

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



GV2L16

Motor circuit breakers from 0.09 to 15 kW / 400 V

Deca - Frame 2 (ref. GV2L): Control by rotary handle, 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 _{li} ± 20 %	Use in association with thermal overload relay (class 10 A)	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		
0.09	★	★	—	—	—	—	—	—	0.4	5.8	LRD03	GV2L03
0.12	★	★	—	—	—	0.37	★	★	0.63	9.3	LRD04	GV2L04
0.18	★	★	—	—	—	—	—	—	0.63	9.3	LRD04	GV2L04
—	—	—	—	—	—	0.55	★	★	1	15.1	LRD05	GV2L05
0.25	★	★	—	—	—	—	—	—	1	15.1	LRD05	GV2L05
—	—	—	—	—	—	0.75	★	★	1	15.1	LRD06	GV2L05
0.37	★	★	0.37	★	★	—	—	—	1	15.1	LRD05	GV2L05
0.55	★	★	0.55	★	★	1.1	★	★	1.6	26.2	LRD06	GV2L06
—	—	—	0.75	★	★	—	—	—	1.6	26.2	LRD06	GV2L06
0.75	★	★	1.1	★	★	1.5	4	100	2.5	39	LRD07	GV2L07
1.1	—	—	—	—	—	—	—	—	—	—	LRD08	GV2L08
1.5	★	★	1.5	★	★	3	4	100	4	74	LRD08	GV2L08
—	—	—	—	—	—	—	—	—	—	—	LRD08	GV2L08
2.2	★	★	3	★	★	4	4	100	6.3	91	LRD10	GV2L10
3	★	★	4	10	100	5.5	4	100	10	149	LRD12	GV2L14
4	—	—	—	—	—	—	—	—	—	—	LRD14	GV2L14
—	—	—	—	—	—	7.5	4	100	10	149	LRD14	GV2L14
—	—	—	—	—	—	9	4	100	14	253.4	LRD16	GV2L16
5.5	50	50	7.5	10	75	11	4	100	14	253.4	LRD16	GV2L16
7.5	50	50	9	10	75	15	4	100	18	341	LRD21	GV2L20
9	50	50	11	10	75	18.5	4	100	25	388.3	LRD22	GV2L22
11	50	50	15	10	75	—	—	—	25	388.3	LRD22	GV2L22
15	50	50	18.5	10	75	22	4	100	32	537.6	LRD32	GV2L32

(1) As % of I_{cu}. Associated current limiter or fuses, where required.

★ > 100 kA.

Motor
circuit
breakers