

**Mini 4G**

**1000 W - 3000 W**



# SWAT SOLAR

SWAT AH PTE LTD.

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# DATASHEET

Model	SWAT mini-1000-4G	SWAT-mini-1500-4G	SWAT-mini-2000-4G	SWAT-mini-2500 4G	SWAT-mini-3000-4G
Energy Source	PV				
Input Side(DC)					
Max. DC input power(kW)	1.2	1.8	2.3	3	3.5
Max. DC input voltage(V)	600				
Start- up voltage (V)	60		90		
MPPT voltage range(V)	50- 550		80- 550		
Max. input current per MPPT(A)	11A				
MPPT number/ Strings per MPPT input	1/ A:1				
Output Side (AC)					
Rated output power(kW)	1	1.5	2	2.5	3
Max. apparent output power(kVW)	1.1	1.7	2.2	2.8	3.3
Max. output power(kW)	1.1	1.7	2.2	2.8	3.3
Rated grid voltage(VLL)	220/ 230				
Grid voltage range(V)	160-285				
Rated grid frequency(Hz)	50/ 60				
Operation phase	L/ N/ PE				
Rated grid output current(A)	4.5/ 4.3	6.8/ 6.5	9.1/ 8.7	11.4/ 10.9	13.6/ 13
Max. output current (A)	5.2	8.1	10.5	13.3	15.7
Power Factor (at rated output power)	0.8 leading.... 0.8 lagging				
THDi (at rated output power)	< 1.5%In				
DC injection current (mA)	< 0.5%In				
Grid frequency range (Hz)	47-52 or 57-62				
Efficiency					
Max. efficiency	97.2%		97.5%		
EU efficiency	96.5%		96.5%		
MPPT efficiency	>99.5%				
Protection					
DC reverse- polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Insulation resistance monitoring	Yes				
Residual current detection	Yes				
Surge protection	Yes				
Islanding protection	Yes				
Temperature protection	Yes				
Integrated DC switch	Yes				
General Data					
Dimensions (mm)	310W * 373H * 160D				
Weight(kg)	7.4		7.7		
Topology	Transformer less				
Self consumption (night)	<1W(Night)				
Operating ambient temperature range	-25-60C				
Ingress protection	Ip65				
Noise emission (typical)	<20 dBA				
Cooling concept	Natural convection				
Max. operation altitude	4000m				
Designed lifetime	>20 years				
Grid connection standard	EN50438, G83/2, AS4777.2:2015, VDE0126-1-1, IEC61727, V-E N 4105				
Relative humidity	0-100%				
Safety/ E.C. standard	IEC62109-1/-2, NB/T 32004, EN61000-6-1, EN61000-6-3				
Features					
DC connection	MC-4 mateable				
AC connection					

**IP -4G**

**4KW- 5KW**



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# DATASHEET

Model	SWAT-1-P4K-4G	SWAT-1-P5K-4G
Energy Source	PV	
Input Side(DC)		
Max. DC input power(kW)	4.6	5.8
Max. DC input voltage(V)	600	
Start- up voltage (V)	120	
MPPT voltage range(V)	90-520	
Max. input current per MPPT(A/B)	11A+11A	
MPPT number/ Strings per MPPT input	2/ A:1; B:1	
Output Side (AC)		
Rated output power(kW)	4	5
Max. apparent output power(kVA)	4.4	5
Max. output power(kW)	4.4	5
Rated grid voltage(V <sub>L-L</sub> )	220/230	
Grid voltage range(V)	160-285	
Rated grid frequency(Hz)	50/ 60	
Operation phase	L/ N/ PE	
Rated grid output current(A)	18.2/17.4	22.7/21.7
Max. output current (A)	21	25
Power Factor (at rated output power)	<0.8 leading.... 0.8 lagging	
THDi (at rated output power)	< 1.5%	
DC injection current (mA)	< 0.5%I <sub>n</sub>	
Grid frequency range (Hz)	47-52 or 57-62	
Efficiency		
Max. efficiency	98.1%	
EU efficiency	97.3%	
MPPT efficiency	>99.5%	
Protection		
DC reverse- polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Output over voltage protection	Yes	
Insulation resistance monitoring	Yes	
Residual current detection	Yes	
Surge protection	Yes	
Islanding protection	Yes	
Temperature protection	Yes	
Intergrated DC switch	Optional	
General Data		
Dimensions (mm)	310W x 543H x160D	
Weight(kg)	11.5	
Topology	Transformer less	
Self consumption (night)	<1W(Night)	
Operationg ambient temperature range	-25-60'C	
Ingress protection	IP65	
Noise emmission (typical)	<30 dBA	
Cooling concept	Natural convection	
Max. operation altitude	4000m	
Designed lifetime	>20 years	
Grid connection standard	EN50438, G83/2, G59/3, AS4777, 2:2015, VDE0126-1-1, IEC61727, VDE N 4105	
Relative humidity	0-100%	
Safety/ EMC standard	IEC62109-1/-2, NB/T 32004, EN61000-6-1, EN61000-6-3	
Features		
DC connection	MC-4 mateable	
AC connection	Terminal connectors	

**IP -4G**

**5KW- 10KW**



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# DATASHEET

Model	SWAT 3P5K-4G	SWAT 3P6K-4G	SWAT 3P8K-4G	SWAT 3P10K-4G
Energy Source	PV			
Input Side(DC)				
Max. DC input power(kW)	6	7.2	9.6	12
Max. DC input voltage(V)	1000			
Start- up voltage (V)	180			
MPPT voltage range(V)	160-850			
Max. input current per MPPT(A)	11A+11A			
MPPT number/ Strings per MPPT input	2/ A:1; B:1			
Output Side (AC)				
Rated output power(kW)	5	6	8	10
Max. apparent output power(kVA)	5.5	6.6	8.8	11
Max. output power	5.5	6.6	8.8	11
Rated grid voltage(V <sub>L-L</sub> )	400			
Grid voltage range(V)	313-470			
Rated grid frequency(Hz)	50/ 60			
Operation phase	3/ N/ PE			
Rated grid output current(A)	7.2	8.7	11.5	14.4
Max. output current (A)	8.4	10.0	13.4	16.7
Power Factor (at rated output power)	<0.8 leading.... 0.8 lagging			
THDi (at rated output power)	< 1.5%			
DC injection current (mA)	< 0.5%I <sub>n</sub>			
Grid frequency range (Hz)	47-52 or 57-62			
Efficiency				
Max. efficiency	98.3%		98.7%	
EU efficiency	97.8%		98.1%	
MPPT efficiency	>99.5%			
Protection				
DC reverse- polarity protection	Yes			
Short circuit protection	Yes			
Output over current protection	Yes			
Insulation resistance monitoring	Yes			
Residual current detection	Yes			
Surge protection	Yes			
Islanding protection	Yes			
Temperature protection	Yes			
Integrated DC switch	Yes			
Intergrated DC switch	Yes			
General Data				
Dimensions (mm)	310W*538H*158D			
Weight(kg)	13.6		7.7	
Topology	Transformerless			
Self consumption (night)	<1W(Night)			
Operationg ambient temperature range	-25-60'C			
Ingress protection	IP65			
Noise emmission (typical)	<30 dBA			
Cooling concept	Natural convection			
Max. operation altitude	4000m			
Designed lifetime	>20 years			
Grid connection standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727, VDE N 4105			
Relative humidity	0-100%			
Safety/ EMC standard	IEC62109-1/-2, AS3100			
Features				
DC connection	MC-4 mateable			
AC connection	Terminal connectors			

**3P - 4 G**

**15 KW**



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# DATASHEET

Model	SWAT 3P15K-4G
Energy Source	PV
<b>Input Side(DC)</b>	
Max. DC input power(kW)	18
Max. DC input voltage(V)	1000
Start- up voltage (V)	180
MPPT voltage range(V)	160-850
Max. input current per MPPT(A/B)	22A+11A
MPPT number/ Strings per MPPT input	2/ A:2; B:2
<b>Output Side (AC)</b>	
Rated output power(kW)	15
Max. apparent output power(kVA)	16.5
Max. output power	16.5
Rated grid voltage(V <sub>LL</sub> )	400
Grid voltage range(V)	313-470
Rated grid frequency(Hz)	50/ 60
Operation phase	3/ N/ PE
Rated grid output current(A)	21.7
Max. output current (A)	25.1
Power Factor (at rated output power)	<0.8 leading.... 0.8 lagging
THDi (at rated output power)	< 1.5%
DC injection current (mA)	< 0.5%I <sub>n</sub>
Grid frequency range (Hz)	47-52 or 57-62
<b>Efficiency</b>	
Max. efficiency	98.7%
EU efficiency	98.1%
MPPT efficiency	>99.5%
<b>Protection</b>	
DC reverse- polarity protection	Yes
Short circuit protection	Yes
Output over current protection	Yes
Output over voltage protection	Yes
Insulation resistance monitoring	Yes
Residual current detection	Yes
Surge protection	Yes
Islanding protection	Yes
Temperature protection	Yes
Integrated DC switch	Yes
Intergrated DC switch	Yes
<b>General Data</b>	
Dimensions (mm)	310W x 563H x 219D
Weight(kg)	18.9
Topology	Transformer less
Self consumption (night)	<1W(Night)
Operating ambient temperature range	-25°C~60°C
Ingress protection	IP65
Noise emmission (typical)	<30 dBA
Cooling concept	Natural Convection + Redundancy Fan
Max. operation altitude	4000m
Designed lifetime	>20 years
Grid connection standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727, VDE N 4105
Relative humidity	0-100%
Safety/ EMC standard	IEC62109-1/-2, AS3100
<b>Features</b>	
DC connection	MC-4 mateable
AC connection	Terminal connectors



**25 KW - 30 KW**



# **SWAT SOLAR**

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# DATASHEET

Model	SWAT - 25K	SWAT - 30K	
Energy Source	PV		
<b>Input Side(DC)</b>			
Max. DC input power(kW)	30	36	
Max. DC input voltage(V)	1000		
Start- up voltage (V)	350		
MPPT voltage range(V)	200-800		
Max. input current per MPPT(A/B/C/D)	18A+18A+18A+18A		
MPPT number/ Strings per MPPT input	4/ A:2; B:2; C:2; D:2		
<b>Output Side (AC)</b>			
Rated output power(kW)	25	30	
Max. apparent output power(kVA)	27.5	33	
Max. output power	27.5	33	
Rated grid voltage(V <sub>L-L</sub> )	400		
Grid voltage range(V)	304-460		
Rated grid frequency(Hz)	50/ 60		
Operation phase	3/ N/ PE		
Rated grid output current(A)	36.1	43.3	
Max. output current (A)	41.7	50	
Power Factor (at rated output power)	<0.8 leading.... 0.8 lagging		
THDi (at rated output power)	< 3%		
DC injection current (mA)	< 0.5%I <sub>n</sub>		
Grid frequency range (Hz)	47-52 or 57-62		
<b>Efficiency</b>			
Max. efficiency	98.6%	98.6%	
EU efficiency	98.3%/98.3%	98.3%/98.3%	
MPPT efficiency	>99.9%		
<b>Protection</b>			
DC reverse- polarity protection	Yes		
Short circuit protection	Yes		
Output over current protection	Yes		
Output over voltage protection	Yes		
Insulation resistance monitoring	Yes		
Residual current detection	Yes		
Surge protection	Yes		
Islanding protection	Yes		
Temperature protection	Yes		
Integrated DC switch	Yes		
Intergrated DC switch	Optional		
<b>General Data</b>			
Dimensions (mm)	530W*700H*365.5D		
Weight(kg)	58.2		
Topology	Transformer less		
Self consumption (night)	<1W(Night)		
Operating ambient temperature range	-25-60'C		
Ingress protection	IP65		
Noise emmission (typical)	<30 dBA		
Cooling concept	Natural convection		
Max. operation altitude	4000m		
Designed lifetime	>20 years		
Grid connection standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727		
Relative humidity	0-100%		
Safety/ EMC standard	IEC62109-1/-2, AS3100, EN61000-6-1, EN61000-6-3		
<b>Features</b>			
DC connection	MC-4 mateable		
AC connection	Terminal connectors		

**50 KW**



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# DATASHEET

Model	SWAT- 50K
Energy Source	PV
<b>Input Side(DC)</b>	
Max. DC input power(kW)	60
Max. DC input voltage(V)	1100
Start- up voltage (V)	200
MPPT voltage range(V)	200 - 1000
Max. input current per MPPT(A/B/C/D)	28.5*4
MPPT number/ Strings per MPPT input	4/ A:3; B:3; C:3; D:3
<b>Output Side (AC)</b>	
Rated output power(kW)	50
Max. apparent output power(kVA)	55
Max. output power(kW)	55
Rated grid voltage(V <sub>L-L</sub> )	400
Grid voltage range(V)	304-460
Rated grid frequency(Hz)	50/ 60
Operation phase	3/ N/ PE
Rated grid output current(A)	72.2
Max. output current (A)	83.3
Power Factor (at rated output power)	0.8 leading.... 0.8 lagging
THDi (at rated output power)	< 2%
DC injection current (mA)	< 0.5%I <sub>n</sub>
Grid frequency range (Hz)	47-52 or 57-62
<b>Efficiency</b>	
Max. efficiency	98.8%
EU efficiency	98.4%/ 98.4%
MPPT efficiency	>99.9%
<b>Protection</b>	
DC reverse- polarity protection	Yes
Short circuit protection	Yes
Output over current protection	Yes
Output over voltage protection	Yes
Insulation resistance monitoring	Yes
Residual current detection	Yes
Surge protection	Yes
Islanding protection	Yes
Temperature protection	Yes
Integrated DC switch	Yes
<b>General Data</b>	
Dimensions (mm)	630W*700H*357D
Weight(kg)	63
Topology	Transformerless
Self consumption (night)	<1W(Night)
Operationg ambient temperature range	-25~60°C
Ingress protection	IP65
Noise emmission (typical)	<60 dBA
Cooling concept	Natural Convection + Redundancy Fan
Max. operation altitude	4000m
Designed lifetime	>20 years
Grid connection standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727
Relative humidity	0-100%
Safety/ EMC standard	IEC62109-1/-2, AS3100, EN61000-6-1, EN61000-6-3
<b>Features</b>	
DC connection	MC-4 mateable