

Power PCB Relay PCFN Solar

- 1 pole 26A/31A/33A, 1 form A (NO) contact
- Contact gap >1.5mm/1.8mm
- 200mW hold power ¹⁾
- Ambient temperature up to 85°C

Typical applications

Photovoltaic Inverter, Power Supply, On board charging



Approval

VDE Cert. No. 40012548, UL E58304

Technical data of approved types on request.

Contact Data	H type	F type
Contact form	1 form A (NO)	
Contact gap	>1.5mm/1.8mm	
Rated voltage	277VAC	277VAC
Rated current	26A	31A/33A
Breaking capacity max.	7200VA	9141VA
Contact material	AgSnO ₂	
Initial contact resistance	100mΩ max. at 1A, 6VDC	
Frequency of operation with/without load	with load = 360/h without load = 1800/h	
Operate/release time max.	20/10ms	
Bounce time max., form A	3ms	

Contact ratings

Type	Load	Cycles
IEC 61810		
H type (PCFN-1xxH)		
NO	26A, 277VAC, resistive, 75°C	30x10 ³
NO	22A, 250VAC, resistive, 85°C	30x10 ³
NO	14A, 250VAC, resistive, 85°C	100x10 ³
F type (PCFN-1xxFxxx,00000)		
NO	31A, 277VAC, resistive, 85°C	10x10 ³
NO	Make 0.1A, carry 31A, break 0.1A, 450VDC	10x10 ³
NO	Make 0.5A, carry 31A, break 0.5A, 100VDC	10x10 ³
UL 508		
H type (PCFN-1xxH)		
NO	26A, 277VAC, resistive, 75°C	30x10 ³
NO	22A, 277VAC, resistive, 85°C	30x10 ³
F type (PCFN-1xxF)		
NO	31A, 277VAC, resistive, 85°C	6x10 ³
NO	31A, 277VAC, resistive	10x10 ³

Internal Test

F type (PCFN-1xxFxxx,02300)		
NO	33A, 277VAC, resistive, 85°C	10x10 ³
Mechanical endurance, DC coil		1x10 ⁶

Coil Data

Rated coil voltage	12-24VDC
Coil insulation system according UL	Class F

Coil versions, DC coil (H type)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
12	12 ¹⁾	7.8	1.2	96	1.5
24	24 ¹⁾	15.6	2.4	384	1.5

Coil versions, DC coil (F type)

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
12	12 ¹⁾	7.8	1.2	112	1.3 / Min. 4.7V hold

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

Insulation Data

Initial dielectric strength		
between open contacts		2500V _{rms}
between contact and coil		4000V _{rms}
Clearance/creepage		
between open contacts		≥ 1.5/3.0mm
between contact and coil		≥ 6.1/6.1mm
Initial Insulation Resistance @ 500Vdc		>1X10 ⁹ Ω
Material group of insulation parts		III
Tracking index of relay base		PTI 175

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

Ambient temperature	-40~85°C ¹⁾
Category of environmental protection	IEC 61810
Vibration resistance (functional)	10G
Vibration resistance (destructive)	10G
Shock resistance (destructive)	100G
Terminal type	PCB-THT
Mounting distance	≥10mm
Weight	28g
Resistance to soldering heat	THT
IEC 60068-2-20	260°C/10s
Packaging unit	tube/20 pcs., box/500 pcs.

1) After the energization time of 100ms with the rated coil voltage, the coil requires a reduction to 40%...50% of the rated coil voltage.

2) The relay connections and wiring have to be designed with an adequate cross sections to ensure the current flow and heat dissipation.

Power PCB Relay PCFN Solar (Continued)

Dimensions

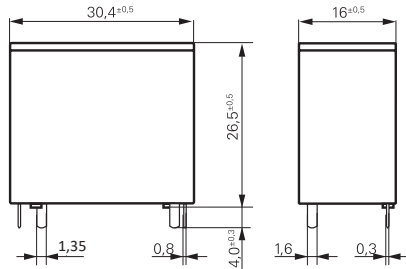
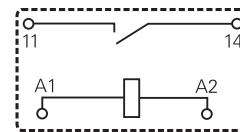
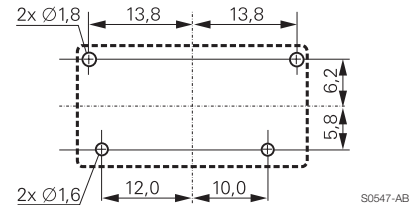


DIAGRAM DIMENSION	TOLERANCE
0.99mm MAX.	±0.1mm
1-2.99mm	±0.2mm
3mm MIN.	±0.3mm

Note. For the Tin-plating of the pins:
±0.1mm for width, thickness and diameter.
±0.5mm for length.

PCB layout / terminal assignment

Bottom view on solder pins



S0547-AA

NOTE: it is recommended to connect the grid
(phase or neutral line) to pin 11 of the PCFN Solar.

Product code structure	Typical product code	PCFN	-1	12	H	2	M	G	,00000
Type									
PCFN Without fasten terminal									
Contact arrangement									
-1 Single Pole									
Coil Voltage									
12 12VDC									
24 24VDC									
Coil Sensitivity									
H Low Sensitivity									
F Speical Sensitivity									
Contact Material									
2 AgSnO ₂									
Contact Configuration									
M 1 Form A (SPST-NO)									
Contact Gap									
none standard									
G 1.5mm									
S 1.8mm									
Suffix									
,00000 Standard version									
,x2xxx Contact gap 1.8mm version									
,xxxxx Customized version, e.g."02300" stands for 33A marked version									

Product code	Version	Contact arrangement	Contact material	Coil	Part number
PCFN-112H2MS,02000	PCB, flux proof	1 form A (NO) contact	AgSnO ₂	12VDC	2071169-1
PCFN-124H2MS,02000	PCB, flux proof	1 form A (NO) contact	AgSnO ₂	24VDC	2071169-2
PCFN-112F2MG,00000	PCB, flux proof	1 form A (NO) contact	AgSnO ₂	12VDC	2071504-1
PCFN-112F2MS,02300	PCB, flux proof	1 form A (NO) contact	AgSnO ₂	12VDC	2071504-3