

3 PHASE SOLAR HYBRID TX SERIES



I0kVA to 250 kVA

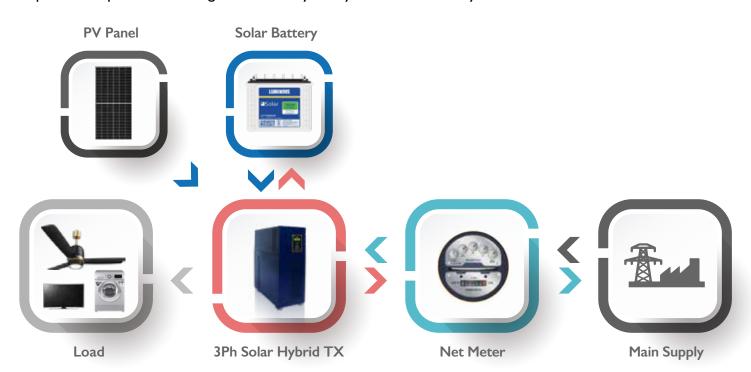






Savings and Backup All Together

3 Phase Solar Hybrid TX is designed with advanced technology. It adopts double transform high frequency and high-performance digital control technique (DSP), with perfect protection, super network management function, reasonable man-machine interface, and a series of precision designs to meet high-reliability requirements. Experience a power that integrates reliability, safety, and maintainability characteristics.



Applications



Petrol Pump



ATM



AC Unit



Farmhouse



Cold Storage



Primary Health Care Center



Microgrid



Rural Bank



Factory & Dairy Equipment



Government Offices



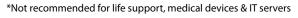
Water Pump



Institutions

Features

- Space Vector Modulation
- Real Time MPPT
- Inbuilt Charger controller
- Grid Synchronization with storage
- Selectable Priority Features -SOLAR/BATTERY/GRID
- Inbuilt galvanic Isolation Transformer
- Export excess PV power to Grid
- Surge Protection on Grid side/PV side
- MODBUS / RS-485 remote monitoring (optional)
- LCD display













System Rating (kVA/kW)	10kVA/8kW
SOLAR Open circuit voltage	400V
Maximum PV Power	10kVA
Charge Controller	
Switching Element	MPPT Charge Controller IGBT
	MPPT
Type of Charger Charger Efficiency) >95%
GRID	793/6
Input Supply	415 VAC, 3 Phase, 4 wire (+15% , -15%)
Input Frequency	50Hz ± 6%
BATTERY	
Battery Voltage	120VDC
Grid charger type	Bi-Directional
Charging current from grid	15A for 150Ah battery/20A for 200Ah Battery or, as required by any other battery (upto inverter kVA Capacity)
Battery Type	Lead Acid/SMF/Lithium ion*
INVERTER	2000 / 100 / 210 110 110 110
Switching Element	IGBT
Output wave form	Pure Sine Wave
Output Nominal Voltage	415VAC ±2%, 3Ph
Output Fequency	50Hz ±1%
Load Power Factor	0.6 lag to 1 (within VA and kW rating)
Inverter Peak Efficiency	90%
Vth with 100% linear load	Mains mode: Same as Grid inverter mode <3%
Galvanic isolation	Inbuilt isolation transformation inverter output
Overload conditions	110% for 60 sec / 125% for 10 sec/150% for 1 sec
PROTECTION	10/0/10/ 00 300/ 120/0/10/ 10 300/100/0/ 1300
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overload,
	Output short circuit, Output over and Under Voltage
Display Downston LED Indication of	Over Temperature Array Reverse Polarity, Battery Over and Under voltage
Display Parameter, LED Indication at Display Parameter	
Display Parameter	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage.
	Battery - voltage, current DC Power* Solar-Voltage, Current Power.
	Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar)
LED to discotion	Event log (5 No's/option USB Storage:upto 1000 no's)
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static
A.I.	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging
Alarm	Audible alarm for fault conditions and warnings
CONFIGURATION	2 different priority produce coloratable from display (Color Dottory Crid) C (Color Crid Dottory)
Modes	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery)
Parameter Setting	All main Parameters can be set through LCD Display
Bypass	Manual bypass switch available for maintenance and service
ENCLOSURE	JD 00
Degree of protection	IP 20
Cooling	Forced Air Cooling
Color	RAL 5013 Cobalt Blue
Dimensions (L*W*H)mm	710 x 300 x 790
Netweight (Approx in Kg's)	130
ENVIRONMENT	0.400.0
Temperature Operating	0-40° C
Max. Relative humidity@25°	Upto 95%
(non condensing)	'
Max. Altitude above sea level without	upto 1000 mtr
de-rating	'



System Rating (kVA/kW)	15kVA/12kW	20kVA/16kW	
SOLAR Open circuit voltage	400V	500V	
Maximum PV Power	15kVA	20kVA	
Charge Controller	MPPT Charg		
Switching Element	IGI		
<u> </u>	MP		
Type of Charger Charger Efficiency	>9!		
GRID	/9:	D/6	
Input Supply	415 VAC, 3 Phase, 4	4 wire (+15% , -15%)	
Input Frequency	50Hz		
BATTERY			
Battery Voltage	180VDC	240VDC	
Grid charger type	Bi-Dire	ctional	
Charging current from grid		quired by any other battery (upto inverter kVA Capacity)	
Battery Type	Lead Acid/SM		
INVERTER	Edda / Kilay Ci	7 2.0.1101111011	
Switching Element	IGI	ВТ	
Output wave form	Pure Sir		
Output Nominal Voltage	415VAC :		
Output Fequency	50Hz		
Load Power Factor	0.6 lag to 1 (within		
Inverter Peak Efficiency	90		
Vth with 100% linear load	Mains mode: Same as		
Galvanic isolation			
Overload conditions	Inbuilt isolation transformation inverter output 110% for 60 sec / 125% for 10 sec/150% for 1 sec		
PROTECTION	110/8/10/ 00/300/ 1120/8/	01 10 300/100% 101 1 300	
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overload, Output short circuit, Output over and Under Voltage		
	Over Temperature Array Reverse Polarity, Battery Over and Under voltage		
Display Parameter, LED Indication a	nd Alarm		
Display Parameter LED Indication	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage. Battery - voltage, current DC Power* Solar-Voltage, Current Power. Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar) Event log (5 No's/option USB Storage:upto 1000 no's) Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging		
Alarm	Audible alarm for fault o		
CONFIGURATION			
Modes	2 different priority modes selectable from disp	olay (Solar-Battery-Grid) & (Solar-Grid-Battery)	
Parameter Setting	All main Parameters can be set through LCD Display		
Bypass	Manual bypass switch available for maintenance and service		
ENCLOSURE			
Degree of protection	IP 20		
Cooling	Forced A	ir Cooling	
Color	RAL 5013 (0	
Dimensions (L*W*H)mm	770 x 40		
Netweight (Approx in Kg's)	15		
ENVIRONMENT			
Temperature Operating	0-4	0° C	
Max. Relative humidity@25°			
(non condensing)	Upto	95%	
Max. Altitude above sea level without			
de-rating	upto 10	00 mtr	
ac rading			



System Rating (kVA/kW)	25kVA/20kW
SOLAR Character state of the st	E00V
Open circuit voltage Maximum PV Power	500V 25kVA
Charge Controller	MPPT Charge Controller IGBT
Switching Element	
Type of Charger	MPPT
Charger Efficiency GRID	>95%
Input Supply	415 VAC, 3 Phase, 4 wire (+15% , -15%)
Input Frequency	50Hz ± 6%
BATTERY	
Battery Voltage	240VDC
Grid charger type	Bi-Directional
Charging current from grid	15A for 150Ah battery/20A for 200Ah Battery or, as required by any other battery (upto inverter kVA Capacity)
Battery Type	Lead Acid/SMF/Lithium ion*
INVERTER	20 33 7 10 37 07 11 7 213 113 11 10 11
Switching Element	IGBT
Output wave form	Pure Sine Wave
Output Nominal Voltage	415VAC ±2%, 3Ph
Output Fequency	50Hz ±1%
Load Power Factor	0.6 lag to 1 (within VA and kW rating)
Inverter Peak Efficiency	90%
Vth with 100% linear load	Mains mode: Same as Grid inverter mode <3%
Galvanic isolation	Inbuilt isolation transformation inverter output
Overload conditions	110% for 60 sec / 125% for 10 sec/150% for 1 sec
PROTECTION	
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overload,
	Output short circuit, Output over and Under Voltage
	Over Temperature Array Reverse Polarity, Battery Over and Under voltage
Display Parameter, LED Indication a	
Display Parameter	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage.
	Battery - voltage, current DC Power* Solar-Voltage, Current Power.
	Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar)
	Event log (5 No's/option USB Storage:upto 1000 no's)
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static
	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging
Alarm	Audible alarm for fault conditions and warnings
CONFIGURATION	
Modes	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery)
Parameter Setting	All main Parameters can be set through LCD Display
Bypass	Manual bypass switch available for maintenance and service
ENCLOSURE	
Degree of protection	IP 20
Cooling	Forced Air Cooling
Color	RAL 5013 Cobalt Blue
Dimensions (L*W*H)mm	900 x 400 x 880
Netweight (Approx in Kg's)	180
ENVIRONMENT	
Temperature Operating	0-40° C
Max. Relative humidity@25°	
(non condensing)	Upto 95%
Max. Altitude above sea level without	. 1000
de-rating	upto 1000 mtr
J	



System Rating (kVA/kW)	30kVA/24kW	40kVA/32kW	50kVA/40kW	
SOLAR Open circuit voltage		750V		
Maximum PV Power	30kVA	40kVA	50kVA	
Charge Controller		MPPT Charge Controller	CORVA	
Switching Element		IGBT		
Type of Charger		MPPT		
Charger Efficiency		>95%		
GRID		75576		
Input Supply	415 VA	AC, 3 Phase, 4 wire (+15%	, -15%)	
Input Frequency		50Hz ± 6%		
BATTERY				
Battery Voltage		360VDC		
Grid charger type		Bi-Directional		
Charging current from grid	15A for 150Ah battery/20A for 200/	Ah Battery or, as required by any other	battery (upto inverter kVA Capacity)	
Battery Type		ead Acid/SMF/Lithium ior		
INVERTER				
Switching Element		IGBT		
Output wave form		Pure Sine Wave		
Output Nominal Voltage		415VAC ±2%, 3Ph		
Output Fequency		50Hz ±1%		
Load Power Factor	0.6 lag	g to 1 (within VA and kW r	ating)	
Inverter Peak Efficiency		90%		
Vth with 100% linear load	Mains mod	de: Same as Grid inverter	mode <3%	
Galvanic isolation	Inbuilt isolo	ation transformation inver	ter output	
Overload conditions		sec / 125% for 10 sec/150	•	
PROTECTION				
Protection	Input Under and Over volta	age, Input Under and Over F	equency, Output Overload,	
	Output shor	rt circuit, Output over and U	nder Voltage	
	Over Temperature Array	Reverse Polarity, Battery	Over and Under voltage	
Display Parameter, LED Indication a	nd Alarm			
Display Parameter		Dutput voltage, Current total Po		
		Power* Solar-Voltage, Current P		
	Statistics - KWH (Grid import,	Grid Export, Inverter Battery IN	and OUT, Solar)	
	Event log (5 No's/option USB Storage:upto 1000 no's)			
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static			
	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging			
Alarm	Audible ala	rm for fault conditions ar	nd warnings	
CONFIGURATION				
Modes	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery)			
Parameter Setting	All main Parameters can be set through LCD Display			
Bypass	Manual bypass sw	Manual bypass switch available for maintenance and service		
ENCLOSURE				
Degree of protection		IP 20		
Cooling		Forced Air Cooling		
Color		RAL 5013 Cobalt Blue		
Dimensions (L*W*H)mm	1	925 x 535 x 1190	1	
Netweight (Approx in Kg's)	250	310	325	
ENVIRONMENT				
ENVIRONMENT Temperature Operating		0-40° C		
ENVIRONMENT Temperature Operating Max. Relative humidity@25°				
ENVIRONMENT Temperature Operating Max. Relative humidity@25° (non condensing)		0-40° C Upto 95%		
ENVIRONMENT Temperature Operating Max. Relative humidity@25°				



System Rating (kVA/kW)	60kVA/48kW	80kVA/64kW
SOLAR	750\/	750\/
Open circuit voltage Maximum PV Power	750V 60kVA	750V 80kVA
Charge Controller	MPPT Charge	
Switching Element	MPF	
Type of Charger	>95	
Charger Efficiency GRID	/90	076
Input Supply	415 VAC, 3 Phase, 4	wire (+15% , -15%)
Input Frequency	50Hz	
BATTERY		
Battery Voltage	360\	/DC
Grid charger type	Bi-Direc	ctional
Charging current from grid	15A for 150Ah battery/20A for 200Ah Battery or, as req	uired by any other battery (upto inverter kVA Capacity)
Battery Type	Lead Acid/SMF	
INVERTER		
Switching Element	IGE	ВТ
Output wave form	Pure Sine	e Wave
Output Nominal Voltage	415VAC ±	2%, 3Ph
Output Fequency	50Hz	±1%
Load Power Factor	0.6 lag to 1 (within \	/A and kW rating)
Inverter Peak Efficiency	90	%
Vth with 100% linear load	Mains mode: Same as G	Grid inverter mode <3%
Galvanic isolation	Inbuilt isolation transform	mation inverter output
Overload conditions	110% for 60 sec / 125% fo	or 10 sec/150% for 1 sec
PROTECTION		
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overloo	
	Output short circuit, Output over and Under Voltage Over Temperature Array Reverse Polarity, Battery Over and Under voltage	
Display Parameter, LED Indication a		
Display Parameter		urrent total Power Load Percentage
	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage. Battery - voltage, current DC Power* Solar-Voltage, Current Power.	
	Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar)	
	Event log (5 No's/option USB Storage:upto 1000 no's)	
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static	
	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging	
Alarm	Audible alarm for fault conditions and warnings	
CONFIGURATION		J
Modes	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery	
Parameter Setting	All main Parameters can be set through LCD Display	
Bypass	Manual bypass switch available for maintenance and service	
ENCLOSURE		
Degree of protection	IP 2	20
Cooling	Forced Air	r Cooling
Color	RAL 5013 Cobalt Blue	
Dimensions (L*W*H)mm	1000 x 70	0 x 1500
Netweight (Approx in Kg's)	510	550
ENVIRONMENT		
Temperature Operating	0-40° C	
Max. Relative humidity@25°	Upto 95%	
(non condensing)	ορίο σολί	
Max. Altitude above sea level without	upto 1000 mtr	
de-rating		



System Rating (kVA/kW) SOLAR	100kVA/80kW	120kVA/96kW	150kVA/120kW	200kVA/160kW
Open circuit voltage		750V		1150V
Maximum PV Power	100kVA	120kVA	150kVA	200kVA
Charge Controller	1001(77)		ge Controller	
Switching Element			BBT	
Type of Charger			PPT	
Charger Efficiency			95%	
GRID			7670	
Input Supply			4 wire (+15% , -15%	5)
Input Frequency		50H	z ± 6%	
BATTERY				
Battery Voltage		48	OVDC	
Grid charger type			ectional	
Charging current from grid	15A for 150Ah battery/20	A for 200Ah Battery or, as r	equired by any other battery	(upto inverter kVA Capacity)
Battery Type		Lead Acid/SN	MF/Lithium ion*	
INVERTER				
Switching Element			BT	
Output wave form			ne Wave	
Output Nominal Voltage			±2%, 3Ph	
Output Fequency			Hz ±1%	
Load Power Factor			NVA and kW rating))
Inverter Peak Efficiency			0%	
Vth with 100% linear load			Grid inverter mode	
Galvanic isolation			rmation inverter o	
Overload conditions	110%	for 60 sec / 125%	for 10 sec/150% for	-l sec
PROTECTION				
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overload,			
	Output short circuit, Output over and Under Voltage			
	Over Temperature Array Reverse Polarity, Battery Over and Under voltage			
Display Parameter, LED Indication a				
Display Parameter	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage.		ad Percentage.	
		rent DC Power* Solar-V	0	
	Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar)			JT, Solar)
	Event log (5 No's/option USB Storage:upto 1000 no's)			
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static			
	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging			
Alarm	Audi	ble alarm for fault	conditions and war	rnings
CONFIGURATION Modes	2 different priority m	adas salastabla from dis	enlaw (Color Pottory Crid	C (Color Crid Pattory)
Parameter Setting	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery) All main Parameters can be set through LCD Display			
Bypass	Manual bypass switch available for maintenance and service			
ENCLOSURE	I Idiliddi byp	, ass syricin availab	To maintenance	GITA SCI VICC
Degree of protection		IP	20	
Cooling			Air Cooling	
Color			Cobalt Blue	
Dimensions (L*W*H)mm			000 x 1700	
Netweight (Approx in Kg's)	710	780	840	910
ENVIRONMENT	, 10	, 55		310
Temperature Operating		0-4	10° C	
Max. Relative humidity@25°				
(non condensing)	Upto 95%			
Max. Altitude above sea level without				
de-rating		upto 10	000 mtr	
40 (40)				



System Rating (kVA/kW)	250kVA/200kW
SOLAR	1150/
Open circuit voltage Maximum PV Power	1150V 250kVA
Charge Controller	
	MPPT Charge Controller IGBT
Switching Element Type of Charger	MPPT
<u> </u>	>95%
Charger Efficiency GRID	793/6
Input Supply	415 VAC, 3 Phase, 4 wire (+15% , -15%)
Input Frequency	50Hz ± 6%
BATTERY	
Battery Voltage	672VDC
Grid charger type	Bi-Directional
Charging current from grid	15A for 150Ah battery/20A for 200Ah Battery or, as required by any other battery (upto inverter kVA Capacity)
Battery Type	Lead Acid/SMF/Lithium ion*
INVERTER	
Switching Element	IGBT
Output wave form	Pure Sine Wave
Output Nominal Voltage	415VAC ±2%, 3Ph
Output Fequency	50Hz ±1%
Load Power Factor	0.6 lag to 1 (within VA and kW rating)
Inverter Peak Efficiency	90%
Vth with 100% linear load	Mains mode: Same as Grid inverter mode <3%
Galvanic isolation	Inbuilt isolation transformation inverter output
Overload conditions	110% for 60 sec / 125% for 10 sec/150% for 1 sec
PROTECTION	
Protection	Input Under and Over voltage, Input Under and Over Fequency, Output Overload, Output short circuit, Output over and Under Voltage
	Over Temperature Array Reverse Polarity, Battery Over and Under voltage
Display Parameter, LED Indication a	
Display Parameter	Grid-Voltage Current Power* Output voltage, Current total Power, Load Percentage.
	Battery - voltage, current DC Power* Solar-Voltage, Current Power.
	Statistics - KWH (Grid import, Grid Export, Inverter Battery IN and OUT, Solar)
	Event log (5 No's/option USB Storage:upto 1000 no's)
LED Indication	Grid ON/OFF, Grid Static switch ON/OFF, inverter ON/OFF, inverter static
	Switch ON/OFF, Load ON/OFF, Battery Charging and Discharging
Alarm	Audible alarm for fault conditions and warnings
CONFIGURATION	
Modes	2 different priority modes selectable from display (Solar-Battery-Grid) & (Solar-Grid-Battery)
Parameter Setting	All main Parameters can be set through LCD Display
Bypass	Manual bypass switch available for maintenance and service
ENCLOSURE	JD 00
Degree of protection	IP 20
Cooling	Forced Air Cooling
Color	RAL 5013 Cobalt Blue
Dimensions (L*W*H)mm	1260 x 1104 x 1850
Netweight (Approx in Kg's)	1200
ENVIRONMENT	0.400.0
Temperature Operating	0-40° C
Max. Relative humidity@25°	Upto 95%
(non condensing)	·
Max. Altitude above sea level without	upto 1000 mtr
de-rating	·



INDIA'S WIDEST RANGE OF SOLAR PRODUCTS



INVERTERS

BATTERIES

PV PANELS

LUMINOUS

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