

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
230 V power supply
Type 1 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2

Use either a circuit-breaker (light green columns), contactor, starter combination or a switch/fuse (dark green columns), contactor, starter combination

Motor		Starter (1)		Circuit-breaker		Type of contactor	Type of switch or switch disconnector (bare unit)	aM fuses		Size	Rating
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating			Unit reference (3)	Without striker	With striker	
kW	A				A						A
M1	A1			Q1		KM1, KM2, KM3					
3	11.5	–	ATS48D17●	GV2L20	18	LC1D18	LS1D32	DF2CA16	–	10 x 38	–
				NS80HMA	12.5	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
4	14.5	ATS48D17●	ATS48D22●	GV2L20	18	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	25	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
5.5	20	ATS48D22●	ATS48D32●	GV2L22	25	LC1D25	LS1D32	DF2CA25	–	10 x 38	25
				NS80HMA	25	LC1D25	LS1D32	DF2CA25	–	10 x 38	25
7.5	27	ATS48D32●	ATS48D38●	GV2L32	32	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
				NS80HMA	50	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
9	32	ATS48D38●	ATS48D47●	GV3L40	40	LC1D38	GK1EK	DF2EA40	DF3EA40	14 x 51	40
				NS80HMA	50	LC1D38	GK1EK	DF2EA40	DF3EA40	14 x 51	40
11	39	ATS48D47●	ATS48D62●	GV3L65	65	LC1D50A	GS1K	DF2FA50	DF3FA50	22 x 58	50
				NS80HMA	50	LC1D50A	GS1K	DF2FA50	DF3FA50	22 x 58	50
15	52	ATS48D62●	ATS48D75●	GV3L65	65	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
				NS80HMA	80	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
18.5	64	ATS48D75●	ATS48D88●	NS80HMA	80	LC1D80	GS1K	DF2FA80	DF3FA80	22 x 58	80
22	75	ATS48D88●	ATS48C11●	NSX100●MA (2)	100	LC1D115	GS1K	DF2FA100	DF3FA100	22 x 58	100
30	103	ATS48C11●	ATS48C14●	NSX160●MA (2)	150	LC1D115	GS1K	DF2FA125	DF4FA125	22 x 58	125
37	126	ATS48C14●	ATS48C17●	NSX160●MA (2)	150	LC1D150	GS1L	DF2GA1161	DF4GA1161	0	160
45	150	ATS48C17●	ATS48C21●	NSX250●MA (2)	220	LC1F185	GS1N	DF2HA1201	DF4HA1201	1	200
55	182	ATS48C21●	ATS48C25●	NSX250●MA (2)	220	LC1F225	GS1N	DF2HA1201	DF4HA1201	1	200
75	240	ATS48C25●	ATS48C32●	NSX400● (2) Micrologic 1.3M	320	LC1F265	GS1QQ	DF2JA1251	DF4JA1251	2	250
90	295	ATS48C32●	ATS48C41●	NSX400● (2) Micrologic 1.3M	320	LC1F330	GS1QQ	DF2JA1311	DF4JA1311	2	315
110	356	ATS48C41●	ATS48C48●	NSX630● (2) Micrologic 1.3M	500	LC1F400	GS1S	DF2KA1401	DF4KA1401	3	400
132	425	ATS48C48●	ATS48C59●	NSX630● (2) Micrologic 1.3M	500	LC1F500	GS1S	DF2KA1501	DF4KA1501	3	500
160	520	ATS48C59●	ATS48C66●	NS630b● (2) Micrologic 5.0 LR Off	630	LC1F630	GS1S	DF2KA1631	DF4KA1631	3	630
200	630	ATS48C66●	ATS48C79●	NS800● (2) Micrologic 5.0 LR Off	800	LC1F800	GS1S	DF2KA1631	DF4KA1631	3	630
220	700	ATS48C79●	ATS48M10●	NS800● (2) Micrologic 5.0 LR Off	800	LC1F800	GS1V	DF2LA1801	DF4LA1801	4	800
250	800	ATS48M10●	ATS48M12●	NS1000● (2) Micrologic 5.0 LR Off	1000	LC1BM33	GS1V	DF2LA1101	DF4LA1101	4	1000
355	1115	ATS48M12●	–	NS1250● (2) Micrologic 5.0 LR Off	1250	LC1BP33	–	DF2LA1251	DF4LA1251	4	1250

(1) Replace ● with Q or Y according to the starter's voltage range.

(2) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table below).

(3) DF2CA, DF●EA, DF●FA: sold in lots of 20.

DF●GA, DF●KA: sold in lots of 3.

DF●LA: sold singly.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Breaking capacity of circuit-breakers according to standard IEC 60947-4-2						
Starter	Iq (kA)	230 V		Icu (kA)				
ATS48D17● to ATS48C32●	50	GV2L20		100				
ATS48C41● to ATS48M12●	70	GV2L22, GV2L32, GV3L40, GV3L65		50				
		230 V		Icu (kA)				
		F	N	H	S	L	LB	
NS80HMA		–	–	100 kA	–	–	–	
NSX100/160/250		85 kA	90 kA	100 kA	120 kA	150 kA	–	
NSX400/630		85 kA	90 kA	100 kA	120 kA	150 kA	–	
NS630b/800L/LB		–	–	–	–	150 kA	200 kA	
NS1000L		–	–	–	–	150 kA	–	
NS1250		–	50 kA	70 kA	–	–	–	

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
230 V power supply
Type 2 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2: circuit-breakers, contactors, fast-acting fuses, starters

Combination: circuit-breaker, contactor, starter

Motor		Starter (1)		Circuit-breaker		Type of contactor
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating A	
kW	A					
M1		A1		Q1		KM1, KM2, KM3
3	11.5	–	ATS48D17●	GV2L20 NS80HMA	18 12.5	LC1D40A LC1D40
4	14.5	ATS48D17●	ATS48D22●	GV2L20 NS80HMA	18 25	LC1D40A LC1D40
5.5	20	ATS48D22●	ATS48D32●	GV2L22 NS80HMA	25 25	LC1D40A LC1D40
7.5	27	ATS48D32●	ATS48D38●	GV2L32 NS80HMA	32 50	LC1D40A LC1D80
9	32	ATS48D38●	ATS48D47●	GV3L40 NS80HMA	40 50	LC1D80 LC1D80
11	39	ATS48D47●	ATS48D62●	GV3L65 NS80HMA	65 50	LC1D80 LC1D80
15	52	ATS48D62●	ATS48D75●	NS80HMA	80	LC1D80
18.5	64	ATS48D75●	ATS48D88●	NS80HMA	80	LC1D80
22	75	ATS48D88●	ATS48C11●	NSX100●MA (2)	100	LC1D115
30	103	ATS48C11●	ATS48C14●	NSX160●MA (2)	150	LC1D115
37	126	ATS48C14●	ATS48C17●	NSX160●MA (2)	150	LC1D150
45	150	ATS48C17●	ATS48C21●	NSX250●MA (2)	220	LC1F185
55	182	ATS48C21●	ATS48C25●	NSX250●MA (2)	220	LC1F225
75	240	ATS48C25●	ATS48C32●	NSX400● (2) Micrologic 1.3M	320	LC1F265
90	295	ATS48C32●	ATS48C41●	NSX400● (2) Micrologic 1.3M	320	LC1F330
110	356	ATS48C41●	ATS48C48●	NSX630● (2) Micrologic 1.3M	500	LC1F400
132	425	ATS48C48●	ATS48C59●	NSX630● (2) Micrologic 1.3M	500	LC1F500
160	520	ATS48C59●	ATS48C66●	NS630bL/LB Micrologic 5.0 LR Off	630	LC1F630
200	626	ATS48C66●	ATS48C79●	NS800L/LB Micrologic 5.0 LR Off	800	LC1F800
220	700	ATS48C79●	ATS48M10●	NS800L/LB Micrologic 5.0 LR Off	800	LC1F800
250	800	ATS48M10●	ATS48M12●	NS1000L Micrologic 5.0 LR Off	1000	LC1BM33
355	1115	ATS48M12●	–	NS1250● (3) Micrologic 5.0 LR Off	1250	LC1BP33

(1) Replace ● with Q or Y according to the starter's voltage range.

(2) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table on page 14).

(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.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Fast-acting fuse (essential for type 2 coordination) and starter combinations				
		Starter	Fast-acting fuses with microswitch			
Starter	I _q (kA)	Reference	Unit reference (4)	Size	Rating A	I ² t kA ² .s
ATS48D17● to ATS48C79●	50	A1	Q3			
ATS48M10● and ATS48M12●	85	ATS48D17●	DF3ER50	14 x 51	50	2.3
		ATS48D22● and ATS48D32●	DF3FR80	22 x 58	80	5.6
		ATS48D38● and ATS48D47●	DF3FR100	22 x 58	100	12
		ATS48D62● and ATS48D75●	DF400125	00	125	45
		ATS48D88● and ATS48C11●	DF400160	00	160	82
		ATS48C14● and ATS48C17●	DF430400	30	400	120
		ATS48C21● to ATS48C32●	DF431700	31	700	490
		ATS48D75●	DF433800	33	800	490
		ATS48C48● and ATS48C59●	DF4331000	33	1000	900
		ATS48C66●	DF42331400	2 x 33	1400	1200
		ATS48C79●	DF4441600	44	1600	1600
		ATS48M10● and ATS48M12●	DF4442200	44	2200	4100

(4) DF3ER, DF3FR: sold in lots of 10.
DF4: sold singly.

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
380 V, 400 V, 415 V power supply
Type 1 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2

Use either a circuit-breaker (light green columns), contactor, starter combination or a switch/fuse (dark green columns), contactor, starter combination

Motor		Starter (1)		Circuit-breaker		Type of contactor	Type of switch or switch disconnector (bare unit)	aM fuses			
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating			Unit reference (3)		Size	Rating
kW	A				A			Without striker	With striker		A
M1		A1		Q1		KM1, KM2, KM3					
5.5	11	–	ATS48D17●	GV2L20	18	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	12.5	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
7.5	14.8	ATS48D17●	ATS48D22●	GV2L20	18	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	25	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
11	21	ATS48D22●	ATS48D32●	GV2L22	25	LC1D25	LS1D32	DF2CA25	–	10 x 38	25
				NS80HMA	25	LC1D25	LS1D32	DF2CA25	–	10 x 38	25
15	28.5	ATS48D32●	ATS48D38●	GV2L32	32	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
				NS80HMA	50	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
18.5	35	ATS48D38●	ATS48D47●	GV3L40	40	LC1D38	GK1EK	DF2EA40	DF3EA40	14 x 51	40
				NS80HMA	50	LC1D38	GK1EK	DF2EA40	DF3EA40	14 x 51	40
22	42	ATS48D47●	ATS48D62●	GV3L65	65	LC1D50A	GS1K	DF2FA50	DF3FA50	22 x 58	50
				NS80HMA	50	LC1D50A	GS1K	DF2FA50	DF3FA50	22 x 58	50
30	57	ATS48D62●	ATS48D75●	GV3L65	65	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
				NS80HMA	80	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
37	69	ATS48D75●	ATS48D88●	NS80HMA	80	LC1D80	GS1K	DF2FA80	DF3FA80	22 x 58	80
45	81	ATS48D88●	ATS48C11●	NSX100●MA (2)	100	LC1D115	GS1K	DF2FA100	DF3FA100	22 x 58	100
55	100	ATS48C11●	ATS48C14●	NSX160●MA (2)	150	LC1D115	GS1K	DF2FA125	DF4FA125	22 x 58	125
75	131	ATS48C14●	ATS48C17●	NSX160●MA (2)	150	LC1D150	GS1L	DF2GA1161	DF4GA1161	0	160
90	162	ATS48C17●	ATS48C21●	NSX250●MA (2)	220	LC1F185	GS1N	DF2HA1201	DF4HA1201	1	200
110	195	ATS48C21●	ATS48C25●	NSX250●MA (2)	220	LC1F225	GS1N	DF2HA1201	DF4HA1201	1	200
132	233	ATS48C25●	ATS48C32●	NSX400● (2) Micrologic 1.3M	320	LC1F265	GS1QQ	DF2JA1251	DF4JA1251	2	250
160	285	ATS48C32●	ATS48C41●	NSX400● (2) Micrologic 1.3M	320	LC1F330	GS1QQ	DF2JA1311	DF4JA1311	2	315
220	388	ATS48C41●	ATS48C48●	NSX630● (2) Micrologic 1.3M	500	LC1F400	GS1S	DF2KA1401	DF4KA1401	3	400
250	437	ATS48C48●	ATS48C59●	NSX630● (2) Micrologic 1.3M	500	LC1F500	GS1S	DF2KA1501	DF4KA1501	3	500
315	560	ATS48C59●	ATS48C66●	NS630b● (2) Micrologic 5.0 LR Off	630	LC1F630	GS1S	DF2KA1631	DF4KA1631	3	630
355	605	ATS48C66●	ATS48C79●	NS800● (2) Micrologic 5.0 LR Off	800	LC1F780	GS1V	DF2LA1631	DF4LA1631	4	630
400	675	ATS48C79●	ATS48M10●	NS800● (2) Micrologic 5.0 LR Off	800	LC1F780	GS1V	DF2LA1801	DF4LA1801	4	800
500	855	ATS48M10●	ATS48M12●	NS1000● (2) Micrologic 5.0 LR Off	1000	LC1BM33	GS1V	DF2LA1101	DF4LA1101	4	1000
630	1045	ATS48M12●	–	NS1250● (2) Micrologic 5.0 LR Off	1250	LC1BP33	–	DF2LA1251	DF4LA1251	4	1250

(1) Replace ● with Q or Y according to the starter's voltage range.

(2) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table below).

(3) DF2CA, DF●EA, DF●FA: sold in lots of 20.

DF●GA, DF●KA: sold in lots of 3.

DF●LA: sold singly.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Breaking capacity of circuit-breakers according to standard IEC 60947-4-2						
Starter		I _q (kA)		380 V, 400 V, 415 V		I _{cu} (kA)		
ATS48D17● to ATS48C32●		50		GV2L20, GV2L22, GV2L32, GV3L40, GV3L50, GV3L65		50		
ATS48C41● to ATS48M12●		70		380 V, 400 V, 415 V		I _{cu} (kA)		
						F	N	H
						S	L	LB
				NS80HMA		–	–	70
				NSX100/160/250		36	50	70
				NSX400/630		36	50	70
				NS630b/800		–	50	70
				NS1000		–	50	70
				NS1250		–	50	70

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
380 V, 400 V, 415 V power supply
Type 2 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2: circuit-breakers, contactors, fast-acting fuses, starters

Combination: circuit-breaker, contactor, starter

Motor		Starter (1)		Circuit-breaker		Type of contactor
		Class 10	Class 20	Reference	Rating	
kW	A	Standard applications	Severe applications		A	
M1		A1		Q1		KM1, KM2, KM3
5.5	11	–	ATS48D17●	GV2L20	18	LC1D25
				NS80HMA	12.5	LC1D40
7.5	14.8	ATS48D17●	ATS48D22●	GV2L20	18	LC1D25
				NS80HMA	25	LC1D40
11	21	ATS48D22●	ATS48D32●	GV2L22	25	LC1D25
				NS80HMA	25	LC1D40
15	28.5	ATS48D32●	ATS48D38●	GV2L32	32	LC1D32
				NS80HMA	50	LC1D80
18.5	35	ATS48D38●	ATS48D47●	GV3L40	40	LC1D50A
				NS80HMA	50	LC1D80
22	42	ATS48D47●	ATS48D62●	GV3L50	50	LC1D50A
				NS80HMA	50	LC1D80
30	57	ATS48D62●	ATS48D75●	GV3L65	65	LC1D65A
				NS80HMA	80	LC1D80
37	69	ATS48D75●	ATS48D88●	NS80HMA	80	LC1D80
45	81	ATS48D88●	ATS48C11●	NSX100●MA (2)	100	LC1D115/F115
55	100	ATS48C11●	ATS48C14●	NSX160●MA (2)	150	LC1D115/F115
75	131	ATS48C14●	ATS48C17●	NSX100●MA (2)	150	LC1D150/F150
90	162	ATS48C17●	ATS48C21●	NSX250●MA (2)	220	LC1F185
110	195	ATS48C21●	ATS48C25●	NSX250●MA (2)	220	LC1F225
132	233	ATS48C25●	ATS48C32●	NSX400● (2) Micrologic 1.3M	320	LC1F265
160	285	ATS48C32●	ATS48C41●	NSX400● (2) Micrologic 1.3M	320	LC1F330
220	388	ATS48C41●	ATS48C48●	NSX630● (2) Micrologic 1.3M	500	LC1F500
250	437	ATS48C48●	ATS48C59●	NSX630● (2) Micrologic 1.3M	500	LC1F500
315	560	ATS48C59●	ATS48C66●	NS630bL Micrologic 5.0 LR Off	630	LC1F630
355	605	ATS48C66●	ATS48C79●	NS800L or LB Micrologic 5.0 LR Off	800	LC1F780
400	675	ATS48C79●	ATS48M10●	NS800L or LB Micrologic 5.0 LR Off	800	LC1F780
500	855	ATS48M10●	ATS48M12●	NS1000L Micrologic 5.0 LR Off	1000	LC1BM33
630	1045	ATS48M12●	–	NS1250 (3) Micrologic 5.0 LR Off	1250	LC1BP33

(1) Replace ● with Q or Y according to the starter's voltage range.

(2) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table below).

(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.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Fast-acting fuse (essential for type 2 coordination) and starter combinations				
Starter	I _q (kA)	Starter Reference	Fast-acting fuses with microswitch			
			Unit reference (4)	Size	Rating A	I ² t kA ² .s
ATS48D17●	50	A1	Q3			
ATS48D22● to ATS48D47●	40	ATS48D17●	DF3ER50	14 x 51	50	2.3
ATS48D62● to ATS48C79●	50	ATS48D22● and ATS48D32●	DF3FR80	22 x 58	80	5.6
ATS48M10● and ATS48M12●	85	ATS48D38● and ATS48D47●	DF3FR100	22 x 58	100	12
		ATS48D62● and ATS48D75●	DF400125	00	125	45
		ATS48D88● and ATS48C11●	DF400160	00	160	82
		ATS48C14● and ATS48C17●	DF430400	30	400	120
		ATS48C21● to ATS48C32●	DF431700	31	700	490
		ATS48D75●	DF433800	33	800	490
		ATS48C48● and ATS48C59●	DF4331000	33	1000	900
		ATS48C66●	DF42331400	2 x 33	1400	1200
		ATS48C79●	DF4441600	44	1600	1600
		ATS48M10● and ATS48M12●	DF4442200	44	2200	4100

(4) DF3ER, DF3FR: sold in lots of 10.

DF4: sold singly.

Breaking capacity of circuit-breakers according to standard IEC 60947-4-2

380 V, 400 V, 415 V		I _{cu} (kA)					
GV2L20, GV2L22, GV2L32, GV3L40, GV3L50, GV3L65		50					
380 V, 400 V, 415 V		I _{cu} (kA)					
		F	N	H	S	L	LB
NS80HMA		–	–	70	–	–	–
NSX100/160/250		36	50	70	100	150	–
NSX400/630		36	50	70	100	150	–
NS630b/800L/LB		–	–	–	–	150	200
NS1000L		–	–	–	–	150	–
NS1250		–	50	70	–	–	–

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
440 V power supply
Type 1 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2

Use either a circuit-breaker (light green columns), contactor, starter combination or a switch/fuse (dark green columns), contactor, starter combination

Motor		Starter		Circuit-breaker		Type of contactor	Type of switch or switch disconnector (bare unit)	aM fuses			
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating			Unit reference (2)		Size	Rating
kW	A					A		Without striker	With striker		
M1		A1		Q1			KM1, KM2, KM3				
5.5	10.4	–	ATS48D17Y	NSX100●MA (1)	12.5	LC1D12	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	12.5	LC1D12	LS1D32	DF2CA16	–	10 x 38	16
7.5	13.7	ATS48D17Y	ATS48D22Y	NSX100●MA (1)	25	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	25	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
11	20.1	ATS48D22Y	ATS48D32Y	NSX100●MA (1)	25	LC1D25	GK1EK	DF2EA25	DF3EA25	14 x 51	25
				NS80HMA	25	LC1D25	GK1EK	DF2EA25	DF3EA25	14 x 51	25
15	26.5	ATS48D32Y	ATS48D38Y	NSX100●MA (1)	50	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
				NS80HMA	50	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
18.5	32.8	ATS48D38Y	ATS48D47Y	NSX100●MA (1)	50	LC1D40A	GK1EK	DF2EA40	DF3EA40	14 x 51	40
				NS80HMA	50	LC1D40A	GK1EK	DF2EA40	DF3EA40	14 x 51	40
22	39	ATS48D47Y	ATS48D62Y	NSX100●MA (1)	50	LC1D40A	GS1K	DF2FA50	DF3FA50	22 x 58	50
				NS80HMA	50	LC1D40A	GS1K	DF2FA50	DF3FA50	22 x 58	50
30	52	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
				NS80HMA	80	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
37	64	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
				NS80HMA	80	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
45	76	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D115	GS1K	DF2FA100	DF3FA100	22 x 58	100
55	90	ATS48C11Y	ATS48C14Y	NSX100●MA (1)	100	LC1D115	GS1L	DF2GA1121	DF4GA1121	0	125
75	125	ATS48C14Y	ATS48C17Y	NSX160●MA (1)	150	LC1D150	GS1L	DF2GA1161	DF4GA1161	1	160
90	150	ATS48C17Y	ATS48C21Y	NSX250●MA (1)	220	LC1F185	GS1N	DF2HA1201	DF4HA1201	1	200
110	178	ATS48C21Y	ATS48C25Y	NSX250●MA (1)	220	LC1F225	GS1N	DF2HA1251	DF4HA1251	1	250
132	215	ATS48C25Y	ATS48C32Y	NSX250●MA (1)	220	LC1F265	GS1QQ	DF2JA1311	DF4JA1311	2	315
160	256	ATS48C32Y	ATS48C41Y	NSX400● (1) Micrologic 1.3M	320	LC1F265	GS1QQ	DF2JA1401	DF4JA1401	2	315
220	353	ATS48C41Y	ATS48C48Y	NSX630● (1) Micrologic 1.3M	500	LC1F400	GS1S	DF2KA1501	DF4KA1501	3	500
250	401	ATS48C48Y	ATS48C59Y	NSX630● (1) Micrologic 1.3M	500	LC1F400	GS1S	DF2KA1501	DF4KA1501	3	500
355	549	ATS48C59Y	ATS48C66Y	NS630b● (1) Micrologic 5.0 LR Off	630	LC1F630	GS1V	DF2LA1801	DF4LA1801	4	800
400	611	ATS48C66Y	ATS48C79Y	NS630b● (1) Micrologic 5.0 LR Off	630	LC1F630	GS1V	DF2LA1801	DF4LA1801	4	800
500	780	ATS48C79Y	ATS48M10Y	NS800● (1) Micrologic 5.0 LR Off	800	LC1F780	GS1V	DF2LA1801	DF4LA1801	4	800
630	965	ATS48M10Y	ATS48M12Y	NS1000● (1) Micrologic 5.0 LR Off	1000	LC1BP33	GS1V	DF2LA1101	DF4LA1101	4	1000
710	1075	ATS48M12Y	–	NS1250● (1) Micrologic 5.0 LR Off	1250	LC1BP33	–	DF2LA1251	–	4	1250

(1) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table below).

(2) DF2CA, DF●EA, DF●FA: sold in lots of 20.

DF●GA, DF●KA: sold in lots of 3.

DF●LA: sold singly.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2

Starter	Iq (kA)
ATS48D17Y to ATS48C32Y	50
ATS48C41Y to ATS48M12Y	70

Breaking capacity of circuit-breakers according to standard IEC 60947-4-2

440 V	Icu (kA)					
GV2L20, GV2L22, GV2L32	20					
GV3L40, GV3L65	50					
GK3EF80	25					
440 V	Icu (kA)					
	F	N	H	S	L	LB
NS80HMA	—	—	65	—	—	—
NSX100/160/250	35	50	65	90	130	—
NSX400/630	30	42	65	90	130	—
NS630b/800	—	50	65	—	130	200
NS1000	—	50	65	—	130	—
NS1250	—	50	65	—	—	—

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
440 V power supply
Type 2 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2: circuit-breakers, contactors, fast-acting fuses, starters

Combination: circuit-breaker, contactor, starter

Motor		Starter		Circuit-breaker		Type of contactor
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating A	
kW	A					
M1		A1		Q1		KM1, KM2, KM3
5.5	10.4	—	ATS48D17Y	NS80HMA	12.5	LC1D40
				NSX100●MA (1)	12.5	LC1D80
7.5	13.7	ATS48D17Y	ATS48D22Y	NS80HMA	25	LC1D40
				NSX100●MA (1)	25	LC1D80
11	20.1	ATS48D22Y	ATS48D32Y	NS80HMA	25	LC1D40
				NSX100●MA (1)	25	LC1D80
15	26.5	ATS48D32Y	ATS48D38Y	NSX100●MA (1)	50	LC1D80
				NS80HMA	50	LC1D80
18.5	32.8	ATS48D38Y	ATS48D47Y	NSX100●MA (1)	50	LC1D80
				NS80HMA	50	LC1D80
22	39	ATS48D47Y	ATS48D62Y	NSX100●MA (1)	50	LC1D80
				NS80HMA	50	LC1D80
30	52	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D80
				NS80HMA	80	LC1D80
37	64	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D80
				NS80HMA	80	LC1D80
45	76	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D115
55	90	ATS48C11Y	ATS48C14Y	NSX100●MA (1)	100	LC1D115
75	125	ATS48C14Y	ATS48C17Y	NSX160●MA (1)	150	LC1D150
90	150	ATS48C17Y	ATS48C21Y	NSX160●MA (1)	150	LC1D150
110	178	ATS48C21Y	ATS48C25Y	NSX250●MA (1)	220	LC1F185
132	215	ATS48C25Y	ATS48C32Y	NSX400● (1) Micrologic 1.3M	320	LC1F265
160	256	ATS48C32Y	ATS48C41Y	NSX400● (1) Micrologic 1.3M	320	LC1F265
220	353	ATS48C41Y	ATS48C48Y	NSX630● (1) Micrologic 1.3M	500	LC1F400
250	401	ATS48C48Y	ATS48C59Y	NSX630● (1) Micrologic 1.3M	500	LC1F500
355	549	ATS48C59Y	ATS48C66Y	NS630bL/LB Micrologic 5.0 LR Off	630	LC1F630
400	611	ATS48C66Y	ATS48C79Y	NS800L/LB Micrologic 5.0 LR Off	800	LC1F800
500	780	ATS48C79Y	ATS48M10Y	NS800L/LB Micrologic 5.0 LR Off	800	LC1F780
630	965	ATS48M10Y	ATS48M12Y	NS1000L Micrologic 5.0 LR Off	1000	LC1BP33
710	1075	ATS48M12Y	—	NS1250● (1)(2) Micrologic 5.0 LR Off	1250	LC1BP33

(1) Replace ● with F, N, H, S, L or LB according to the breaking capacity (see the breaking capacity table on page 18).

(2) 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.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Fast-acting fuse (essential for type 2 coordination) and starter combinations				
		Starter	Fast-acting fuses with microswitch			
Starter	I _q (kA)	Reference	Unit reference (3)	Size	Rating A	I ² t kA ² .s
ATS48D17Y	50	A1	Q3			
ATS48D22Y to ATS48D47Y	20	ATS48D17Y	DF3ER50	14 x 51	50	2.3
ATS48D62Y and ATS48D75Y	50	ATS48D22Y and ATS48D32Y	DF3FR80	22 x 58	80	5.6
ATS48D88Y and ATS48C41Y	40	ATS48D38Y and ATS48D47Y	DF3FR100	22 x 58	100	12
ATS48C11Y to ATS48C32Y	50	ATS48D62Y and ATS48D75Y	DF400125	00	125	45
ATS48C48Y to ATS48C79Y	50	ATS48D88Y and ATS48C11Y	DF400160	00	160	82
ATS48M10Y and ATS48M12Y	85	ATS48C14Y and ATS48C17Y	DF430400	30	400	120
		ATS48C21Y to ATS48C32Y	DF431700	31	700	490
		ATS48C41Y	DF433800	33	800	490
		ATS48C48Y and ATS48C59Y	DF4331000	33	1000	900
		ATS48C66Y	DF42331400	2 x 33	1400	1200
		ATS48C79Y	DF4441600	44	1600	1600
		ATS48M10Y and ATS48M12Y	DF4442200	44	2200	4100

(3) DF3ER, DF3FR: sold in lots of 10.
DF4: sold singly.

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
500 V power supply
Type 1 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2

Use either a circuit-breaker (light green columns), contactor, starter combination or a switch/fuse (dark green columns), contactor, starter combination

Motor		Starter		Circuit-breaker		Type of contactor	Type of switch or switch disconnector (bare unit)	aM fuses			
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating			Unit reference (2)		Size	Rating
kW	A					A		Without striker	With striker		A
M1		A1		Q1			KM1, KM2, KM3				
7.5	12	–	ATS48D17Y	GV2L16 + LA9LB920	–	LC1D18	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	12.5	LC1D32	–	–	–	–	–
				NSX100●MA (1)	12.5	LC1D40A	–	–	–	–	–
9	14	ATS48D17Y	ATS48D22Y	GV2L20 + LA9LB920	–	LC1D25	LS1D32	DF2CA16	–	10 x 38	16
				NS80HMA	25	LC1D32	–	–	–	–	–
				NSX100●MA (1)	25	LC1D40A	–	–	–	–	–
11	18.4	ATS48D22Y	ATS48D32Y	GV2L22 + LA9LB920	–	LC1D25	GK1EK	DF2EA25	DF3EA25	14 x 51	25
				NS80HMA	25	LC1D32	–	–	–	–	–
				NSX100●MA (1)	25	LC1D40A	–	–	–	–	–
18.5	28.5	ATS48D32Y	ATS48D38Y	GV2L32 + LA9LB920	–	LC1D32	GK1EK	DF2EA32	DF3EA32	14 x 51	32
				NS80HMA	50	LC1D40A	–	–	–	–	–
				NSX100●MA (1)	50	LC1D40A	–	–	–	–	–
22	33	ATS48D38Y	ATS48D47Y	NS80HMA	50	LC1D50A	GK1EK	DF2EA40	DF3EA40	14 x 51	40
				NSX100●MA (1)	50	LC1D50A	–	–	–	–	–
30	45	ATS48D47Y	ATS48D62Y	NS80HMA	50	LC1D50A	GS1K	DF2FA50	DF3FA50	22 x 58	50
				NSX100●MA (1)	50	LC1D50A	–	–	–	–	–
37	55	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D65A	GS1K	DF2FA80	DF3FA80	22 x 58	80
45	65	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D80	GS1K	DF2FA80	DF3FA80	22 x 58	80
55	80	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D80	GS1K	DF2FA100	DF3FA100	22 x 58	100
75	105	ATS48C11Y	ATS48C14Y	NSX160●MA (1)	150	LC1D150/F115	GS1L	DF2GA1121	DF4GA1121	0	125
90	130	ATS48C14Y	ATS48C17Y	NSX160●MA (1)	150	LC1D150/F115	GS1L	DF2GA1161	DF4GA1161	0	160
110	156	ATS48C17Y	ATS48C21Y	NSX250●MA (1)	220	LC1F185	GS1N	DF2HA1201	DF4HA1201	1	200
132	207	ATS48C21Y	ATS48C25Y	NSX250●MA (1)	220	LC1F225	GS1N	DF2HA1251	DF4HA1251	1	250
160	257	ATS48C25Y	ATS48C32Y	NSX400● (1) Micrologic 1.3M	320	LC1F265	GS1QQ	DF2JA1311	DF4JA1311	2	315
220	310	ATS48C32Y	ATS48C41Y	NSX630● (1) Micrologic 1.3M	500	LC1F400	GS1QQ	DF2JA1401	DF4JA1401	2	400
250	360	ATS48C41Y	ATS48C48Y	NSX630● (1) Micrologic 1.3M	500	LC1F400	GS1S	DF2KA1501	DF4KA1501	3	500
315	460	ATS48C48Y	ATS48C59Y	NSX630● (1) Micrologic 1.3M	500	LC1F500	GS1S	DF2KA1631	DF4KA1631	3	630
400	540	ATS48C59Y	ATS48C66Y	NS630b● (1) Micrologic 5.0 LR Off	630	LC1F630	GS1V	DF2LA1801	DF4LA1801	4	800
450	630	ATS48C66Y	ATS48C79Y	NS630b● (1) Micrologic 5.0 LR Off	630	LC1F780	GS1V	DF2LA1801	DF4LA1801	4	800
500	680	ATS48C79Y	ATS48M10Y	NS800● (1) Micrologic 5.0 LR Off	800	LC1BL33	GS1V	DF2LA1801	DF4LA1801	4	800
630	850	ATS48M10Y	ATS48M12Y	NS1000● (1) Micrologic 5.0 LR Off	1000	LC1BP33	GS1V	DF2LA1101	DF4LA1101	4	1000
800	1100	ATS48M12Y	–	NS1250● (1) Micrologic 5.0 LR Off	1250	LC1BP33	–	DF2LA1251	–	4	1250

(1) Replace ● with N, H, S, L, R, HB1 or HB2 according to the breaking capacity (see the breaking capacity table below).

(2) DF2CA, DF●EA, DF●FA: sold in lots of 20. DF●GA, DF●KA: sold in lots of 3. DF●LA: sold singly.

Breaking capacity of circuit-breakers according to standard IEC 60947-4-2

500 V Icu (kA)

GV2 + LA9LB920 100

500 V Icu (kA)

	N	H	S	L	R	HB1	HB2
NS80HMA	–	25	–	–	–	–	–
NSX100	36	50	65	70	80	85	100
NSX160	36	50	65	70	–	–	–
NSX250/400/630	36	50	65	70	80	85	100
NS630b/800/1000L	–	–	–	100	–	–	–
NS1250	40	50	–	–	–	–	–

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2

Starter Iq (kA)

ATS48D17Y to ATS48C32Y 50

ATS48C41Y to ATS48M12Y 70

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
500 V power supply
Type 2 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2: circuit-breakers, contactors, fast-acting fuses, starters

Combination: circuit-breaker, contactor, starter

Motor		Starter		Circuit-breaker		Type of contactor
		Class 10	Class 20	Reference	Rating	
kW	A	Standard applications	Severe applications		A	
M1		A1		Q1		KM1, KM2, KM3
7.5	12	–	ATS48D17Y	GV2L16 + LA9LB920	–	LC1D25
				NS80HMA	12.5	LC1D40
				NSX100●MA (1)	12.5	LC1D80
9	14	ATS48D17Y	ATS48D22Y	GV2L20 + LA9LB920	–	LC1D25
				NS80HMA	25	LC1D40
				NSX100●MA (1)	25	LC1D80
11	18.4	ATS48D22Y	ATS48D32Y	GV2L22 + LA9LB920	–	LC1D25
				NS80HMA	25	LC1D40
				NSX100●MA (1)	25	LC1D80
18.5	28.5	ATS48D32Y	ATS48D38Y	GV2L32 + LA9LB920	–	LC1D25
				NS80HMA	50	LC1D40
				NSX100●MA (1)	50	LC1D80
22	33	ATS48D38Y	ATS48D47Y	NS80HMA	50	LC1D80
				NSX100●MA (1)	50	LC1D80
30	45	ATS48D47Y	ATS48D62Y	NS80HMA	50	LC1D80
				NSX100●MA (1)	50	LC1D80
37	55	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D150/F115
45	65	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D150/F115
55	80	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D150/F115
75	105	ATS48C11Y	ATS48C14Y	NSX160●MA (1)	150	LC1F150
90	130	ATS48C14Y	ATS48C17Y	NSX160●MA (1)	150	LC1F185
110	156	ATS48C17Y	ATS48C21Y	NSX250●MA (1)	220	LC1F225
132	207	ATS48C21Y	ATS48C25Y	NSX250●MA (1)	220	LC1F330
160	257	ATS48C25Y	ATS48C32Y	NSX400● (1) Micrologic 1.3M	320	LC1F400
220	310	ATS48C32Y	ATS48C41Y	NSX400● (1) Micrologic 1.3M	320	LC1F400
250	360	ATS48C41Y	ATS48C48Y	NSX630● (1) Micrologic 1.3M	500	LC1F500
315	460	ATS48C48Y	ATS48C59Y	NSX630● (1) Micrologic 1.3M	500	LC1F500
400	540	ATS48C59Y	ATS48C66Y	NS630bL Micrologic 5.0 LR Off	630	LC1F630
450	630	ATS48C66Y	ATS48C79Y	NS630bL Micrologic 5.0 LR Off	630	LC1F800
500	680	ATS48C79Y	ATS48M10Y	NS800L Micrologic 5.0 LR Off	800	LC1BL33
630	850	ATS48M10Y	ATS48M12Y	NS1000L Micrologic 5.0 LR Off	1000	LC1BP33
800	1100	ATS48M12Y	–	NS1250● (1) (2) Micrologic 5.0 LR Off	1250	LC1BP33

(1) Replace ● with N, H, S, L, R, HB1 or HB2 according to the breaking capacity (see the breaking capacity table below).

(2) 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.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Fast-acting fuse (essential for type 2 coordination) and starter combinations						
Starter	Iq (kA)	Starter Reference	Fast-acting fuses with microswitch					
			Unit reference(3)	Size	Rating A	I ² t kA ² .s		
ATS48D17Y	50	A1	Q3					
ATS48D22Y to ATS48D47Y	20		DF3ER50	14 x 51	50	2.3		
ATS48D62Y and ATS48D75Y	50		DF3FR80	22 x 58	80	5.6		
ATS48D88Y	40		DF3FR100	22 x 58	100	12		
ATS48C11Y to ATS48C32Y	50		DF400125	00	125	45		
ATS48C41Y	40		DF400160	00	160	82		
ATS48C48Y to ATS48C79Y	50		DF430400	30	400	120		
ATS48M10Y and ATS48M12Y	85		DF431700	31	700	490		
			DF433800	33	800	490		
			DF4331000	33	1000	900		
			DF42331400	2 x 33	1400	1200		
			DF4441600	44	1600	1600		
			DF4442200	44	2200	4100		
Breaking capacity of circuit-breakers according to standard IEC 60947-4-2								
500 V		Icu (kA)						
GV2 + LA9LB920		100						
500 V		Icu (kA)						
		N	H	S	L	R	HB1	HB2
NS80HMA		—	25	—	—	—	—	—
NSX100		36	50	65	70	80	85	100
NSX160		36	50	65	70	—	—	—
NSX250/400/630		36	50	65	70	80	85	100
NS630b/800/1000L		—	—	—	100	—	—	—
NS1250		40	50	—	—	—	—	—

(3) DF3ER, DF3FR: sold in lots of 10. DF4: sold singly.

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
690 V power supply
Type 1 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2

Use either a circuit-breaker (light green columns), contactor, starter combination or a switch/fuse (dark green columns), contactor, starter combination

Motor		Starter		Circuit-breaker		Type of contactor	Type of switch or switch disconnecter (bare unit)	aM fuses			
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating			Unit reference (2)		Size	Rating
								Without striker	With striker		
kW	A				A						A
M1	A1			Q1		KM1, KM2, KM3					
11	12.1	–	ATS48D17Y	GV2L16 + LA9LB920	–	LC1D18	GS1K	DF2FA16	DF3FA16	22 x 58	16
15	16.5	ATS48D17Y	ATS48D22Y	GV2L20 + LA9LB920	–	LC1D25	GS1K	DF2FA20	DF3FA20	22 x 58	20
				NSX100●MA (1)	25	LC1D25	–	–	–	–	–
18.5	20.2	ATS48D22Y	ATS48D32Y	GV2L22 + LA9LB920	–	LC1D32	GS1K	DF2FA25	DF3FA25	22 x 58	25
				NSX100●MA (1)	50	LC1D32	–	–	–	–	–
22	24.2	ATS48D32Y	ATS48D38Y	GV2L32 + LA9LB920	–	LC1D32	GS1K	DF2FA32	DF3FA32	22 x 58	32
				NSX100●MA (1)	50	LC1D40A	–	–	–	–	–
30	33	ATS48D38Y	ATS48D47Y	NSX100●MA (1)	50	LC1D40A	GS1K	DF2FA40	DF3FA40	22 x 58	40
37	40	ATS48D47Y	ATS48D62Y	NSX100●MA (1)	50	LC1D65A	GS1K	DF2FA50	DF3FA50	22 x 58	50
45	49	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D80	–	–	–	–	–
55	58	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D-115	–	–	–	–	–
75	75.5	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D-115	–	–	–	–	–
90	94	ATS48C11Y	ATS48C14Y	NSX160●MA (1)	150	LC1D-150	–	–	–	–	–
110	113	ATS48C14Y	ATS48C17Y	NSX160L●MA (1)	150	LC1D-150	–	–	–	–	–
160	165	ATS48C17Y	ATS48C21Y	NSX250●MA (1)	220	LC1F-265	–	–	–	–	–
200	203	ATS48C21Y	ATS48C25Y	NSX400L● (1) Micrologic 1.3M	320	LC1F-330	–	–	–	–	–
250	253	ATS48C25Y	ATS48C32Y	NSX400● (1) Micrologic 1.3M	320	LC1F-400	–	–	–	–	–
315	321	ATS48C32Y	ATS48C41Y	NSX630● (1) Micrologic 1.3M	500	LC1F-500	–	–	–	–	–
400	390	ATS48C41Y	ATS48C48Y	NSX630LB Micrologic 1.3M	500	LC1F630	–	–	–	–	–
500	490	ATS48C48Y	ATS48C59Y	NS630bLB Micrologic 5.0 LR Off	630	LC1BL33	–	–	–	–	–
560	549	ATS48C59Y	ATS48C66Y	NS630bLB Micrologic 5.0 LR Off	630	LC1BL33	–	–	–	–	–
630	605	ATS48C66Y	ATS48C79Y	NS800LB Micrologic 5.0 LR Off	800	LC1BP33	–	–	–	–	–
710	694	ATS48C79Y	ATS48M10Y	NS800LB Micrologic 5.0 LR Off	800	LC1BP33	–	–	–	–	–
900	880	ATS48M10Y	ATS48M12Y	NS1000● (1) Micrologic 5.0 LR Off	1000	LC1BR33	–	–	–	–	–
950	1000	ATS48M12Y	–	NS1250● (1) Micrologic 5.0 LR Off	1250	LC1BR33	–	–	–	–	–

(1) Replace ● with N, H, S, L, R, HB1, HB2 or LB according to the breaking capacity (see the breaking capacity table below).
(2) DF●FA: sold in lots of 10.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Breaking capacity of circuit-breakers according to standard IEC 60947-4-2							
Starter	Iq (kA)	690 V		Icu (kA)					
ATS48D17Y to ATS48C32Y	50	GV2 + LA9LB920		50					
ATS48C41Y to ATS48M12Y	70	690 V		Icu (kA)					
				N	H	S	L	R	HB1 HB2 LB
				8	10	10	15	45	75 100 –
				8	10	10	15	–	– – –
				8	10	10	15	45	75 100 –
				10	10	20	25	45	75 100 –
				–	–	–	–	–	– 75
				30	42	–	–	–	– –

Soft starters for asynchronous motors

Altistart 48 soft start/soft stop units
690 V power supply
Type 2 coordination

Compatible components according to standards IEC 60947-4-1 and IEC 60947-4-2: circuit-breakers, contactors, fast-acting fuses, starters

Combination: circuit-breaker, contactor, starter

Motor		Starter		Circuit-breaker		Type of contactor
		Class 10 Standard applications	Class 20 Severe applications	Reference	Rating A	
kW	A					
M1		A1		Q1		KM1, KM2, KM3
11	12.1	—	ATS48D17Y	NSX100●MA (1)	25	LC1D80
15	16.5	ATS48D17Y	ATS48D22Y	NSX100●MA (1)	25	LC1D80
18.5	20.2	ATS48D22Y	ATS48D32Y	NSX100●MA (1)	25	LC1D80
22	24.2	ATS48D32Y	ATS48D38Y	NSX100●MA (1)	25	LC1D80
30	33	ATS48D38Y	ATS48D47Y	NSX100●MA (1)	50	LC1D150/F115
37	40	ATS48D47Y	ATS48D62Y	NSX100●MA (1)	50	LC1D150/F115
45	49	ATS48D62Y	ATS48D75Y	NSX100●MA (1)	100	LC1D150/F115
55	58	ATS48D75Y	ATS48D88Y	NSX100●MA (1)	100	LC1D150/F115
75	75.5	ATS48D88Y	ATS48C11Y	NSX100●MA (1)	100	LC1D150/F115
90	94	ATS48C11Y	ATS48C14Y	NSX250●MA (1)	150	LC1F150
110	113	ATS48C14Y	ATS48C17Y	NSX250●MA (1)	150	LC1F185
160	165	ATS48C17Y	ATS48C21Y	NSX250●MA (1)	220	LC1F330
200	203	ATS48C21Y	ATS48C25Y	NSX250●MA (1)	220	LC1F330
250	253	ATS48C25Y	ATS48C32Y	NSX400●MA (1)	320	LC1F400
315	321	ATS48C32Y	ATS48C41Y	NSX630●MA (1)	500	LC1F500
400	390	ATS48C41Y	ATS48C48Y	NSX630●MA (1)	500	LC1F630
500	490	ATS48C48Y	ATS48C59Y	NS630bLB Micrologic 5.0 LR Off	630	LC1F630
560	549	ATS48C59Y	ATS48C66Y	NS630bLB Micrologic 5.0 LR Off	630	LC1F630
630	605	ATS48C66Y	ATS48C79Y	NS800LB Micrologic 5.0 LR Off	800	LC1F780
710	694	ATS48C79Y	ATS48M10Y	NS800LB Micrologic 5.0 LR Off	800	LC1F780
900	880	ATS48M10Y	ATS48M12Y	NS1000 (2) Micrologic 5.0 LR Off	1000	LC1BR33
950	1000	ATS48M12Y	—	NS1250 (2) Micrologic 5.0 LR Off	1250	LC1BR33

(1) Replace ● with HB1 or HB2 according to the breaking capacity (see the breaking capacity table below).

(2) 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.

Maximum starter prospective short-circuit current according to standard IEC 60947-4-2		Fast-acting fuse (essential for type 2 coordination) and starter combinations				
Starter	Iq (kA)	Starter Reference	Fast-acting fuses with microswitch			
			Unit reference (3)	Size	Rating A	I ² t kA ² .s
ATS48D17Y	50					
ATS48D22Y to ATS48D47Y	20	A1	Q3			
ATS48D62Y and ATS48D75Y	50	ATS48D17Y	DF3ER50	14 x 51	50	2.3
ATS48D88Y	40	ATS48D22Y and ATS48D32Y	DF3FR80	22 x 58	80	5.6
ATS48C11Y to ATS48C32Y	50	ATS48D38Y and ATS48D47Y	DF3FR100	22 x 58	100	12
ATS48C41Y	40	ATS48D62Y and ATS48D75Y	DF400125	00	125	45
ATS48C48Y to ATS48C79Y	50	ATS48D88Y and ATS48C11Y	DF400160	00	160	82
ATS48M10Y and ATS48M12Y	85	ATS48C14Y and ATS48C17Y	DF430400	30	400	120
ATS48D17Y	50	ATS48C21Y to ATS48C32Y	DF431700	31	700	490
		ATS48C41Y	DF433800	33	800	490
		ATS48C48Y and ATS48C59Y	DF4331000	33	1000	900
		ATS48C66Y	DF42331400	2 x 33	1400	1200
		ATS48C79Y	DF4441600	44	1600	1600
		ATS48M10Y and ATS48M12Y	DF4442200	44	2200	4100

(3) DF3ER, DF3FR: sold in lots of 10.

DF4: sold singly.

Breaking capacity of circuit-breakers according to standard IEC 60947-4-2

690 V					
Icu (kA)					
GV2 + LA9LB920					
50					
690 V					
Icu (kA)					
	N	H	HB1	HB2	LB
NSX100/250	—	—	75	100	—
NSX400/630	—	—	75	100	—
NS630b/800LB	—	—	—	—	75
NS1000/1250	30	42	—	—	—