MPX Microgrid Series

Hybrid Solar Inverter

30–500 kW / Three-phase 400 V

Flexible power for demanding microgrids.

The MPX Microgrid Series combines solar power conversion, battery charging and microgrid control in an integrated platform for grid-connected and off-grid applications. Adaptive MPPT technology enables flexible PV sizing, while parallel operation supports scalable system configurations. Integrated switching and maintenance bypass, diesel-generator load control and configurable operating strategies help meet the needs of remote and distributed energy systems.

Integrated MPPT · Transformer · STS

Built-in maintenance bypass



MPX Microgrid Hybrid Inverter

Key Features

Integrated system architecture

Combines MPPT modules, a transformer, a static transfer switch (STS) and maintenance bypass.

Adaptive MPPT technology

Step-up/step-down MPPT technology supports flexible PV capacity configurations.

100% unbalanced-load support

Supports fully unbalanced loads for demanding three-phase applications.

Diesel-generator load control

Controls diesel-generator loading to improve fuel economy.

Scalable parallel operation

Supports multiple inverters connected in parallel for scalable microgrid systems.

Configurable control strategies

Flexible operating strategies accommodate different microgrid requirements.

Applications

Off-grid mining	Island microgrids	Remote farms	Rural electrification

Product Range



MPX0030 / MPX0050

30 / 50 kW



MPX0100 / MPX0150

100 / 150 kW



MPX0250

250 kW



MPX0500

500 kW

Technical Specifications

MPX Microgrid Series · Three-phase 400 V

Parameter	MPX0030	MPX0050	MPX0100	MPX0150	MPX0250	MPX0500
AC Output — Grid-Connected						
Maximum output power (kW)	33	55	110	165	275	550
Rated output power (kW)	30	50	100	150	250	500
Rated voltage (V)	400					
Voltage range (V)	320–460					
Rated current (A)	43	72	144	216	361	722
Rated frequency (Hz)	50 / 60					
Frequency range (Hz)	45–55 / 55–65					
Current distortion (THDi)	<3%					
Power factor	1 leading to 1 lagging (configurable)					
Grid connection	3W + N + PE					
AC Output — Off-Grid						
Maximum output power (kW)	33	55	110	165	275	550
Rated output power (kW)	30	50	100	150	250	500
Rated voltage (V)	400					
Rated current (A)	43	72	144	216	361	722
Voltage distortion (THDu)	≤1% with linear loads; ≤5% with nonlinear loads					
Rated frequency (Hz)	50 / 60					
Overload capacity	110% continuous; 120% for 1 minute					
PV Input						
Maximum PV input voltage (V)	1,000					
Maximum PV power (kW)	82.5	82.5	165 / 247.5	165 / 247.5 / 330	300 / 412.5	600 / 742.5 / 825
Number of MPPT modules	1	1	2 / 3	2 / 3 / 4	4 / 5	8 / 9 / 10
MPPT voltage range (V)	250–1,000					
Battery						
Battery voltage range (V)	250–850	320–850	420–950	420–950	420–950	500–950
Maximum charging power (kW)	33	55	110	165	275	550
General Data						
Dimensions W × D × H (mm)	800 × 800 × 1,900	800 × 800 × 1,900	1,200 × 800 × 2,050	1,200 × 800 × 2,050	(600 × 720 × 2,050) × 1 + (1,200 × 800 × 2,050)	(600 × 720 × 2,050) × 2 + (1,600 × 1,050 × 2,050)
Weight (kg)	620	720	1,120 / 1,150	1,250 / 1,280 / 1,310	1,950 / 1,980	3,205 / 3,235 / 3,265
Operating temperature (°C)	–30 to +55					
Relative humidity	0–95%, non-condensing					
Ingress protection	IP20					
Noise emission (dB)	<70					
Operating altitude	Derating required above 3,000 m					
Cooling method	Air cooling					
Display and Communication						
Display	LCD touchscreen					
BMS communication	RS485, CAN					
EMS communication	RS485, TCP/IP					
Standards and certifications*	EN 62109-1/-2, EN 62477-1, EN 61000-6-2/-6-4, NRS 097-2-1:2024, ASGC					

*Standards and certifications are reproduced as listed in the source brochure. Technical data and product images are based on the MPX Microgrid Series 400 V specification, version 1.6. Slash-separated values indicate the configurations listed in that specification. Confirm the selected configuration and applicable certification documentation before ordering.