

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 200...240 V



GV2 L20
+
LC1 D25●●
+
ATV 71HU22M3

Applications

Circuit-breaker/contactor/drive combinations can be used to ensure continuous service of the installation with optimum safety.

The type of circuit-breaker/contactor coordination selected can reduce maintenance costs in the event of a motor short-circuit by minimizing the time required to make the necessary repairs and the cost of replacement equipment. The suggested combinations provide type 1 or type 2 coordination depending on the drive rating.

Type 2 coordination: A motor short-circuit will not damage the device or affect its settings. The motor starter should be able to operate once the electrical fault has been removed. The electrical isolation provided by the circuit-breaker will not be affected by the short-circuit. Welding of the contactor contacts is permissible if they can be separated easily.

Type 1 coordination: The electrical isolation provided by the circuit-breaker will not be affected by the incident and no other elements apart from the contactor are damaged as a result of the motor short-circuit.

The drive controls the motor, provides protection against short-circuits between the drive and the motor and protects the motor cable against overloads. The overload protection is provided by the drive's motor thermal protection. If this protection is removed, external thermal protection should be provided. Before restarting the installation, the cause of the trip must be removed.

Motor starters for UL Type 1/IP 20 drives

Motor Power (1)	Drive Reference	Circuit-breaker		Line contactor Reference (3) (4)
		Reference (2)	Rating Im	
kW	HP		A	A
Single phase supply voltage 200...240 V 50/60 Hz. Type 2 coordination				
0.37	0.5	ATV 71H075M3	GV2 L10	6.3 – LC1 D18●●
0.75	1	ATV 71HU15M3	GV2 L14	10 – LC1 D18●●
1.5	2	ATV 71HU22M3	GV2 L20	18 – LC1 D25●●
2.2	3	ATV 71HU30M3	GV2 L22	25 – LC1 D25●●
3	–	ATV 71HU40M3 (5)	GV2 L22	25 – LC1 D25●●
4	5	ATV 71HU55M3 (5)	NS80HMA50	50 300 LC1 D40●●
5.5	7.5	ATV 71HU75M3 (5)	NS80HMA50	50 300 LC1 D50●●

(1) Standard power ratings for 4-pole motors 50/60 Hz 230 V.

The values expressed in HP comply with the NEC (National Electrical Code).

(2) NS80HMA: product sold under the Merlin Gerin brand.

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

Circuit-breaker	Icu (kA) for 240 V
GV2 L	50
NS80HMA	100

(3) Composition of contactors:

LC1 D18 to LC1 D50: 3 poles + 1 "N/O" auxiliary contact and 1 "N/C" auxiliary contact.

(4) Replace ●● with the control circuit voltage reference indicated in the table below.

	Volts ~	24	48	110	220	230	240
LC1 D	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.

(5) A line choke must be added (see page 60289/8).

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 200...240 V

046751_20-M



103308_18-M



PF105780-32-M



NS80HMA50
+
LC1 D40●●
+
ATV 71HU55M3

Motor starters for UL Type 1/IP 20 drives

Motor Power (1)		Drive Reference	Circuit-breaker Reference (2)		Line contactor Reference (3) (4)	
kW	HP		Rating	Im		
			A	A		
3-phase supply voltage 200...240 V 50/60 Hz. Type 2 coordination						
0.37	0.5	ATV 71H037M3	GV2 L08	4	–	LC1 D09●●
0.75	1	ATV 71H075M3	GV2 L14	10	–	LC1 D09●●
1.5	2	ATV 71HU15M3	GV2 L14	10	–	LC1 D18●●
2.2	3	ATV 71HU22M3	GV2 L16	14	–	LC1 D18●●
3	–	ATV 71HU30M3	GV2 L20	18	–	LC1 D25●●
4	5	ATV 71HU40M3	GV2 L22	25	–	LC1 D25●●
5.5	7.5	ATV 71HU55M3	NS80HMA50	50	300	LC1 D40●●
7.5	10	ATV 71HU75M3	NS80HMA50	50	300	LC1 D50●●
11	15	ATV 71HD11M3X	NS80HMA80	80	480	LC1 D65●●
15	20	ATV 71HD15M3X	NS100NMA80	80	480	LC1 D65●●
18.5	25	ATV 71HD18M3X	NS100NMA100	100	600	LC1 D80●●
22	30	ATV 71HD22M3X	NS100NMA100	100	600	LC1 D80●●
30	40	ATV 71HD30M3X	NS160NMA150	150	1350	LC1 D115●●
37	50	ATV 71HD37M3X	NS160NMA150	150	1350	LC1 D150●●
45	60	ATV 71HD45M3X	NS250NMA220	220	1980	LC1 D150●●
55	75	ATV 71HD55M3X	NS250NMA220	220	1980	LC1 F225●●
75	100	ATV 71HD75M3X	NS400NMA320	320	1920	LC1 F265●●

(1) Standard power ratings for 4-pole motors 50/60 Hz 230 V.

The values expressed in HP comply with the NEC (National Electrical Code).

(2) NS80HMA, NS●●●N: Products sold under the Merlin Gerin brand.

Breaking capacity of circuit-breakers according to standard IEC60947-2:

Circuit-breaker	Icu (kA) for 240 V
GV2 L08...L20	100
GV2 L22	50
NS80HMA	100
NS●●●NMA	85

(3) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 "N/O" auxiliary contact + 1 "N/C" auxiliary contact.

LC1 F●●●: 3 poles. To add auxiliary contacts or other accessories, please consult our specialist catalogue

"Motor-starter solutions. Control and protection components".

(4) Replace ●● with the control circuit voltage reference indicated in the table below.

	Volts ~	24	48	110	220	230	240
LC1 D	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F225	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 380...415 V

DFE3345-20-M



105817-13-M



PF10877-31-M



NS160●MA150
+
LC1 D115●●
+
ATV 71HD45N4

Motor starters for UL Type 1/IP 20 drives

Motor Power (1)	Drive Reference	Circuit-breaker			Line contactor Reference (3) (4)	
		Reference (2)	Rating A	Im A		
kW	HP					
3-phase supply voltage 380...415 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71H075N4	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71HU15N4	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71HU22N4	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71HU30N4	GV2 L16	14	–	LC1 D18●●
4	5	ATV 71HU40N4	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71HU55N4	GV2 L22	25	–	LC1 D25●●
7.5	10	ATV 71HU75N4	NS80HMA50	50	300	LC1 D40●●
11	15	ATV 71HD11N4	NS80HMA50	50	300	LC1 D40●●
15	20	ATV 71HD15N4	NS80HMA50	50	300	LC1 D50●●
18.5	25	ATV 71HD18N4	NS80HMA50	50	300	LC1 D50●●
22	30	ATV 71HD22N4	NS80HMA80	80	480	LC1 D65●●
30	40	ATV 71HD30N4	NS80HMA80	80	480	LC1 D65●●
37	50	ATV 71HD37N4	NS100●MA100	100	800	LC1 D80●●
45	60	ATV 71HD45N4	NS160●MA150	150	1350	LC1 D115●●
55	75	ATV 71HD55N4	NS160●MA150	150	1350	LC1 D115●●
75	100	ATV 71HD75N4	NS250●MA150	150	1350	LC1 D150●●
90	125	ATV 71HD90N4	NS250●MA220	220	1980	LC1 F185●●
110	150	ATV 71HC11N4	NS250●MA220	220	1980	LC1 F185●●
132	200	ATV 71HC13N4	NS400●MA320	320	1920	LC1 F265●●
160	250	ATV 71HC16N4	NS400●MA320	320	1920	LC1 F265●●
200	300	ATV 71HC20N4	NS400●MA320	320	1920	LC1 F400●●
220	350	ATV 71HC25N4	NS630●MAE500	500	3000	LC1 F400●●
250	400	ATV 71HC25N4	NS630●MAE500	500	3000	LC1 F500●●
280	450	ATV 71HC28N4	NS630●MAE500	500	3000	LC1 F500●●
315	500	ATV 71HC31N4	NS630●MAE500	500	3000	LC1 F500●●
3-phase supply voltage 380...415 V 50/60 Hz. Type 1 coordination						
355	–	ATV 71HC40N4	NS800 MicroLogic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
400	600	ATV 71HC40N4	NS800 MicroLogic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
500	700	ATV 71HC50N4	NS1000 MicroLogic 2 or 5 (LR OFF)	1000	2000	LC1 F800●●

(1) Standard power ratings for 4-pole motors 50/60 Hz 400 V.

The values expressed in HP comply with the NEC (National Electrical Code).

(2) NS80HMA, NS●●●●, NS800, NS1000: products sold under the Merlin Gerin brand.

For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (N, H, L).

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

Circuit-breaker	Icu (kA) for 400 V		
	N	H	L
GV2 L08...L14	100	–	–
GV2 L16, L22	50	–	–
NS80HMA	70	–	–
NS100●MA	–	25	70
NS160●MA, NS250●MA	–	36	70
NS400●, NS630●, NS800, NS1000	–	45	70

(3) Composition of contactors:

LC1 D18 to LC1 D150: 3 poles + 1 "N/O" auxiliary contact + 1 "N/C" auxiliary contact.

LC1 F●●●: 3 poles. To add auxiliary contacts or other accessories, please consult our specialist catalogue

"Motor-starter solutions. Control and protection components".

(4) Replace ●● with the control circuit voltage reference indicated in the table below.

	Volts ~	24	48	110	220	230	240
LC1 D	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 F800	40...400 Hz (LX1 coil)	–	–	FE7	P7	P7	P7

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 440...480 V

DF54673



105517-13-M



12/0615-33-M



NS160●MA150
+
LC1 D115●●
+
ATV 71HD75N4

Motor starters for UL Type 1/IP 20 drives

Motor		Drive	Circuit-breaker		Line contactor	
Power (1)	Reference	Reference (2)	Rating	Im	Reference (3) (4)	
kW	HP		A	A		
3-phase supply voltage 440...480 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71H075N4	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71HU15N4	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71HU22N4	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71HU30N4	GV2 L14	10	–	LC1 D18●●
4	5	ATV 71HU40N4	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71HU55N4	NS80HMA50	50	300	LC1 D25●●
7.5	10	ATV 71HU75N4	NS80HMA50	50	300	LC1 D40●●
11	15	ATV 71HD11N4	NS80HMA50	50	300	LC1 D40●●
15	20	ATV 71HD15N4	NS80HMA50	50	300	LC1 D50●●
18.5	25	ATV 71HD18N4	NS100●MA50	50	300	LC1 D50●●
22	30	ATV 71HD22N4	NS100●MA50	50	300	LC1 D65●●
30	40	ATV 71HD30N4	NS100●MA100	100	600	LC1 D65●●
37	50	ATV 71HD37N4	NS100●MA100	100	600	LC1 D80●●
45	60	ATV 71HD45N4	NS160●MA100	100	600	LC1 D115●●
55	75	ATV 71HD55N4	NS160●MA150	150	1350	LC1 D115●●
75	100	ATV 71HD75N4	NS160●MA150	150	1350	LC1 D115●●
90	125	ATV 71HD90N4	NS160●MA150	150	1350	LC1 D115●●
110	150	ATV 71HC11N4	NS250●MA220	220	1980	LC1 F185●●
132	200	ATV 71HC13N4	NS250●MA220	220	1980	LC1 F225●●
160	250	ATV 71HC16N4	NS400●MA320	320	1920	LC1 F265●●
200	300	ATV 71HC20N4	NS400●MA320	320	1920	LC1 F330●●
220	350	ATV 71HC25N4	NS400●MA320	320	1920	LC1 F400●●
250	400	ATV 71HC25N4	NS630●MAE500	500	3000	LC1 F400●●
280	450	ATV 71HC28N4	NS630●MAE500	500	3000	LC1 F500●●
315	500	ATV 71HC31N4	NS630●MAE500	500	3000	LC1 F500●●
355	–	ATV 71HC40N4	NS630●MAE500	500	3000	LC1 F630●●
3-phase supply voltage 440...480 V 50/60 Hz. Type 1 coordination						
400	600	ATV 71HC40N4	NS800 MicroLogic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
500	700	ATV 71HC50N4	NS1000 MicroLogic 2 or 5 (LR OFF)	1000	2000	LC1 F800●●

(1) Standard power ratings for 4-pole motors 50/60 Hz 400 V.

The values expressed in HP comply with the NEC (National Electrical Code).

(2) NS800HMA, NS●●●●, NS800, NS1000: products sold under the Merlin Gerin brand.

For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (N, H, L).
Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	Icu (kA) for 440 V		
	N	H	L
GV2 L08, GV2 L10	100	–	–
GV2 L14, GV2 L16	20	–	–
NS80HMA	65	–	–
NS100●MA	–	25	65
NS160●MA, NS250●MA	–	35	65
NS400p, NS630p	–	42	65
NS800, NS1000	–	50	65

(3) Composition of contactors:

LC1 D18 to LC1 D115: 3 poles + 1 "N/O" auxiliary contact + 1 "N/C" auxiliary contact.

LC1 F●●●: 3 poles. To add auxiliary contacts or other accessories, please consult our specialist catalogue
"Motor-starter solutions. Control and protection components".

(4) Replace ●● with the control circuit voltage reference indicated in the table below.

	Volts ~	24	48	110	220	230	240
LC1 D	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265, F330	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 F800	40...400 Hz (LX1 coil)	–	–	FE7	P7	P7	P7

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 380...480 V

DF53345-20-M



108517-13-M



PF108784-32-M



NS160●MA150
+
LC1 D115●●
+
ATV 71WD55N4

Motor starters for UL Type 12/IP 54 drives

Motor Power (1)	Drive Reference	Drive	Circuit-breaker Reference (2)	Rating A	Im A	Line contactor Reference (3) (4)
3-phase supply voltage 380...415 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71W075N4	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71WU15N4	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71WU22N4	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71WU30N4	GV2 L16	14	–	LC1 D18●●
4	5	ATV 71WU40N4	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71WU55N4	GV2 L22	25	–	LC1 D25●●
7.5	10	ATV 71WU75N4	NS80HMA50	50	300	LC1 D40●●
11	15	ATV 71WD11N4	NS80HMA50	50	300	LC1 D40●●
15	20	ATV 71WD15N4	NS80HMA50	50	300	LC1 D50●●
18.5	25	ATV 71WD18N4	NS80HMA50	50	300	LC1 D50●●
22	30	ATV 71WD22N4	NS80HMA80	80	480	LC1 D65●●
30	40	ATV 71WD30N4	NS80HMA80	80	480	LC1 D65●●
37	50	ATV 71WD37N4	NS100●MA100	100	800	LC1 D80●●
45	60	ATV 71WD45N4	NS160●MA150	150	1350	LC1 D115●●
55	75	ATV 71WD55N4	NS160●MA150	150	1350	LC1 D115●●
75	100	ATV 71WD75N4	NS250●MA150	150	1350	LC1 D150●●
3-phase supply voltage 440...480 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71W075N4	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71WU15N4	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71WU22N4	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71WU30N4	GV2 L14	10	–	LC1 D18●●
4	5	ATV 71WU40N4	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71WU55N4	NS80HMA50	50	300	LC1 D25●●
7.5	10	ATV 71WU75N4	NS80HMA50	50	300	LC1 D40●●
11	15	ATV 71WD11N4	NS80HMA50	50	300	LC1 D40●●
15	20	ATV 71WD15N4	NS80HMA50	50	300	LC1 D50●●
18.5	25	ATV 71WD18N4	NS100●MA50	50	300	LC1 D50●●
22	30	ATV 71WD22N4	NS100●MA50	50	300	LC1 D65●●
30	40	ATV 71WD30N4	NS100●MA100	100	600	LC1 D65●●
37	50	ATV 71WD37N4	NS100●MA100	100	600	LC1 D80●●
45	60	ATV 71WD45N4	NS160●MA100	100	600	LC1 D115●●
55	75	ATV 71WD55N4	NS160●MA150	150	1350	LC1 D115●●
75	100	ATV 71WD75N4	NS160●MA150	150	1350	LC1 D115●●

(1) Standard power ratings for 4-pole motors 50/60 Hz 400 V.

The values expressed in HP comply with the NEC (National Electrical Code).

(2) NS80HMA●●, NS●●●●: products sold under the Merlin Gerin brand.

For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (N, H, L).

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

Circuit-breaker	Icu (kA) for 400 V		
	N	H	L
GV2 L08...L14	100	–	–
GV2 L16, L22	50	–	–
NS80HMA	70	–	–
NS100●MA	–	25	70
NS160●MA, NS250●MA	–	36	70
NS160●MA	–	–	150

Circuit-breaker	Icu (kA) for 440 V		
	N	H	L
GV2 L08, GV2 L10	100	–	–
GV2 L14, GV2 L16	20	–	–
NS80HMA	65	–	–
NS100●MA	–	25	65
NS160●MA	–	35	65
NS160●MA	–	–	130

(3) Composition of contactors:

LC1 D18 to LC1 D150: 3 poles + 1 "N/O" auxiliary contact and 1 "N/C" auxiliary contact.

(4) Replace ●● with the control circuit voltage reference indicated in the table below.

LC1 D18...D150	Volts ~	24	48	110	220	230	240
	50 Hz	B5	E5	F5	M5	P5	U5
60 Hz	B6	E6	F6	M6	–	U6	
50/60 Hz	B7	E7	F7	M7	P7	U7	

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.

Variable speed drives for asynchronous motors

Altivar 71

Motor starters: supply voltage 440...480 V



GV2 L16
+
LC1 D18●●
+
ATV 71PU40N4Z

Motor starters for UL Type 1/IP 20 drives on base plates

Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)	Rating	Im	Line contactor Reference (3) (4)	
kW	HP		A	A		
3-phase supply voltage 380...415 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71P075N4Z	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71PU15N4Z	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71PU22N4Z	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71PU30N4Z	GV2 L16	14	–	LC1 D18●●
4	5	ATV 71PU40N4Z	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71PU55N4Z	GV2 L22	25	–	LC1 D25●●
7.5	10	ATV 71PU75N4Z	NS80HMA50	50	300	LC1 D40●●
3-phase supply voltage 440...480 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 71P075N4Z	GV2 L08	4	–	LC1 D18●●
1.5	2	ATV 71PU15N4Z	GV2 L10	6.3	–	LC1 D18●●
2.2	3	ATV 71PU22N4Z	GV2 L14	10	–	LC1 D18●●
3	–	ATV 71PU30N4Z	GV2 L14	10	–	LC1 D18●●
4	5	ATV 71PU40N4Z	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 71PU55N4Z	NS80HMA50	50	300	LC1 D25●●
7.5	10	ATV 71PU75N4Z	NS80HMA50	50	300	LC1 D40●●

- (1) Standard power ratings for 4-pole motors 50/60 Hz 400 V.
The values expressed in HP comply with the NEC (National Electrical Code).
(2) NS80HMA: Products sold under the Merlin Gerin brand.
Breaking capacity of circuit-breakers according to standard IEC60947-2:

Circuit-breaker	Icu (kA) for 400 V		
	N	H	L
GV2 L08...L14	100	–	–
GV2 L16, L22	50	–	–
NS80HMA	70	–	–

- (3) Composition of contactors:
LC1 D18 to LC1 D40: 3 poles + 1 "N/O" auxiliary contact and 1 "N/C" auxiliary contact.
(4) Replace ●● with the control circuit voltage reference indicated in the table below.

	Volts ~	24	48	110	220	230	240
LC1 D	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please consult your Regional Sales Office.