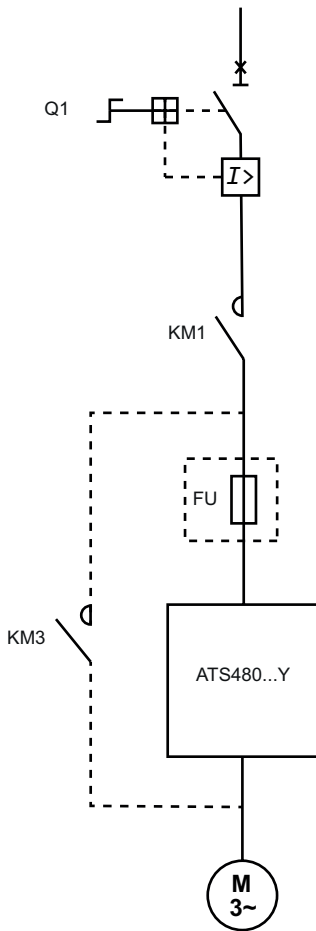


Altivar Soft Starter ATS480

Soft starters for asynchronous motors

Type of coordination, variants on the wiring diagram



Presentation

Type of coordination

The EN/IEC 60947-4-1 standard makes a distinction between two different types of coordination, which are designated coordination type 1 and coordination type 2:

- Type 1 coordination requires that, under short-circuit conditions, the contactor or soft starter shall cause no danger to persons or the installation and may not be suitable for further service without repair and replacement of parts.
- Type 2 coordination requires that, under short-circuit conditions, the contactor or soft starter shall cause no danger to persons or the installation and shall be suitable for further use. The risk of contact welding is recognized, in which case the manufacturer shall indicate the measures to be taken as regards the maintenance of the equipment.

- For type 2 coordination (according to IEC 60947-4-1 and IEC 60947-4-2), install fast-acting fuses in series with the soft starter to ensure that the ATS480 will be protected in the event of a short circuit. After a short circuit, fast-acting fuses must be replaced, and the contactor must be checked.

Note: Use of a short-circuit protection device (SCPD) that does not comply with the manufacturer's specification can invalidate the coordination.

Bypass

The bypass contactor is optional as the ATS480 is able to power the motor during starting, running at fixed speed, and stopping without any loss of performance. When used, the bypass contactor is controlled based on relay R2. The assignment of relay R2 cannot be modified.

When bypassed, an ATS480 with a lower current rating could be used (please refer to [page 18](#)) or the ATS480 can operate at a maximum ambient temperature of 50 °C without derating.

Line contactor

The line contactor on ATS480 is optional.

When used, the line contactor is controlled by relay R1. There are two possibilities influencing the wiring diagram:

- R1 assigned to "Operating State Fault":
 - The line contactor is controlled by Power ON and Power OFF push buttons and relay R1. Relay R1 is activated when the soft starter is powered up (minimum CL1/CL2 control) and is deactivated when an error is detected and the motor switches to freewheel mode.
- R1 assigned to "Line Contactor":
 - The line contactor is controlled by relay R1 on the basis of the ATS480 RUN and STOP commands. Relay R1 is activated by a RUN command (or a preheating command). It is deactivated at the end of braking or deceleration, or when the motor switches to freewheel mode after a STOP command. It is also deactivated when an error is detected: the motor switches to freewheel mode at this point.

Note: ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

Thermal monitoring

The Altivar Soft Starter ATS480 will help to protect the motor and the cables against overloads. If this monitoring function is disabled, external thermal monitoring must be provided.

Altivar Soft Starter ATS480

Soft starters for asynchronous motors

Type 1 coordination according to IEC 60947-4-1 and IEC 60947-4-2

230 V power supply, ATS480 connected in-line

Motor power kW	Combination Iq (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
3	50	–	ATS480D17Y	GV2L20	LC1D18●●	LC1D18●●
4	50	ATS480D17Y	ATS480D22Y	GV2L20	LC1D18●●	LC1D18●●
5.5	50	ATS480D22Y	ATS480D32Y	GV2L22	LC1D25●●	LC1D25●●
7.5	50	ATS480D32Y	ATS480D38Y	GV2L32	LC1D32●●	LC1D32●●
9	50	ATS480D38Y	ATS480D47Y	GV3L40	LC1D38●●	LC1D38●●
11	50	ATS480D47Y	ATS480D62Y	GV3L65	LC1D50A●●	LC1D50A●●
15	50	ATS480D62Y	ATS480D75Y	GV3L65	LC1D65A●●	LC1D65A●●
18.5	50	ATS480D75Y	ATS480D88Y	GV4L80B	LC1D80●●	LC1D80●●
22	50	ATS480D88Y	ATS480C11Y	GV4L115B	LC1D115●●	LC1D115●●
30	50	ATS480C11Y	ATS480C14Y	GV4L115B	LC1D115●●	LC1D115●●
37	50	ATS480C14Y	ATS480C17Y	NSX160F MA	LC1D150●●	LC1D150●●
45	50	ATS480C17Y	ATS480C21Y	NSX250F MA	LC1G185●●●●	LC1G185●●●●
55	50	ATS480C21Y	ATS480C25Y	NSX250F MA	LC1G225●●●●	LC1G225●●●●
75	50	ATS480C25Y	ATS480C32Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
90	50	ATS480C32Y	ATS480C41Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	LC1G330●●●●
110	70	ATS480C41Y	ATS480C48Y	NSX630N MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
132	70	ATS480C48Y	ATS480C59Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
160	70	ATS480C59Y	ATS480C66Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
200	70	ATS480C66Y	ATS480C79Y	NS800N MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
220	70	ATS480C79Y	ATS480M10Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
250	70	ATS480M10Y	ATS480M12Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	LC1F1000●●
355	42	ATS480M12Y	–	NS1250N MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

230 V power supply, ATS480 connected inside delta

Motor power kW	Combination Iq (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
5.5	50	–	ATS480D17Y	GV2L22	LC1D25●●	LC1D25●●
7.5	50	ATS480D17Y	ATS480D22Y	GV2L32	LC1D32●●	LC1D32●●
9	50	ATS480D22Y	ATS480D32Y	GV3L40	LC1D38●●	LC1D38●●
15	50	ATS480D32Y	ATS480D38Y	GV3L65	LC1D65A●●	LC1D65A●●
18.5	50	ATS480D38Y	ATS480D47Y	GV4L80B	LC1D80●●	LC1D80●●
22	50	ATS480D47Y	ATS480D62Y	GV4L115B	LC1D115●●	LC1D115●●
30	50	ATS480D62Y	ATS480D75Y	GV4L115B	LC1D115●●	LC1D115●●
37	50	ATS480D75Y	ATS480D88Y	NSX160F MA	LC1D150●●	LC1D150●●
45	50	ATS480D88Y	ATS480C11Y	NSX250F MA	LC1G185●●●●	LC1G185●●●●
55	50	ATS480C11Y	ATS480C14Y	NSX250F MA	LC1G225●●●●	LC1G225●●●●
75	50	ATS480C14Y	ATS480C17Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
90	50	ATS480C17Y	ATS480C21Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	LC1G330●●●●
110	70	ATS480C21Y	ATS480C25Y	NSX630N MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
132	70	ATS480C25Y	ATS480C32Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
160	70	ATS480C32Y	ATS480C41Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
220	70	ATS480C41Y	ATS480C48Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
250	70	ATS480C48Y	ATS480C59Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	LC1F1000●●
355	42	ATS480C79Y	ATS480M10Y	NS1250N MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

Altivar Soft Starter ATS480

Soft starters for asynchronous motors
Type 1 coordination according to IEC 60947-4-1
and IEC 60947-4-2

380/400/415 V power supply, ATS480 connected in-line						
Motor power kW	Combination I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
5.5	50	–	ATS480D17Y	GV2L20	LC1D18●●	LC1D18●●
7.5	50	ATS480D17Y	ATS480D22Y	GV2L20	LC1D18●●	LC1D18●●
11	50	ATS480D22Y	ATS480D32Y	GV2L22	LC1D25●●	LC1D25●●
15	50	ATS480D32Y	ATS480D38Y	GV2L32	LC1D32●●	LC1D32●●
18.5	50	ATS480D38Y	ATS480D47Y	GV3L40	LC1D38●●	LC1D38●●
22	50	ATS480D47Y	ATS480D62Y	GV3L65	LC1D50A●●	LC1D50A●●
30	50	ATS480D62Y	ATS480D75Y	GV3L65	LC1D65A●●	LC1D65A●●
37	50	ATS480D75Y	ATS480D88Y	GV4L80N	LC1D80●●	LC1D80●●
45	50	ATS480D88Y	ATS480C11Y	NSX100N MA	LC1D115●●	LC1D115●●
55	50	ATS480C11Y	ATS480C14Y	NSX160N MA	LC1D115●●	LC1D115●●
75	50	ATS480C14Y	ATS480C17Y	NSX160N MA	LC1D150●●	LC1D150●●
90	50	ATS480C17Y	ATS480C21Y	NSX250N MA	LC1G185●●●●	LC1G185●●●●
110	50	ATS480C21Y	ATS480C25Y	NSX250N MA	LC1G225●●●●	LC1G225●●●●
132	50	ATS480C25Y	ATS480C32Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
160	50	ATS480C32Y	ATS480C41Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	LC1G330●●●●
220	70	ATS480C41Y	ATS480C48Y	NSX630H MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
250	70	ATS480C48Y	ATS480C59Y	NSX630H MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
315	70	ATS480C59Y	ATS480C66Y	NS630bH MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
355	70	ATS480C66Y	ATS480C79Y	NS800H MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
400	70	ATS480C79Y	ATS480M10Y	NS800H MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
500	70	ATS480M10Y	ATS480M12Y	NS1000H MicroLogic 5.0 LR Off	LC1F1000●●	LC1F1000●●
630	42	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

380/400/415 V power supply, ATS480 connected inside delta						
Motor power kW	Combination I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
11	50	–	ATS480D17Y	GV2L22	LC1D25●●	LC1D25●●
15	50	ATS480D17Y	ATS480D22Y	GV2L32	LC1D32●●	LC1D32●●
18.5	50	ATS480D22Y	ATS480D32Y	GV3L40	LC1D38●●	LC1D38●●
22	50	ATS480D32Y	ATS480D38Y	GV3L65	LC1D50A●●	LC1D50A●●
30	50	ATS480D38Y	ATS480D47Y	GV3L65	LC1D65A●●	LC1D65A●●
45	50	ATS480D47Y	ATS480D62Y	NSX100N MA	LC1D115●●	LC1D115●●
55	50	ATS480D62Y	ATS480D75Y	NSX160N MA	LC1D115●●	LC1D115●●
55	50	ATS480D75Y	ATS480D88Y	NSX160N MA	LC1D115●●	LC1D115●●
75	50	ATS480D88Y	ATS480C11Y	NSX160N MA	LC1D150●●	LC1D150●●
90	50	ATS480C11Y	ATS480C14Y	NSX250N MA	LC1G185●●●●	LC1G185●●●●
110	50	ATS480C14Y	ATS480C17Y	NSX250N MA	LC1G225●●●●	LC1G225●●●●
132	50	ATS480C17Y	ATS480C21Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
160	50	ATS480C21Y	ATS480C25Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	LC1G330●●●●
220	70	ATS480C25Y	ATS480C32Y	NSX630H MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
250	70	ATS480C32Y	ATS480C41Y	NSX630H MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
315	70	ATS480C41Y	ATS480C48Y	NS630bH MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
355	70	ATS480C48Y	ATS480C59Y	NS800H MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
400	70	ATS480C59Y	ATS480C66Y	NS800H MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
500	70	ATS480C66Y	ATS480C79Y	NS1000H MicroLogic 5.0 LR Off	LC1F1000●●	LC1F1000●●
630	42	ATS480C79Y	ATS480M10Y	NS1250H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

Altivar Soft Starter ATS480

Soft starters for asynchronous motors
Type 1 coordination according to IEC 60947-4-1
and IEC 60947-4-2

440 V power supply, ATS480 connected in-line

Motor power kW	Combination I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
5.5	50	–	ATS480D17Y	GV4L25N	LC1D12●●	LC1D12●●
7.5	50	ATS480D17Y	ATS480D22Y	GV4L25N	LC1D18●●	LC1D18●●
11	50	ATS480D22Y	ATS480D32Y	GV4L25N	LC1D25●●	LC1D25●●
15	50	ATS480D32Y	ATS480D38Y	GV4L50N	LC1D40A●●	LC1D40A●●
18.5	50	ATS480D38Y	ATS480D47Y	GV4L50N	LC1D40A●●	LC1D40A●●
22	50	ATS480D47Y	ATS480D62Y	GV4L50N	LC1D40A●●	LC1D40A●●
30	50	ATS480D62Y	ATS480D75Y	GV4L80N	LC1D65A●●	LC1D65A●●
37	50	ATS480D75Y	ATS480D88Y	GV4L80N	LC1D65A●●	LC1D65A●●
45	50	ATS480D88Y	ATS480C11Y	GV4L80N	LC1D80●●	LC1D80●●
55	50	ATS480C11Y	ATS480C14Y	GV4L115N	LC1D115●●	LC1D115●●
75	50	ATS480C14Y	ATS480C17Y	NSX160N MA	LC1D150●●	LC1D150●●
90	50	ATS480C17Y	ATS480C21Y	NSX250N MA	LC1G150●●●●	LC1G150●●●●
110	50	ATS480C21Y	ATS480C25Y	NSX250N MA	LC1G185●●●●	LC1G185●●●●
132	50	ATS480C25Y	ATS480C32Y	NSX250N MA	LC1G225●●●●	LC1G225●●●●
160	50	ATS480C32Y	ATS480C41Y	NSX400H MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
220	70	ATS480C41Y	ATS480C48Y	NSX630S MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
250	70	ATS480C48Y	ATS480C59Y	NSX630S MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
355	70	ATS480C59Y	ATS480C66Y	NS630bL MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
400	70	ATS480C66Y	ATS480C79Y	NS630bL MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
500	70	ATS480C79Y	ATS480M10Y	NS800L MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
630	70	ATS480M10Y	ATS480M12Y	NS1000L MicroLogic 5.0 LR Off	LC1F1000●●	LC1F1000●●
710	42	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

500 V power supply, ATS480 connected in-line

Motor power kW	Combination I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor (2) KM1 reference	Bypass contactor (2) KM3 reference
		Class 10 Normal duty	Class 20 Heavy duty			
7.5	50	–	ATS480D17Y	NSX100H MA	LC1D40A●●	LC1D40A●●
9	50	ATS480D17Y	ATS480D22Y	NSX100H MA	LC1D40A●●	LC1D40A●●
11	50	ATS480D22Y	ATS480D32Y	NSX100H MA	LC1D40A●●	LC1D40A●●
18.5	50	ATS480D32Y	ATS480D38Y	NSX100H MA	LC1D40A●●	LC1D40A●●
22	50	ATS480D38Y	ATS480D47Y	NSX100H MA	LC1D50A●●	LC1D50A●●
30	50	ATS480D47Y	ATS480D62Y	NSX100H MA	LC1D50A●●	LC1D50A●●
37	50	ATS480D62Y	ATS480D75Y	NSX100H MA	LC1D65A●●	LC1D65A●●
45	50	ATS480D75Y	ATS480D88Y	NSX100H MA	LC1D80●●	LC1D80●●
55	50	ATS480D88Y	ATS480C11Y	NSX100H MA	LC1D80●●	LC1D80●●
75	50	ATS480C11Y	ATS480C14Y	NSX160H MA	LC1D150●●	LC1D150●●
90	50	ATS480C14Y	ATS480C17Y	NSX160H MA	LC1D150●●	LC1D150●●
110	50	ATS480C17Y	ATS480C21Y	NSX250H MA	LC1G185●●●●	LC1G185●●●●
132	50	ATS480C21Y	ATS480C25Y	NSX250H MA	LC1G225●●●●	LC1G225●●●●
160	50	ATS480C25Y	ATS480C32Y	NSX400H MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
220	50	ATS480C32Y	ATS480C41Y	NSX630H MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
250	70	ATS480C41Y	ATS480C48Y	NSX630L MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
315	70	ATS480C48Y	ATS480C59Y	NSX630L MicroLogic 1.3 M	LC1G500●●●●	LC1G500●●●●
400	70	ATS480C59Y	ATS480C66Y	NS630bL MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
450	70	ATS480C66Y	ATS480C79Y	NS800L MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
500	42	ATS480C79Y	ATS480M10Y	NS800L MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●
630	42	ATS480M10Y	ATS480M12Y	NS1000L MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●
800	42	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

690 V power supply, ATS480 connected in-line						
Motor power kW	Combination I _q (kA)	ATS480		Circuit breaker (1)	Line contactor (2)	Bypass contactor (2)
		Class 10 Normal duty	Class 20 Heavy duty	Q1 reference	KM1 reference	KM3 reference
11	50	–	ATS480D17Y	NSX100HB1 MA	LC1D40A●●	LC1D40A●●
15	50	ATS480D17Y	ATS480D22Y	NSX100HB1 MA	LC1D40A●●	LC1D40A●●
18.5	50	ATS480D22Y	ATS480D32Y	NSX100HB1 MA	LC1D40A●●	LC1D40A●●
22	50	ATS480D32Y	ATS480D38Y	NSX100HB1 MA	LC1D40A●●	LC1D40A●●
30	50	ATS480D38Y	ATS480D47Y	NSX100HB1 MA	LC1D40A●●	LC1D40A●●
37	50	ATS480D47Y	ATS480D62Y	NSX100HB1 MA	LC1D65A●●	LC1D65A●●
45	50	ATS480D62Y	ATS480D75Y	NSX100HB1 MA	LC1D80●●	LC1D80●●
55	50	ATS480D75Y	ATS480D88Y	NSX100HB1 MA	LC1D115●●	LC1D115●●
75	50	ATS480D88Y	ATS480C11Y	NSX100HB1 MA	LC1D115●●	LC1D115●●
90	15	ATS480C11Y	ATS480C14Y	NSX250HB1 MA	LC1D150●●	LC1D150●●
110	15	ATS480C14Y	ATS480C17Y	NSX250HB1 MA	LC1D150●●	LC1D150●●
160	50	ATS480C17Y	ATS480C21Y	NSX250HB1 MA	LC1G225●●●●	LC1G225●●●●
200	50	ATS480C21Y	ATS480C25Y	NSX400HB1 MicroLogic 1.3 M	LC1G265●●●●	LC1G265●●●●
250	50	ATS480C25Y	ATS480C32Y	NSX400HB1 MicroLogic 1.3 M	LC1G330●●●●	LC1G330●●●●
315	50	ATS480C32Y	ATS480C41Y	NSX630HB1 MicroLogic 1.3 M	LC1G400●●●●	LC1G400●●●●
400	70	ATS480C41Y	ATS480C48Y	NSX630HB1 MicroLogic 1.3 M	LC1G630●●●●	LC1G630●●●●
500	70	ATS480C48Y	ATS480C59Y	NS630bLB MicroLogic 5.0 LR Off	LC1G630●●●●	LC1G630●●●●
560	70	ATS480C59Y	ATS480C66Y	NS630bLB MicroLogic 5.0 LR Off	LC1G800●●●●	LC1G800●●●●
630	42	ATS480C66Y	ATS480C79Y	NS800LB MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●
710	42	ATS480C79Y	ATS480M10Y	NS800LB MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●
900	42	ATS480M10Y	ATS480M12Y	NS1000H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●
950	42	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●●	LC1F2600●●

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

Altivar Soft Starter ATS480

Soft starters for asynchronous motors
Type 2 coordination according to IEC 60947-4-1
and IEC 60947-4-2

230 V power supply, ATS480 connected in-line

Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses with microswitch		Fuse disconnecter
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
3	50	–	ATS480D17Y	GV2L20	LC1D25●●	DF3ER50	14 x 51	GK1EK
4	50	ATS480D17Y	ATS480D22Y	GV2L20	LC1D25●●	DF3ER50	14 x 51	GK1EK
5.5	50	ATS480D22Y	ATS480D32Y	GV2L22	LC1D25●●	DF3FR80	22 x 58	GS1JD3
7.5	50	ATS480D32Y	ATS480D38Y	GV2L32 + GV1L3	LC1D32●●	DF3FR80	22 x 58	GS1JD3
9	35	ATS480D38Y	ATS480D47Y	GV3L40	LC1D80●●	DF3FR100	22 x 58	GS1JD3
11	35	ATS480D47Y	ATS480D62Y	GV3L65	LC1D80●●	DF3FR100	22 x 58	GS1JD3
15	50	ATS480D62Y	ATS480D75Y	GV4L80B	LC1D65A●●	DF400125	00	GS1KKD3
18.5	50	ATS480D75Y	ATS480D88Y	GV4L80B	LC1D80●●	DF400125	00	GS1KKD3
22	50	ATS480D88Y	ATS480C11Y	GV4L115B	LC1D115●●	DF400160	00	GS1LLD3
30	50	ATS480C11Y	ATS480C14Y	GV4L115B	LC1D115●●	DF400160	00	–
37	50	ATS480C14Y	ATS480C17Y	NSX160F MA	LC1D150●●	DF430400	30	–
45	50	ATS480C17Y	ATS480C21Y	NSX250F MA	LC1G185●●●●	DF430400	30	–
55	50	ATS480C21Y	ATS480C25Y	NSX250F MA	LC1G225●●●●	DF431700	31	–
75	50	ATS480C25Y	ATS480C32Y	NSX400F MicroLogic 1.3 M	LC1G265●●●●	DF431700	31	–
90	50	ATS480C32Y	ATS480C41Y	NSX400F MicroLogic 1.3 M	LC1G330●●●●	DF431700	31	–
110	50	ATS480C41Y	ATS480C48Y	NSX630F MicroLogic 1.3 M	LC1G400●●●●	DF433800	33	–
132	50	ATS480C48Y	ATS480C59Y	NSX630F MicroLogic 1.3 M	LC1G500●●●●	DF4331000	33	–
160	50	ATS480C59Y	ATS480C66Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	DF4331000	33	–
200	50	ATS480C66Y	ATS480C79Y	NS800N MicroLogic 5.0 LR Off	LC1G630●●●●	DF42331400	2 x 33	–
220	50	ATS480C79Y	ATS480M10Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	DF4441600	44	–
250	85	ATS480M10Y	ATS480M12Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	DF4442200	44	–
355	85	ATS480M12Y	–	NS1250N MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

230 V power supply, ATS480 connected inside delta

Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse- disconnecter
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
5.5	50	–	ATS480D17Y	GV2L22	LC1D25●●	DF3ER50	14 x 51	GK1EK
7.5	50	ATS480D17Y	ATS480D22Y	GV2L32 + GV1L3	LC1D32●●	DF3ER50	14 x 51	GK1EK
9	35	ATS480D22Y	ATS480D32Y	GV3L40	LC1D80●●	DF3FR80	22 x 58	GS1JD3
15	50	ATS480D32Y	ATS480D38Y	GV4L80B	LC1D65A●●	DF3FR80	22 x 58	GS1JD3
18.5	50	ATS480D38Y	ATS480D47Y	GV4L80B	LC1D80●●	DF3FR100	22 x 58	GS1JD3
22	50	ATS480D47Y	ATS480D62Y	GV4L115B	LC1D115●●	DF3FR100	22 x 58	GS1JD3
30	50	ATS480D62Y	ATS480D75Y	GV4L115B	LC1D115●●	DF400125	00	GS1KKD3
37	50	ATS480D75Y	ATS480D88Y	NSX160F MA	LC1D150●●	DF400125	00	GS1KKD3
45	50	ATS480D88Y	ATS480C11Y	NSX250F MA	LC1G185●●●●	DF400160	00	GS1LLD3
55	50	ATS480C11Y	ATS480C14Y	NSX250F MA	LC1G225●●●●	DF400160	00	–
75	50	ATS480C14Y	ATS480C17Y	NSX400F MicroLogic 1.3 M	LC1G265●●●●	DF430400	30	–
90	50	ATS480C17Y	ATS480C21Y	NSX400F MicroLogic 1.3 M	LC1G330●●●●	DF430400	30	–
110	50	ATS480C21Y	ATS480C25Y	NSX630F MicroLogic 1.3 M	LC1G400●●●●	DF431700	31	–
132	50	ATS480C25Y	ATS480C32Y	NSX630F MicroLogic 1.3 M	LC1G500●●●●	DF431700	31	–
160	50	ATS480C32Y	ATS480C41Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	DF431700	31	–
220	50	ATS480C41Y	ATS480C48Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	DF433800	43	–
250	85	ATS480C48Y	ATS480C59Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	DF4331000	43	–
355	85	ATS480C79Y	ATS480M10Y	NS1250N MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

(3) Type 2 coordination is only possible if the fast-acting fuses remain in the motor supply circuit and are not bypassed at the end of starting.

380/400/415 V power supply, ATS480 connected in-line								
Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse-disconnector
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
5.5	50	–	ATS480D17Y	GV2L20	LC1D25●●	DF3ER50	14 x 51	GK1EK
7.5	50	ATS480D17Y	ATS480D22Y	GV2L20	LC1D25●●	DF3ER50	14 x 51	GK1EK
11	40	ATS480D22Y	ATS480D32Y	GV2L22	LC1D25●●	DF3FR80	22 x 58	GS1JD3
15	40	ATS480D32Y	ATS480D38Y	GV2L32 + GV1L3	LC1D32●●	DF3FR80	22 x 58	GS1JD3
18.5	40	ATS480D38Y	ATS480D47Y	GV3L40	LC1D50A●●	DF3FR100	22 x 58	GS1JD3
22	40	ATS480D47Y	ATS480D62Y	GV3L50	LC1D50A●●	DF3FR100	22 x 58	GS1JD3
30	50	ATS480D62Y	ATS480D75Y	GV3L65	LC1D65A●●	DF400125	00	GS1KKD3
37	50	ATS480D75Y	ATS480D88Y	GV4L80N	LC1D80●●	DF400125	00	GS1KKD3
45	50	ATS480D88Y	ATS480C11Y	GV4L115N	LC1D115●●	DF400160	00	GS1LLD3
55	50	ATS480C11Y	ATS480C14Y	GV4L115N	LC1D115●●	DF400160	00	–
75	50	ATS480C14Y	ATS480C17Y	NSX160N MA	LC1D150●●	DF430400	30	–
90	50	ATS480C17Y	ATS480C21Y	NSX250N MA	LC1G185●●●●	DF430400	30	–
110	50	ATS480C21Y	ATS480C25Y	NSX250N MA	LC1G225●●●●	DF431700	31	–
132	50	ATS480C25Y	ATS480C32Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	DF431700	31	–
160	50	ATS480C32Y	ATS480C41Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	DF431700	31	–
220	50	ATS480C41Y	ATS480C48Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	DF433800	33	–
250	50	ATS480C48Y	ATS480C59Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	DF4331000	33	–
315	50	ATS480C59Y	ATS480C66Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	DF4331000	33	–
355	50	ATS480C66Y	ATS480C79Y	NS800N MicroLogic 5.0 LR Off	LC1G630●●●●	DF42331400	2 x 33	–
400	50	ATS480C79Y	ATS480M10Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	DF4441600	44	–
500	85	ATS480M10Y	ATS480M12Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	DF4442200	44	–
630	85	ATS480M12Y	–	NS1250N MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

380/400/415 V power supply, ATS480 connected inside delta								
Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse-disconnector
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
11	40	–	ATS480D17Y	GV2L22	LC1D25●●	DF3ER50	14 x 51	GK1EK
15	40	ATS480D17Y	ATS480D22Y	GV2L32 + GV1L3	LC1D32●●	DF3ER50	14 x 51	GK1EK
18.5	40	ATS480D22Y	ATS480D32Y	GV3L40	LC1D50A●●	DF3FR80	22 x 58	GS1JD3
22	40	ATS480D32Y	ATS480D38Y	GV3L50	LC1D50A●●	DF3FR80	22 x 58	GS1JD3
30	50	ATS480D38Y	ATS480D47Y	GV3L65	LC1D65A●●	DF3FR100	22 x 58	GS1JD3
45	50	ATS480D47Y	ATS480D62Y	GV4L115N	LC1D115●●	DF3FR100	22 x 58	GS1JD3
55	50	ATS480D62Y	ATS480D75Y	GV4L115N	LC1D115●●	DF400125	00	GS1KKD3
55	50	ATS480D75Y	ATS480D88Y	GV4L115N	LC1D115●●	DF400125	00	GS1KKD3
75	50	ATS480D88Y	ATS480C11Y	NSX160N MA	LC1D150●●	DF400160	00	GS1LLD3
90	50	ATS480C11Y	ATS480C14Y	NSX250N MA	LC1G185●●●●	DF400160	00	–
110	50	ATS480C14Y	ATS480C17Y	NSX250N MA	LC1G225●●●●	DF430400	30	–
132	50	ATS480C17Y	ATS480C21Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	DF430400	30	–
160	50	ATS480C21Y	ATS480C25Y	NSX400N MicroLogic 1.3 M	LC1G330●●●●	DF431700	31	–
220	50	ATS480C25Y	ATS480C32Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	DF431700	31	–
250	50	ATS480C32Y	ATS480C41Y	NSX630N MicroLogic 1.3 M	LC1G500●●●●	DF431700	31	–
315	50	ATS480C41Y	ATS480C48Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	DF433800	33	–
355	50	ATS480C48Y	ATS480C59Y	NS800N MicroLogic 5.0 LR Off	LC1G630●●●●	DF4331000	33	–
400	50	ATS480C59Y	ATS480C66Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	DF4331000	33	–
500	50	ATS480C66Y	ATS480C79Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	DF42331400	2 x 33	–
630	85	ATS480C79Y	ATS480M10Y	NS1250N MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

(3) Type 2 coordination is only possible if the fast-acting fuses remain in the motor supply circuit and are not bypassed at the end of starting.

Altivar Soft Starter ATS480

Soft starters for asynchronous motors
Type 2 coordination according to IEC 60947-4-1 and IEC 60947-4-2

440 V power supply, ATS480 connected in-line

Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse-disconnector
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
5.5	50	–	ATS480D17Y	GV4L25N	LC1D65A●●	DF3ER50	14 x 51	GK1EK
7.5	50	ATS480D17Y	ATS480D22Y	GV4L25N	LC1D65A●●	DF3ER50	14 x 51	GK1EK
11	20	ATS480D22Y	ATS480D32Y	GV4L25N	LC1D65A●●	DF3FR80	22 x 58	GS1JD3
15	20	ATS480D32Y	ATS480D38Y	GV4L50N	LC1D65A●●	DF3FR80	22 x 58	GS1JD3
18.5	20	ATS480D38Y	ATS480D47Y	GV4L50N	LC1D65A●●	DF3FR100	22 x 58	GS1JD3
22	20	ATS480D47Y	ATS480D62Y	GV4L50N	LC1D65A●●	DF3FR100	22 x 58	GS1JD3
30	50	ATS480D62Y	ATS480D75Y	GV4L80N	LC1D65A●●	DF400125	00	GS1KKD3
37	50	ATS480D75Y	ATS480D88Y	GV4L80N	LC1D65A●●	DF400125	00	GS1KKD3
45	40	ATS480D88Y	ATS480C11Y	GV4L80N	LC1D80●●	DF400160	00	GS1LLD3
55	40	ATS480C11Y	ATS480C14Y	GV4L115N	LC1D115●●	DF400160	00	–
75	50	ATS480C14Y	ATS480C17Y	NSX160N MA	LC1D150●●	DF430400	30	–
90	50	ATS480C17Y	ATS480C21Y	NSX250N MA	LC1G150●●●●	DF430400	30	–
110	50	ATS480C21Y	ATS480C25Y	NSX250N MA	LC1G185●●●●	DF431700	31	–
132	50	ATS480C25Y	ATS480C32Y	NSX400 MA	LC1G225●●●●	DF431700	31	–
160	50	ATS480C32Y	ATS480C41Y	NSX400N MicroLogic 1.3 M	LC1G265●●●●	DF431700	31	–
220	50	ATS480C41Y	ATS480C48Y	NSX630H MicroLogic 1.3 M	LC1G400●●●●	DF433800	33	–
250	50	ATS480C48Y	ATS480C59Y	NSX630H MicroLogic 1.3 M	LC1G400●●●●	DF4331000	33	–
355	50	ATS480C59Y	ATS480C66Y	NS630bN MicroLogic 5.0 LR Off	LC1G630●●●●	DF4331000	33	–
400	50	ATS480C66Y	ATS480C79Y	NS800N MicroLogic 5.0 LR Off	LC1G630●●●●	DF42331400	2 x 33	–
500	50	ATS480C79Y	ATS480M10Y	NS800N MicroLogic 5.0 LR Off	LC1G800●●●●	DF4441600	44	–
630	85	ATS480M10Y	ATS480M12Y	NS1000N MicroLogic 5.0 LR Off	LC1F1000●●	DF4442200	44	–
710	85	ATS480M12Y	–	NS1250N MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

500 V power supply, ATS480 connected in-line

Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse-disconnector
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
7.5	50	–	ATS480D17Y	GV2L20 + LA9LB920	LC1D25●●	DF3ER50	14 x 51	GK1EK
9	50	ATS480D17Y	ATS480D22Y	GV2L20 + LA9LB920	LC1D25●●	DF3ER50	14 x 51	GK1EK
11	20	ATS480D22Y	ATS480D32Y	GV2L20 + LA9LB920	LC1D25●●	DF3FR80	22 x 58	GS1JD3
18.5	20	ATS480D32Y	ATS480D38Y	GV2L32 + LA9LB920	LC1D25●●	DF3FR80	22 x 58	GS1JD3
22	20	ATS480D38Y	ATS480D47Y	NSX100H MA	LC1D80●●	DF3FR100	22 x 58	GS1JD3
30	20	ATS480D47Y	ATS480D62Y	NSX100H MA	LC1D80●●	DF3FR100	22 x 58	GS1JD3
37	50	ATS480D62Y	ATS480D75Y	NSX100H MA	LC1D150●●	DF400125	00	GS1KKD3
45	50	ATS480D75Y	ATS480D88Y	NSX100H MA	LC1D150●●	DF400125	00	GS1KKD3
55	40	ATS480D88Y	ATS480C11Y	NSX100H MA	LC1D150●●	DF400160	00	GS1LLD3
75	50	ATS480C11Y	ATS480C14Y	NSX160H MA	LC1D150●●	DF400160	00	–
90	50	ATS480C14Y	ATS480C17Y	NSX160H MA	LC1G185●●●●	DF430400	30	–
110	50	ATS480C17Y	ATS480C21Y	NSX160H MA	LC1G185●●●●	DF430400	30	–
132	50	ATS480C21Y	ATS480C25Y	NSX250H MA	LC1G225●●●●	DF431700	31	–
160	50	ATS480C25Y	ATS480C32Y	NSX400H MicroLogic 1.3 M	LC1G265●●●●	DF431700	31	–
220	50	ATS480C32Y	ATS480C41Y	NSX400H MicroLogic 1.3 M	LC1G400●●●●	DF431700	31	–
250	40	ATS480C41Y	ATS480C48Y	NSX630H MicroLogic 1.3 M	LC1G400●●●●	DF433800	33	–
315	50	ATS480C48Y	ATS480C59Y	NSX630H MicroLogic 1.3 M	LC1G500●●●●	DF4331000	33	–
400	50	ATS480C59Y	ATS480C66Y	NS630bH MicroLogic 5.0 LR Off	LC1G800●●●●	DF4331000	33	–
450	50	ATS480C66Y	ATS480C79Y	NS800H MicroLogic 5.0 LR Off	LC1G800●●●●	DF42331400	2 x 33	–
500	50	ATS480C79Y	ATS480M10Y	NS800H MicroLogic 5.0 LR Off	LC1F1000●●	DF4441600	44	–
630	85	ATS480M10Y	ATS480M12Y	NS1000H MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–
800	85	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

(3) Type 2 coordination is only possible if the fast-acting fuses remain in the motor supply circuit and are not bypassed at the end of starting.

690 V power supply, ATS480 connected in-line								
Motor power kW	I _q (kA)	ATS480		Circuit breaker (1) Q1 reference	Line contactor Bypass contactor (2) KM1, KM3 reference	Fast-acting fuses		Fuse- disconnecter
		Class 10 Normal duty	Class 20 Heavy duty			FU reference	Size	
11	50	–	ATS480D17Y	NSX100HB1 MA	LC1D80●●	DF3ER50	14 x 51	GK1EK
15	50	ATS480D17Y	ATS480D22Y	NSX100HB1 MA	LC1D80●●	DF3ER50	14 x 51	GK1EK
18.5	20	ATS480D22Y	ATS480D32Y	NSX100HB1 MA	LC1D80●●	DF3FR80	22 x 58	GS1JD3
22	20	ATS480D32Y	ATS480D38Y	NSX100HB1 MA	LC1D80●●	DF3FR80	22 x 58	GS1JD3
30	20	ATS480D38Y	ATS480D47Y	NSX100HB1 MA	LC1D150●●	DF3FR100	22 x 58	GS1JD3
37	20	ATS480D47Y	ATS480D62Y	NSX100HB1 MA	LC1D150●●	DF3FR100	22 x 58	GS1JD3
45	25	ATS480D62Y	ATS480D75Y	NSX100HB1 MA	LC1D150●●	DF400125	00	GS1KKD3
55	25	ATS480D75Y	ATS480D88Y	NSX100HB1 MA	LC1D150●●	DF400125	00	GS1KKD3
75	40	ATS480D88Y	ATS480C11Y	NSX100HB1 MA	LC1D150●●	DF400160	00	GS1LLD3
90	50	ATS480C11Y	ATS480C14Y	NSX250HB1 MA	LC1G185●●●●	DF400160	00	–
110	50	ATS480C14Y	ATS480C17Y	NSX250HB1 MA	LC1G225●●●●	DF430400	30	–
160	50	ATS480C17Y	ATS480C21Y	NSX250HB1 MA	LC1G225●●●●	DF430400	30	–
200	50	ATS480C21Y	ATS480C25Y	NSX250HB1 MA	LC1G265●●●●	DF431700	31	–
250	50	ATS480C25Y	ATS480C32Y	NSX400HB1 MicroLogic 1.3 M	LC1G330●●●●	DF431700	31	–
315	50	ATS480C32Y	ATS480C41Y	NSX630HB1 MicroLogic 1.3 M	LC1G400●●●●	DF431700	31	–
400	40	ATS480C41Y	ATS480C48Y	NSX630HB1 MicroLogic 1.3 M	LC1G630●●●●	DF433800	33	–
500	50	ATS480C48Y	ATS480C59Y	NS630bLB MicroLogic 5.0 LR Off	LC1G630●●●●	DF4331000	33	–
560	50	ATS480C59Y	ATS480C66Y	NS630bLB MicroLogic 5.0 LR Off	LC1G800●●●●	DF4331000	33	–
630	50	ATS480C66Y	ATS480C79Y	NS800LB MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF42331400	2 x 33	–
710	50	ATS480C79Y	ATS480M10Y	NS800LB MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4441600	44	–
900	42	ATS480M10Y	ATS480M12Y	NS1000H MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–
950	42	ATS480M12Y	–	NS1250H MicroLogic 5.0 LR Off	LC1F2600●● (3)	DF4442200	44	–

(1) Set I_{rm} current of the circuit breaker (when available) to a minimum of six times the current rating of the soft starter.

(2) Replace with the appropriate control circuit voltage code (refer to page 44). ATS48 and ATS480 control supply voltage may differ, check the value in the installation guide before starting the system.

(3) Type 2 coordination is only possible if the fast-acting fuses remain in the motor supply circuit and are not bypassed at the end of starting.

Line contactor reference table

Basic reference	Power supply	Control voltage code													
		24	42	48	110	115	220	230	240	380	400	415	440	500	
LC1D18...D150 (1)	50/60 Hz	B7	D7	E7	F7	FE7	M7	P7	U7	Q7	V7	N7	R7	S7	
LC1D18...D65 (2)	50 Hz	B5	D5	E5	-	-	-	P5	-	-	-	-	-	-	
LC1D80...D115	50 Hz	B5	D5	E5	F5	FE5	M5	P5	U5	Q5	V5	N5	R5	S5	
LC1D80...D115	60 Hz	B6	-	E6	F6	-	M6	-	U6	Q6	-	-	R6	-	
	DC	12	24	36	48	60	72	110	125	220	250	440			
LC1D18...D38 (3)	U 0.7...1.25 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD			
LC1D40A...D65A (3)	U 0.75...1.25 Uc	JD	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	RD			
LC1D80...D95	U 0.85...1.1 Uc	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	RD			
	U 0.75...1.2 Uc	JW	BW	CW	EW	-	SW	FW	-	MW	-	-			
LC1D115...150 (4)	U 0.75...1.2 Uc	-	BD	-	ED	ND	SD	FD	GD	MD	UD	RD			
	DC (low consumption)	5	12	20	24	48	110	220	250						
LC1D18...D38 (3)	U 0.8...1.25 Uc	AL	JL	ZL	BL	EL	FL	ML	UL						
	AC/DC (low consumption)														
LC1D18...D150	See TeSys D Green, page B8/4 of TeSys catalog														
	AC	24	48	110	115	120	208	220	230	240	380	400	415	440	
LC1F1000...2600	40...400 Hz (coil LX1F)	-	-	F7	-	G7	-	M7	P7	U7	Q7	V7	N7	R7	
	DC	24	48	110	125	220	230	250	400	440					
LC1F1000...2600	(coil LX4F)	-	-	FD	GD	MD	-	UD	-	RD					
	AC/DC	24...48	48...130	100...250	200...500										
LC1G150...G500		BEEA		EHEN		KUEN		LSEA							
LC1G630...G800		-		EHEN		KUEN		LSEA							

(1) D115 and D150 coils with built-in suppression as standard, by bidirectional peak limiting diode.

(2) Not available with «connection for lugs or bars».

(3) Coils with integral suppression device fitted as standard, by bidirectional peak limiting diode.

(4) Coil with built-in suppression device as standard.

(5) For these coil voltages, choose from TeSys D Green contactors. Same product reference radical, just add BBE coil voltage code for 24 V DC, BNE for 24-60 V AC/DC, EHE for 48-130 V AC/DC, KUE for 100-250 V AC/DC. Example: LC1D40ABBE

