



Power Reinvented

The Future of Solar Energy



155000+
Products Delivered in 2024

540+
MW Inverters Sold in 2024

250+
Dealers Across Pakistan

50+
Service Centers

TABLE OF CONTENTS

01

Introduction

A brief introduction to our company and our commitment to innovation in solar energy.

02

02

Hybrid Inverters

Details on our IP65-rated inverters, including specifications, features, and an image of the product.

03

03

Batteries

Information about our Solar Batteries, including performance details and key features.

21

04

OnGrid Inverters

Technical specifications and features of our IP66-rated inverters, designed for enhanced protection.

25

05

VFDs

Specifications and features of our VFDs, which optimize motor efficiency and performance.

33

06

Service Centers

A list of our service centers where customers can get assistance and repairs.

35

07

Technical Support

Help & Troubleshooting for Our Products, Details on how to get expert support for any technical issues.

36

Fronus Solar Energy

Empowering Your Dreams

With us, you step into a world where sunlight, technology, and innovation converge. We are the architects of a solar-powered future. Our story is one of commitment, dedication, and progress. We strive to bring the most cost-effective and latest technology solar solutions to our customers.

Now, with our state-of-the-art inverter manufacturing and lithium battery manufacturing factory, we are redefining the industry by producing high-quality, efficient, and sustainable energy solutions.

Empowering **TOMORROW**

At Fronus Solar Energy, we envision a world where clean energy is accessible to all. Our mission is to lead this transformation and inspire change. Our cutting-edge solar solutions, inverters, and lithium batteries are redefining possibilities and reshaping the energy landscape. We have dedicated our services to democratizing sustainable power, breaking down costs, and eliminating technological barriers for widespread adoption.

At Fronus Solar Energy, our journey is an ode to unwavering commitment, a symphony composed by the artisans of sustainability. Like skilled craftsmen, we sculpt and refine each facet of our solar solutions, now including cutting-edge inverters and lithium batteries, ensuring reliability, affordability, and innovation.

Empowering **DREAM**

Our purpose is to provide reliable and sustainable solar solutions that empower communities and nurture a healthier planet. Join us on a journey to redefine energy and illuminate the future. Through the intricate dance of technology and nature, we orchestrate a symphony of progress that resonates far beyond the confines of wires and cells.

Amidst the tapestry of our narrative, the thread of excellence is woven with unyielding determination. We are not content with mediocrity; instead, we stride forward relentlessly, with an insatiable desire to push the boundaries of what is possible.

Pakistan's First **15kW** Inverter

X3 GENKI

IP65 10kW / 15kW Three Phase Inverter

Pakistan's only inverter with

30KW MPPT

15kW for Load & 15kW for
Battery Charging



Unbalanced Output

Can Support Unbalanced Output



200% Overload Tolerance

Can Tolerate 200% Overload For 10 Sec



3ms Switch Over Time

Single unit UPS-level switchover time 3ms



Stand Alone Inverter

Can Work With & Without Battery



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X3-GENKI-10kW	X3-GENKI-15kW
Max. PV Array [Wp]	20000	30000
Max. PV Input Power [W]	20000	30000
Max. PV Input Voltage [V]		1000
Start Output Voltage [V]		150
Nominal Input Voltage [V]		640
MPPT Voltage Range [V]		160 ~ 950
No. of MPPT / Strings per MPPT	2(2 / 1)	2(2 / 2)
Max. Input Current [A]	36 / 18	36 / 36
Max. Short Circuit Current [A]	50 / 25	50 / 50
BATTERY DATA		
Battery Type	Lithium / Lead-Acid	
Battery Voltage Range [V]	40 ~ 60	
Nominal Battery Voltage [V]	48	
Max. Charging Voltage [V]	≤60(Adjustable)	
Max. Charging / Discharging Current [A]	250	300
Charging Strategy for Li-ion Battery	Self Adaption to BMS	
Charging Strategy for Lead Acid Battery	3 Stages Curves	
Temperature Sensor	Yes	
EPS OUTPUT (WITH BATTERY)		
Nominal Output Power [W]	10000	15000
Peak Apparent Power ¹ sun+BAT [W, s]	2 times of rated power , 10	
Nominal AC Output Frequency [Hz]	50 / 60	
Nominal AC Output Current [A]	14.50	21.70
Nominal AC Voltage	220 / 380, 230/400	
Switch Time	< 6ms	
THDv (linear load) [%]	< 2%	
AC INPUT(GEN)		
Nominal GEN Voltage, Frequency	220 / 380, 230 / 400 a.c. V, 50/60Hz	
Nominal GEN Input Power	10000W	15000W
Nominal GEN Input Current	29A	
SYSTEM DATA		
MPPT Efficiency [%]	> 99.9	
Max. Efficiency [%]	97.6	
Euro. Efficiency [%]	97.0	
PROTECTION DECIVE		
PV String Input Reverse Polarity Protection	Yes	
Insulation Resistor Detection	Yes	
Residual Current Monitoring Unit	Yes	
Output Over Current Protection	Yes	
Output Short Protection	Yes	
Output Over Voltage Protection	Yes	
Surge Protection	AC Type II / DC Type II	
Battery Terminal Temp Protection	Yes	
ENVIRONMENT LIMIT		
Degree of Protection	IP65	
Operating Temperature Range [°C]	-25 ~ +60 (derating above +45)	
Relative Humidity [%]	0 ~ 100%	
Max. Operation Altitude [m]	< 3000	
Storage Temperature range [°C]	-25 ~ +70	
Noise Emission(typical) [dB]	< 55	
GENERAL		
Dimensions(WxHxD) [mm]	520 x 705 x 258	
Net Weight [kg]	44.6	
Cooling Concept	FAN	
Topology	Transformerless for PV Side / HF for Battery Side	
HMI / Communication Interfaces	LED + LCD / CAN, RS485, WiFi / LAN / 4G(Optional) / NTC	
Mounting	Wall Bracket	
STANDARD		
Safety	EN IEC 62109-1 / -2, EN IEC62040	

Next Generation Inverter **X1 GENKI**

IP65 - Single Phase 8kW / 10kW / 12kW

Pakistan's only inverter with

200%

PV OVERSIZING

100% for Load & 100% for
Battery Charging



IP65 Protection

Protect Inverter From Water &
Dust Particles



200% Overload Tolerance

Can Tolerate 200% Overload For 10 Sec



6ms Switch Over Time

Single unit UPS-level switchover time 3ms



Stand Alone Inverter

Can Work With & Without Battery



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X1-GENKI-8kW	X1-GENKI-10kW	X1-GENKI-12kW
Max. PV Array [Wp]	16000	20000	24000
Max. PV Input Power [Wp]	16000	20000	24000
Max. PV Input Voltage [V]	600		
Start Output Voltage [V]	110		
Nominal Input Voltage [V]	360		
Operating Voltage Range [V]	50 ~ 550		
MPPT Voltage Range [V]	50 ~ 550		
No. of MPPT / Strings per MPPT	2(2 / 2)	2(2 / 2)	3(2 / 2 / 2)
Max. Input Current [A]	32 / 32	32 / 32	32 / 32 / 32
Max. Short Circuit Current [A]	40 / 40	40 / 40	40 / 40 / 40
BATTERY DATA			
Battery Type	Lithium / Lead-Acid		
Battery Voltage Range [V]	40 ~ 60		
Nominal Battery Voltage [V]	48		
Max. Charging / Discharging Current [A]	190	220	250
EPS OUTPUT (WITH BATTERY)			
Nominal Output Apparent Power [VA]	8000	10000	12000
Peak Apparent Power [VA , s] ^③	16000 , 10	20000 , 10	24000 , 10
Nominal Output Current [A]	34.8	43.5	52.2
Nominal Voltage [V], Frequency [Hz]	230V, 50 / 60		
Switch Time [ms]	< 4		
THDv (linear load) [%]	< 2		
LRA [A]	125		
SYSTEM DATA			
MPPT Efficiency [%]	> 99.9		
Max. Efficiency [%]	97.6		
Euro. Efficiency [%]	97.0		
ENVIRONMENT LIMIT			
Degree of Protection	IP65		
Operating Temperature Range [°C]	-25 ~ +60 (derating above +45)		
Relative Humidity [%]	4 ~ 100%		
Max. Operation Altitude [m]	< 3000		
Storage Temperature range [°C]	-25 ~ +70		
Noise Emission(typical) [dB]	< 45		
GENERAL			
Dimensions(WxHxD) [mm]	651 x 462 x 280		
Net Weight [kg]	38.5		
Cooling Concept	Smart Cooling		
Topology	Transformerless for PV Side / HF for Battery Side		
HMI / Communication Interfaces	LED + LCD / CAN, RS485, CT, Meter, USB, NTC, WiFi+Lan		
Warranty [years]	5		
STANDARD			
Safety	EN IEC 62109-1 / -2		

Next Generation Inverter

X1 GENKI

IP65 - Single Phase 6kW

IP65

PROTECTION

Protect Inverter From Water & Dust Particles



IP65 Protection

Protect Inverter From Water & Dust Particles



200% Overload Tolerance

Can Tolerate 200% Overload For 10 Sec



3.6ms Switch Over Time

Single unit UPS-level switchover time 3.6ms



Remote Access

Remote Access & Fault Diagnostics



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X1-GENKi-6kW
Max. PV Array Input Power [Wp]	12000
Max. PV Input Power(PV1+PV2) [Wp]	9000
Max. PV Input Voltage [V]	550
Start Output Voltage [V]	110
Nominal Input Voltage [V]	360
MPPT Voltage Range [V]	80 ~ 520
No. of MPPT / Strings per MPPT	2 / 2
Max. Input Current [A]	16 / 16
Max. Short Circuit Current [A]	20
BATTERY DATA	
Battery Type	Lithium / Lead-Acid
Battery Voltage Range [V]	40 ~ 60
Nominal Battery Voltage [V]	48
Max. Charging / Discharging Current [A]	120
EPS OUTPUT (WITH BATTERY)	
Nominal Output Apparent Power [VA]	6000
Peak Apparent Power [VA , s] ^③	12000 , 10
Nominal Output Current [A]	26.1
Nominal Voltage [V], Frequency [Hz]	230V, 50 / 60
Switch Time [ms]	< 4
SYSTEM DATA	
MPPT Efficiency [%]	> 99.9
Max. Efficiency [%]	97.6
Euro. Efficiency [%]	97.0
ENVIRONMENT LIMIT	
Degree of Protection	IP65
Operating Temperature Range [°C]	-25 ~ +60 (derating above +45)
Relative Humidity [%]	4 ~ 100%
Max. Operation Altitude [m]	< 3000
Storage Temperature range [°C]	-25 ~ +70
Noise Emission(typical) [dB]	< 45
GENERAL	
Dimensions(WxHxD) [mm]	397 x 480 x 201
Net Weight [kg]	17.3
Cooling Concept	Smart Cooling
Topology	Transformerless for PV Side / HF for Battery Side
HMI / Communication Interfaces	LED + LCD / CAN, RS485, CT, Meter, USB, NTC, WiFi+Lan
Warranty [years]	5
STANDARD	
Safety	EN IEC 62109-1 / -2

INFINEON *reborn* PV12200

IP21 10.2 Kilowatts Hybrid Inverter

SMART APP CONTROL

Smart Control & Monitoring
via Fronus App



Wifi Controller

Smart Remote Monitoring Enabled



160A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Grid-Tie Operation	
Maximum PV Input Power	12200W	Nominal Output Voltage	220/230/240VAC
Rated Output Power	10200W/10200VA	Feed-In Grid Voltage Range	195~253VAC
Output Voltage Waveform	Pure Sine Wave	Feed-In Grid Frequency Range	49~51±1Hz / 59~61±1Hz
Output Voltage Regulation	230VAC ±5%	Nominal Output Current	44.3A
Output Frequency	50Hz	Power Factor Range	>0.99
Peak Efficiency	93%	Maximum Conversion Efficiency (DC/AC)	98%
Overload Protection	3s@≥150% Load 5s@101%~150 Load	Line Mode	
Surge Capacity	20400W For 5s	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Nominal DC Input Voltage	48Vdc	Nominal Input Voltage	230Vac
Cold Start Voltage	46.0Vdc	Low Loss Voltage	170Vac ±7V (UPS) 90Vac ±7V (Appliances)
High DC Recovery Voltage	62Vdc	Low Loss Return Voltage	180Vac ±7V (UPS) 100Vac ±7V (Appliances)
High DC Cut-Off Voltage	63Vdc	High Loss Voltage	280Vac±7V
No Load Power Consumption	75W	High Loss Return Voltage	270Vac±7V
Two Load Output Power		Maximum AC Input Voltage	300Vac
Full Load	10200W	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Maximum Main Load	10200W	Low Loss Frequency	40±1Hz
Maximum Second Load Upto(Battery Mode)	3400W	Low Loss Return Frequency	42±1Hz
Main Load Cutt Off Voltage	52VDC	High Loss Frequency	65±1Hz
Main Load Return Voltage	54VDC	High Loss Return Frequency	63±1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	140A	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	General Specs	
	AGM/Gel Battery		
Floating Charging Voltage	54Vdc	Safety Certification	CE
MPPT Solar Charging Mode		Operating Temperature Range	-10°C to 50°C
		Storage Temperature	-15°C to 60°C
Maximum PV Array Power	PV1 Channel: 5400W PV2 Channel: 5400W	Humidity	5% to 95% Relative Humidity (Non-Condensing)
IMax. PV	PV1 Channel: 18A PV2 Channel: 18A	Dimensions (D*W*H) mm	530 x 390 x 130
Nominal PV Voltage	360Vdc	Net Weight (KG)	14.5
PV Array MPPT Voltage Range	90Vdc~450Vdc		
Max PV Array Open Circuit Voltage	500Vdc		
Maximum Charging Current	160A		

INFINEON *reborn* PV9200

IP21 8.2 Kilowatts Hybrid Inverter

SMART APP CONTROL

Smart Control & Monitoring
via Fronus App



Wifi Controller

Smart Remote Monitoring Enabled



160A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Grid-Tie Operation	
Maximum PV Input Power	9200W	Nominal Output Voltage	220/230/240VAC
Rated Output Power	8200W/8200VA	Feed-In Grid Voltage Range	195~253VAC
Output Voltage Waveform	Pure Sine Wave	Feed-In Grid Frequency Range	49~51±1Hz / 59~61±1Hz
Output Voltage Regulation	230VAC ±5%	Nominal Output Current	35.6A
Output Frequency	50Hz	Power Factor Range	>0.99
Peak Efficiency	93%	Maximum Conversion Efficiency (DC/AC)	98%
Overload Protection	3s@≥150% Load 5s@101%~150 Load	Line Mode	
Surge Capacity	16400W For 5s	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Nominal DC Input Voltage	48Vdc	Nominal Input Voltage	230Vac
Cold Start Voltage	46.0Vdc	Low Loss Voltage	170Vac ±7V (UPS) 90Vac ±7V (Appliances)
High DC Recovery Voltage	62Vdc	Low Loss Return Voltage	180Vac ±7V (UPS) 100Vac ±7V (Appliances)
High DC Cut-Off Voltage	63Vdc	High Loss Voltage	280Vac±7V
No Load Power Consumption	70W	High Loss Return Voltage	270Vac±7V
Two Load Output Power		Maximum AC Input Voltage	300Vac
Full Load	8200W	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Maximum Main Load	8200W	Low Loss Frequency	40±1Hz
Maximum Second Load Upto(Battery Mode)	2733W	Low Loss Return Frequency	42±1Hz
Main Load Cutt Off Voltage	52VDC	High Loss Frequency	65±1Hz
Main Load Return Voltage	54VDC	High Loss Return Frequency	63±1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	100A	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	General Specs	
	AGM/Gel Battery	Safety Certification	CE
Floating Charging Voltage	54Vdc	Operating Temperature Range	-10°C to 50°C
MPPT Solar Charging Mode		Storage Temperature	-15°C to 60°C
Maximum PV Array Power	9200W	Humidity	5% to 95% Relative Humidity (Non-Condensing)
Nominal PV Voltage	360Vdc	Dimensions (D*W*H) mm	500 x 390 x 130
PV Array MPPT Voltage Range	90Vdc~450Vdc	Net Weight (KG)	14.2
Max PV Array Open Circuit Voltage	500Vdc		
Maximum Charging Current	160A		

INFINEON *reborn* **ECO 7200**

IP21 6.2 Kilowatts Hybrid Inverter

UPGRADED MPPT CHIPSET

Upgraded to Latest Chipset that
is more Efficient and Reliable



Wifi Controller

Smart Remote Monitoring Enabled



120A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Grid-Tie Operation	
Maximum PV Input Power	7200W	Nominal Output Voltage	220/230/240VAC
Rated Output Power	6200W/6200VA	Feed-In Grid Voltage Range	195~253VAC
Output Voltage Waveform	Pure Sine Wave	Feed-In Grid Frequency Range	49~51±1Hz / 59~61±1Hz
Output Voltage Regulation	230VAC ±5%	Nominal Output Current	26.9A
Output Frequency	50Hz	Power Factor Range	>99
Peak Efficiency	93%	Maximum Conversion Efficiency (DC/AC)	97%
Overload Protection	3s@≥150% Load 5s@101%~150 Load	Line Mode	
Surge Capacity	12400W For 5s	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Nominal DC Input Voltage	48Vdc	Nominal Input Voltage	230Vac
Cold Start Voltage	46.0Vdc	Low Loss Voltage	170Vac ±7V (UPS) 90Vac ±7V (Appliances)
High DC Recovery Voltage	62Vdc	Low Loss Return Voltage	180Vac ±7V (UPS) 100Vac ±7V (Appliances)
High DC Cut-Off Voltage	63Vdc	High Loss Voltage	280Vac±7V
No Load Power Consumption	50W	High Loss Return Voltage	270Vac±7V
Two Load Output Power		Maximum AC Input Voltage	300Vac
Full Load	6200W	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Maximum Main Load	6200W	Low Loss Frequency	40±1Hz
Maximum Second Load Upto(Battery Mode)	2066W	Low Loss Return Frequency	42±1Hz
Main Load Cutt Off Voltage	52VDC	High Loss Frequency	65±1Hz
Main Load Return Voltage	54VDC	High Loss Return Frequency	63±1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	100A (@V _{IP} = 230Vac)	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	General Specs	
	AGM/Gel Battery	Safety Certification	CE
Floating Charging Voltage	54Vdc	Operating Temperature Range	-10°C to 50°C
MPPT Solar Charging Mode		Storage Temperature	-15°C to 60°C
Maximum PV Array Power	7200W	Humidity	5% to 95% Relative Humidity (Non-Condensing)
Nominal PV Voltage	360Vdc	Dimensions (D*W*H) mm	450*350*110
PV Array MPPT Voltage Range	60Vdc~450Vdc	Net Weight (KG)	10.0
Max PV Array Open Circuit Voltage	500Vdc		
Maximum Charging Current	120A		

INFINEON *reborn* ECO 5200

IP21 4.2 Kilowatts Hybrid Inverter

UPGRADED MPPT CHIPSET

Upgraded to Latest Chipset that
is more Efficient and Reliable



Wifi Controller

Smart Remote Monitoring Enabled



120A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Grid-Tie Operation	
Maximum PV Input Power	5200W	Nominal Output Voltage	220/230/240VAC
Rated Output Power	4200W/4200VA	Feed-In Grid Voltage Range	195~253VAC
Output Voltage Waveform	Pure Sine Wave	Feed-In Grid Frequency Range	49~51±1Hz / 59~61±1Hz
Output Voltage Regulation	230VAC ±5%	Nominal Output Current	15.7A
Output Frequency	50Hz	Power Factor Range	>99
Peak Efficiency	93%	Maximum Conversion Efficiency (DC/AC)	97%
Overload Protection	3s@≥150% Load 5s@101%~150 Load	Line Mode	
Surge Capacity	8400W For 5s	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Nominal DC Input Voltage	24Vdc	Nominal Input Voltage	230Vac
Cold Start Voltage	23.0Vdc	Low Loss Voltage	170Vac ±7V (UPS) 90Vac ±7V (Appliances)
High DC Recovery Voltage	32Vdc	Low Loss Return Voltage	180Vac ±7V (UPS) 100Vac ±7V (Appliances)
High DC Cut-Off Voltage	33Vdc	High Loss Voltage	280Vac±7V
No Load Power Consumption	30W	High Loss Return Voltage	270Vac±7V
Two Load Output Power		Maximum AC Input Voltage	300Vac
Full Load	4200W	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Maximum Main Load	4200W	Low Loss Frequency	40±1Hz
Maximum Second Load Upto(Battery Mode)	1386W	Low Loss Return Frequency	42±1Hz
Main Load Cutt Off Voltage	24VDC	High Loss Frequency	65±1Hz
Main Load Return Voltage	27VDC	High Loss Return Frequency	63±1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	100A (@V _{IP} = 230Vac)	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	General Specs	
	AGM/Gel Battery	Safety Certification	CE
Floating Charging Voltage	27Vdc	Operating Temperature Range	-10°C to 50°C
MPPT Solar Charging Mode		Storage Temperature	-15°C to 60°C
Maximum PV Array Power	5200W	Humidity	5% to 95% Relative Humidity (Non-Condensing)
Nominal PV Voltage	240Vdc	Dimensions (D*W*H) mm	420*350*110
PV Array MPPT Voltage Range	60Vdc~450Vdc	Net Weight (KG)	9.0
Max PV Array Open Circuit Voltage	500Vdc		
Maximum Charging Current	120A		

INFINEON *reborn* NML 3200

IP21 2.6 Kilowatts Hybrid Inverter

SMART ANTI DUST KIT

Protect Inverter From
Dust Particles



Wifi Controller

Smart Remote Monitoring Enabled



120A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Line Mode	
Rated Output Power	3200VA/3000W	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Output Voltage Waveform	Pure Sine Wave	Nominal Input Voltage	230Vac
Output Voltage Regulation	230VAC \pm 5%	Low Loss Voltage	170Vac \pm 7V (UPS) 90Vac \pm 7V (Appliances)
Output Frequency	50Hz	Low Loss Return Voltage	180Vac \pm 7V (UPS) 100Vac \pm 7V (Appliances)
Peak Efficiency	94%	High Loss Voltage	280Vac \pm 7V
Overload Protection	5s@ \geq 150% Load 10s@100%~150 Load	High Loss Return Voltage	270Vac \pm 7V
Surge Capacity	2x Rated Power For 5s	Maximum AC Input Voltage	280Vac
Nominal DC Input Voltage	24Vdc	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Cold Start Voltage	23.0Vdc	Low Loss Frequency	46 \pm 1Hz
High DC Recovery Voltage	29Vdc	Low Loss Return Frequency	47 \pm 1Hz
High DC Cut-Off Voltage	30Vdc	High Loss Frequency	54 \pm 1Hz
No Load Power Consumption	<35W	High Loss Return Frequency	53 \pm 1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	60A (@V _{TP} = 230Vac)	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	29.2	General Specs
	AGM/Gel Battery	28.2	
Floating Charging Voltage	27Vdc	Safety Certification	CE
MPPT Solar Charging Mode		Operating Temperature Range	-10°C to 50°C
Maximum PV Array Power	3000W	Storage Temperature	-15°C to 60°C
Nominal PV Voltage	240Vdc	Humidity	5% to 95% Relative Humidity (Non-Condensing)
PV Array MPPT Voltage Range	30Vdc~400Vdc	Dimensions (D*W*H) mm	390*270*100
Max PV Array Open Circuit Voltage	400Vdc	Net Weight (KG)	5.4
Maximum Charging Current	80A		

INFINEON *reborn* **NMML 2200**

IP21 1.6 Kilowatts Hybrid Inverter

SMART ANTI DUST KIT

Protect Inverter From
Dust Particles



Wifi Controller

Smart Remote Monitoring Enabled



120A Max PV Charging

High-Efficiency Solar Charging System



Pure Sine Wave

Stable and Reliable Power Output



Li-ion Battery Compatible

Fully Compatible with Li-ion Batteries



SCAN QR CODE

For Video Tutorial

DATA SHEET

Inverter Mode		Line Mode	
Rated Output Power	2000VA/1500W	Input Voltage Waveform	Sinusoidal (Utility or Generator)
Output Voltage Waveform	Pure Sine Wave	Nominal Input Voltage	230Vac
Output Voltage Regulation	230VAC \pm 5%	Low Loss Voltage	170Vac \pm 7V (UPS) 90Vac \pm 7V (Appliances)
Output Frequency	50Hz	Low Loss Return Voltage	180Vac \pm 7V (UPS) 100Vac \pm 7V (Appliances)
Peak Efficiency	94%	High Loss Voltage	280Vac \pm 7V
Overload Protection	5s@ \geq 150% Load 10s@100%~150 Load	High Loss Return Voltage	270Vac \pm 7V
Surge Capacity	2x Rated Power For 5s	Maximum AC Input Voltage	280Vac
Nominal DC Input Voltage	12Vdc	Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Cold Start Voltage	11.5Vdc	Low Loss Frequency	46 \pm 1Hz
High DC Recovery Voltage	14Vdc	Low Loss Return Frequency	47 \pm 1Hz
High DC Cut-Off Voltage	16Vdc	High Loss Frequency	54 \pm 1Hz
No Load Power Consumption	<25W	High Loss Return Frequency	53 \pm 1Hz
Utility Charging Mode		Output Short Circuit Protection	Circuit Breaker
Charging Algorithm	3-Step	Efficiency (Line Mode)	>95% (Rated R Load, Battery Full Charged)
AC Charging Current (Maximum)	60A (@V _{TP} = 230Vac)	Transfer Time	10ms For UPS 20ms For Appliance
Bulk Charging Voltage	Flooded Battery	14.6	General Specs
	AGM/Gel Battery	14.1	
Floating Charging Voltage	13.5Vdc	Safety Certification	CE
MPPT Solar Charging Mode		Operating Temperature Range	-10°C to 50°C
Maximum PV Array Power	2000W	Storage Temperature	-15°C to 60°C
Nominal PV Voltage	240Vdc	Humidity	5% to 95% Relative Humidity (Non-Condensing)
PV Array MPPT Voltage Range	30Vdc~400Vdc	Dimensions (D*W*H) mm	36*270*100
Max PV Array Open Circuit Voltage	400Vdc	Net Weight (KG)	4.4
Maximum Charging Current	80A		

Lithium-ion Battery Module **TP-L053**

100Ah 48V - 5.3kWh

IP65

PROTECTION

Protect Battery From Water & Dust Particles



120A

Discharge Current



100A

Charge Current



SOC Balance Function

High SOC And Accuracy



6000 Life Cycles

6000+ Life Cycles of Battery



SCAN QR CODE

For Video Tutorial

DATA SHEET

System Parameters

TP-LD53

Number of Module Series	1
Nominal Capacity [kWh]	5.3
Usable Capacity (90% DOD) ^① [kWh]	4.7
Max. Output Current [A] ^②	100
Peak Discharge Current [A, s]	200, 10

General Information

Weight [kg]	48.5
Dimension (L x W x H) [mm]	645 x 150 x 430
Nominal Voltage [V]	51.2
Operating Voltage Range [V]	45 to 58
Battery Type	Lithium Iron Phosphate
Communication Port	CAN / RS485
Operation Temperature [°C]	0 to 53 (charge) ; -20 to 53 (discharge)
Storage Temperature [°C]	30 to 50 (6 months) ; -20 to 30 (12 months)
Ingress Protection	IP65
Colling concept	Natural
Relative humidity [%]	5 to 95 (Non-condensing)
Altitude [m]	3000
Warranty [years]	5
Cycle Life ^③ [90% DOD]	> 6000
Certification	IEC62619, IEC62040, CE, UN38.3

Lithium-ion Battery Module

LR-51

51.2V

5.12kWh

Pakistan's only Battery with

135A
CONSTANT
Charge / Discharge Current



IP40 Protection
Water & Dust Protection



6000 Life Cycles
6000+ Life Cycles of Battery



Built-in Wifi
Wifi Controller For Remote Access



Remote Updates
Can Update Remotely



Touch Screen LED
User Friendly LED



SCAN QR CODE

For Video Tutorial

DATA SHEET

Battery type	LFP
Battery component	1P16S
Nominal voltage	51.2 V
Operating voltage range	44.8 ~ 58.4 V
Rated capacity	100 Ah
Nominal energy	5.12 kWh
Recommended current	100 A
Max. Current	Charge: 135 A, Discharge: 135 A
Peak current	200 A (10s, 25°C)
Cycle life	>6000 Cycles
Communication interfaces	CAN / RS485
HMI	3.5 inch LCD touchscreen + Status Light + SOC power indicators
Operation temperature	Charge: 0 ~ 55°C, Discharge: -20 ~ 55°C
Storage temperature	-20 ~ 30°C (12 months), 30 ~ 60°C (6 months)
Single string quantity	16 pcs
Dimension (W x H x D)	335 x 626 x 169 mm
Weight	43±2 kg
Installation type	Wall / Floor / Rack mounting
Enclosure protection	IP40 (Water & Dust Protection)
Cooling concept	Natural cooling
Humidity	20 ~ 85% RH (non-condensing)
Altitude	<3000 m
Certification	IEC 62477, IEC 62619, IEC 60730, IEC 63056, IEC 61000, UN38.3
Warranty	5 Years

On-Grid Inverter

X3 MIC G2

IP66 5KW / 10KW / 15KW

EFFICIENCY REDEFINED

Seamless Energy Conversion
for a Brighter Tomorrow!



IP66 Protection

Protect Inverter From Water &
Dust Particles



200% PV Oversizing

Can Install 200% Solar Panels



Heat Dissipation

Prevent Inverter from Overheating



Upto 98.3% Efficiency

Maximum Efficiency



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X3-MIC-5kW-G2	X3-MIC-10kW-G2	X3-MIC-15kW-G2
Max. PV array input power [Wp]	10000	20000	30000
Max. PV input voltage [V]	1000	1000	1000
Startup voltage [V]	150	150	150
Nominal input voltage [V]	640	640	640
MPP tracker voltage range [V]	120~980	120~980	120~980
No. of MPP trackers/Strings per MPP tracker	2(1/1)	2(1/1)	2(2/1)
Max. PV input current [A]	16/16	16/16	32/16
Isc PV Array Short Circuit current [A]	20/20	20/20	40/20
AC OUTPUT			
Rated AC output power [W]	5000	10000	15000
Rated AC output current [A]*	7.6/7.3	15.2/14.5	22.7/21.8
Max. AC output apparent power [VA]	5500	10000	15000
Max. AC output current [A]	8.0	15.2	22.7
Nominal AC voltage/AC voltage range [V]**	220/380V, 230/400V, 3/(N)/PE; (95-285V)*		
Nominal AC frequency/AC frequency range [Hz]**	50/60; ±5		
Power Factor range	0.8 leading-0.8 lagging		
THDi (Rated power) [%]	<3		
SYSTEM DATA			
Max. efficiency [%]	98.3		
Euro efficiency [%]	97.8		
Standby consumption (night) [W]	<3		
Ingress protection	IP66		
Operating ambient temperature range [°C]	-30~+60(Derating above 45)		
Max. operation altitude [m]	4000(Derating above 3000)		
Relative humidity [%]	0~100		
Typical noise emission [dB]	<30	<45	<50
Storage temperature [°C]	-30~+60		
Dimensions (W×H×D) [mm]	342*434*144.5	342*434*156	342*434*156
Weight [kg]	15.5	17	18
Cooling concept	Natural cooling	Smart fan cooling	Smart fan cooling
Communication interfaces	USB/RS485/DRM, Optional: Meter		
Optional monitoring dongle	Pocket WiFi / LAN / 4G		
Display	2 x LED + LCD(16 x 2) / APP		
PROTECTION			
Over/under voltage protection	YES		
DC isolation protection	YES		
DC reverse protection	YES		
Grid monitoring	YES		
DC injection monitoring	YES		
Back feed current monitoring	YES		
Residual current detection	YES		
Anti-islanding protection	YES		
Over temperature protection	YES		
SPD (DC/AC)	Type II / Type II (Optional)		
Arc-fault circuit interrupter(AFCI)	Optional		
AC auxiliary power supply(APS)	Optional		
STANDARD			
Safety	IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004		
EMC	IEC/EN 61000; NB/T 32004		
Certification	VDE4105, EN 50549, AS 4777.2, VDE4105, G98/G99, IEC 61727, IEC 62116, IEC 61683, IEC 60068, EN 50530, NB/T 32004		

On-Grid Inverter

X3 PRO G2

IP66 20KW / 25KW / 30KW

MAXIMUM POWER

Smart Energy Solutions
for a Brighter Future!



IP66 Protection

Protect Inverter From Water &
Dust Particles



150% PV Oversizing

Can Install 200% Solar Panels



Heat Dissipation

Prevent Inverter from Overheating



Upto 98.5% Efficiency

Maximum Efficiency



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X3-PRO-20kW-G2	X3-PRO-25kW-G2	X3-PRO-30kW-G2
Max. PV array input power [Wp]	30000	37500	45000
Max. PV input voltage [V]	1100	1100	1100
Start startup voltage [V]	200	200	200
Nominal input voltage [V]	650	650	650
MPP tracker voltage range [V]		160~980	
No. of MPP trackers	2	3	3
Strings per MPP tracker	2	2	2
Max. PV input current [A]	32/32	32/32/32	32/32/32
Isc PV Array Short Circuit current [A]	40/40	40/40/40	40/40/40
AC OUTPUT			
Rated AC output power [kW]	20000	25000	30000 ^②
Rated AC output current [A]*	30.3/29	37.9/36.3	45.5/43.5
Max. AC output apparent power [VA]	22000	27500	30000 ^②
Max. AC output current [A]	33.6	41.8	45.5
Nominal AC voltage/AC voltage range [V]**		220/380V, 230/400V, 3/N/PE, 3/PE; 95-285V	
Nominal AC frequency/AC frequency range [Hz]**		50/60; ±5	
Power Factor range		0.8 leading ~ 0.8 lagging	
THDi (Rated power) [%]		<3	
SYSTEM DATA			
Max. efficiency [%]	98.30	98.50	98.50
Euro. efficiency [%]	97.80	98.00	98.00
Standby consumption (Night) [W]		<3	
Ingress protection		IP66	
Operating ambient temperature range [°C]		-30~+60 (Derating above 45)	
Max. operation altitude [m]		4000 (Derating above 3000)	
Relative humidity [%]		0~100	
Typical noise emission [dB]	<55	<55	<58
Storage temperature [°C]		-30~+60	
Dimensions (W×H×D) [mm]		482×417×181	
Weight [kg]		28	
Cooling concept		Smart fan cooling	
Communication interfaces		USB / RS485 / DRM, Optional: Meter	
Optional monitoring dongle		Pocket WiFi/LAN/4G	
Display		2 x LED + LCD (16 x 2) / APP	
PROTECTION			
Over/under voltage protection		YES	
DC isolation protection		YES	
Grid monitoring		YES	
DC injection monitoring		YES	
Residual current detection		YES	
Anti-islanding protection		YES	
Over Temp protection		YES	
SPD (DC/AC)		Type II / Type II	
AC auxiliary power supply (APS)		Optional	
Arc-fault circuit interrupter (AFCI)		Optional	
STANDARD			
Safety		IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004	
EMC		IEC/EN 61000; NB/T 32004	
Certification		VDE4105; EN 50549; AS 4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004	

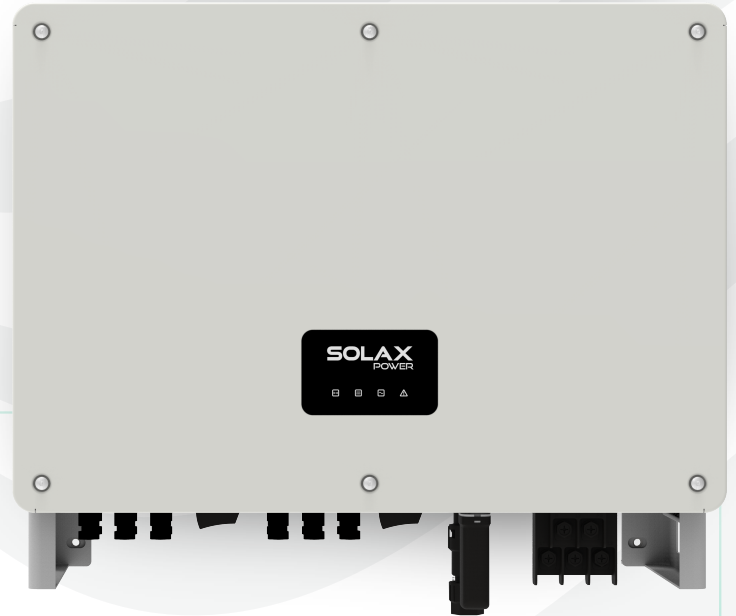
On-Grid Inverter

X3 MEGA G2

IP66 40KW / 50KW / 60KW

MAXIMUM POWER

Smart Energy Solutions
for a Brighter Future!



IP66 Protection

Protect Inverter From Water & Dust Particles



150% PV Oversizing

Can Install 200% Solar Panels



Heat Dissipation

Prevent Inverter from Overheating



Upto 98.4% Efficiency

Maximum Efficiency



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X3-MGA-40K-G2	X3-MGA-50K-G2	X3-MGA-60K-G2
Max. PV array input power [kWp]	60	75	90
Max. PV input voltage [V]		1100	
Startup voltage [V]		200	
Nominal input voltage [V]		600	
MPP tracker voltage range [V]		180~1000	
No. of MPP trackers	4	5	6
Strings per MPP tracker	2	2	2
Max. PV input current per MPPT [A]		32	
Isc PV Array Short Circuit current per MPPT [A]		46	
AC OUTPUT			
Rated AC output power [kW]	40	50	60
Rated AC output current [A]*	60.6 / 58	75.8 / 72.5	90.9 / 87
Max. AC output apparent power [kVA]	44	55	66
Max. AC output current [A]*	66.7 / 63.8	83.3 / 79.7	100 / 95.7
Nominal AC voltage [V]		220/380V, 230/400V, 3/N/PE, 3/PE	
AC voltage range [V]**		304~460	
Nominal AC frequency / AC frequency range [Hz]**		50/60; ±5	
Power Factor range		0.8 leading ~ 0.8 lagging	
THDi (Rated power) [%]		<3	
SYSTEM DATA			
Max. efficiency [%]		98.4	
Euro. efficiency [%]		98.1	
Standby consumption [W] @Night		<2	
Ingress protection		IP66	
Operating ambient temperature range [°C]		-30~+60 (Derating above 45)	
Max. operation altitude [m]		4000 (Derating above 3000)	
Relative humidity [%]		0~100	
Dimensions [W×H×D] [mm]		630*521*286	
Weight [kg]	44	44.5	45.5
Cooling concept		Smart fan cooling	
Communication interfaces		RS485 / USB / DRM / PLC(Optional)	
Optional monitoring dongle		Pocket WiFi / LAN / 4G	
Display		LCD (16×2, optional) / LED×4	
PROTECTION			
Over/under voltage protection		YES	
Over current protection		YES	
DC isolation protection		YES	
Grid monitoring		YES	
DC injection monitoring		YES	
Residual current detection		YES	
Anti-islanding protection		YES	
String fault detection		YES	
Over temperature protection		YES	
SPD (DC/AC)		Type II / Type II	
Arc-fault circuit interrupter (AFCI)		Optional	
AC auxiliary power supply (APS)		Optional	
Power line communication (PLC)		Optional	
STANDARD			
Safety		IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004	
EMC		EN/IEC 61000; NB/T 32004	
Certification		VDE4105; EN 50549; AS 4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004	

On-Grid Inverter **X3 FORTH**

IP66 80KW / 100KW / 110KW / 125kW

MAXIMUM POWER

Smart Energy Solutions
for a Brighter Future!



IP66 Protection

Protect Inverter From Water & Dust Particles



150% PV Oversizing

Can Install 200% Solar Panels



Heat Dissipation

Prevent Inverter from Overheating



Upto 99% Efficiency

Maximum Efficiency



SCAN QR CODE

For Video Tutorial

DATA SHEET

DC INPUT	X3-FORTH-80KW	X3-FORTH-100K	X3-FORTH-110K	X3-FORTH-125K
Max. PV array input power [kWp]	120	150	165	188
Max. PV input voltage [V]			1100	
Nominal input voltage [V]*	580/600	580/600	580/600	580/600
Startup voltage [V]			200	
MPP tracker voltage range [V]			180-1000	
No. of MPP trackers	9	9	9	12
Strings per MPP tracker			2	
Max. PV input current per MPPT [A]			32	
Isc PV Array Short Circuit current per MPPT [A]			46	
AC OUTPUT				
Rated AC output power [kW]	80	100	110	125
Rated AC output current [A]*	121.3/116	151.6/145	166.7/159.5	189.4/181.2
Max. AC output apparent power [kVA]	88	110	121	132
Max. AC output current [A]*	133.4/127.6	166.7/159.5	183.4/175.4	200/191.3
Nominal AC voltage [V]			220/380, 230/400, 3/N/PE, 3/PE	
AC voltage range [V]**			304 ~ 480	
Nominal AC frequency/AC frequency range [Hz]**			50/60; ±5	
THDi (Rated power) [%]			<3	
Power Factor range			0.8 leading ~ 0.8 lagging	
SYSTEM DATA				
MPPT efficiency [%]			99.9	
Max. efficiency [%]	98.6	98.6	98.6	98.6
Ingress protection			IP66	
Operating ambient temperature range [° C]			-30~+60 (Derating above 45)	
Max. operation altitude [m]			4000 (Derating above 3000)	
Relative humidity [%]			0~100	
Dimensions [W×H×D] [mm]			985×660×327.5	
Weight [kg]	83	83	83	87
Cooling concept			Smart fan cooling	
Communication interfaces			RS485 / USB / DRM / PLC(Optional)	
Optional monitoring dongle			Pocket WiFi/LAN/4G	
Display			LCD(16x2, optional)/LEDx4	
PROTECTION				
Over/under voltage protection			YES	
DC isolation protection			YES	
Grid monitoring			YES	
DC injection monitoring			YES	
Residual current detection			YES	
Anti-islanding protection			YES	
String fault detection			YES	
SPD (DC/AC)			Type II / Type II	
Arc-fault circuit interrupter(AFCI)			Optional	
AC terminals over temperature detection			YES	
AC auxiliary power supply(APS)			Optional	
Power line communication(PLC)			Optional	
STANDARD				
Safety			IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004	
EMC			IEC/EN 61000; NB/T 32004	
Certification	EN 50549; AS4777	.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004		

Variable Frequency Drive **PV 100**

ThreePhase 4 - 30 Kilowatts

ULTIMATE CONTROL

Efficiency & Precision For
Optimal Performance!



IP54 Cabinet

Protect VFD From Water &
Dust Particles



99% Efficiency

High Power Conversion Efficiency



Reverse Polarity Alarm

Alert On Wrong Connections



Over Voltage Protection

Safeguard Against Voltage Spikes



SCAN QR CODE

For Video Tutorial

DATA SHEET

Product Specifications

AC Input Voltage (V)	380 (-15%)—440 (+10%) (3PH)
Max. DC Voltage (V)	800
Start-Up Voltage (V)	300
Lowest Working Voltage (V)	250
Recommended DC Input Voltage Range (V)	300-750
Recommended MPP Voltage (V)	550

Rated Specifications

Model	Rated Output Power (KW)	Rated Input Power (A)	Rated Output Current (KW)	Max DC Input Current (A)
Fronus 100-04	4.0	13.5	16.5	9.5
Fronus 100-05	5.5	19.5	23.9	14
Fronus 100-07	7.5	25	30.6	18.5
Fronus 100-11	11	32	39.2	25
Fronus 100-15	15	40	49	32
Fronus 100-18	18.5	47	50	38
Fronus 100-22	22	51	60	45
Fronus 100-30	30	70	81	60

Quick Service

Service Centers

Expert Solutions

Reliable Service

Our expert technical support team is dedicated to assisting you with any solar inverter issues. We provide reliable support through phone calls, offering step-by-step guidance to troubleshoot problems.

Lahore

☎ Basement Munawar Center,
Near Mili Shoes, The
Mall Road, Lahore

📍 042 37117712

Faisalabad

☎ Shop#16, 17 Basement,
Ibrahim Palaza,
Eid Gah Rd, Faisalabad

📍 0330 3581861

Gujranwala

☎ Fronus Service Center,
Civil Lines,
Gujranwala

📍 0330 2433666

Mianwali

☎ City Police Office Street,
Near Wali Brothers UPS,
Mianwali

📍 0321 1112460

Multan

☎ Rahim Bux H 1671 A9 Near
Sultan Mobile Center
Katchery Rd, Multan

📍 0330 2433665

Rahim Yar Khan

☎ Fronus Service Center Near
Flower Street Bano Bazar,
Rahim Yar Khan

📍 0321 6008388

Rawalpindi

☎ Shop #26, TM Plaza, Ground Floor,
Gorden Clg. Rd, Naya Mohalla,
Rawalpindi

📍 0330 3581864

Sargodha

☎ Fronus Service Center Near
Allah Wala Hotel, Block No.5,
Sargodha

📍 048 3726700

Sialkot

☎ Mujahid Road,
Saleem Market,
Sialkot

📍 048 3726700

Karachi

☎ Office #1103-04 11th Floor,
Al-Najeebi Electronics Market,
Saddar, Karachi

📍 0330 3581854

Hyderabad

☎ Plot #395 1st Floor Haji Shah Chowk,
Saddar Bohri Bazar,
Hyderabad

📍 0330 2433661

Larkana

☎ Mehran Centre, near Khokhar Plaza,
Pakistan Chowk,
Larkana

📍 0306 6669531

Sukkur

☎ Ghanta Ghar Shaheed Ganj
SSD Street,
Sukkur

📍 0330 3581869

Mardan

☎ Gul Ahmed Plaza Charsadda Chowk,
Gujar Garhi New Adda,
Mardan

📍 0330 3581866

Naurang

☎ Fronus Service Center,
Civil Lines,
Gujranwala

📍 0330 2433666

Peshawar

☎ Shop No. UG 307,
Deans Mall Center,
Saddar Peshawar

📍 03117855590

Quetta

☎ Shop #9 Underground Spinzer,
Plaza Angle Rd,
Quetta

📍 0330 2433660

Technical Support

Your Satisfaction Our Priority

Our expert technical support team is dedicated to assisting you with any solar inverter issues. We provide reliable support through phone calls, offering step-by-step guidance to troubleshoot problems.

For more complex issues, we arrange video calls to diagnose and resolve faults efficiently. Our goal is to ensure your solar system operates smoothly with minimal downtime.



Call

042 111 111 140



Email

info@fronus.com



Website

www.fronus.com



042 35173222

042 35173223

042 35173224

042 35173222

CONTACT US

Call

042 111 111 140



Email

info@fronus.com



Website

www.fronus.com



Address

Plot #64-65, Maulana Shaukat Ali Road
Johar Town Lahore

