

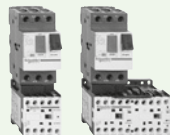


# TeSys

Open pre-cabled motor starters


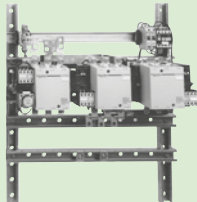




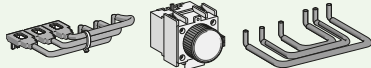
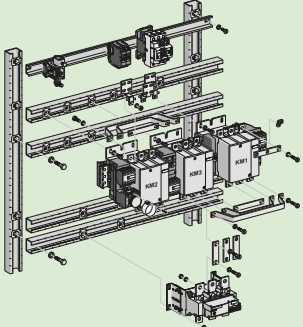
**Direct-on-line and reversing starters**

Composition	Range		Page
Motor circuit breaker + contactor (direct-on-line) Coordination type 1	Up to 5.5 kW		A2/2
Motor circuit breaker + 2 contactors (reversing) Coordination type 1	Up to 5.5 kW		A2/3
Motor circuit breaker + contactor (direct-on-line) Coordination type 1	Up to 15 kW		A2/4
Motor circuit breaker + 2 contactors (reversing) Coordination type 1	Up to 15 kW		A2/5
Motor circuit breaker + contactor (direct-on-line) Coordination type 2	Up to 30 kW		A2/6
Motor circuit breaker + 2 contactors (reversing) Coordination type 2	Up to 30 kW		A2/7

**Star-delta starters**

3 contactors + 1 time delay aux. block	Up to 132 kW		A2/8
3 contactors + 1 time delay aux. block + 1 control relay	Up to 315 kW		A2/9

**For customer star-delta assembly**

Separated components and mounting kits for suggested motor starter components combinations - on plate or mounting rail	Up to 132 kW		A2/10
Separated components for suggested motor starter combinations - on chassis	Up to 315 kW		A2/14

## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

### D.O.L. starters, non-reversing, from 0.37 to 5.5 kW at 400/415 V, type 1 coordination

This pre-assembled combination comprises:

- 1 motor circuit breaker GV2 ME,
- 1 3-pole contactor LC1 K,
- 1 combination block GV2 AF01.

#### Characteristics

Starter type		GV2		ME06K1	ME07K1	ME08K1	ME10K1	ME14K1	ME16K1
Breaking capacity (Iq) (1)	Conforming to IEC 60947-4-1	400/415 V	kA	50	50	50	50	50	15
		440 V	kA	50	50	50	50	15	8
		500 V	kA	50	50	50	50	10 (4 kW) 6 (5.5 kW)	6

#### References



GV2 ME10K1●●

#### D.O.L. starters, non-reversing

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed <sup>(2)</sup>		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code <sup>(3)</sup>	kg
0.37	0.37	0.37	1...1.6	22.5	GV2 ME06	LC1 K06	GV2ME06K1●●	0.460
0.55	0.55	0.55						
—	—	0.75						
0.75	0.75	—	1.6...2.5	33.5	GV2 ME07	LC1 K06	GV2ME07K1●●	0.460
—	1.1	1.1						
1.1	—	1.5	2.5...4	51	GV2 ME08	LC1 K06	GV2ME08K1●●	0.460
1.5	1.5	2.2						
2.2	2.2	—	4...6.3	78	GV2 ME10	LC1 K06	GV2ME10K1●●	0.460
—	3	3						
3	—	4	6...10	138	GV2 ME14	LC1 K09	GV2ME14K1●●	0.460
4	4	5.5						
5.5	5.5	7.5	9...14	170	GV2 ME16	LC1 K12	GV2ME16K1●●	0.460

#### Add-on blocks

Description	Sold in lots of	Unit reference
Combination block between circuit breaker and contactor	10	GV2AF01

<sup>(1)</sup> The breaking performance of circuit breakers **GV2 ME** can be increased by adding a current limiter **GV1 L3**, see page B6/11.

<sup>(2)</sup> Please consult your Regional Sales Office.

<sup>(3)</sup> Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	24	110	220/230	230	230/240	380/400
~ 50/60 Hz	B7	F7	M7	P7	U7	Q7
— <sup>(4)</sup>	BW3	—	—	—	—	—

<sup>(4)</sup> Coil: low consumption (1.5 W), wide range (0.7...1.3 U<sub>c</sub>) with integral suppression device as standard.

## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

### D.O.L. starters, reversing, from 0.37 to 5.5 kW at 400/415 V, type 1 coordination

This pre-assembled combination comprises:

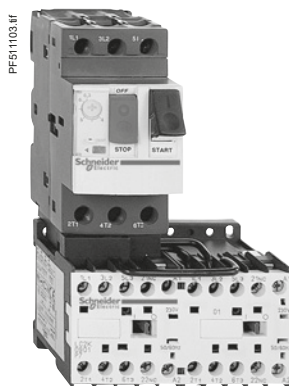
- 1 motor circuit breaker GV2 ME,
- 1 3-pole reversing contactor LC2 K,
- 1 combination block GV2 AF01.

#### Characteristics

Starter type		GV2		ME06K2	ME07K2	ME08K2	ME10K2	ME14K2	ME16K2
Breaking capacity (Iq) <sup>(1)</sup>	Conforming to IEC 60947-4-1	400/415 V	kA	50	50	50	50	50	15
		440 V	kA	50	50	50	50	15	8
		500 V	kA	50	50	50	50	10 (4 kW) 6 (5.5 kW)	6

Open  
pre-cabled  
motor  
starters

#### References



GV2 ME10K2●●

#### D.O.L. starters, reversing

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed (2)		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code (3)	kg
0.37	0.37	0.37	1...1.6	22.5	GV2 ME06	LC2 K06	GV2ME06K2●●	0.460
0.55	0.55	0.55						
—	—	0.75						
0.75	0.75	—	1.6...2.5	33.5	GV2 ME07	LC2 K06	GV2ME07K2●●	0.460
—	1.1	1.1						
1.1	—	1.5	2.5...4	51	GV2 ME08	LC2 K06	GV2ME08K2●●	0.460
1.5	1.5	2.2						
2.2	2.2	—	4...6.3	78	GV2 ME10	LC2 K06	GV2ME10K2●●	0.460
—	3	3						
3	—	4	6...10	138	GV2 ME14	LC2 K09	GV2ME14K2●●	0.460
4	4	5.5						
5.5	5.5	7.5	9...14	170	GV2 ME16	LC2 K12	GV2ME16K2●●	0.460

#### Add-on blocks

Description	Sold in lots of	Unit reference
Combination block between circuit breaker and contactor	10	GV2AF01

(1) The breaking performance of circuit breakers **GV2 ME** can be increased by adding a current limiter **GV1 L3**, see page B6/11.

(2) Please consult your Regional Sales Office.

(3) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	24	110	220/230	230	230/240	380/400
~ 50/60 Hz	B7	F7	M7	P7	U7	Q7
— (4)	BW3	—	—	—	—	—

(4) Coil: low consumption (1.5 W), wide range (0.7...1.3 Uc) with integral suppression device as standard.

**Note:** The combinations are valid for IE2 motors and IE3 with maximum starting current = 7.5 x motor rating current (see pages A6/4 and A6/5).

## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

### D.O.L. starters, non-reversing, from 0.06 to 15 kW at 400/415 V, type 1 coordination

This pre-assembled combination comprises:

- 1 motor circuit breaker GV2 ME,
- 1 3-pole contactor LC1 D,
- 1 combination block GV2 AF3.

#### Characteristics

Starter type		GV2		DM 102 to DM 110	DM 114	DM 116	DM 120	DM 121	DM 122	DM 132
Breaking capacity (I <sub>q</sub> ) <sup>(1)</sup>	Conforming to IEC 60947-4-1	400/415 V	kA	50	50	15	15	15	15	10
		440 V	kA	50	15	8	8	6	6	6
		500 V	kA	50	6	6	6	4	4	4

#### References

PF511104.fr



GV2 DM102●●

#### D.O.L. starters, non-reversing

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed <sup>(2)</sup>		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code <sup>(2)</sup>	kg
0.06	0.06	—	0.16...0.25	2.4	GV2ME02	LC1D09●●	GV2DM102●● <sup>(3)</sup>	0.596
0.09	0.09	—	0.25...0.40	5	GV2ME03	LC1D09●●	GV2DM103●● <sup>(3)</sup>	0.596
—	0.12	—	—	—	—	—	—	—
0.12	—	—	0.40...0.63	8	GV2ME04	LC1D09●●	GV2DM104●● <sup>(3)</sup>	0.596
0.18	0.18	—	—	—	—	—	—	—
0.25	0.25	—	0.63...1	13	GV2ME05	LC1D09●●	GV2DM105●● <sup>(3)</sup>	0.596
0.37	0.37	—	—	—	—	—	—	—
—	—	0.37	1...1.6	22.5	GV2ME06	LC1D09●●	GV2DM106●● <sup>(3)</sup>	0.596
0.55	0.55	0.55	—	—	—	—	—	—
—	—	0.75	—	—	—	—	—	—
0.75	0.75	—	1.6...2.5	33.5	GV2ME07	LC1D09●●	GV2DM107●● <sup>(3)</sup>	0.596
—	1.1	1.1	—	—	—	—	—	—
1.1	—	1.5	2.5...4	51	GV2ME08	LC1D09●●	GV2DM108●● <sup>(3)</sup>	0.596
1.5	1.5	2.2	—	—	—	—	—	—
2.2	2.2	—	4...6.3	78	GV2ME10	LC1D09●●	GV2DM110●● <sup>(3)</sup>	0.596
—	3	3	—	—	—	—	—	—
3	—	4	6...10	138	GV2ME14	LC1D09●●	GV2DM114●● <sup>(3)</sup>	0.596
4	4	5.5	—	—	—	—	—	—
5.5	5.5	7.5	9...14	170	GV2ME16	LC1D12●●	GV2DM116●●	0.601
7.5	7.5	—	13...18	223	GV2ME20	LC1D18●●	GV2DM120●●	0.606
—	9	9	—	—	—	—	—	—
9	11	11	17...23	327	GV2ME21	LC1D25●●	GV2DM121●●	0.646
11	—	15	20...25	327	GV2ME22	LC1D25●●	GV2DM122●●	0.646
15	15	18.5	24...32	416	GV2ME32	LC1D32●●	GV2DM132●●	0.651

#### Add-on blocks

Description	Mounting of GV2	Sold in lots of	Unit reference
Combination block between circuit breaker and contactor	— rail	10	GV2AF3
	Mounting plate LAD 311	10	GV2AF4

<sup>(1)</sup> The breaking performance of circuit breakers **GV2 ME** can be increased by adding a current limiter **GV1 L3**, see page B6/11.

<sup>(2)</sup> Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	24	220	230
~ 50/60 Hz	B7	M7	P7
— <sup>(4)</sup>	BD	—	—

<sup>(3)</sup> Type 2 coordination also possible, see page A6/10.

<sup>(4)</sup> Only available for **GV2 DM**. Coil with integral suppression device as standard.

**Note:** The combinations are valid for IE2 motors and IE3 with maximum starting current = 7.5 x motor rating current (see pages A6/4 and A6/5).

## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

### D.O.L. starters, reversing, from 0.06 to 15 kW at 400/415 V, type 1 coordination

This pre-assembled combination comprises:

- 1 motor circuit breaker GV2 ME,
- 1 3-pole reversing contactor LC2 D,
- 1 combination block GV2AF3.

#### Characteristics

Starter type		GV2		DM202 to DM210	DM214	DM216	DM220	DM221	DM222	DM232
Breaking capacity (I <sub>q</sub> ) (1)	Conforming to IEC 60947-4-1	400/415 V	kA	50	50	15	15	15	15	10
		440 V	kA	50	15	8	8	6	6	6
		500 V	kA	50	10	6	6	4	4	4

#### References

##### D.O.L. starters, reversing<sup>(2)</sup>

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed <sup>(3)</sup>		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code <sup>(4)</sup>	kg
0.06	0.06	—	0.16...0.25	2.4	GV2ME02	LC2D09●●	GV2DM202●●	0.963
0.09	0.09	—	0.25...0.40	5	GV2ME03	LC2D09●●	GV2DM203●●	0.963
—	0.12	—	—	—	—	—	—	—
0.12	—	—	0.40...0.63	8	GV2ME04	LC2D09●●	GV2DM204●●	0.963
0.18	0.18	—	—	—	—	—	—	—
0.25	0.25	—	0.63...1	13	GV2ME05	LC2D09●●	GV2DM205●●	0.963
0.37	0.37	—	—	—	—	—	—	—
—	—	0.37	1...1.6	22.5	GV2ME06	LC2D09●●	GV2DM206●●	0.963
0.55	0.55	0.55	—	—	—	—	—	—
—	—	0.75	—	—	—	—	—	—
0.75	0.75	—	1.6...2.5	33.5	GV2ME07	LC2D09●●	GV2DM207●●	0.963
—	1.1	1.1	—	—	—	—	—	—
1.1	—	1.5	2.5...4	51	GV2ME08	LC2D09●●	GV2DM208●●	0.963
1.5	1.5	2.2	—	—	—	—	—	—
2.2	2.2	—	4...6.3	78	GV2ME10	LC2D09●●	GV2DM210●●	0.963
—	3	3	—	—	—	—	—	—
3	—	4	6...10	138	GV2ME14	LC2D09●●	GV2DM214●●	0.963
4	4	5.5	—	—	—	—	—	—
5.5	5.5	7.5	9...14	170	GV2ME16	LC2D12●●	GV2DM216●●	0.973
7.5	7.5	—	13...18	223	GV2ME20	LC2D18●●	GV2DM220●●	0.983
—	9	9	—	—	—	—	—	—
9	11	11	17...23	327	GV2ME21	LC2D25●●	GV2DM221●●	1.063
11	—	15	20...25	327	GV2ME22	LC2D25●●	GV2DM222●●	1.063
15	15	18.5	24...32	416	GV2ME32	LC2D32●●	GV2DM232●●	1.073

##### Add-on blocks

Description	Mounting of GV2	Sold in lots of	Unit reference
Combination block between circuit breaker and contactor	— rail	10	GV2AF3
	Mounting plate LAD 311	10	GV2AF4

<sup>(1)</sup> The breaking performance of circuit breakers GV2ME can be increased by adding a current limiter GV1L3, see page B6/11.

<sup>(2)</sup> Type 2 coordination also possible, see page A6/5.

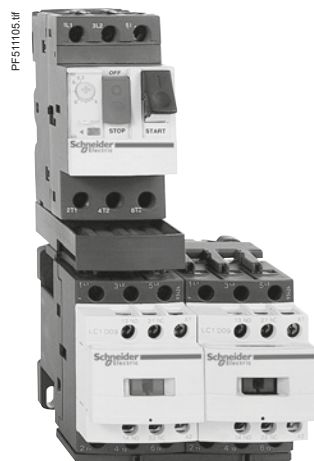
<sup>(3)</sup> See page B8/2.

<sup>(4)</sup> Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	24	220	230
~ 50/60 Hz	B7	M7	P7
— <sup>(5)</sup>	BD	—	—

<sup>(5)</sup> Coil with integral suppression device as standard.

**Note:** The combinations are valid for IE2 motors and IE3 with maximum starting current = 7.5 x motor rating current (see pages A6/4 and A6/5).



GV2 DM202●●



## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

### D.O.L. starters, non-reversing, from 0.06 to 30 kW at 400/415 V, type 2 coordination

This pre-assembled combination comprises:

- 1 motor circuit breaker GV2 P,
- 1 3-pole contactor LC1 D,
- 1 combination block GV2 AF3.

#### Characteristics

Starter type		GV2		DP102 to DP110	DP114	DP116	DP120	DP121	DP122	DP132
Breaking capacity (I <sub>q</sub> ) <sup>(1)</sup>	Conforming to IEC 60947-4-1	400/415 V	kA	130	130	130	50	50	50	50
		440 V	kA	130	130	50	20	20	20	20
		500 V	kA	130	50	42	10	10	10	10

#### References

##### D.O.L. starters, non-reversing

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed <sup>(2)</sup>		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code <sup>(3)</sup>	kg
0.06	0.06	—	0.16...0.25	2.4	GV2P02	LC1D09●●	GV2DP102●●	0.686
—	0.09	—	0.25...0.40	5	GV2P03	LC1D09●●	GV2DP103●●	0.686
0.09	0.12	—	—	—	—	—	—	—
0.12	—	—	0.40...0.63	8	GV2P04	LC1D09●●	GV2DP104●●	0.686
0.18	0.18	—	—	—	—	—	—	—
0.25	0.25	—	0.63...1	13	GV2P05	LC1D09●●	GV2DP105●●	0.686
0.37	0.37	—	—	—	—	—	—	—
—	—	0.37	1...1.6	22.5	GV2P06	LC1D09●●	GV2DP106●●	0.686
0.55	0.55	0.55	—	—	—	—	—	—
—	—	0.75	—	—	—	—	—	—
0.75	0.75	—	1.6...2.5	33.5	GV2P07	LC1D09●●	GV2DP107●●	0.686
—	1.1	1.1	—	—	—	—	—	—
1.1	—	1.5	2.5...4	51	GV2P08	LC1D09●●	GV2DP108●●	0.696
1.5	1.5	2.2	—	—	—	—	—	—
2.2	2.2	—	4...6.3	78	GV2P10	LC1D09●●	GV2DP110●●	0.736
—	3	3	—	—	—	—	—	—
3	—	4	6...10	138	GV2P14	LC1D09●●	GV2DP114●●	0.736
4	4	5.5	—	—	—	—	—	—
5.5	5.5	7.5	9...14	170	GV2P16	LC1D25●●	GV2DP116●●	0.741
—	7.5	9	—	—	—	—	—	—
7.5	9	—	13...18	223	GV2P20	LC1D25●●	GV2DP120●●	0.736
9	11	11	17...23	327	GV2P21	LC1D25●●	GV2DP121●●	0.741
11	—	15	20...25	327	GV2P22	LC1D25●●	GV2DP122●●	0.741
15	15	18.5	24...32	416	GV2P32	LC1D32●●	GV2DP132●●	0.741
18.5	—	—	30...40	560	GV3 P401 <sup>(4)</sup>	LC1D50A●●	—	1.725
—	18.5	22	30...40	560	GV3 P401 <sup>(4)</sup>	LC1D65A●●	—	1.730
22	—	—	37...50	700	GV3 P501 <sup>(4)</sup>	LC1D50A●●	—	1.725
—	22	30	37...50	700	GV3 P501 <sup>(4)</sup>	LC1D65A●●	—	1.730
30	37	—	48...65	910	GV3 P651 <sup>(4)</sup>	LC1D65A●●	—	1.730

##### Add-on blocks

Description	Mounting of GV2	Sold in lots of 10	Unit reference
Combination block between circuit breaker and contactor	└┐ rail	10	GV2AF3
(1) The breaking performance of circuit breakers GV2 P can be increased by adding a current limiter GV1 L3, see page B6/11.			
(2) See page B8/2.			
(3) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):			
<b>Volts</b>	<b>24</b>	<b>220</b>	<b>230</b>
<b>~ 50/60 Hz</b>	<b>B7</b>	<b>M7</b>	<b>P7</b>
<b>—<sup>(5)</sup></b>	<b>BD</b>	<b>—</b>	<b>—</b>

(4) Circuit breaker supplied without downstream EverLink® power terminal block, which is required for vertical mounting. For side by side mounting, use a GV3 P circuit breaker with terminal blocks and the GV3S set of S-shape busbars (see page B8/29).

(5) Coil with integral suppression device as standard.

**Note:** The combinations are valid for IE2 motors and IE3 with maximum starting current = 7.5 x motor rating current (see pages A6/4 and A6/5).



GV2 DP102●●



GV3 P651  
+  
LC1 D65A●●



## Motor starters - open version

Combination automatic motor starters with overload protection built into the circuit breaker

## D.O.L. starters, reversing, from 0.06 to 30 kW at 400/415 V, type 2 coordination

This pre-assembled combination comprises:

- 1 motor circuit breaker GV2 P,
- 1 3-pole reversing contactor LC2 D,
- 1 combination block GV2 AF3.

Open  
pre-cabled  
motor  
starters

### Characteristics

Starter type		GV2		DP202 to DP210	DP214	DP216	DP220	DP221	DP222	DP232
Breaking capacity (I <sub>q</sub> ) (1)	Conforming to IEC 60947-4-1	400/415 V	kA	130	130	130	50	50	50	50
		440 V	kA	130	130	50	20	20	20	20
		500 V	kA	130	50	42	10	10	10	10

### References

#### D.O.L. starters, reversing

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic tripping current 13 Irth	For customer assembly		Pre-assembled	Weight
400/415 V	440 V	500 V			Motor circuit-breaker Reference	Contactor Reference to be completed <sup>(2)</sup>		
kW	kW	kW	A	A			Basic reference, to be completed by adding the voltage code <sup>(3)</sup>	kg
0.06	0.06	—	0.16...0.25	2.4	GV2P02	LC2D09●●	GV2DP202●●	1.053
—	0.09	—	0.25...0.40	5	GV2P03	LC2D09●●	GV2DP203●●	1.053
0.09	0.12	—	—	—	—	—	—	—
0.12	—	—	0.40...0.63	8	GV2P04	LC2D09●●	GV2DP204●●	1.053
0.18	0.18	—	—	—	—	—	—	—
0.25	0.25	—	0.63...1	13	GV2P05	LC2D09●●	GV2DP205●●	1.053
0.37	0.37	—	—	—	—	—	—	—
—	—	0.37	1...1.6	22.5	GV2P06	LC2D09●●	GV2DP206●●	1.053
0.55	0.55	0.55	—	—	—	—	—	—
—	—	0.75	—	—	—	—	—	—
0.75	0.75	—	1.6...2.5	33.5	GV2P07	LC2D09●●	GV2DP207●●	1.053
—	1.1	1.1	—	—	—	—	—	—
1.1	—	1.5	2.5...4	51	GV2P08	LC2D09●●	GV2DP208●●	1.073
1.5	1.5	2.2	—	—	—	—	—	—
2.2	2.2	—	4...6.3	78	GV2P10	LC2D09●●	GV2DP210●●	1.153
—	3	3	—	—	—	—	—	—
3	—	4	6...10	138	GV2P14	LC2D09●●	GV2DP214●●	1.153
4	4	5.5	—	—	—	—	—	—
5.5	5.5	7.5	9...14	170	GV2P16	LC2D25●●	GV2DP216●●	1.163
—	7.5	9	—	—	—	—	—	—
7.5	9	—	13...18	223	GV2P20	LC2D25●●	GV2DP220●●	1.153
9	11	11	17...23	327	GV2P21	LC2D25●●	GV2DP221●●	1.163
11	—	15	20...25	327	GV2P22	LC2D25●●	GV2DP222●●	1.163
15	15	18.5	24...32	416	GV2P32	LC2D32●●	GV2DP232●●	1.163
18.5	—	—	30...40	560	GV3 P401 <sup>(4)</sup>	LC2D50A●●	—	2.750
—	18.5	22	30...40	560	GV3 P401 <sup>(4)</sup>	LC2D65A●●	—	2.760
22	—	—	37...50	700	GV3 P501 <sup>(4)</sup>	LC2D50A●●	—	2.750
—	22	30	37...50	700	GV3 P501 <sup>(4)</sup>	LC2D65A●●	—	2.760
30	37	—	48...65	910	GV3 P651 <sup>(4)</sup>	LC2D65A●●	—	2.760

#### Add-on blocks

Description	Mounting of GV2	Sold in lots of	Unit reference
Combination block between circuit breaker and contactor	└┐ rail	10	GV2AF3

(1) The breaking performance of circuit breakers **GV2 P** can be increased by adding a current limiter **GV1 L3**, see page B6/11.

(2) See page B8/2.

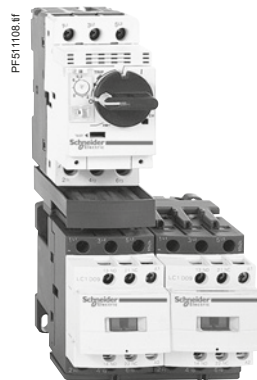
(3) Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	24	220	230
~ 50/60 Hz	B7	M7	P7
— <sup>(5)</sup>	BD	—	—

(4) Circuit breaker supplied without downstream **EverLink®** power terminal block, which is required for vertical mounting. For side by side mounting, use a **GV3 P** circuit breaker with terminal blocks and the **GV3S** set of S-shape busbars (see page B8/29).

(5) Coil with integral suppression device as standard.

**Note:** The combinations are valid for IE2 motors and IE3 with maximum starting current = 7.5 x motor rating current (see pages A6/4 and A6/5).



GV2 DP202●●



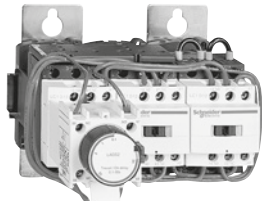
GV3 P651  
+  
LC2 D65A●●

## Motor starters - open version

Star-delta starters for motor control up to 132 kW <sup>(1)</sup>,  
without isolating device, pre-assembled

Open  
pre-cabled  
motor  
starters







DF526460.1ff









LC3 D32A●●

### Plate mounted starters

Maximum operating rate: 30 starts/hour. Maximum starting time: 30 seconds.

Standard power ratings of squirrel cage motors Mains voltage - delta connection				Auxiliary contacts available on each contactor						Star delta mechanical interlock	Basic reference, to be completed by adding the voltage code <sup>(2)</sup>	Weight
220/230 V	380/400 V	415 V	440 V	line KM2	delta KM3	star KM1						
												
kW	kW	kW	kW									kg
4	7.5	7.5	7.5	—	—	—	— <sup>(3)</sup>	—	1	With	LC3D09A●●	1.530
5.5	11	11	11	—	—	—	— <sup>(3)</sup>	—	1	With	LC3D12A●●	1.530
11	18.5	22	22	—	—	—	— <sup>(3)</sup>	—	1	With	LC3D18A●●	1.730
15	25	30	30	—	—	—	— <sup>(3)</sup>	—	1	With	LC3D32A●●	2.030
37	75	75	75	—	1	1	— <sup>(3)</sup>	—	— <sup>(3)</sup>	Without	LC3D80●●	5.200
										With	LC3D80●●A64	5.400
63	110	110	110	—	1	1	— <sup>(3)</sup>	—	— <sup>(3)</sup>	Without	LC3D115●● <sup>(4)</sup>	11.800
										With	LC3D115●●A64 <sup>(4)</sup>	12.100
75	132	132	147	—	1	1	— <sup>(3)</sup>	—	1 <sup>(3)</sup>	Without	LC3D150●● <sup>(4)</sup>	12.100
										With	LC3D150●●A64 <sup>(4)</sup>	12.100

### Rail mounted starters (35 mm rail)

Standard power ratings of squirrel cage motors Mains voltage - delta connection				Auxiliary contacts available on each contactor						Star delta mechanical interlock	Basic reference, to be completed by adding the voltage code <sup>(2)</sup>	Weight
220/230 V	380/400 V	415 V	440 V	line KM2		delta KM3		star KM1				
												
kW	kW	kW	kW									kg
Maximum operating rate: 12 starts/hour. Maximum starting time: 30 seconds.												
3	5.5	5.5	5.5	–	–	–	–	–	1	With	LC3K06●●	0.740
4	7.5	7.5	7.5	–	–	–	–	–	1	With	LC3K09●●	0.740
Maximum operating rate: 30 starts/hour. Maximum starting time: 30 seconds												
4	7.5	7.5	7.5	–	–	–	– <sup>(3)</sup>	–	1	With	LC3D090A●●	1.530
5.5	11	11	11	–	–	–	– <sup>(3)</sup>	–	1	With	LC3D120A●●	1.530
11	18.5	22	22	–	–	–	– <sup>(3)</sup>	–	1	With	LC3D180A●●	1.730
15	25	30	30	–	–	–	– <sup>(3)</sup>	–	1	With	LC3D320A●●	2.030

<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately. Select appropriate overload relay for setting at 0.58 of the full load rated motor current (see pages B11/4 and B11/5).

<sup>(2)</sup> Standard control circuit voltages:

Volts ~ 50/60 Hz      24      36      42      48      110      220      230      240      380      400      415      440

Star-delta starters LC3 K06 and K09

Code      B7      C7      D7      E7      F7      M7      P7      U7      —      —      —      —

Star-delta starters LC3 D09A...D150, LC3 D090A...D320A

Code      B7      —      D7      E7      F7      M7      P7      U7      Q7      V7      N7      R7

For other voltages, please consult your Regional Sales Office.

<sup>(3)</sup> One auxiliary contact block type LAD N can also be fitted, see page B8/23.

<sup>(4)</sup> These starters consist of contactors LC1 D115 or D150 without connectors.

## Motor starters - open version

Star-delta starters for motor control, up to 315 kW <sup>(1)</sup>,  
without isolating device, pre-assembled

## Pre-assembled starters

Maximum operating rate: 12 starts/hour.







Maximum starting time:

LC3 F●●●●●: 20 seconds,

LC3 F●●●●●A64: 30 seconds (3 identical contactors).

Composition of starters without mechanical interlock, see pages A2/14, A2/15.

## Star-delta starters

Standard power ratings of squirrel cage motors				Auxiliary contacts available on each contactor						Star delta mechanical interlock	Basic reference, to be completed by adding the voltage code <sup>(2)</sup>	Weight
Mains voltage - delta connection				line		delta		star				
220/230 V	380/400 V	415 V	440 V	KM2		KM3		KM1				
										(3)		
kW	kW	kW	kW									kg
90	160	160	185	1	2	2	1	1	1	Without	LC3F185●●	16.500
										With	LC3F185●●A64	16.625
100	200	200	220	1	2	2	1	1	1	Without	LC3F225●●	16.500
										With	LC3F225●●A64	16.625
110	220	220	250	1	2	2	1	1	1	Without	LC3F265●●	27.300
										With	LC3F265●●A64	27.425
160	280	280	315	1	2	2	1	1	1	Without	LC3F330●●	37.000
										With	LC3F330●●A64	37.125
185	315	355	375	1	2	2	1	1	1	Without	LC3F400●●	37.000
										With	LC3F400●●A64	37.125

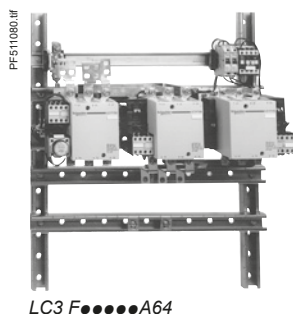
<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately. Select appropriate overload relay for setting at 0.58 of the full load rated motor current, see pages B11/11 and B11/12.

<sup>(2)</sup> Standard control circuit voltages:

Volts ~ 50/60 Hz	48	110	115	220/230	230	240	380/400	400	415
Code	E7	F7	FE7	M7	P7	U7	Q7	V7	N7

For other voltages, please consult your Regional Sales Office.

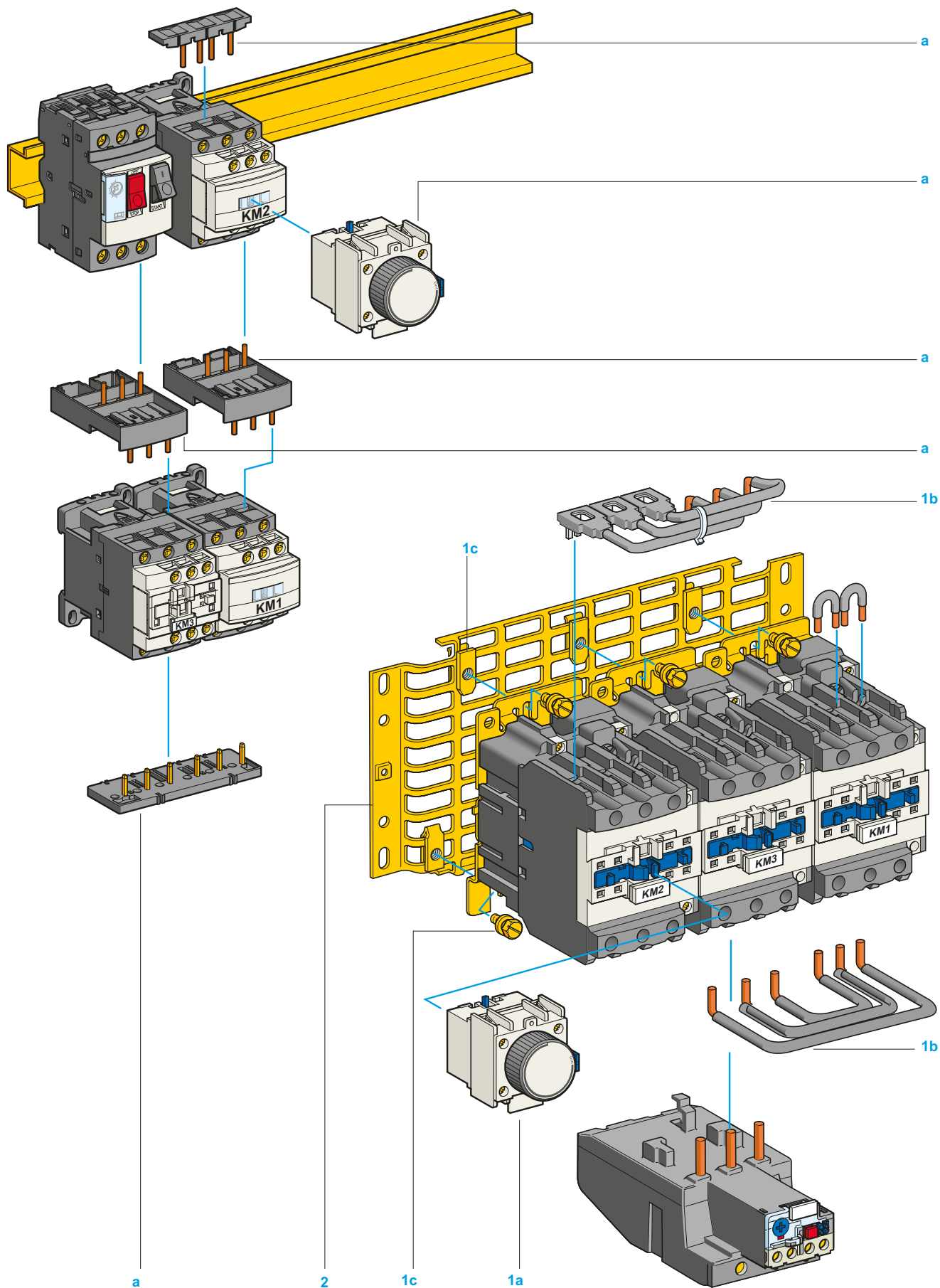
<sup>(3)</sup> One auxiliary contact block type **LAD N** can be fitted.



LC3 F●●●●●A64

Open  
pre-cabled  
motor  
starters

Open  
pre-cabled  
motor  
starters



## Motor starters - open version

Star-delta starters, for motor control, up to 132 kW <sup>(1)</sup>, without mechanical interlock, for customer assembly (on plate or on mounting rail) <sup>(2)</sup>

Starters for direct combination with a circuit breaker							
Maximum operating rate: 30 starts/hour. Maximum starting time: 30 seconds							
Standard power ratings of squirrel cage motors <sup>(3)</sup> Mains voltage - delta connection		Thermal-magnetic motor circuit breaker <i>References in italics are available in CEE zone only</i>	Contactors (basic references, to be completed by adding the voltage code) <sup>(4)</sup>				
400/ 415 V	440 V		line	delta	star		
kW	kW		KM2	KM3	KM1		
7.5	7.5	GV2ME20 or GV2ME20AP	LC1D09●●	LC1D09●●	LC1D09●●		
–	9	GV2ME20 or GV2ME20AP	LC1D12●●	LC1D12●●	LC1D09●●		
9	11	GV2ME21 or GV2ME21AP	LC1D12●●	LC1D12●●	LC1D09●●		
11	–	GV2ME22 or GV2ME22AP	LC1D12●●	LC1D12●●	LC1D09●●		
15	15	GV2ME32 or GV2ME32AP	LC1D18●●	LC1D18●●	LC1D09●●		

Separate component			
Description	Illustration item no.	Reference	
Mounting kit comprising: power circuit connections and 1 time delay contact block LAD S2	a	LAD912GV	

Starters for mounting separately from upstream protection							
Maximum operating rate: 30 starts/hour. Maximum starting time: 30 seconds.							
Standard power ratings of squirrel cage motors <sup>(3)</sup> Mains voltage - delta connection				Contactors (basic references, to be completed by adding the voltage code) <sup>(4)</sup>			Separate components (see below)
220/ 230 V	380/ 400 V	415 V	440 V	line	delta	star	
kW	kW	kW	kW	KM2	KM3	KM1	Component types
4	7.5	7.5	7.5	LC1D09●●	LC1D09●●	LC1D09●●	D09
5.5	11	11	11	LC1D18●● <sup>(6)</sup>	LC1D12●●	LC1D09●●	D12
11	18.5	22	22	LC1D25●● <sup>(7)</sup>	LC1D25●● <sup>(7)</sup>	LC1D09●●	D18
15	25	30	30	LC1D32●●	LC1D32●●	LC1D18●●	D32
18.5	37	37	37	LC1D40A●●	LC1D40A●●	LC1D40A●●	D40
30	55	59	59	LC1D50A●●	LC1D50A●●	LC1D40A●●	D50
37	75	75	75	LC1D80●●	LC1D80●●	LC1D50A●●	D80
63	110	110	110	LC1D115●●	LC1D115●●	LC1D80●●	D115 <sup>(5)</sup>
75	132	132	147	LC1D150●●	LC1D150●●	LC1D115●●	D150 <sup>(5)</sup>

Separate components				
Description	Illustration item no.	For components type <sup>(5)</sup>	Reference	Without timer LADS2
Mounting kit comprising: - 1 time delay contact block LAD S2 (D09...D80) <sup>(3)</sup> , - power circuit connections (D09...D80), - screws and clamps for fixing contactors to the plate (D40...D80).	1 a	LC1D09 to D38 <sup>(8)</sup>	LAD91217	LAD91218
	1 b	LC1D09 to D38 <sup>(9)</sup>	LAD93217	LAD93218
	1 c	D40 and D50	LA9D5017	–
		D80	LA9D8017	–
Equipment mounting plates	2	LC1D09 to D38	LA9D12974	
		D40 and D50	LA9D40973	
		D80	LA9D80973	

<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately.

Select appropriate overload relay for setting at 0.58 of the full load rated motor current, see pages B11/4 and B11/5.

<sup>(2)</sup> For mounting, assembly and cabling: please refer to installation instructions supplied with the equipment.

<sup>(3)</sup> See comments on page A2/24.

<sup>(4)</sup> See page B8/2.

<sup>(5)</sup> For D115 and D150 components, see illustration and separate parts on pages A2/12 and A2/13.

<sup>(6)</sup> A D12 component is adequate for the application, but use of a D18 is recommended.

(connection capacity, correct use of power connection kit and connections).

<sup>(7)</sup> A D18 component is adequate for the application, but use of a D25 is recommended.

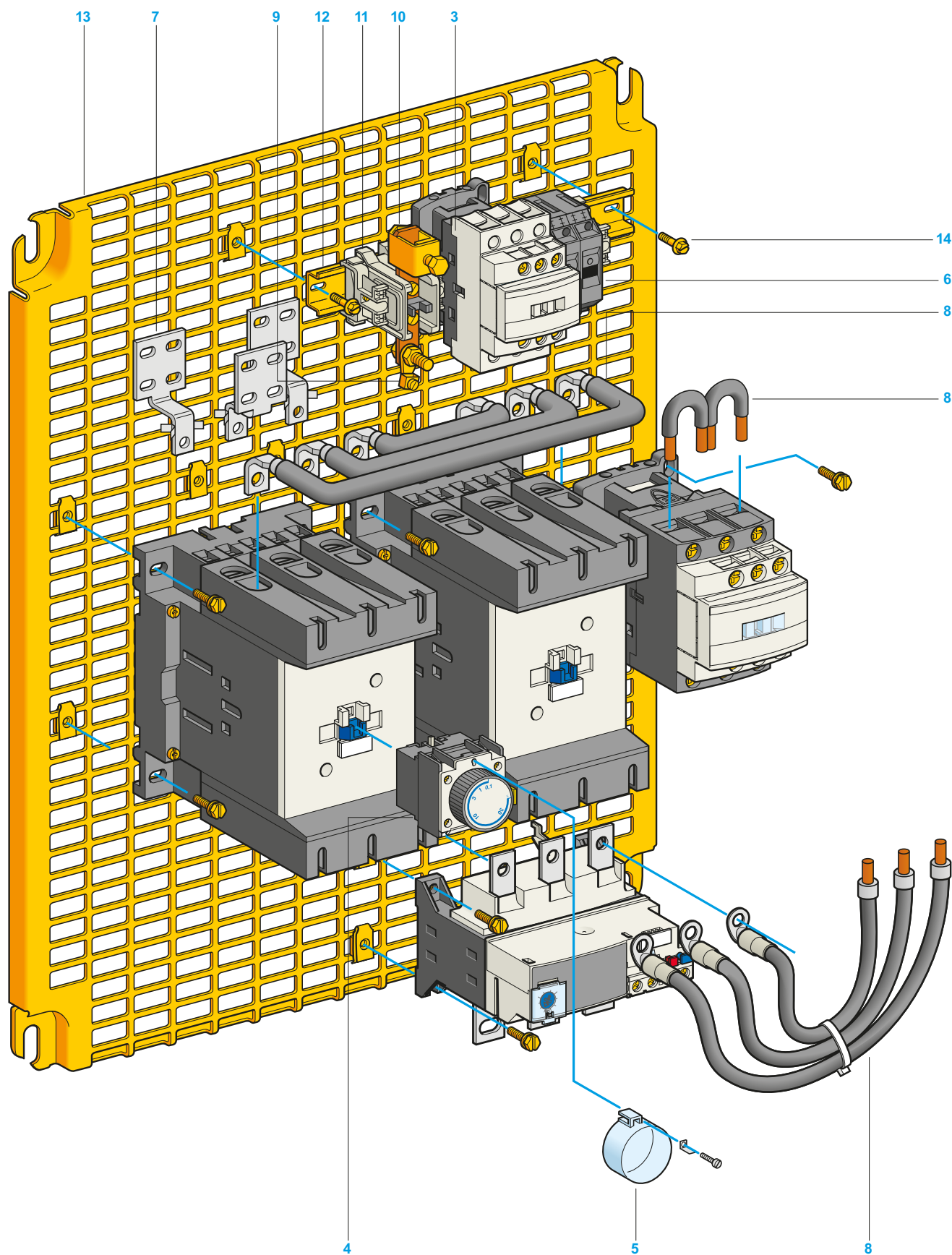
(connection capacity, correct use of power connection kit and connections).

<sup>(8)</sup> For assembly of 3 contactors of the same physical size (depth).

<sup>(9)</sup> For assembly of 3 contactors with star contactor physically smaller (depth).



Open  
pre-cabled  
motor  
starters



## Motor starters - open version

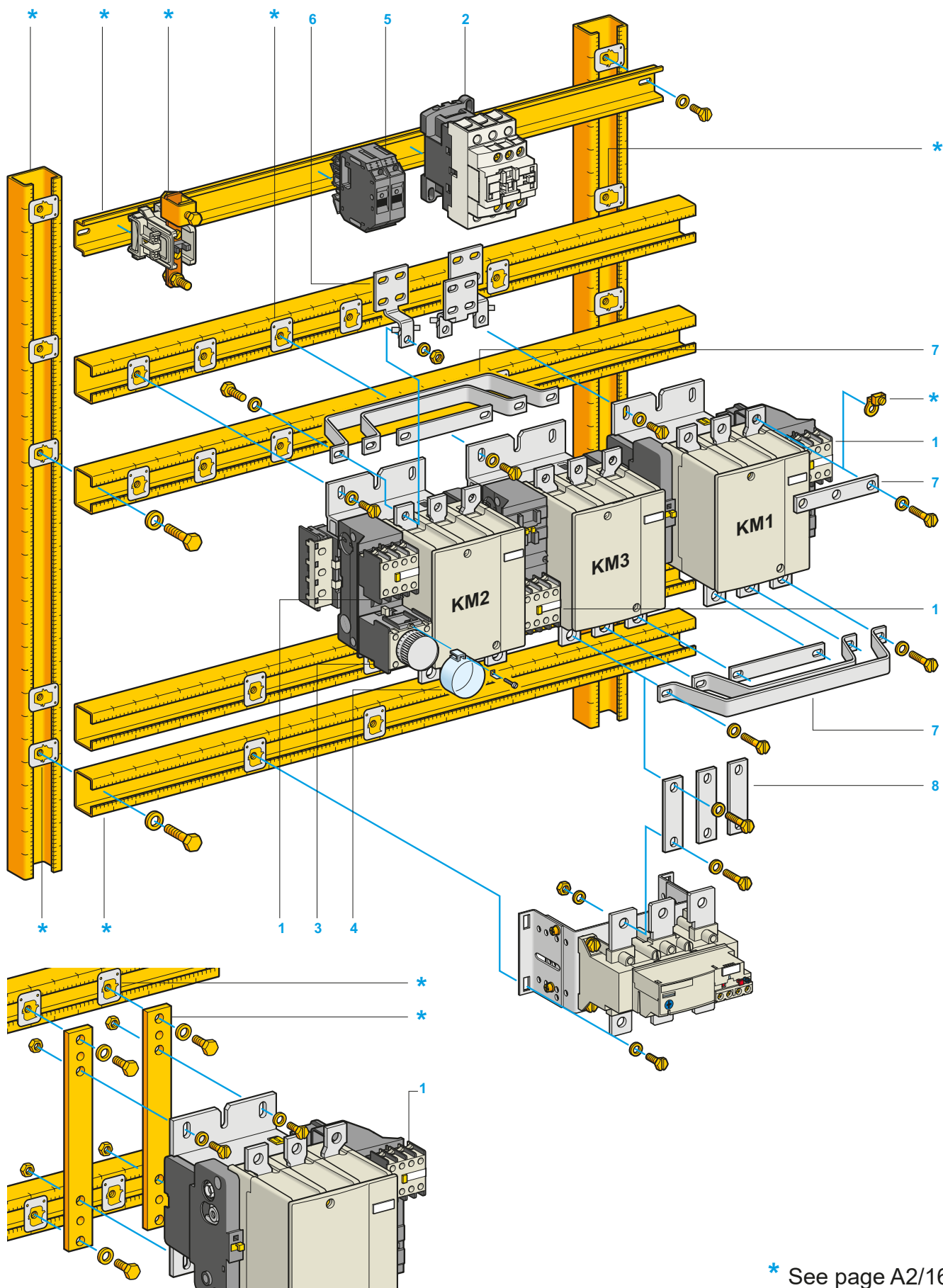
Star-delta starters, for motor control, up to 132 kW <sup>(1)</sup>, without mechanical interlock, for customer assembly (on plate or on mounting rail) <sup>(2)</sup>

Starters for mounting separately from upstream protection						
Separate components (continued)						
Description	Illustration item no.	For use on	No.	Sold in lots of	Unit reference	Weight kg
Instantaneous auxiliary contact blocks 1 N/O	1	D115 (star)	1	1	LADN10	0.020
Control relay	3	D115, D150	1	1	CAD32 <sup>(3)</sup>	0.320
Time delay auxiliary contact blocks	4	D115, D150	1	1	LADT2	0.060
Lead sealing kit for time delay auxiliary contact blocks	5	D115, D150	1	1	LA9D901	0.005
Thermal magnetic circuit breaker for control circuit (200...415 V)	6	D115, D150	2	6	GB2CB05	0.060
Set of 3 connectors for wider terminations (optional)	7	D115, D150	1	1	LA9FG980	0.200
Set of power connections with fixing accessories	8	D115	1	1	LA9D11517	0.800
		D150	1	1	LA9D15017	1.050
Spare volt free terminals	9	D115, D150	1	10	DZ3HA3	0.007
			2	10	DZ3GA3	0.006
Lug-connector terminal block	10	D115, D150	1	10	AB1BC9535	0.236
End stop	11	D115, D150	3	100	AB1AB8M35	0.005
Mounting rail 35 mm	12	D115, D150	1	10	AM1ED021	0.210
Pre-slotted mounting plate	13	D115, D150	1	1	AM3PA65	1.950
Screw with captive washer	14	D115, D150	12	100	AF1VA618	0.006
			2	100	AF1VA410	0.002

<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately. Select appropriate overload relay for setting at 0.58 of the full load rated motor current, see pages B11/4 and B11/5.

<sup>(2)</sup> For mounting, assembly and cabling: please refer to installation instructions supplied with the equipment.





\* See page A2/16

## Motor starters - open version

Star-delta starters for motor control, up to 315 kW <sup>(1)</sup>, for customer assembly (on chassis)

Contactors							
Maximum operating rate: 12 starts/hour. Maximum starting time: 20 seconds <sup>(3)</sup>							
Standard power ratings of squirrel cage motors				Contactors <sup>(2)</sup>			Separate components (see below)
220/230V	380/400V	415V	440V	line	delta	star	
kW	kW	kW	kW	KM2	KM3	KM1	Component types
90	160	160	185	LC1F185●●	LC1F185●●	LC1D150●●	F185
100	200	200	220	LC1F225●●	LC1F225●●	LC1F185●●	F225
110	220	220	250	LC1F265●●	LC1F265●●	LC1F185●●	F265
160	280	280	315	LC1F330●●	LC1F330●●	LC1F265●●	F330
185	315	355	375	LC1F400●●	LC1F400●●	LC1F265●●	F400

Separate components <sup>(4)</sup>						
Description	Illustration item no.	For use on	No.	Sold in lots of	Unit reference	Weight kg
Instantaneous auxiliary contact blocks 2 N/O + 2 N/C	1	F185 to F400	3	1	LADN22	0.050
Control relay	2	F185 to F400	1	1	CAD32	0.580
Time delay auxiliary contact blocks	3	F185 to F400	1	1	LADT2	0.060
Sealing cover	4	F185 to F400	1	1	LA9D901	0.005
Thermal magnetic circuit breaker for 5 A control circuit	5	F185 to F400	2	6	GB2CB10	0.050
Sets of 3 connectors for wider terminations (optional)	6	F185	1	1	LA9FG980	0.200
		F225 to F400	1	1	LA9FJ980	0.490
Sets of power connections	7	F185	1	1	LA9F18517	0.800
		F225	1	1	LA9F22510	1.400
		F265	1	1	LA9FH610	1.400
		F330 and F400	1	1	LA9FJ610	1.500
Set of 3 busbars for thermal overload connections	8	F185 to F400	1	1	LA7F●●● (Selected according to size of thermal overload relay) see pages B11/11 and B11/12.	

<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately. Select appropriate overload relay for setting at 0.58 of the full load rated motor current, see pages B11/11 and B11/12.

<sup>(2)</sup> Contactors supplied with coil. Complete the reference by adding the control circuit voltage code.

Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

LC1D150										
Volts	48	110	115	120	220	230	240	380	400	415
50/60 Hz	E7	F7	FE7	G7	M7	P7	U7	Q7	V7	N7

LC1F185 to F400										
Volts	48	110	115	120	220	230	240	380	400	415
40... 400 Hz <sup>(5)</sup>	E7 <sup>(6)</sup>	F7	FE7	G7	M7	P7	U7	Q7	V7	N7

Standard voltages, see page B9/2.

For other voltages between 24 and 660 V, see pages B9/32 to B9/41.

<sup>(3)</sup> For longer starting times, please consult your Regional Sales Office.

<sup>(4)</sup> Other separate components, see page A2/17.

<sup>(5)</sup> Coil LX1: LC1F265, F330 and F400. Coil LX9: LC1F185 and F225.

<sup>(6)</sup> Except for LC1F400.

\* See page A2/14

## Motor starters - open version

Star-delta starters for motor control, up to 315 kW <sup>(1)</sup>, for customer assembly (on chassis)

Separate components (continued from page A2/15)						
Description	Illustration item no.	For use on	No.	Sold in lots of	Unit reference	Weight kg
Spare volt free terminals	9	F185	3	10	DZ3GA3	0.006
		F225...F400	3	10	DZ3HA3	0.007
Neutral terminals with stop and spare volt free terminal (for control circuit)	10	F185	1	10	AB1BC9535	0.236
			2	100	AB1AB8P35	0.006
			1	10	DZ3HA3	0.007
		F225 and F265	1	10	AB1BC15035	0.277
			2	100	AB1AB8M35	0.007
			1	10	DZ3JA3	0.010
		F330 and F400	1	10	AB1BC24035	0.287
			2	100	AB1AB8M35	0.007
			1	10	DZ3JA3	0.010
Reducer bracket	11	F400	2	1	LA9F100	0.100
Mounting rails <sup>(2)</sup>	12	F185...F400	1	10	NSYSDR200	0.900
	13	F185...F400	1	4	AM1EC200	2.980
Uprights <sup>(2)</sup>	14	F115...F400	2	4	AM1EC200	2.980
1/4 turn sliding clip nuts and corresponding bolts for rails AM1 DE	15	F185...F400	2	10	NSYSNM6	0.020
				100	AF1VA618	0.006
1/4 turn sliding clip nuts and corresponding bolts for rails AM1 DE	16	F185...F400	8	10	NSYSNM8	0.020
				10	AF1VC820	0.024
1/4 turn sliding clip nuts and corresponding bolts for equipment fixing	17	F185...F330	15	10	AF1CD061	0.020
				100	AF1VA618	0.006
				10	AF1CD061	0.020
				10	AF1CD081	0.020
		F400	8	10	AF1CD061	0.020
				10	AF1CD081	0.020
				100	AF1VA618	0.006
				10	AF1VC820	0.024
Enclosures: metal, grey RAL 7032	—	F185...F225	1	1	ACMGV763	19.090
		F265	1	1	ACMGV973	33.310
		F330 and F400	1	1	ACMGV1084	54.000
Fixing lugs adjustable for enclosure ACM	—	—	4	4	AE3FX122	0.080

<sup>(1)</sup> Protection must be provided by the addition of a thermal overload relay, to be ordered separately. Select appropriate overload relay for setting at 0.58 of the full load rated motor current, see pages B11/11 and B11/12.

<sup>(2)</sup> Supplied in 2 m lengths. See page A2/27 for cutting to length.

