## Single-Phase String Inverters 1 kW to 3 kW

> Residential, Solar Inverters



## **Zeverlution Series** 10005/15005/20005/30005

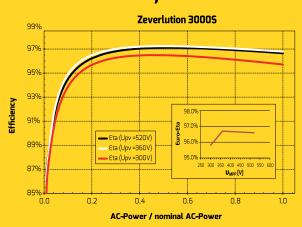
#### Introduction

The Zeverlution inverter generation combines all aspects of our beliefs into simple, reliable and affordable PV inverters. By introducing a patented inverter topology we used less power electronic components for further increased reliability. At the same time we have reduced the weight of the inverter by nearly 50%, making it even simpler to install and use. An increased efficiency of 97.5% makes the use of PV systems even more affordable.Furthermore integrated monitoring via Ethernet or WiFi communication is available, whenever you want, our Zeverlution series.

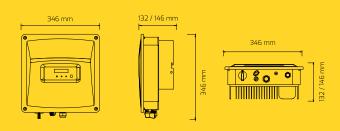
#### **Features**

- Extremely lightweight with only 6.5 kg
- Compact design with IP65 casing for outdoor use
- Sunclix connectors for toolless DC wiring
- Higher power yield with efficiency of 97.5%
- Extremely quiet with only 15dB noise
- Higher operating altitude up to 3000m without
- Optional integrated Ethernet and Wi-Fi communication
- Support remote firmware update

### **Conversion efficiency**



#### **Dimensions**



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Sept	Technical data	Zeverlution 1000S	Zeverlution 1500S	Zeverlution 2000S	Zeverlution 30005		
Mon. top valonger   SOOV   SOOV   SOOV   Mon. taker valonger range if rated input voltage   170-6501 / SOOV   SOOV   Mon. taker valonger   1807	Input (DC)						
Milk start voltage   Milk st	DC convertible power (@cosφ=1)	1150W	1750W	2350W	3150W		
Min. rank/ paper	Max. input voltage		500V				
Milk strong current per MPPT   184		70 <b>-</b> 450V / 360V			70 <b>-</b> 520V / 360V		
Milk strong current per MPPT   184	Min. start voltage				80V		
Mincher of MoPFs					6W		
Number of Integrander MIPF Injuns  Output (AC)  Future active power   1000W   1500W   2000W   3000W					11A		
Name of ineligentation MPP inputs   1   1   1   1   1   1   1   1   1							
Output (AC)         Content (active power)         10000W         15000W         2000W         30000W           Awar, apparent AC power?         1000WA         1650VA         2020VA         30000WA           Nominal AC voltage Frange         SECTIVE SECTIV					1		
Mail active power							
Manual AV sottage Irange		1000W	1500W	2000W	MUUNE		
Normal AC voltage / range  AC power frequency / range   32(0) 23(0) 245∪ / 18(00 - 2010)    AC power frequency / range   50,60 / -510    Max. output current   5.5A   7.5A   10A   15A    Power factor (@rated power)   1    Adjustable deplacement power factor   0.8 inductive 0.8 capacitive 18 inductive 18 i	·						
MC power frequency / rate grid voltage				3000471			
Max. output current   S.5A   7.5A   10   15A							
Max. output current   5.5A   7.5A   10A   15A     Power factor (garade power)							
Power factor (@rated power)				1E A			
Adjustable displacement power factor   C.B. inductive O.B. capacitive		J.SA	Ac.1	1UA	IDA		
Feed-in phases / connection phases   1/1   1   1   1   1   1   1   1   1		0.01-1-11-2.02					
Hermonic distortion (THD) at rated output							
### #################################							
Mox. efficiency / European weighted efficiency         978 / 96.3%         97.2% / 96.5%         97.3% / 96.7%         97.50%         99.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%         90.50%		< 3%					
### PT efficiency ### 99.50% ###							
Protective devices         CC isolator         O							
DC isolator PV iso / Grid monitoring DC reverse polarity protection / AC short-circuit current capability Foretrion class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)  Protection class (according to IEC 60103) / overvoltage category (according to IEC 60664-1)  Protection class (according to IEC 60721-3-4) Protection class (according to IEC 60721-3-4) Protection (accord	MPPT efficiency	99.50%	99.50%	99.50%	99.50%		
PV iso / Grid monitoring	Protective devices						
DC reverse polarity protection / AC short-circuit current capability  GFCI function Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)  Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / WIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm® Interface®: RS485 / Ethernet / VIFI Earth Fault Alarm	DC isolator	0					
Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664+1)   I / II (DC), III (AC)	PV iso / Grid monitoring	•/•					
Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)   General data	DC reverse polarity protection / AC short-circuit current capability	•/•					
General data         Interface <sup>1</sup> : R5489 f. Ethernet / WIFI         ● / o / o         ● / o	GFCI function	•					
Interfacel*: R5485 / Ethernet / WIFT       • / o / o         Earth Fault Alarm³?       Cloud based, audible and visible         Display       16 x 2 characters         Dimensions (W x H x D)       346 x 346 x 132mm       346 x 346 x 146mm         Weight       6.5kg       6.8kg         Cooling concept       convection         Noise emission (typical)       < 15 dB(A)@1m	Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / II (DC), III (AC)					
Earth Fault Alarm³¹            Display            Dimensions (W x H x D)            Weight             Weight            Weight            Weight            Weight            16x 2 characters           346 x 346 x 132mm            346 x 346 x 132mm            346 x 346 x 146mm            6.5kg            6.5kg             6.5kg              6.5kg              6.5kg <th audible<="" based,="" color="" td=""><td colspan="6">General data</td></th>	<td colspan="6">General data</td>	General data					
Display         16 x 2 characters           Dimensions (W x H x D)         346 x 346 x 132mm         346 x 346 x 146mm           Weight         6.5kg         6.8kg           Cooling concept         convection         -5 dB(A)@lm           Noise emission (typical)         < 15 dB(A)@lm         -1 stallation           Installation         wall mounting bracket	Interface <sup>1)</sup> : RS485 / Ethernet / WIFI	•/0/0					
Dimensions (W x H x D)         346 x 346 x 132mm         346 x 346 x 146mm           Weight         6.5kg         6.8kg           Cooling concept         5.5kg         6.8kg           Noise emission (typical)         5 15 dB(A)@im         5 15 dB(A)@im           Installation         Indoor & outdoor         4 15 dB(A)@im         5 15 dB(A)@im           Mounting information         wall mounting bracket         5 UNCLIX         5 UNCLIX           AC connection technology         5 UNCLIX         5 UNCLIX         5 UNCLIX           AC connection technology         5 UNCLIX         6 UNCLIX	Earth Fault Alarm <sup>2)</sup>	cloud based,audible and visible					
Weight         6.5kg         6.8kg           Cooling concept         convection         convection           Noise emission (typical)         < 15 dB(A)@Im	Display	16 x 2 characters					
Cooling concept  Noise emission (typical)  Installation  Nounting information  Mounting information  DC connection technology  AC connection technology  AC connection technology  Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Certificates and approvals (more available on request)  Convection  Convection  A 15 dB(A)ajim  A 16 dB(A)a	Dimensions (W x H x D)	346 x 346 x 132mm			346 x 346 x 146mm		
Noise emission (typical)  Installation  Installation  Mounting information  Wall mounting bracket  SUNCLIX  AC connection technology  Screw clamp terminal  Operating temperature range  Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  CE,  NENSO43B,  GB3/2,  VDE-AR-N4105, VDE-AR-N4105, VDE-16-11, IECG2116, IECG1727,  IECG2116, IECG	Weight	6.5kg			6.8kg		
Installation indoor & outdoor  Mounting information	Cooling concept	convection					
Mounting information wall mounting bracket  DC connection technology SUNCLIX  AC connection technology Screw clamp terminal  Operating temperature range -25°C+60°C / -13°F+140°F  Relative humidity (non-condensing) 0% 100%  Max. operating altitude 400m (>3000m derating)  Degree of protection (according to IEC 60529) IP65  Climatic category (according to IEC 60721-3-4) 4K4H  Topology 4K4H  Topology 1 transformerless  Self-consumption (night) 1	Noise emission (typical)	< 15 dB(A)@1m					
DC connection technology  AC connection technology  AC connection technology  Screw clamp terminal  -25°C+60°C / -13°F+140°F  Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  CE, NEN5043B, GB3/2, VDE-AR-N4105, VDE-AR-N4105, VDE-AR-N4105, VDE-AR-N4105, VDE-AR-N4105, VDE-AR-N4105, VDE-C2116, IECG116, IECG11727, IECG2116, IECG11727, IECG11727, IECG2116, IECG11727, IECG2116, IECG11727, IECG11727, IECG2116, IECG11727, IECG11727, IECG2116, IECG11727, IECG11727, IECG2116, IECG11727, IECG	Installation	indoor & outdoor					
AC connection technology  Operating temperature range  Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  Certificates and approvals (more available on request)  Certificates and approvals (more available on request)  AC connection technology  Screw clamp terminal  -25°C+60°C /-13°F+140°F  0% 100%  4000m (>3000m derating)  IP65  IV4H  4K4H  Topology  Stansformerless  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  CER, NEN50438, G83/2, VDE-AR-N4105, VDE0126-1-1, IEC62116, IEC61727, IEC62116	Mounting information	wall mounting bracket					
Operating temperature range  Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  Certificates and approvals (more available on request)  CERTIFICATE OF AR-N4105, UDE-0126-1-1, IECG2116, IECG1727,  IECG2116, IECG1727,  Relative humidity (non-condensing)  -25°C+60°C / -13°F+140°F  0% 100%  4000m (>3000m derating)  4000m (>3000m derating)  FP65  4K4H  4K4H  Topology  transformerless  < 1W  Standby power  CE, NEN50438, G83/2, VDE-AR-N4105, VDE0126-1-1, IECG2116, IECG1727, IECG2116, IE	DC connection technology	SUNCLIX					
Relative humidity (non-condensing)  Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  Certificates and approvals (more available on request)  CERTIFICATE OF AR-NA1105, UDE-AR-NA1105, UDE-AR	AC connection technology	screw clamp terminal					
Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)	Operating temperature range	-25°C+60°C / -13°F+140°F					
Max. operating altitude  Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)	Relative humidity (non-condensing)	0% 100%					
Degree of protection (according to IEC 60529)  Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)	Max. operating altitude	4000m (>3000m derating)					
Climatic category (according to IEC 60721-3-4)  Topology  Self-consumption (night)  Standby power  Certificates and approvals (more available on request)  Certificates and approvals (more available	Degree of protection (according to IEC 60529)	IP65					
Topology transformerless  Self-consumption (night) < 1W  Standby power < 6W  Certificates and approvals (more available on request)		4K4H					
Self-consumption (night) < 1W  Standby power < 6W  Certificates and approvals (more available on request)   CE, NEN50438, G83/2, G83/2, VDE-AR-N4105, IEC62116, IEC61727, IEC62116, IEC62116, IEC62116, IEC61727, IEC62116, IEC621	,	transformerless					
Standby power         < 6W           Certificates and approvals (more available on request)         CE, NEN50438, NEN50438, NEN50438, G83/2, G83/2, VDE-AR-N4105, VDE-AR-N4105, VDE-D126-1-1, IEC62116, IEC61727, IEC62116, IEC61727,	1 0,		<1W				
Certificates and approvals (more available on request)  CE, CE, AS4777,  NEN50438, NEN50438, G83/2, G83/2, VDE-AR-N4105, VDE-AR-N4105, VDE-AR-N4105, VDE-G126-1-1, IEC62116, IEC61727, IEC62116, IEC61727,			< 6	iW			
NEN50438, NEN50438, G83/2, G83/2, VDE-AR-N4105, VDE-AR-N4105, VDE-GR-N4105, VDE-GR-N41	· ·						
IECG2116, IECG1727, IECG2116, IECG1727,		NEN50438, G83/2,	\ //	NEN50438, G83/2,	1.1		
		IEC62116, IEC61727,	VI	IEC62116, IEC61727,	- I <del>-</del> I,		

As of April, 2016 / Technical data is subject to revisions.

<sup>•</sup> standard optional - not available

1) Optional ComBox (ETH & WiFi). will replace RS485 port functionality

2) Selectable in ZeverCloud; audible alarm will only be activated in AS4777 setting