



Thinkwe Technology

Catalogue

PV Power Optimizer

Rapid Shutdown

Firefighter Safety Switch

Surge Protective Device

About Thinkwe

Thinkwe Technology is a professional electrical manufacturer dedicated to the safety of PV applications for over 12 years. The main products include PV Power Optimizer、Rapid Shutdown、Firefighter Safety Switch、Surge Protective Device. As of today, we have already shipped more than 120000 units worldwide.

Thinkwe Technology have 2 R&D bases in Wuxi and Xiamen, with a production base of 4000 m² in Wuxi. With our 40+ professional R&D team, our company is able to provide the market with state-of-the-art products.

Thinkwe Technology is devoted to making PV systems safer for everyone, which we believe is of vital importance to a fast-growing renewable energy market all over the World.



R&D centers
2



Engineers
40



Employees
200



Core patents
15



Years of experience
12



Supply of units
120,000



PV Power Optimizer



Safety

- Effectively reduces the hot-spot of PV module
- Mitigates the mismatch loss of PV module in its service life

Convenience

- Double screw & clip-type design fasten and reliable
- Easy disassembly and maintenance

High Efficiency

- 15A600W&21A800w compatible with various PV module
- Designed to work in the complex and changeable installation sites
- Maximum efficiency(99.5%)

Technical Data

Model	TW-OPT600-1	TW-OPT700-1	TW-OPT800-1
Input parameters			
Maximum Rated Input DC Power	600W	700W	800W
Maximum Input Current	15A DC	20A DC	21A DC
Maximum Input Voltage	55V	55V	60V
MPPT Operating Range	8~55V	8~55V	14~60V
Output parameters			
Maximum Output Current	15A DC	20A DC	21A DC
Overcurrent Protection	18A DC	23A DC	23A DC
Maximum Output Voltage	42V DC	42V DC	60V DC
General data			
Maximum Efficiency	99.5%		
DC Short-Circuit Protection	Yes		
DC Input Connector	MC4		
Weight(including cables)	510 g		
OD Of Wire	5.7/6.1/6.4 mm		
Dimensions(Wx L x H)	105 x 100 x 21 mm		
Input Wire Length	0.5 m		
Output Wire Length	1 m		
Operating Temperature Range	-40°C ~ 85°C		
Standard(s) For Safety	UL1741, IEC62109-1		
EMC	IEC61000-6-2, IEC61000-6-3		
Protection Rating	IP68		
Fire Rating Degree	5VA		

Rapid Shutdown



Safety

- Meets NEC 2017&2020 requirements
- Meets SunSpec requirements
- When the signal is lost, rapid shutdown is to execute

High Efficiency

- 15A&20A, compatible with various PV module
- Support for factory pre-installed PV modules

Convenience

- Clip-type design, fasten and reliable
- Easy assembly and maintenance

Technical Data

Model	TW-RSD15-1	TW-RSD20-1
Input parameters		
Number of panel	1	
Input Operating Voltage Range	8~80V DC	
Maximum Input Current	15A DC	20A DC
Output parameters		
Output Operating Voltage Range	8~80V DC	
System Voltage	1500V DC	
General data		
Over Temperature Protection	Yes	
DC Input Connector	MC4	
Weight(including cables)	170g	
OD Of Wire	6.4 mm	
Dimensions(Wx L x H)	135 x 35 x 19 mm	
Input Wire Length	0.5 m & customize	
Output Wire Length	1 m & customize	
OperatingTemperature Range	-40℃ ~ 85℃	
Standard(s) For Safety	UL1741,IEC62109-1,CSA22.2	
EMC	IEC/EN61000-6-1/-2/-3/-4	
Protection Rating	IP68	
Fire Rating Degree	5VA	

Technical Data

Model	TW-RSD15-2	TW-RSD20-2
Input parameters		
Number of panel	2	
Input Operating Voltage Range	8~65V DC	
Maximum Input Current	15x2A DC	20x2A DC
Output parameters		
Output Operating Voltage Range	16~130V DC	
System Voltage	1500V DC	
General data		
Over Temperature Protection	Yes	
DC Input Connector	MC4	
Weight(includingcables)	735 g	
OD Of Wire	6.4 mm	
Dimensions(Wx L x H)	139 x 50 x 21 mm	
Input Wire Length	0.52 m & customize	
Output Wire Length	2.4 m & customize	
Operating Temperature Range	-40℃ ~ 85℃	
Standard(s) For Safety	UL1741,IEC62109-1,CSA22.2,2PFG2305	
EMC	IEC/EN61000-6-1/-2/-3/-4	
Protection Rating	IP68	
Fire Rating Degree	5VA	

Firefighter Safety Switch



Feature

- 1~10 strings available
- Up to 40A
- UP to 1500 V
- CE certification
- IP66 protection & anti UV
- Shutdown feedback signal
- Auto shutdown exceeding 70°C
- 10000 mechanical life cycles
- Isolator with CE, CB, TUV, SAA
- Valve to avoid condensation

Select Code

TW	RSD	150	—	40	—	N
↓	↓	↓		↓		↓
Thinkwe	Rapid Shutdown	Max voltage		Max current		Number of strings
	string-level panel-level	1500V		40A		1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Technical Data

Model	TW-RSD150-40-1	TW-RSD150-40-2
Main loop parameters		
Number of strings	1	2
Max DC voltage	1500 Vdc	
Max DC current	40A	
Parameters	1500V26A,1250V32A,1000V40A,800V40A	
DC connector	MC4	
Control loop parameters		
Power supply type	AC single phase	
Nominal voltage	230Vac	
Operating voltage	100-270 Vac	
Nominal frequency	50/60Hz	
Operating frequency	47-63 Hz	
Nominal current	100mA	
Max current	300mA	
AC connector	Plug-in	
Product parameters		
Protection degree	IP 66	
Protection level	Class II	
Certification	CE	
Switch according to	EN 60947-3	
Number of operations	>10000	
N. of operations under load	>1500	
Operating temperature	-20°C ~ 75°C	
Temperature sensor trigger	70°C	
Warranty	5 years	
Dimensions (L*W*H)	190 * 230 * 105	
Weight	1470 g	1520 g

Technical Data

Model	TW-RSD150-40-3	TW-RSD150-40-4
Main loop parameters		
Number of strings	3	4
Max DC voltage	1500 Vdc	
Max DC current	40A	
Parameters	1500V26A,1250V32A,1000V40A,800V40A	
DC connector	MC4	
Control loop parameters		
Power supply type	AC single phase	
Nominal voltage	230Vac	
Operating voltage	100-270 Vac	
Nominal frequency	50/60Hz	
Operating frequency	47-63 Hz	
Nominal current	100mA	
Max current	300mA	
AC connector	Plug-in	
Product parameters		
Protection degree	IP 66	
Protection level	Class II	
Certification	CE	
Switch according to	EN 60947-3	
Number of operations	>10000	
N. of operations under load	>1500	
Operating temperature	-20°C ~ 75°C	
Temperature sensor trigger	70°C	
Warranty	5 years	
Dimensions (L*W*H)	300 * 280 * 115	
Weight	3440 g	3950 g

Technical Data

Model	TW-RSD150-40-5	TW-RSD150-40-6
Main loop parameters		
Number of strings	5	6
Max DC voltage	1500 Vdc	
Max DC current	40A	
Parameters	1500V26A,1250V32A,1000V40A,800V40A	
DC connector	MC4	
Control loop parameters		
Power supply type	AC single phase	
Nominal voltage	230Vac	
Operating voltage	100-270 Vac	
Nominal frequency	50/60Hz	
Operating frequency	47-63 Hz	
Nominal current	100mA	
Max current	300mA	
AC connector	Plug-in	
Product parameters		
Protection degree	IP 66	
Protection level	Class II	
Certification	CE	
Switch according to	EN 60947-3	
Number of operations	>10000	
N. of operations under load	>1500	
Operating temperature	-20°C ~ 75°C	
Temperature sensor trigger	70°C	
Warranty	5 years	
Dimensions (L*W*H)	348 * 280 * 137	
Weight	4700 g	5200 g

Technical Data

Model	TW-RSD150-40-7	TW-RSD150-40-8
Main loop parameters		
Number of strings	7	8
Max DC voltage	1500 Vdc	
Max DC current	40A	
Parameters	1500V26A,1250V32A,1000V40A,800V40A	
DC connector	MC4	
Control loop parameters		
Power supply type	AC single phase	
Nominal voltage	230Vac	
Operating voltage	100-270 Vac	
Nominal frequency	50/60Hz	
Operating frequency	47-63 Hz	
Nominal current	100mA	
Max current	300mA	
AC connector	Plug-in	
Product parameters		
Protection degree	IP 66	
Protection level	Class II	
Certification	CE	
Switch according to	EN 60947-3	
Number of operations	>10000	
N. of operations under load	>1500	
Operating temperature	-20°C ~ 75°C	
Temperature sensor trigger	70°C	
Warranty	5 years	
Dimensions (L*W*H)	348 * 330 * 166	
Weight	5800 g	6300 g

Technical Data

Model	TW-RSD150-40-9	TW-RSD150-40-10
Main loop parameters		
Number of strings	9	10
Max DC voltage	1500 Vdc	
Max DC current	40A	
Parameters	1500V26A,1250V32A,1000V40A,800V40A	
DC connector	MC4	
Control loop parameters		
Power supply type	AC single phase	
Nominal voltage	230Vac	
Operating voltage	100-270 Vac	
Nominal frequency	50/60Hz	
Operating frequency	47-63 Hz	
Nominal current	100mA	
Max current	300mA	
AC connector	Plug-in	
Product parameters		
Protection degree	IP 66	
Protection level	Class II	
Certification	CE	
Switch according to	EN 60947-3	
Number of operations	>10000	
N. of operations under load	>1500	
Operating temperature	-20°C ~ 75°C	
Temperature sensor trigger	70°C	
Warranty	5 years	
Dimensions (L*W*H)	348 * 330 * 195	
Weight	6500 g	7000 g

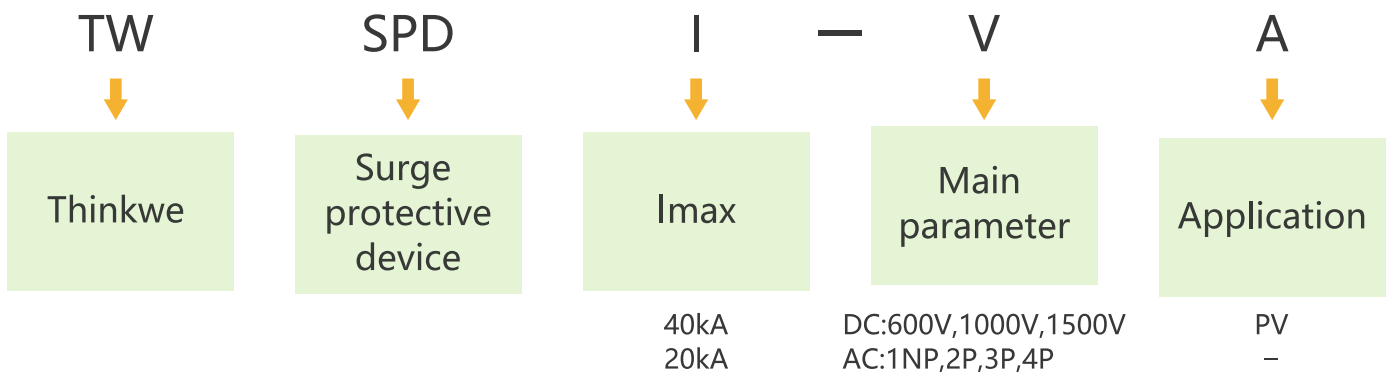
Surge Protective Device



Feature

- Focus on solar safety
- DC SPD available
- AC SPD available
- Up to 1500V for DC SPD
- 1-4P available for AC SPD
- Up to 40KA
- High reliability
- Wide temperature range

Select Code



Technical Data

DC SPD for solar system(40KA)

Model	TW-SPD-600PV	TW-SPD-1000PV	TW-SPD-1500PV
According to the standard	IEC61643		
Number of pole	2P	3P	3P
Rated operating Voltage	600V DC	1000V DC	1500V DC
Max operating Voltage	660V DC	1100V DC	1800V DC
Max discharge current (Imax)	40kA		
Nominal discharge current(In)	20kA		
Response time	≤25ns		
Range of working temperature	-40°C ~ 70°C		
Housing material	PA6/PBT UL94 V-0		
Remote signaling device	option		
Protection grade	IP20		
Warranty	1 year		
Indication of invalidation	Green is normal, Red is invalidation		

DC SPD for solar system(20KA)

Model	TW-SPD-600PV	TW-SPD-1000PV	TW-SPD-1500PV
According to the standard	IEC61643		
Number of pole	2P	3P	3P
Rated operating Voltage	600V DC	1000V DC	1500V DC
Max operating Voltage	660V DC	1100V DC	1800V DC
Max discharge current (Imax)	20kA		
Nominal discharge current(In)	10kA		
Response time	≤25ns		
Range of working temperature	-40°C ~ 70°C		
Housing material	PA6/PBT UL94 V-0		
Remote signaling device	option		
Protection grade	IP20		
Warranty	1 year		
Indication of invalidation	Green is normal, Red is invalidation		

Technical Data

AC SPD for solar system(40KA)

Model	TW-SPD40-1N	TW-SPD40-2	TW-SPD40-3	TW-SPD40-4
According to the standard	IEC61643			
Number of pole	1NP	2P	3P	4P
Max operating Voltage	275V DC	385V AC	385V AC	385V AC
Max discharge current (Imax)	40kA			
Nominal discharge current(In)	20kA			
Response time	≤25ns			
Range of working temperature	-40℃ ~ 70℃			
Housing material	PA6/PBT UL94 V-0			
Remote signaling device	option			
Protection grade	IP20			
Warranty	1 year			
Indication of invalidation	Green is normal, Red is invalidation			

AC SPD for solar system(20KA)

Model	TW-SPD20-1N	TW-SPD20-2	TW-SPD20-3	TW-SPD20-4
According to the standard	IEC61643			
Number of pole	1NP	2P	3P	4P
Max operating Voltage	275V DC	385V AC	385V AC	385V AC
Max discharge current (Imax)	20kA			
Nominal discharge current(In)	10kA			
Response time	≤25ns			
Range of working temperature	-40℃ ~ 70℃			
Housing material	PA6/PBT UL94 V-0			
Remote signaling device	option			
Protection grade	IP20			
Warranty	1 year			
Indication of invalidation	Green is normal, Red is invalidation			

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