

Features

Printed circuit mount

50 A Power relay for photovoltaic inverters

- 2 and 3 pole versions (NO, double break contacts)
- Contact gap ≥ 3 mm, according to VDE 0126-1-1, EN 62109-1, EN 62109-2
- DC coils, with only 170 mW holding power
- Reinforced insulation between coil and contacts
- 1.5 mm gap between PCB and relay base
- Suitable for use at ambient temperatures up to 85 °C (with energy-saving coil energization) or 70 °C (with standard coil energization)

67.22-4300

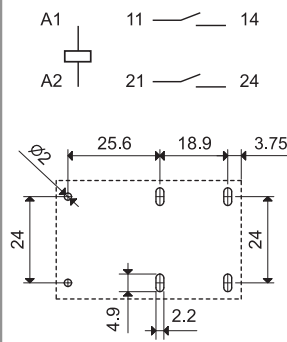


- 2 NO
- Contact gap ≥ 3 mm
- PCB mount

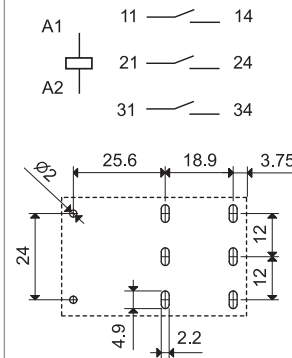
67.23-4300



- 3 NO
- Contact gap ≥ 3 mm
- PCB mount



Copper side view



Copper side view

For outline drawing see page 5

Contact specification			
Contact configuration		2 NO (DPST-NO)	3 NO (3PST-NO)
Contact gap		≥ 3 mm	≥ 3 mm
Rated current/Maximum peak current (for 5 ms) A		50/150	50/150
Rated voltage/Maximum switching voltage V AC		400/690	400/690
Rated load AC1/AC-7a	VA	20,000	20,000
Minimum switching load	mW (V/mA)	1,000 (10/10)	1,000 (10/10)
Standard contact material		AgSnO ₂	AgSnO ₂
Coil specification			
Nominal voltage (U _N)	V DC	5 - 6 - 8 - 12 - 24 - 48 - 60 - 110	5 - 6 - 8 - 12 - 24 - 48 - 60 - 110
Rated power	W	1.7	1.7
Operating range	(-40...70°C)	(0.90 ... 1.1) U _N	(0.90 ... 1.1) U _N
	for 1" (-40...85°C)	(0.95...2.5) U _N	(0.95...2.5) U _N
Minimum pull-in power	W	1.5	1.5
Holding voltage range	(-40...85°C)	(0.32...0.65) U _N	(0.32...0.65) U _N
Minimum holding power	W	0.17	0.17
Must drop-out voltage		0.05 U _N	0.05 U _N
Technical data			
Mechanical life	cycles	1 · 10 ⁶	1 · 10 ⁶
Electrical life at rated load AC-7a	cycles	30 · 10 ³	30 · 10 ³
Operate/release time	ms	35/4	35/4
Ambient temperature range	°C	-40...+85	-40...+85
Environmental protection		RTII	RTII
Overall dimensions	mm	33 x 51.5 x 57.5	33 x 51.5 x 57.5
Approvals (according to type)			

Features

Printed circuit mount 50 A Power relay for photovoltaic inverters

- 2 and 3 pole versions, NO double break contacts
- Contact gap ≥ 5.2 mm (according to VDE 0126-1-1, EN 62109-1, EN 62109-2)
- Suitable for inverters with DC input up to 1,500 V and AC output up to 690 V, installations up to 4,000 m on sea level
- DC coils, with only 170 mW holding power
- Reinforced insulation between coil and contacts
- 1.5 mm gap between PCB and relay base
- Suitable for use at ambient temperatures up to 85 °C (with energy-saving coil energization) or 60 °C (with standard coil energization)

67.22-4500

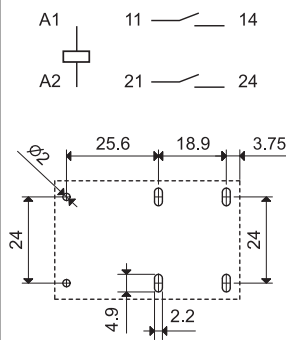


- 2 NO
- Contact gap ≥ 5.2 mm
- PCB mount

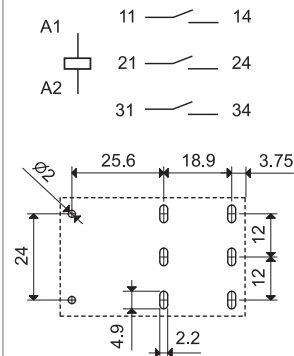
67.23-4500



- 3 NO
- Contact gap ≥ 5.2 mm
- PCB mount



Copper side view



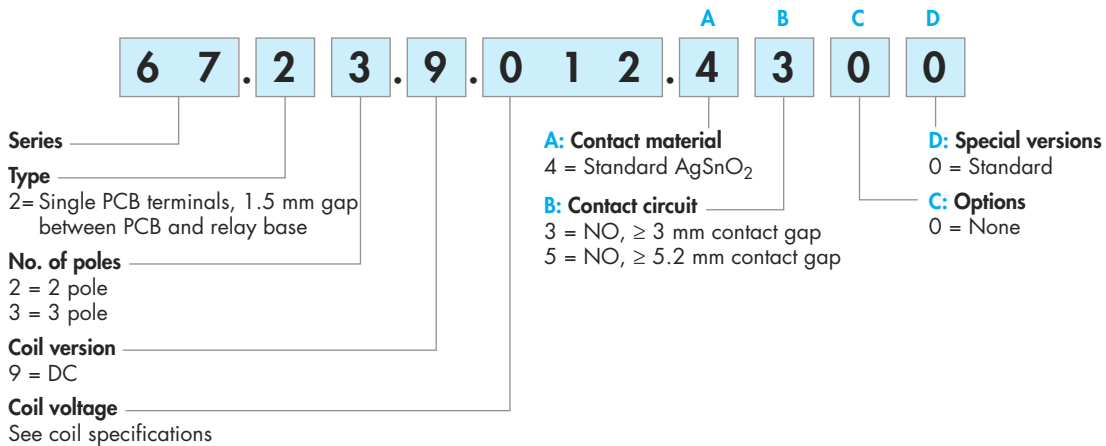
Copper side view

For outline drawing see page 5

Contact specification			
Contact configuration		2 NO (DPST-NO)	3 NO (3PST-NO)
Contact gap		≥ 5.2 mm	≥ 5.2 mm
Rated current/Maximum peak current (for 5 ms) A		50/150	50/150
Rated voltage/Maximum switching voltage V AC		400/690	400/690
Rated load AC1/AC-7a VA		20,000	20,000
Minimum switching load mW (V/mA)		1,000 (10/10)	1,000 (10/10)
Standard contact material		AgSnO ₂	AgSnO ₂
Coil specification			
Nominal voltage (U _N) V DC		5 - 6 - 8 - 12 - 24 - 48 - 60 - 110	5 - 6 - 8 - 12 - 24 - 48 - 60 - 110
Rated power W		2.7	2.7
Operating range	(-40...60°C)	(0.90 ... 1.1) U _N	(0.90 ... 1.1) U _N
	for 1" (-40...85°C)	(0.95...2.5) U _N	(0.95...2.5) U _N
Minimum pull-in power W		2.4	2.4
Holding voltage range (-40...85°C)		(0.25...0.5) U _N	(0.25...0.5) U _N
Minimum holding power W		0.17	0.17
Must drop-out voltage		0.05 U _N	0.05 U _N
Technical data			
Mechanical life cycles		1 · 10 ⁶	1 · 10 ⁶
Electrical life at rated load AC-7a cycles		30 · 10 ³	30 · 10 ³
Operate/release time ms		30/4	30/4
Ambient temperature range °C		-40...+85	-40...+85
Environmental protection		RTII	RTII
Overall dimensions mm		33 x 51.5 x 57.5	33 x 51.5 x 57.5
Approvals (according to type)			

Ordering information

Example: 67 series solar relay, single PCB terminals, 2 pole NO, ≥ 3 mm contact gap .



Technical data

Insulation according to EN 61810-1				
Nominal voltage of supply system	V AC	400/690 3-phase	400 1-phase	230/400
Rated insulation voltage	V AC	630	400	400
Overvoltage category		III		III
Rated impulse voltage	kV (1.2/50 μs)	6		4
Pollution degree		3		3
Type of Insulation	between coil and contacts	Reinforced		Reinforced
	between adjacent contacts	Basic		Basic
	between open contacts	Micro-disconnection (with overvoltage category II: Full-disconnection)		Full-disconnection
Dielectric strength				
Between coil and contacts	V AC	4,000		
Between adjacent contacts	V AC	2,500		
Between open contacts	V AC	2,500 (67.xx-4300) / 3,000 (67.xx-4500)		
Other data				
Power lost to the environment	without contact current	W	1.7 (67.xx-4300) / 2.7 (67.xx-4500)	
	with rated current	W	8.5 (67.xx-4300) / 9.5 (67.xx-4500)	
Recommended distance between relays mounted on PCB	mm	≥ 20		
Recommended PCB tracks dimensions		2 x 130 μm thick, 15 mm wide		

Coil specifications

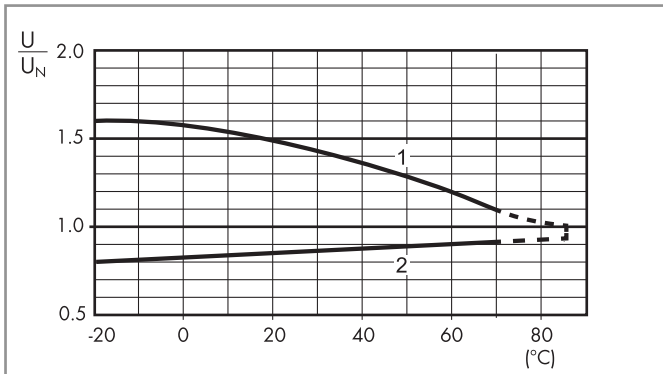
DC coil data, 67.xx-4300

Nominal voltage U_N V	Coil code	Operating range (@ 70 °C max)		Holding voltage U_h V	Resistance R Ω	Rated coil consumption I at U_N I_N mA
		U_{min} V	U_{max} V			
5	9.005	4.5	5.5	1.6	14.7	340
6	9.006	5.4	6.6	1.9	21.5	279
8	9.008	7.2	8.8	2.6	37.6	213
12	9.012	10.8	13.2	3.8	85	141
24	9.024	21.6	26.4	7.7	340	71
48	9.048	43.2	52.8	15.4	1355	35
60	9.060	54	66	19.2	2120	28
110	9.110	99	121	35.2	7120	15

DC coil data, 67.xx-4500

Nominal voltage U_N V	Coil code	Operating range (@ 60 °C max)		Holding voltage U_h V	Resistance R Ω	Rated coil consumption I at U_N I_N mA
		U_{min} V	U_{max} V			
5	9.005	4.5	5.5	1.25	9.3	538
6	9.006	5.4	6.6	1.5	13.5	444
8	9.008	7.2	8.8	2	23.7	338
12	9.012	10.8	13.2	3	53.5	224
24	9.024	21.6	26.4	6	213	113
48	9.048	43.2	52.8	12	855	56
60	9.060	54	66	15	1335	45
110	9.110	99	121	27.5	4500	24

R 67 - Operating range v ambient temperature, 67.xx-4300

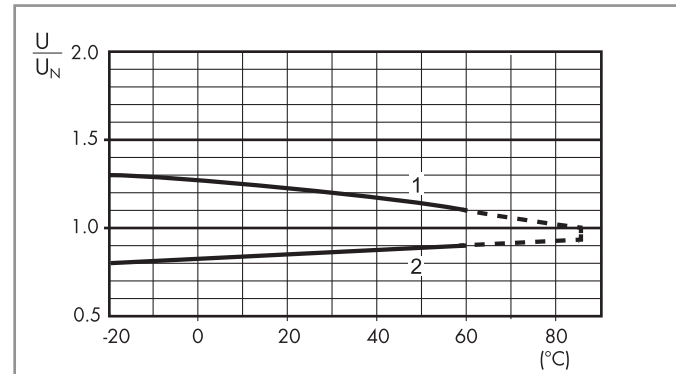


1 - Max. permitted coil voltage.

2 - Min. pick-up voltage with coil at ambient temperature.

NOTE The dashed area (above 70 °C) only for coil energization < 1"

R 67 - Operating range v ambient temperature, 67.xx-4500



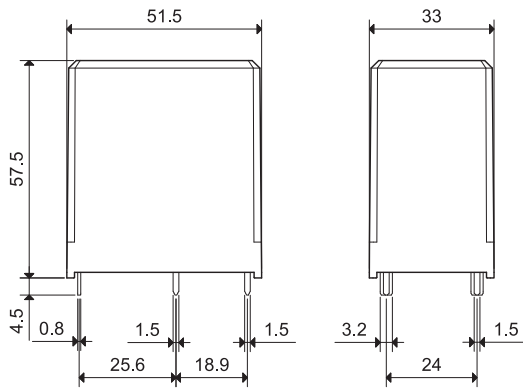
1 - Max. permitted coil voltage.

2 - Min. pick-up voltage with coil at ambient temperature.

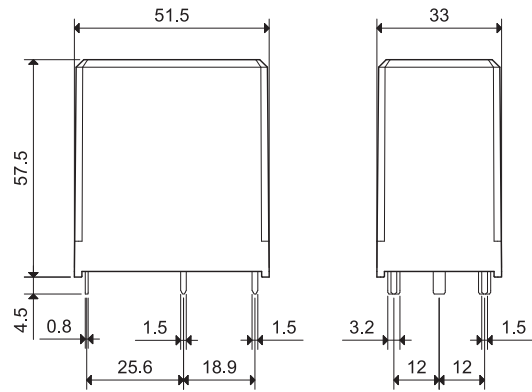
NOTE The dashed area (above 60 °C) only for coil energization < 1"

Outline drawings

Type 67.22



Type 67.23



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