

Recommended Selection Charts with Circuit Breaker for Motor Protection

General contents

Table of Charts	3
Recommended Selection Charts	4
Fuseless - Direct-on-Line starters with circuit-breaker and overload protection built into the circuit-breaker Type GV.....	4
Fuseless - Direct-on-Line starters with circuit-breaker type GV and overload protection by separate thermal overload relay type LRE	5
Fuseless - Star Delta starters with circuit-breaker and overload protection built into the circuit-breaker Type GV.....	6
Fuseless - Star Delta starters with circuit-breaker type GV and overload protection by separate thermal overload relay type LRE	7
Notes	8-9

Recommended Selection Charts for Motor Feeders

Motor Efficiency Class	IE2/IE3			
Type of Starter	Direct On Line		Star Delta	
No. of Products in Motor Feeder	2 Product	3 Product	2 Product	3 Product
Fuseless with Circuit breaker for Motor Protection type GV	Page-4	Page-5	Page-6	Page-7

Notes:

- SCPD stands for Short Circuit Protection Device.
- Selection is valid for Switching & Protection of IE2/IE3 4 Pole Motors which comply to IS12615.
- The rated motor current used for derivation is Full Load Current (FLC) for 3-phase Squirrel Cage Induction Motors as indicated in IS12615.
- Higher ratings of Contactors can be used in place of recommended combinations.
- Selection is for Normal Starting time (Relay Trip classes 10A/10).
- For high Inertia loads like Blowers, Pumps & ID/FD fans etc. taking longer starting time, kindly consult us to derive the selection
- For Star-Delta Motor feeders, In-side delta wiring is considered for Contactors.
- For Star Delta Motor feeders, proper Change-over time and Pause time must be ensured.
- This selection is valid only for suggested Product combinations. Change in any of the recommended combination will invalidate the recommendations and Human safety, Installation safety and product safety requirements may not be fulfilled.
- Utilisation category considered is AC-3
- Max. Operating rate per Hour for contactors & Circuit breaker for Motor protection shall not be exceeded.
- Recommended Circuit breaker for Motor protection are specifically designed for Motors and can-not be replaced by distribution Circuit breaker.
- Product Evolution and Improvement is a Continuous process at Schneider Electric. Hence, recommendations and guidelines are subject to change. Contact Schneider Electric for latest guidelines.

Fuseless - Direct-on-Line starters with circuit-breaker and overload protection built into the circuit-breaker Type GV

Selection for	DOL Motor Feeders
Contactor & CB	EasyPact TVS & GV
Iq Current	50kA
Ue	415 V, 50 Hz

Functions obtained	Devices
Disconnection & Isolation	Circuit Breaker
Short Circuit Protection	
Overload Protection	
Switching	Contactor

Sr. No.	3Φ Motors			Contactor	Overload Relay		MPCB		
	kW	hp	FLC - I _n (Amps)		Type	Range (A)	Type	Range (A)	
1	0.06	x	0.19	LC1E09	In-built in Circuit Breaker		GV2ME02 Or GV2P02	0.16 - 0.25	
2	0.09	x	0.28	LC1E09		GV2ME03 Or GV2P03	0.25- 0.4		
3	0.12	0.16	0.51	LC1E09		GV2ME04 Or GV2P04	0.4 - 0.63		
4	0.18	0.25	0.6	LC1E09		GV2ME04 Or GV2P04	0.4 - 0.63		
5	0.25	0.33	0.8	LC1E09		GV2ME05 Or GV2P05	0.63 - 1		
6	0.37	0.5	1.4	LC1E09		GV2ME06 Or GV2P06	1 - 1.6		
7	0.55	0.75	1.7	LC1E09		GV2ME06 Or GV2P06	1 - 1.6		
8	0.75	1	2.2	LC1E09		GV2ME07 Or GV2P07	1.6 - 2.5		
9	1.1	1.5	2.9	LC1E09		GV2ME08 Or GV2P08	2.5 - 4		
10	1.3	1.75	3	LC1E09		GV2ME08 Or GV2P08	2.5 - 4		
11	1.5	2	3.8	LC1E09		GV2ME08 Or GV2P08	2.5 - 4		
12	2.2	3	5.1	LC1E18		GV2ME10 Or GV2P10	4 - 6.3		
13	3	4	6	LC1E18		GV2ME14 Or GV2P14	6--10		
14	3.7	5	8.1	LC1E25		GV2ME14 Or GV2P14	6--10		
15	4	5.5	8.5	LC1E25		GV2ME14 Or GV2P14	6--10		
16	5.5	7.5	11.4	LC1E32		GV2ME16 Or GV2P16	9--14		
17	7.5	10	15.4	LC1E32		GV2ME20 Or GV2P20	13 - 18		
18	9.3	12.5	17.3	LC1E40		GV2ME21 Or GV2P21	17 - 23		
19	11	15	22	LC1E40		GV2ME22 Or GV2P22	20-25		
20	13	17.5	24	LC1E50		GV2ME32 Or GV2P32	24 - 32		
21	15	20	30	LC1E50		GV2ME32 Or GV2P32	24 - 32		
22	18.5	25	36	LC1E65			GV3P40	30 - 40	
23	22	30	43	LC1E65			GV3P50	37 -50	
24	30	40	56	LC1E80			GV3P65	48 - 65	
25	37	50	69	LC1E95			GV3P73	62 -73	

Fuseless - Direct-on-Line starters with circuit-breaker type GV and overload protection by separate thermal overload relay type LRE

Selection for	DOL Motor Feeders
Contactor & CB	EasyPact TVS & GV
I _q Current	50kA
U _e	415 V, 50 Hz

Functions obtained	Devices
Disconnection & Isolation	Circuit Breaker
Short Circuit Protection	
Overload Protection	Overload Relay
Switching	Contactor

Sr. No.	3Φ Motors			Contactor	Overload Relay		Circuit Breaker			
	kW	hp	FLC - I _n (Amps)		Type	Range (A)	Type	Rating (A)		
1	0.06	x	0.19	LC1E09	LRE02	0.16-0.25	GV2LE03	Or	GV2L03	0.4
2	0.09	x	0.28	LC1E09	LRE03	0.25-0.4	GV2LE03	Or	GV2L03	0.4
3	0.12	0.16	0.51	LC1E09	LRE04	0.4-0.63	GV2LE04	Or	GV2L04	0.63
4	0.18	0.25	0.6	LC1E09	LRE04	0.4-0.63	GV2LE04	Or	GV2L04	0.63
5	0.25	0.33	0.8	LC1E09	LRE05	0.63-1	GV2LE05	Or	GV2L05	1
6	0.37	0.5	1.4	LC1E09	LRE06	1-1.6	GV2LE06	Or	GV2L06	1.6
7	0.55	0.75	1.7	LC1E09	LRE07	1.6-2.5	GV2LE07	Or	GV2L07	2.5
8	0.75	1	2.2	LC1E09	LRE07	1.6-2.5	GV2LE07	Or	GV2L07	2.5
9	1.1	1.5	2.9	LC1E09	LRE08	2.5-4	GV2LE08	Or	GV2L08	4
10	1.3	1.75	3	LC1E09	LRE08	2.5-4	GV2LE08	Or	GV2L08	4
11	1.5	2	3.8	LC1E09	LRE08	2.5-4	GV2LE08	Or	GV2L08	4
12	2.2	3	5.1	LC1E18	LRE10	4-6	GV2LE10	Or	GV2L10	6.3
13	3	4	6	LC1E18	LRE12	5.5-8	GV2LE14	Or	GV2L14	10
14	3.7	5	8.1	LC1E25	LRE14	7-10	GV2LE14	Or	GV2L14	10
15	4	5.5	8.5	LC1E25	LRE14	7-10	GV2LE14	Or	GV2L14	10
16	5.5	7.5	11.4	LC1E32	LRE16	9-13	GV2LE16	Or	GV2L16	14
17	7.5	10	15.4	LC1E32	LRE21	12-18	GV2LE20	Or	GV2L20	18
18	9.3	12.5	17.3	LC1E40	LRE21	12-18	GV2LE21	Or	GV2L21	23
19	11	15	22	LC1E40	LRE22	16-24	GV2LE22	Or	GV2L22	25
20	13	17.5	24	LC1E50	LRE32	23-32	GV2LE32	Or	GV2L32	32
21	15	20	30	LC1E50	LRE32	23-32	GV2LE32	Or	GV2L32	32
22	18.5	25	36	LC1E65	LRE35	30-38			GV3L40	40
23	22	30	43	LC1E65	LRE357	37-50			GV3L50	50
24	30	40	56	LC1E80	LRE359	48-65			GV3L65	65
25	37	50	69	LC1E95	LRE361	55-70			GV3L73	73

Fuseless - Star Delta starters with circuit-breaker and overload protection built into the circuit-breaker Type GV

Selection for	Star Delta Motor Feeders
Contactor & CB	EasyPact TVS & GV
Iq Current	50kA
Ue	415 V, 50 Hz

Functions obtained	Devices
Disconnection & Isolation	Circuit Breaker
Short Circuit Protection	
Overload Protection	
Switching	Contactor

Sr. No.	3Φ Motors				Contactor			Overload Relay		Circuit Breaker	
	kW	hp	FLC - I _n (Amps) Line	Phase	Main	Delta	Star	Type	Range (A)	Type	Range (A)
1	0.75	1	2.2	1.3	LC1E09	LC1E09	LC1E09	In-built in Circuit Breaker		GV2P07	1.6 - 2.5
2	1.1	1.5	2.90	1.67	LC1E09	LC1E09	LC1E09			GV2P08	2.5 - 4
3	1.3	1.75	3.00	1.73	LC1E09	LC1E09	LC1E09			GV2P08	2.5 - 4
4	1.5	2	3.80	2.19	LC1E09	LC1E09	LC1E09			GV2P08	2.5 - 4
5	2.2	3	5.1	2.9	LC1E09	LC1E09	LC1E09			GV2P10	4 - 6.3
6	3	4	6.00	3.46	LC1E09	LC1E09	LC1E09			GV2P10	4 - 6.3
7	3.7	5	8.10	4.68	LC1E09	LC1E09	LC1E09			GV2P14	6 - 10
8	4	5.5	8.50	4.91	LC1E09	LC1E09	LC1E09			GV2P14	6 - 10
9	5.5	7.5	11.4	6.6	LC1E12	LC1E12	LC1E09			GV2P16	9 - 14
10	7.5	10	15.40	8.89	LC1E18	LC1E18	LC1E09			GV2P20	13 - 18
11	9.3	12.5	17.30	9.99	LC1E18	LC1E18	LC1E09			GV2P21	17 - 23
12	11	15	22.00	12.70	LC1E25	LC1E25	LC1E12			GV2P22	20 - 25
13	15	20	30	17.3	LC1E32	LC1E32	LC1E18			GV2P32	24 - 32
14	18.5	25	36.00	20.79	LC1E38	LC1E38	LC1E25			GV3P40	30...40
15	22	30	43.00	24.83	LC1E40	LC1E40	LC1E32			GV3P50	37...50
16	30	40	56.00	32.33	LC1E50	LC1E50	LC1E38			GV3P65	48...65
17	37	50	69	39.8	LC1E65	LC1E65	LC1E40			GV3P73	62...73
18	45	60	84.00	48.50	LC1E80	LC1E80	LC1E50			GV4PE115N	65..115
19	55	75	99.00	57.16	LC1E95	LC1E95	LC1E65			GV4PE115N	65..115
20	75	100	134.00	77.37	LC1E120	LC1E120	LC1E80			GV7RS150	90 -150
21	80	110	139	80.3	LC1E120	LC1E120	LC1E80			GV7RS150	90 -150
22	90	120	164.00	94.69	LC1E160	LC1E160	LC1E95			GV7RS220	132 - 220
23	110	150	204.00	117.78	LC1E160	LC1E160	LC1E120			GV7RS220	132 - 220

Fuseless - Star Delta starters with circuit-breaker type GV and overload protection by separate thermal overload relay type LRE

Selection for	Star Delta Motor Feeders
Contactor & CB	EasyPact TVS & GV
Iq Current	50kA
Ue	415 V, 50 Hz

Functions obtained	Devices
Disconnection & Isolation	Circuit Breaker
Short Circuit Protection	
Overload Protection	Overload Relay
Switching	Contactor

Sr. No.	3Φ Motors				Contactor			Overload Relay		Circuit Breaker	
	kW	hp	FLC - I _n (Amps) Line	Phase	Main	Delta	Star	Type	Range (A)	Type	Rating (A)
1	0.75	1	2.2	1.3	LC1E09	LC1E09	LC1E09	LRE06	1-1.6	GV2L07 or GV2LE07	2.5
2	1.1	1.5	2.9	1.7	LC1E09	LC1E09	LC1E09	LRE07	1.6-2.5	GV2L08 or GV2LE08	4
3	1.3	1.75	3.0	1.7	LC1E09	LC1E09	LC1E09	LRE07	1.6-2.5	GV2L08 or GV2LE08	4
4	1.5	2	3.8	2.2	LC1E09	LC1E09	LC1E09	LRE07	1.6-2.5	GV2L08 or GV2LE08	4
5	2.2	3	5.1	2.9	LC1E09	LC1E09	LC1E09	LRE08	2.5-4	GV2L10 or GV2LE10	6.3
6	3	4	6.0	3.5	LC1E09	LC1E09	LC1E09	LRE08	2.5-4	GV2L10 or GV2LE10	6.3
7	3.7	5	8.1	4.7	LC1E09	LC1E09	LC1E09	LRE10	4-6	GV2L14 or GV2LE14	10
8	4	5.5	8.5	4.9	LC1E09	LC1E09	LC1E09	LRE10	4-6	GV2L14 or GV2LE14	10
9	5.5	7.5	11.4	6.6	LC1E12	LC1E12	LC1E09	LRE12	5.5-8	GV2L16 or GV2LE16	14
10	7.5	10	15.4	8.9	LC1E18	LC1E18	LC1E09	LRE14	7-10	GV2L20 or GV2LE20	18
11	9.3	12.5	17.3	10.0	LC1E18	LC1E18	LC1E09	LRE14	7-10	GV2L20 or GV2LE20	18
12	11	15	22.0	12.7	LC1E25	LC1E25	LC1E12	LRE16	9-13	GV2L22 or GV2LE22	25
13	15	20	30.0	17.3	LC1E32	LC1E32	LC1E18	LRE21	12-18	GV2L32 or GV2LE32	32
14	18.5	25	36.0	20.8	LC1E38	LC1E38	LC1E25	LRE22	16-24	GV3L40 or GV3LE40	40
15	22	30	43.0	24.8	LC1E40	LC1E40	LC1E32	LRE32	23-32	GV3L50 or GV3LE50	50
16	30	40	56.0	32.3	LC1E50	LC1E50	LC1E38	LRE355	30-40	GV3L65 or GV3LE65	65
17	37	50	69.0	39.8	LC1E65	LC1E65	LC1E38	LRE355	30-40	GV3L73 or GV3LE73	73

Life Is On

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