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Behineh Sazan Toos Co.



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NO 370, SANAT BLV, TOOS INDUSTRIAL ESTATE,
MASHHAD, RAZAVI KHORASAN PROVINCE, IRAN



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GT1-5KD1 INVERTER

Due to the limited resources of fossil fuels and the increasing use of renewable energies, the installation of solar plants has become more widespread. These plants can contribute significantly to reducing the use of fossil fuels and greenhouse gas emissions.

Solar inverters are a crucial component of these plants, as they convert electricity generated by photovoltaic panels and synchronize it with the national electricity grid, injecting it into the network.

Behineh Sazan Toos Co. has developed a range of solar inverters under the LIVOLTEK brand name. LIVOLTEK has addressed issues present in previous generations of electrical energy converters by utilizing optimized and innovative designs of electric circuits and manufacturing processes. The LIVOLTEK features a range of power levels, from 5 to 25.

LIVOLTEK solar inverters meet international standards such as VDE0126, IEC62109, and IEC61727, as well as the requirements set by the Renewable Energy and Energy Efficiency Organization (SATBA). These inverters have undergone rigorous field tests and have received a certificate of standard authenticity from the EPIL reference laboratory, ensuring that they meet the highest standards of quality and reliability. These inverters have received approval from distribution companies located in Mashhad, Razavi Khorasan, Qom, and other provinces, making them a reliable choice for a variety of solar power projects.

Technical Specifications

Description	VALUE
Input (PV)	
Max. DC Input Power	7500Wp
Max. DC Input Voltage	550V
Min PV Input Voltage	70V
Start-up DC Input Voltage	90V
Nominal DC Input Voltage	360V
MPPT Operating Range	70-545V
Max. DC Input Current	14A+14A
Max. Short Circuit Current	20A+20A
No. of MPPTs/Strings per MPPT	2/1
Output (Grid)	
Nominal Output Power	5000W
Max. Apparent Power	5500VA
Rated AC Grid Output Current	21.7A
Max. AC Output Current	23.9A
Rated AC Grid Voltage	220V/230V/240V, L+N+PE
AC Grid Voltage Range	160V-300V (Adjustable)
Rated Grid Frequency	50Hz/60Hz
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)
Power Factor	> 0.99 Rated Power (Adjustable 0.8 Leading - 0.8 Lagging)
Output THDi (@Nominal Output)	<3%
Efficiency	
Max. Efficiency	98.4%
Euro Efficiency	97.5%
MPPT Efficiency	>99%
Protection	
Surge Arrester	Type III / Type II (Optional)
PV Current Detection	Support
Over Current Protection	Support
AC Short Circuit Protection	Support
Over Voltage Protection	Support
Anti-islanding Protection	Support
Ground Fault Monitoring	Support
Residual Current Monitoring Unit	Support
DC Reverse Polarity Protection	Support
Anti-arc Protection	Optional
General Data	
Dimension (W*H*D)	350*315*176mm
Weight	12.5kg
Protection Degree	IP65
Cooling	Natural Cooling
Operating Temperature Range	-30°C ~ +60°C (Derating at 45°C)
Typical Noise Emission	<25dB
Night Self Consumption	<1W
Display	LED+APP/LCD (Optional)
Communication	RS485(LCD/Meter), Wi-Fi+Bluetooth, DRM
Topology	Transformerless
Certifications and Standards	
Grid Regulation	IEC61727, IEC62116, EN50549, ABNT NBR 16149, ABNT NBR 16150
Safety/EMC Standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4



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