

Power Stick

INV-300

Micro-Inverter for PV Modules

Based on our unique high-frequency technology, the Power Stick INV-300 is the smallest and fastest inverter in the world. Its unique thermal management guarantees superior lifetime and reliability. Thanks to its miniaturized design, the inverter can even be integrated into the frame of PV modules to create true plug & play AC modules.



Key Features



Superior energy yield

Highest yields with shade-tolerant substring design
Unsurpassed low-light performance



Highest reliability

10 years limited warranty (in combination with Micro-Gateway)
Unique thermal design leads to minimized failure rates



Easy installation

Ultra-long string design for East-West configuration
Plug & Play over-the-air commissioning
No data cables anywhere
Auto-detection and location of missing connectors
Automatic roof mapping / smart layout function



High-efficiency module design

No by-pass diodes required for cells strings up to 60 cells in series
Reverse-bias control eliminates hot cells and hot spots
Enabler for high-efficiency heterojunction and Perovskite tandem technology



Inherent safety

No high DC voltages during installation and operation (no risk of fire)
Self-limiting string design

Models

INV-300-a: Add-on version that is compatible with standard PV modules and can either be pre-assembled into the frame of the module by the module manufacturer or be mounted to the mounting structure by the installer.

INV-300-i: Module-integrated version for frame-integration of AC modules.

Technical Data

Input (DC)	INV-300-a	INV-300-i
Recommended module power	Up to 440 Wp	
DC connector	2 DC cable (2.5 mm ²) with Stäubli MC4 connectors	DC connector without cables
Minimum open-circuit voltage at standard operating conditions (STC)	25V	
Maximum open-circuit voltage at STC	60V	
Current (DC)	< 20 A	
Over-voltage class	II	

Output (AC)	INV-300-a	INV-300-i
Continuous output power (at 240 V)	300 W	
European efficiency	> 96 %	
Nominal voltage	230 V @ 50 Hz / 240 V @ 60 Hz	
Current	Max 1.3 A	
Max. Power factor	> 0.99	
Active power factor control	Down to 0.95	
Over-voltage class	II	
Nominal frequency	50-60 Hz	
NS-protection	Integrated, no separate relay box required	

General Data	INV-300-a	INV-300-i
Dimensions without connectors (length x width x height)	370 mm x 23.9 mm x 22.3 mm (14.6 in x 0.9 in x 0.9 in)	
Total length	535 mm (21.1 in) including DC cables	403.5 mm (15.9 in)
Recommended module frame height	32-35 mm	
Weight	320 g (8.8 oz)	350 g (9.9 oz)
Cooling	Natural convection	
Ingress protection	IP55	
Noise emission	< 40 dB	

Compliance	INV-300-a	INV-300-i
Certifications (pending)	IEC 62109-1, IEC 62109-2, IEC 62109-3, (EU) 2016/631, VDE-AR-N 4105	

Smart Balcony System Architecture

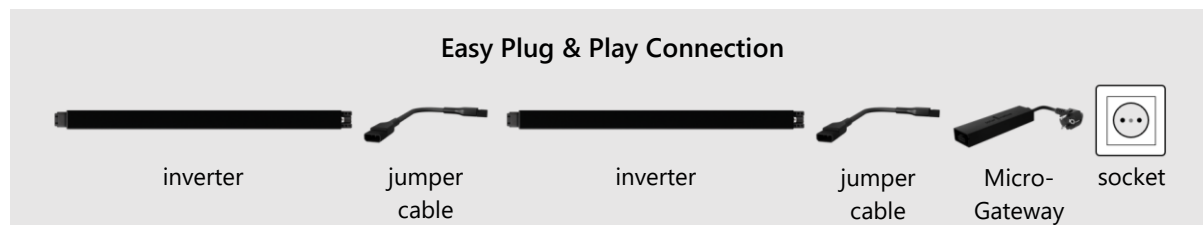


Illustration: Example setup with two PV modules

The INV-300 is a plug and play device. It is easily connected to a PV module and a power outlet with pre-assembled Solarnative Jumper Cables.

To enable control of feed-in power, data monitoring via mobile app, over-the-air firmware upgrades, and extended warranty, the Solarnative Micro-Gateway is required.

System	INV-300-a	INV-300-i
Maximum current per string		6 A
Number of inverters per string	Unlimited. Self-regulated system. No minimum number of inverters.	
Recommended maximum number of inverters per string	4-5	
System components	Inverter, wire harness, termination cap, Micro-Gateway	
Connectivity	Powerline communication from inverters to Micro-Gateway, WiFi from Micro-Gateway to cloud server	