

# 3.6kW & 5kW Single-phase Hybrid Inverter

## Advanced solar optimisation

- Features dual MPPT trackers, up to 14A MPPT current, and supports a DC/AC ratio of up to 160%

## Flexible system compatibility

- Supports both DC and AC-coupled systems for a wide range of installations

## Intelligent energy management

- Integrated EMS offers self-consumption, economic, and backup modes for optimised energy use

## Smart monitoring & easy installation

- Ultralight, space-saving design with cloud remote monitoring for real-time diagnostics and performance tracking



Model	INS-3.6LV-EUA1	INS-5.0LV-EUA1
<b>PV Input</b>		
Max. PV input power (W)	6000	7500
Max. PV input voltage (V)	550	
Nominal input voltage (V)	360	
MPPT voltage range (V)	125-500	
Start-up voltage (V)	150	
Number of MPPTs	2	
Max. number of PV strings per MPPT	1/1	
Max. PV input current (A)	14/14	
Short-circuit current of PV input (A)	17/17	
<b>Efficiency</b>		
Max. efficiency	97.6%	
Euro efficiency	97.0%	
Max. battery to load efficiency	95.0%	
MPPT efficiency	99.9%	

Model	INS-3.6LV-EUA1	INS-5.0LV-EUA1
<b>AC Input and Output (On-grid)</b>		
Nominal output apparent power (VA)	3680	5000 <sup>(1)</sup>
Max. output apparent power (VA)	3680	5000 <sup>(1) (2)</sup>
Max. input apparent power (VA)	7360	
Nominal AC voltage (V)	230	
Nominal grid frequency (Hz)	50/60	
Max. output current (A)	16.0	21.7
Max. input current (A)	32.0	
Power factor	0.8 leading ... 0.8 lagging	
Total harmonic distortion (@nominal output)	<3%	
<b>AC Input and Output (Off-grid)</b>		
Max. output apparent power (VA)	3680	5000
Peak output apparent power (VA)	7360, 10s	10000, 10s
Nominal AC voltage (V)	230	
Nominal AC frequency (Hz)	50/60	
Max. output current (A)	16.0	21.7
Total harmonic distortion (@nominal output)	<3%	
<b>Certification and Standards</b>		
Grid regulation	EN 50549, VDE-AR-N 4105, AS/NZS 4777.2, G98, G99	EN 50549, VDE-AR-N 4105, AS/NZS 4777.2, VFR: 2019, TOR Erzeuger Type A, RD647, NTS (SENP), CEI 0-21 2019:04, G98, G99
Safety regulation	IEC 62109-1, IEC 62109-2	
EMC	EN 61000-6-1, EN 61000-6-3	

(1) 4600 for VDE-AR-N 4105 & VDE0126-1-1; 4999 for AS/NZS 4777.2

(2) Max. output apparent power 3680 VA for TOR Erzeuger Type A

Model	INS-3.6LV-EUA1	INS-5.0LV-EUA1
<b>Protection</b>		
Anti-islanding protection	Integrated	
PV string input reverse polarity protection	Integrated	
Insulation resistor detection	Integrated	
Residual current monitoring unit	Integrated	
AC over current protection	Integrated	
AC short current protection	Integrated	
AC overvoltage and undervoltage protection	Integrated	
Surge protection	DC Type II/AC Type III	
<b>Protection</b>		
Dimensions (W x H x D [mm])	502 x 461 x 202	
Weight (kg)	25	24
Mounting	Wall mounting	
Operation temperature (°C)	-25 to 65 (>45, derating)	
Relative humidity	0-95%, no condensing	
Altitude (m)	≤2000	
Cooling	Natural convection	
Protection degree	IP65	
Noise (dB[A])	<40	
User interface	LED & app	
Communication with BMS	CAN	
Communication with meter	N/A	RS485
Communication interface	Wi-Fi/Ethernet/4G (optional)	RS485, Wi-Fi/Ethernet/4G (optional)
Digital input/output	DRM, 1 x DI, 2 x DO	
Isolation method (solar/battery)	Transformerless/High-frequency isolation	