



GV4P



GV4PE

Ref.



Motor
circuit
breakers

Standard version

Protection

Settings are made using dials.

Overload or thermal protection (I_r)

Inverse-time thermal protection against overloads with adjustable pick-up I_r .

Wide range setting made in amperes.

The tripping curve for the thermal protection, which indicates the time delay t_r before tripping, is defined by the selected trip class.

Trip class (class)

The class is selected as a function of the normal motor starting time.

■ Class 10: starting time less than 10 s.

■ Class 20: starting time less than 20 s.

For a given class, it is necessary to check that all motor-feeder components are sized to carry the $7.2 I_r$ starting current without excessive temperature rise during the time corresponding to the class.

Short time delay protection (I_{sd})

Short time delay protection (around 100 ms) to let through motor starting currents, but to protect cables and motor starter devices and allow not to oversize them (particularly usefull for wide range settings circuit breakers).

Fixed pick-up $I_{sd} = 13 I_r$.

Short-circuit protection (I_i)

Instantaneous protection with non-adjustable pick-up $I_i = 17 I_n$.

Phase unbalance or phase loss (I_{unbal} , t_{unbal})

This function opens the circuit breaker if a phase unbalance occurs:

■ that is greater than the 30 % of I_{rms} (fixed pick-up): **I_{unbal}**

■ following the non-adjustable time delay (**t_{unbal}**) equal to:

□ 0.7 s during starting

□ 4 s during normal operation.

Phase loss is an extreme case of phase unbalance and leads to tripping under the same conditions.

Ground-fault protection (I_g , t_g)

Residual type ground-fault protection:

■ fixed pick-up $I_g = I_n$

■ fixed time delay $t_g = 0.1$ s.

Indications

Front indications

■ Green "Ready" LED: flashes slowly when the circuit breaker is ready to trip in the event of an abnormal deviation in engine operating conditions.

■ Red alarm LED: goes ON when the thermal image of the motor is greater than 95 % of the permissible temperature rise.

Standards and certifications

IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1, UL 60497-4-1, CSA 22.2 n° 60497-4-1, CCC, EAC, CSA (cCSAus).

Thermal magnetic motor circuit breakers from 0.25 to 55 kW											
Standard power ratings of 3-phase motors - 50 / 60 Hz in category AC-3									Thermal setting range (Ir)	Reference with EverLink terminals	
400/415 V			500 V			690 V					
P kW	Icu kA	Ics ⁽¹⁾ %	P kW	Icu kA	Ics ⁽¹⁾ %	P kW	Icu kA	Ics ⁽¹⁾ %		A	with toggle
0.25... 0.75	25	100	0.37... 1.1	10	100	0.55... 1.5	-	-	0.8... 2	-	-
	50	100		25	100		8	25		GV4PE02N	GV4P02N
	100	100		30	100		10	25		GV4PE02S	-
0.55... 1.5	25	100	0.75... 1.5	10	100	1.1... 2.2	-	-	1.4... 3.5	-	-
	50	100		25	100		8	25		GV4PE03N	GV4P03N
	100	100		30	100		10	25		GV4PE03S	-
1.5... 3	25	100	2.2... 4	10	100	3... 7.5	-	-	2.9... 7	-	-
	50	100		25	100		8	25		GV4PE07N	GV4P07N
	100	100		30	100		10	25		GV4PE07S	-
3... 5.5	25	100	3... 7.5	10	100	5.5... 11	-	-	5... 12.5	-	-
	50	100		25	100		8	25		GV4PE12N	GV4P12N
	100	100		30	100		10	25		GV4PE12S	-
5.5... 11	25	100	7.5... 15	10	100	7.5... 18.5	-	-	10... 25	GV4PE25B	GV4P25B
	50	100		25	100		8	25		GV4PE25N	GV4P25N
	100	100		30	100		10	25		GV4PE25S	-
11... 22	25	100	15... 30	10	100	18.5... 45	-	-	20... 50	GV4PE50B	GV4P50B
	50	100		25	100		8	25		GV4PE50N	GV4P50N
	100	100		30	100		10	25		GV4PE50S	-
22... 37	25	100	30... 55	10	100	37... 55	-	-	40... 80	GV4PE80B	GV4P80B
	50	100		25	100		8	25		GV4PE80N	GV4P80N
	100	100		30	100		10	25		GV4PE80S	GV4P80S
37... 55	25	100	45... 75	10	100	75... 90	-	-	65... 115	GV4PE115B	GV4P115B
	50	100		25	100		8	25		GV4PE115N	GV4P115N
	100	100		30	100		10	25		GV4PE115S	GV4P115S

Thermal magnetic motor circuit breakers from 3/4 to 75 HP / 480 V															
Single-Phase 120 V				3-Phase								Rating A	Reference with EverLink terminals		
Power	FLA	Power	FLA	Power	FLA	Power	FLA	Power	FLA	Power	FLA				
HP	A	Hp	A	Hp	A	Hp	A	Hp	A	Hp	A				
-	-	1/10	1.5	-	-	-	-	3/4	1.6	1	1.7	2	-	-	
1/10	3	1/4	2.9	1/2	2.4	3/4	3.2	2	3.4	2	2.7	3.5	GV4PE02N	GV4P02N	
													GV4PE02S	-	
													-	-	
1/4	5.8	3/4	6.9	1-1/2	6.6	2	6.8	3	4.8	5	6.1	7	GV4PE03N	GV4P03N	
													GV4PE03S	-	
													-	-	
1/2	9.8	1-1/2	10	3	10.6	3	9.6	7-1/2	11	10	11	12.5	GV4PE07N	GV4P07N	
													GV4PE07S	-	
													-	-	
1-1/2	20	3	17	5	16.7	7-1/2	22	15	21	20	22	25	GV4PE12N	GV4P12N	
													GV4PE12S	-	
													GV4PE25B	GV4P25B	
3	34	7-1/2	40	10	30.8	15	42	30	40	40	41	50	GV4PE25N	GV4P25N	
													GV4PE25S	-	
													GV4PE50B	GV4P50B	
7-1/2	80	15	68	25	74.8	30	80	60	77	75	77	80	GV4PE50N	GV4P50N	
													GV4PE50S	-	
													GV4PE80B	GV4P80B	
10	100	20	88	30	88	40	104	75	96	100	99	115	GV4PE80N	GV4P80N	
													GV4PE80S	GV4P80S	
													GV4PE115B	GV4P115B	
													GV4PE115N	GV4P115N	
														GV4PE115S	GV4P115S

Connection by lugs

To order circuit breakers with connection by lugs, add the digit **6** to the end of reference selected above. Example: **GV4PE02N** becomes **GV4PE02N6**.

⁽¹⁾ As % of Icu.

Characteristics:
pages B6/120 to B6/123

Curves:
pages B6/129 to B6/131

Dimensions, schemes:
pages B6/134, B6/135, B6/137