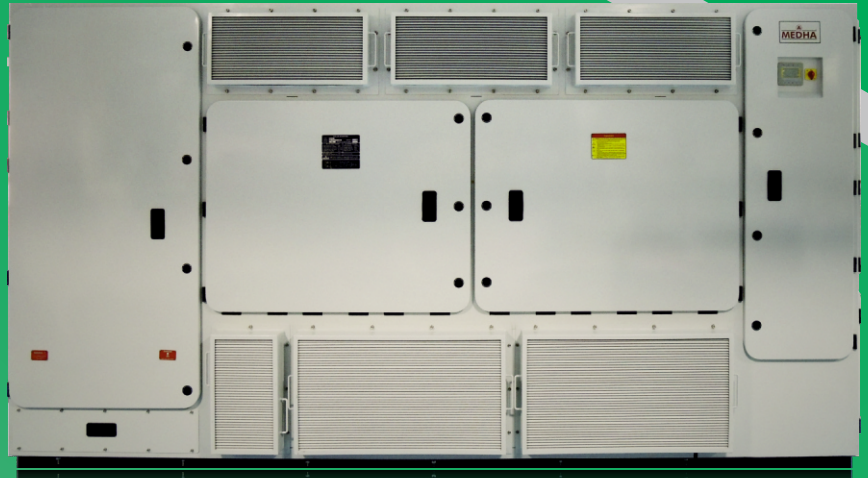


Medha Solar Inverter

MCI-0752-15-3125 kW

- 1500 V outdoor inverter
- Integrated array protection with Fuses eliminates the additional array junction box
- Array Current monitoring provides the user to monitor the health of each array.
- Low harmonic current output
- Input and output isolation through automatic control of switch and ACB through control computer respectively.
- DC insulation monitoring and protection for IT system and compatible to positive/ negative grounding (TN) system
- Automatic wake-up and sleep mode operation



Smart User Interface

- 128 x 64 dot matrix user Interactive Display
- User data configuration, and faults, data download through USB/ Ethernet using PC based application software
- Ethernet / SCADA system for interfacing the web-based monitoring system
- 30 days of Internal memory data and fault information with associated data packs for any triggered event



Advanced Technology

- Highest efficiency over wide operation range using three level technology
- Configurable reactive and power factor control
- Grid side fault monitoring and support (LVRT, HVRT, anti-islanding, reactive power control, power factor regulation)
- Integrated grid side current lower harmonic control algorithm



High Yield

- 2 MPPT will enhance the total yield during the clouds and shading conditions
- Each MPP (1562 kW Inverter) can operate individually, with independent cooling circuit



Protections

Input side Disconnection device	DC Motorized Switch
Output side Disconnection device	AC Circuit Breaker
Anti islanding-loss of mains	✔ Yes
DC reverse polarity protection	✔ Yes
AC and DC short circuit and over load protection	✔ Yes
AC and DC Surge Protection	✔ Yes (DC-Side Type-I, AC-Side- Type-II)
AC over and under voltage protection	✔ Yes
DC over voltage protection	✔ Yes
Earth fault protection	✔ Yes
Insulation monitoring and protection	✔ Yes
Ground Fault monitoring and protection	✔ Yes
AC Over/Under frequency protection	✔ Yes
Current Imbalance protection	✔ Yes
Loss of synchronisation	✔ Yes
Over Temperature	✔ Yes
Cooling Failure	✔ Yes



Compliance*

Efficiency Measurements	IEC 61683:First Edition,1999-11
Environmental Testing	IEC 60068-2-1 Cold test, -2-2 Dry Heat Test, -2-30 Damp Heat Cycle Test
Electromagnetic Compatibility (EMC)	IEC 61000-6-2, -6-4
Electrical Safety	IEC 62109-1:Edition-1.0, 2010-04 and IEC 62109-2:Edition-1, 2011-06
Protection against Islanding of grid	IEC 62116 and IEEE 1547
Photovoltaic (PV) systems characteristics of the utility Interface	IEC 61727:Edition2, 2004-12

* Testing in progress



Operating Performances

Maximum Efficiency (excluding auxiliary supply), %	99%
Weighted Efficiency EURO/CEC(excluding auxiliary consumption for both parameters), %	98.8% / 98.8%
MPPT Efficiency, %	99.9%
Auxiliary power consumption, W	<4400
Night mode power consumption, W	<140
No load Losses, W	<3300W

DC Data

	2865 kW	3125 kW	3438 kW
Max. DC voltage, V	1500		
Voltage Operating Range, V	800-1450	875-1450	950-1450
MPPT voltage range, V	800-1300	875-1300	950-1300
DC start voltage, V	850	925	1000
Nominal Operating DC voltage, V	1050	1090	1125
Maximum MPPT power, kWp	3190	3479	3826
Max. DC Power, kWp	3667	4000	4400
No. of MPPT trackers	2		
MPPT Efficiency, %	>99.9		
Max Operating DC current, A	3987	3976	4027
Max Short Circuit DC current, A	4983	4970	5035
Maximum Inverter backfeed current to the array, A	6228	6213	6293
Maximum number of Protected DC Inputs	20 (+ve and -ve) with Fuse protection at +ve terminals & Optional at -ve terminals.		
DC connection type	Through cables with Lug fixing, Bolt & nut type		

AC Data

	2865 kW	3125 kW	3438 kW
Rated AC power (Cos Φ =0.95, Ambient = 50°C), kVA	2865	3125	3437
Max. AC power (110% of rated) (Cos Φ =1), kVA	3151	3437	3781
Max. Apparent power, kVA	3151	3437	3781
Rated power factor at rated power / Displacement factor adjustable range	>0.99/ Adjustable from 0.8 Lead to 0.8 Lagg		
Rated AC Voltage, V	550	600	660
AC Voltage range, V	550 (+10%,-15%)	600 (+10%,-15%)	660 (+4.5%,-15%)
Rated frequency / frequency range, Hz	50 \pm 5%		
Rated AC current @ Ambient 50°C, A	3007		
Rated AC current (110% of rated), A	3307		
AC Current (In rush), A	< 800A, 100msec		
Maximum output fault current, A	4877A, 250uSec		
Maximum output over current protection, A	5300A, <250uSec		
Max. distortion factor THD at rated power conditions, %	< 3 %		
DC current Injection, %	< 0.5%		
Grid Feeding off at [Standby mode power], kW	20		
AC connection type	3-phase, 3 wire Through cables with Lug fixing, Bolt & nut type Transformer less design.		
Distribution Network type	TN and IT (Inverter type must be IT type)		

Mechanical Data

Dimensions (H x W x D) (in mm)	2100 x 3754 x 1280
Protective class	Class I
Degree of protection	IP65
Cooling method	Forced Air cooled based on temperature
Fresh air consumption	14400 m ³ /h
Weight	<4000 kg
Mounting system	On concrete base
DC side termination	Al. Busbar with Ø17 hole, Gland plate 5mm
AC side termination	Al. Busbar with Ø17 hole, Gland plate 5mm

Environmental Data

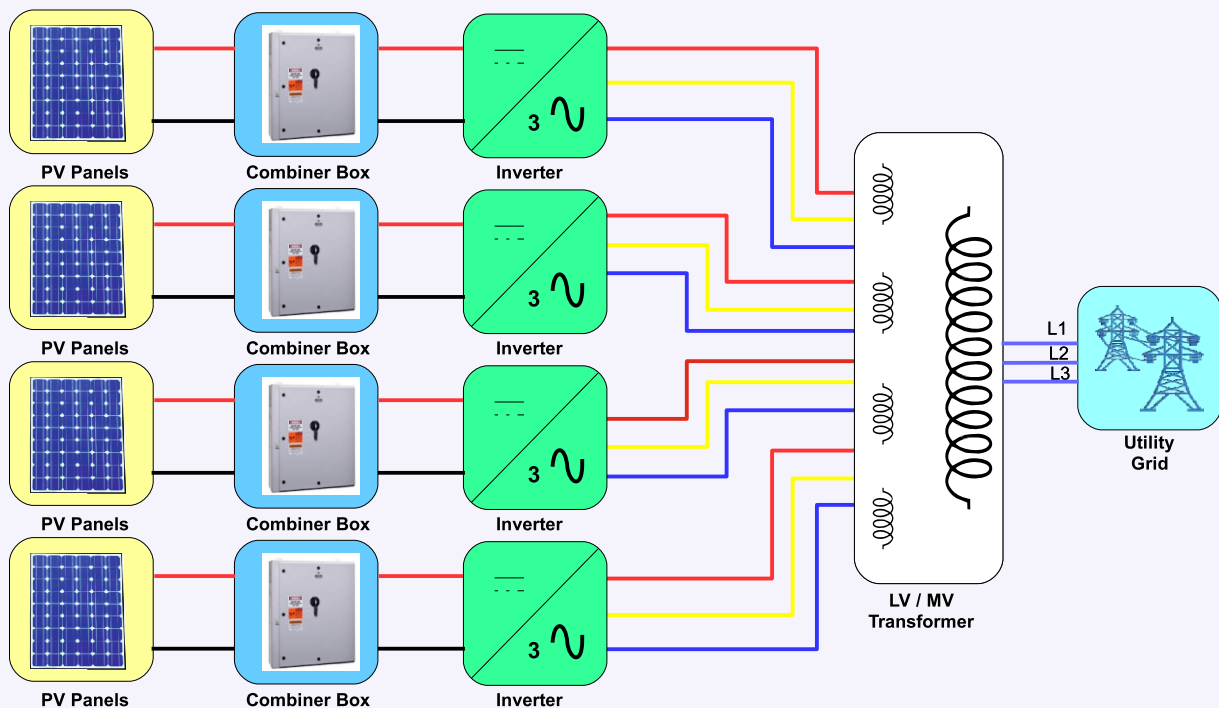
Installation	Outdoor
Ambient temperature range	-20°C to 60°C
Relative humidity	4 % to 100 % (Condensing)
Maximum altitude	4000m (>2000m power deration)
Maximum noise emission	<80 dB(A) 1m away from unit

Communication

Local user interface	128 x 64 dot matrix User Interactive LCD and keypad
Field bus connectivity	Ethernet

Proposed Configuration of Inverters and Transformer connections

Four Inverters Connecting to Grid with Five Winding Transformer (4 x 3.125 MW)



Medha Servo Drives Pvt. Ltd.

2-3-2/A, Behind Mint Compound, Cherlapally, R.R.Dist.
Hyderabad - 500 051 Telangana, India