Features

Printed circuit mount
50 A Power relay for photovoltaic inverters

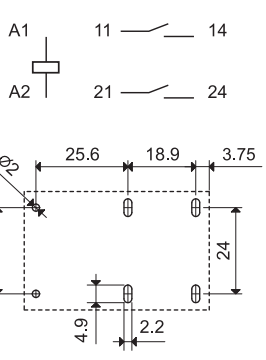
- 2 and 3 pole versions (NO, double break contacts)
- Contact gap ≥ 3 mm, according to VDE 0126-1-1, EN 62109-1, EN 62109-2
- DC coils, with only 170 mW holding power
- Reinforced insulation between coil and contacts
- 1.5 mm gap between PCB and relay base
- Suitable for use at ambient temperatures up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

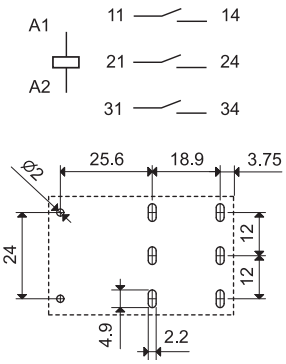
67.22-4300

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

67.23-4300

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





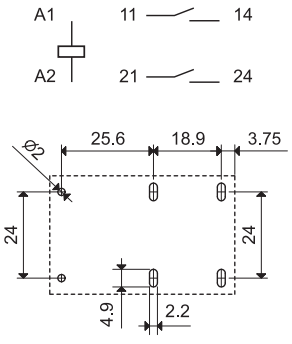
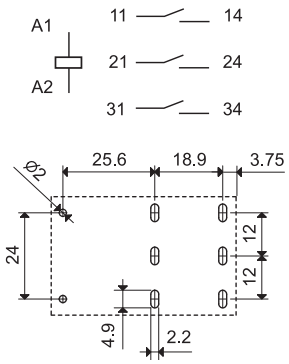
For outline drawing see page 5

		Copper side view	Copper side view
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	$1 \cdot 10^6$	$1 \cdot 10^6$
Electrical life at rated load AC-7a	cycles	$30 \cdot 10^3$	$30 \cdot 10^3$
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	67.23-4500
		
	• 2 NO • Contact gap ≥ 5.2 mm • PCB mount	• 3 NO • Contact gap ≥ 5.2 mm • PCB mount
		
For outline drawing see page 5	Copper side view	Copper side view
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	$1 \cdot 10^6$	$1 \cdot 10^6$
Electrical life at rated load AC-7a cycles	$30 \cdot 10^3$	$30 \cdot 10^3$
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)		

VII-2012, www.findernet.com

Ordering information

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

								A	B	C	D
6	7	. 2	3	. 9	. 0	1	2	. 4	3	0	0

Series

Type
2= Single PCB terminals, 1.5 mm gap between PCB and relay base

No. of poles
2 = 2 pole
3 = 3 pole

Coil version
9 = DC

Coil voltage
See coil specifications

A: Contact material
4 = Standard $AgSnO_2$

B: Contact circuit
3 = NO, ≥ 3 mm contact gap
5 = NO, ≥ 5.2 mm contact gap

D: Special versions
0 = Standard

C: Options
0 = None

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

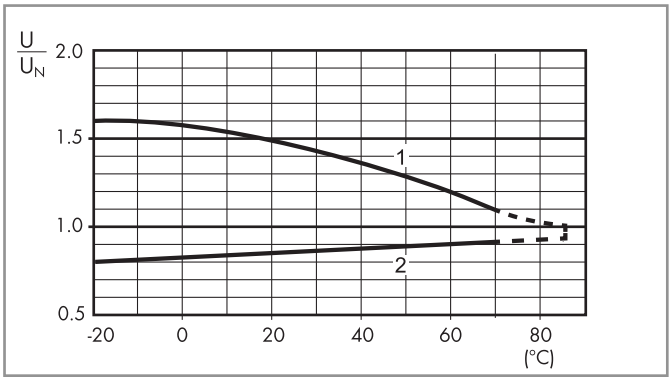
DC coil data, 67.xx-4300

Nominal voltage U_N	Coil code	Operating range (@ 70 °C max) U_{min}	U_{max}	Holding voltage U_h	Resistance R	Rated coil consumption I at U_N I_N
V		V	V	V	Ω	mA
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

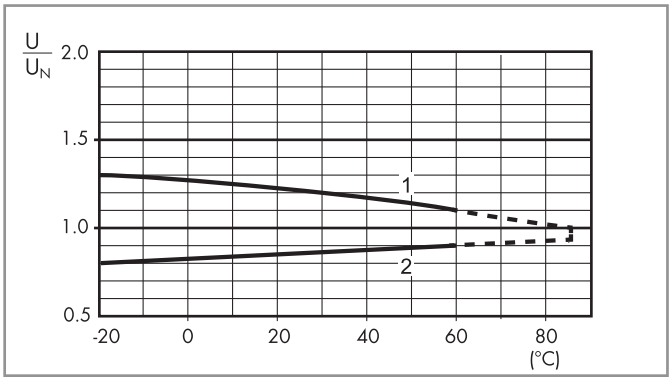
Nominal voltage U_N	Coil code	Operating range (@ 60 °C max) U_{min}	U_{max}	Holding voltage U_h	Resistance R	Rated coil consumption I at U_N I_N
V		V	V	V	Ω	mA
5	**9**.005	4.5	5.5	1.25	9.3	538
6	**9**.006	5.4	6.6	1.5	13.5	444
8	**9**.008	7.2	8.8	2	23.7	338
12	**9**.012	10.8	13.2	3	53.5	224
24	**9**.024	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"

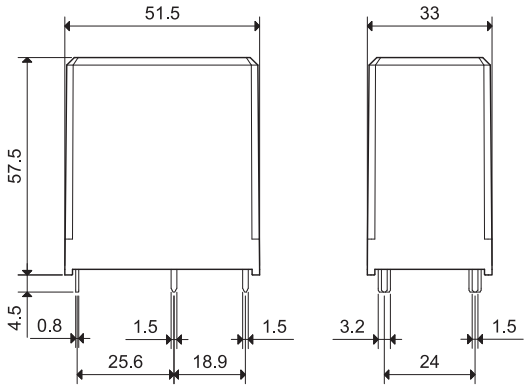
R 67 - Operating range v ambient temperature, 67.xx-4500



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