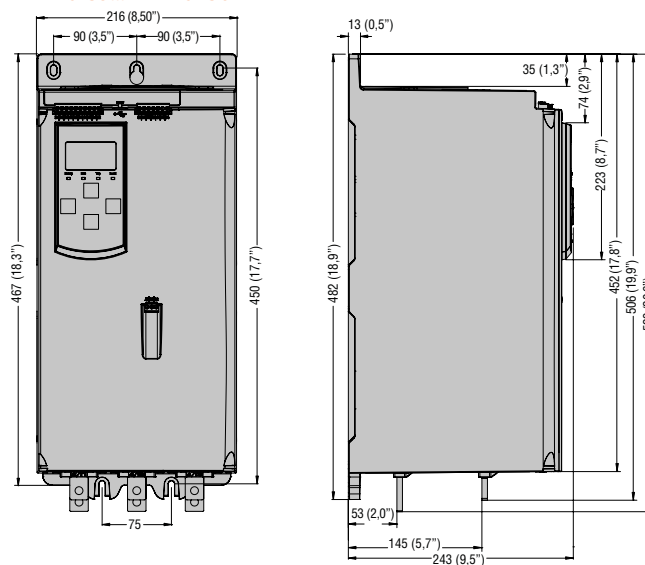


- 4 digital inputs: 1 for start/stop, 1 for reset and 2 programmable
- 1 thermistor input
- 3 relay outputs: 1 programmable with changeover contact, 2 with NO contact (1 for line contactor control and 1 programmable)
- 1 programmable analog output, type 0/4...20mA.

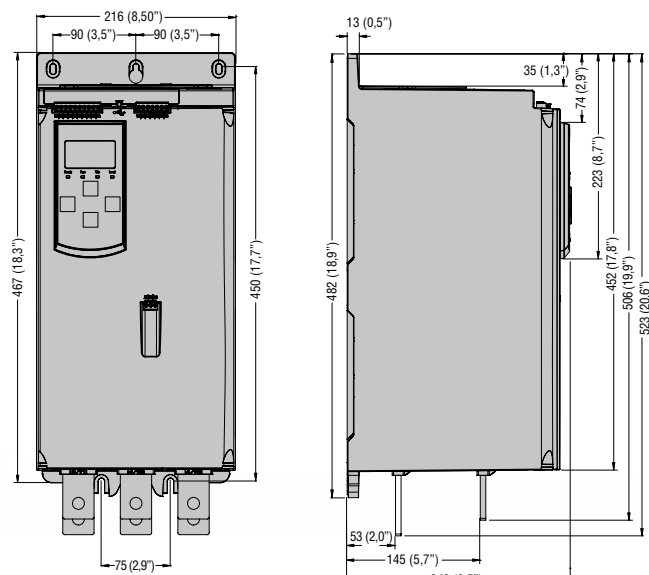
## ADXT0034...ADXT0126



## ADXT0139...ADXT0230



## ADXT0311...ADXT0554





## SOFT STARTERS ADXT SERIES



### **LOVATO ELECTRIC S.P. A.**

via Don E. Mazza, 12  
24020 Gorle (Bergamo), Italy  
tel +39 035 4282111  
[info@LovatoElectric.com](mailto:info@LovatoElectric.com)

[www.LovatoElectric.com](http://www.LovatoElectric.com)

