

**Power PCB Relay PCFN Solar**

- 1 pole 26A/31A/33A, 1 form A (NO) contact
- Contact gap >1.5mm/1.8mm
- 200mW hold power <sup>1)</sup>
- 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 <sub>2</sub>	
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
<b>IEC 61810</b>		
H type (PCFN-1xxH)		
NO	26A, 277VAC, resistive, 75°C	30x10 <sup>3</sup>
NO	22A, 250VAC, resistive, 85°C	30x10 <sup>3</sup>
NO	14A, 250VAC, resistive, 85°C	100x10 <sup>3</sup>
F type (PCFN-1xxFxxx,00000)		
NO	31A, 277VAC, resistive, 85°C	10x10 <sup>3</sup>
NO	Make 0.1A, carry 31A, break 0.1A, 450VDC	10x10 <sup>3</sup>
NO	Make 0.5A, carry 31A, break 0.5A, 100VDC	10x10 <sup>3</sup>
<b>UL 508</b>		
H type (PCFN-1xxH)		
NO	26A, 277VAC, resistive, 75°C	30x10 <sup>3</sup>
NO	22A, 277VAC, resistive, 85°C	30x10 <sup>3</sup>
F type (PCFN-1xxF)		
NO	31A, 277VAC, resistive, 85°C	6x10 <sup>3</sup>
NO	31A, 277VAC, resistive	10x10 <sup>3</sup>

**Internal Test**

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

**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 <sup>1)</sup>	7.8	1.2	96	1.5
24	24 <sup>1)</sup>	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 <sup>1)</sup>	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 <sub>rms</sub>
between contact and coil		4000V <sub>rms</sub>
Clearance/creepage		
between open contacts		≥ 1.5/3.0mm
between contact and coil		≥ 6.1/6.1mm
Initial Insulation Resistance @ 500Vdc		>1X10 <sup>9</sup> 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 <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>	
Ambient temperature	-40~85°C <sup>1)</sup>
Category of environmental protection	IEC 61810
	RTII - flux proof
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**

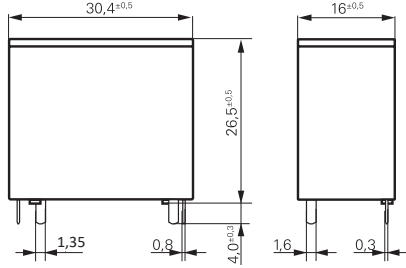
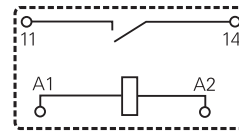
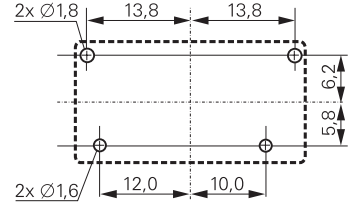


DIAGRAM DIMENSION	TOLERANCE
0.99mm MAX.	±0.1mm
1-2.99mm	±0.2mm
3mm MIN.	±0.3mm

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-AB

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
<b>Type</b>									
PCFN Without fasten terminal									
<b>Contact arrangement</b>									
-1 Single Pole									
<b>Coil Voltage</b>									
12 12VDC									
24 24VDC									
<b>Coil Sensitivity</b>									
H Low Sensitivity									
F Speical Sensitivity									
<b>Contact Material</b>									
2 AgSnO <sub>2</sub>									
<b>Contact Configuration</b>									
M 1 Form A (SPST-NO)									
<b>Contact Gap</b>									
none standard									
G 1.5mm									
S 1.8mm									
<b>Suffix</b>									
,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 <sub>2</sub>	12VDC	2071169-1
PCFN-124H2MS,02000	PCB, flux proof	1 form A (NO) contact	AgSnO <sub>2</sub>	24VDC	2071169-2
PCFN-112F2MG,00000	PCB, flux proof	1 form A (NO) contact	AgSnO <sub>2</sub>	12VDC	2071504-1
PCFN-112F2MS,02300	PCB, flux proof	1 form A (NO) contact	AgSnO <sub>2</sub>	12VDC	2071504-3