

Circuit breakers for motor protection and control

Deca, Giga motor circuit breakers provide compact, reliable and efficient solutions for:

- isolation,
- protection against short circuits and overloads,
- On-Off manual control of motors from 0.06 to 250 kW.

They are conforming to, depending of the versions, IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1 and UL 60947-4-1, CSA 22.2 n° 60947-4-1.

Deca, Giga protection technologies

Deca, Giga circuit breakers are carried with 3 variants:

- Magnetic detection: product references GV2LE, GV2L, GV3L, GV4L, GV4LE for protection against short-circuit.
 - Thermal-magnetic: product references GV2ME ⁽¹⁾, GV2P, GV3P, GV4P, GV4PE, GV5, GV6 for protection against short-circuits, overload, phase loss and phase unbalance.
 - Advanced: product references GV4PEM combines GV4P protections and motor jam, long start, ground-fault protections.
- With a magnetic circuit breaker, a thermal relay is frequently associated in order to have a short circuit protection and an overload protection.

TeSys Deca - Frame 2 circuit breakers: 45 mm width, for motors up to 15 kW

The most commonly used circuit breaker. with a choice of about 100 auxiliaries and accessories. TeSys Deca Frame 2 circuit breakers and TeSys K, Deca contactors can be easily assembled as a single block with one accessory.

The high Frame 2 electrical endurance (up to 100 000 operating cycles) makes it very suitable for direct manual motor control, especially ref. GV2ME ⁽¹⁾ (thermal-magnetic c.b., lth up to 32 A).

Enclosure mounting is well adapted to ref. GV2L and GV2P, with their possible extended rotary handle and visible trip indication.

TeSys Deca - Frame 3 circuit breakers: 55 mm width, for motors up to 45 kW

High performance breakers, high breaking capacity (Ics 100 kA/400 V for ratings up to 32 A, 50 kA up to 80 A).

Wide choice of auxiliaries / accessories, possible extended rotary handle. Visible tri indication.

Patented Everlink connectors provide everlasting connection (no re-tightening required).

Direct monoblock starter assembly with TeSys Deca contactors. No accessory required.

TeSys Deca - Frame 4 circuit breakers: 81 mm width, for motors up to 55 kW

State-of-the-art technology, TeSys Deca Frame 4 is compact and robust. Electronic core of ref. GV4P gives a great detection accuracy, with alarming and advanced protections for ref. GV4PEM, GV4PB.

Magnetic, electronic thermal-magnetic, or electronic thermal-magnetic with advanced protections versions.

Ratings up to 115 A with breaking capacity Ics of 25 kA/400 V (B series), 50 kA/400 V (N series) or 100 kA/400 V (S series).

TeSys Giga - Frame 5: 105 mm width, for motors up to 110 kW / Frame 6: 140 mm width, for motors up to 250 kW

TeSys Giga - Frame 5 and 6 with advanced thermal-magnetic trip unit provide more effective protection to high power motors in the most demanding appliances.

They provide protection to motors against overloads with selection of a trip class (5, 10 or 20), short-circuits, phase unbalance or phase loss.

Adjustable over-load and short circuit current settings provide flexibility.

Wide choice of auxiliaries/accessories are available for indication, control and operation.



⁽¹⁾ Ref. GV2ME●●AP are specific GV2ME references for CEE zone.

TeSys Power

Deca - Frame 2 Motor circuit breakers - Magnetic

Product references



Characteristics:
p. B6/72 to B6/74

Curves:
p. B6/77 to B6/82

Dimensions:
p. B6/90 to B6/92

Schemes:
p. B6/99

PS111879_001



GV2LE

Magnetic motor circuit breakers from 0.06 to 15 kW / 400 V

Deca - Frame 2 (ref. GV2LE): control by toggle, connection by screw clamp terminals

Standard power ratings of 3-phase motors
50/60 Hz in category AC-3/AC-3e

400/415 V			500 V			690 V			Rated current I _n	Magnetic tripping current I _i ± 20 %	Use in association with thermal overload relay	Reference
P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾				
kW	kA		kW	kA		kW	kA		A	A		
0.06	★	★	—	—	—	—	—	—	0.4	5.8	LR2K0302	GV2LE03
0.09	★	★	—	—	—	—	—	—	0.4	5.8	LR2K0304	GV2LE03
0.12	★	★	—	—	—	0.37	★	★	0.63	9.3	LR2K0304	GV2LE04
0.18	★	★	—	—	—	—	—	—	0.63	9.3	LR2K0305	GV2LE04
—	—	—	—	—	—	0.55	★	★	1	15.1	LR2K0305	GV2LE05
0.25	★	★	—	—	—	—	—	—	1	15.1	LR2K0306	GV2LE05
—	—	—	—	—	—	0.75	★	★	1	15.1	LR2K0306	GV2LE05
0.37	★	★	0.37	★	★	—	—	—	1	15.1	LR2K0306	GV2LE05
0.55	★	★	0.55	★	★	1.1	★	★	1.6	26.2	LR2K0307	GV2LE06
—	—	—	0.75	★	★	—	—	—	1.6	26.2	LR2K0307	GV2LE06
0.75	★	★	1.1	★	★	1.5	3	75	2.5	39	LR2K0308	GV2LE07
1.1	★	★	—	—	—	—	—	—	2.5	39	LR2K0308	GV2LE07
1.5	★	★	1.5	★	★	3	3	75	4	74	LR2K0310	GV2LE08
—	—	—	2.2	★	★	—	—	—	4	74	LR2K0312	GV2LE08
2.2	★	★	3	50	100	4	3	75	6.3	91	LR2K0312	GV2LE10
3	★	★	4	10	100	5.5	3	75	10	149	LR2K0314	GV2LE14
4	★	★	5.5	10	100	—	—	—	10	149	LR2K0316	GV2LE14
—	—	—	—	—	—	7.5	3	75	10	149	LRD14	GV2LE14
—	—	—	—	—	—	9	3	75	14	253.4	LRD16	GV2LE16
5.5	15	50	7.5	6	75	11	3	75	14	253.4	LR2K0321	GV2LE16
7.5	15	50	9	6	75	15	3	75	18	341	LRD21	GV2LE20
9	15	40	11	4	75	18.5	3	75	25	388.3	LRD22	GV2LE22
11	15	40	15	4	75	—	—	—	25	388.3	LRD22	GV2LE22
15	10	50	18.5	4	75	22	3	75	32	537.6	LRD32	GV2LE32

⁽¹⁾ As % of I_{cu}.

★ > 100 kA.

Motor
circuit
breakers