



Solar Balcony Solution

Types of Balconies in Apartments



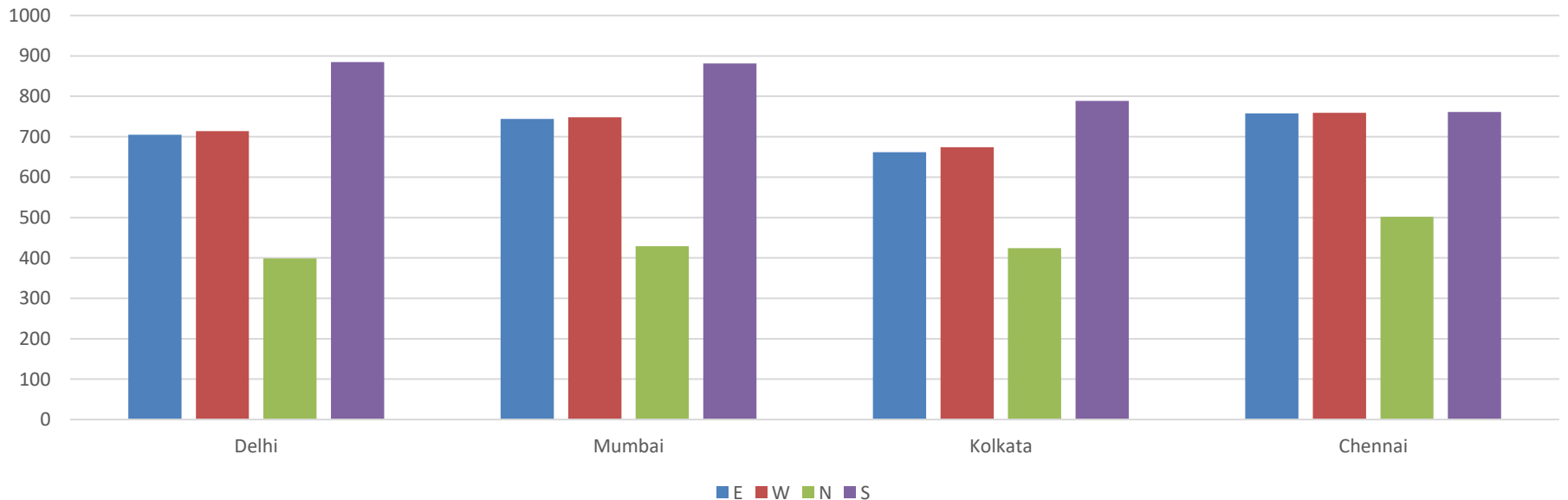
Solar performance study in 4 metros with 70 degree tilt



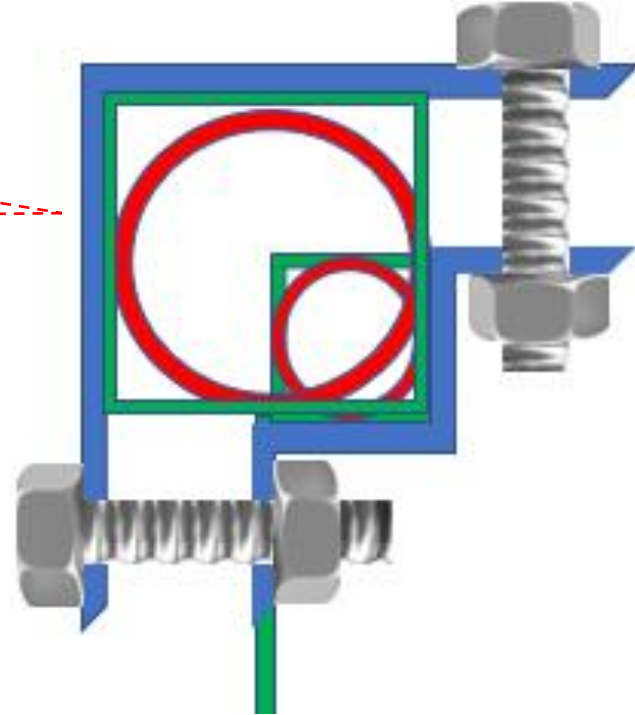
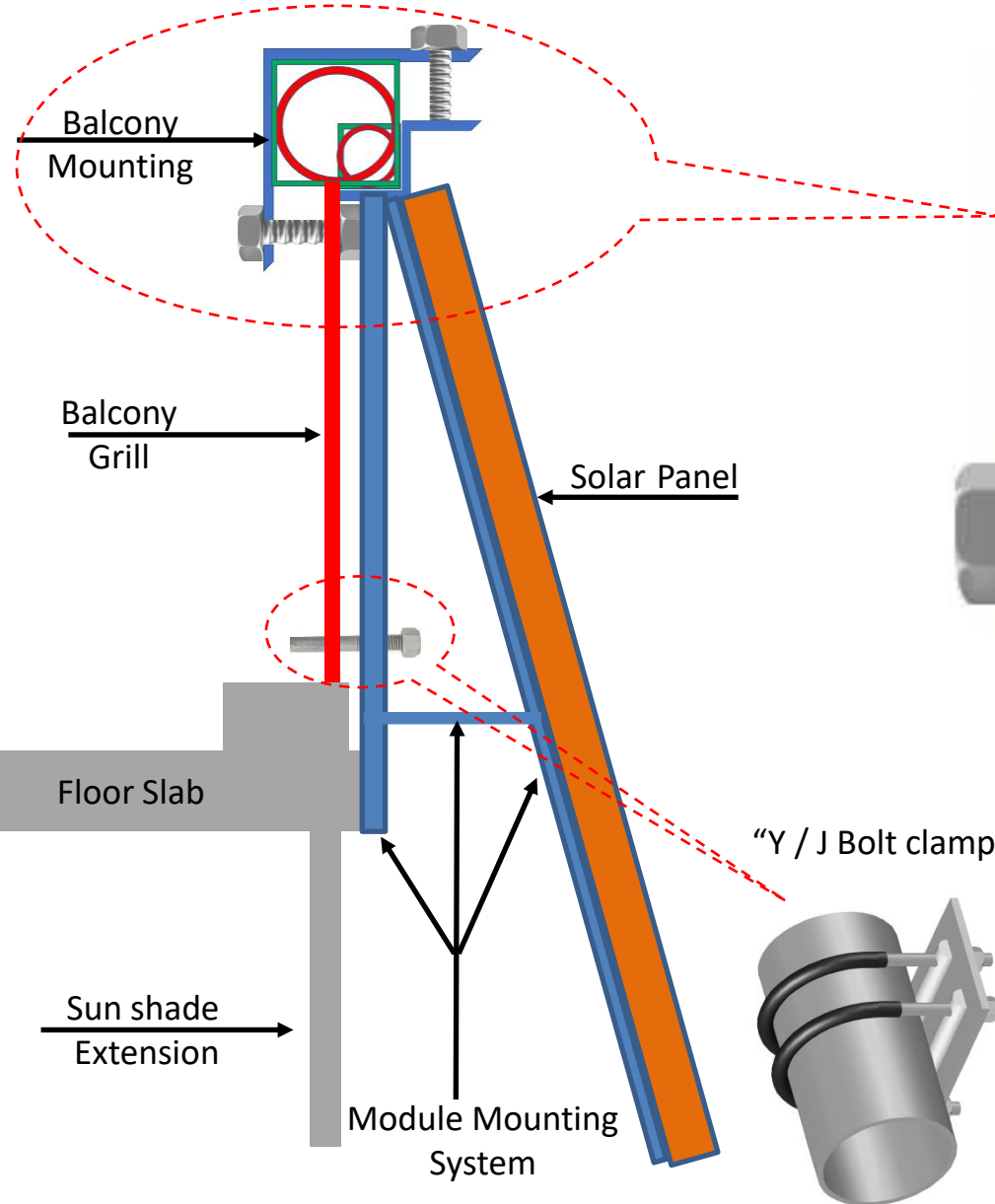
Number of units of electricity generated per year with 1 kWp solar balcony system installed at 20 degree tilt from balcony face at different locations in India and different balcony directions

Balcony direction	Delhi	Mumbai	Kolkata	Chennai
E	705 units / yr	744 units / yr	662 units / yr	758 units / yr
W	714 units / yr	748 units / yr	674 units / yr	759 units / yr
N	399 units / yr	429 units / yr	424 units / yr	502 units / yr
S	885 units / yr	881 units / yr	789 units / yr	761 units / yr

20 Degree tilt, 1kW system



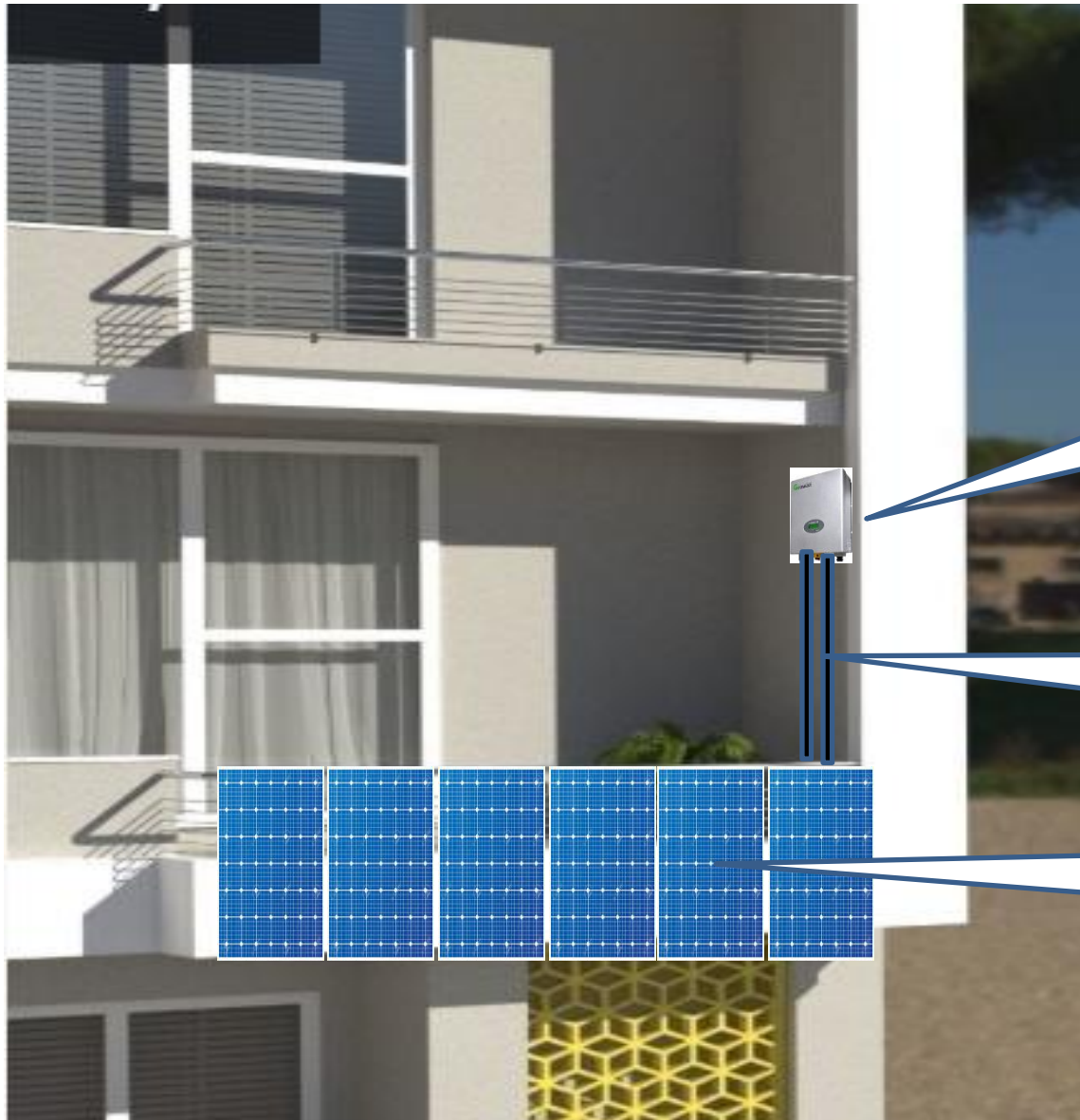
Solar Module Mounting system for Balcony



Unique Design Features of the MMS

- ❖ Mounting system for each modules independently
- ❖ Simple fastening with 2 balcony railing clamp and 2 j bolt (4 fasteners per module)
- ❖ MMS has wide range of the railings flexibility, from 40mm to 80 mm round / rectangular / square tubes
- ❖ Hot dip galvanization for long life of mms
- ❖ Flexible mounting mechanism of both portrait & landscape options based on site requirements
- ❖ Light weight & east to handle
- ❖ Module + MMS weight / units shall be ~ 30kgs

Typical Balcony Solar System integration – On Grid

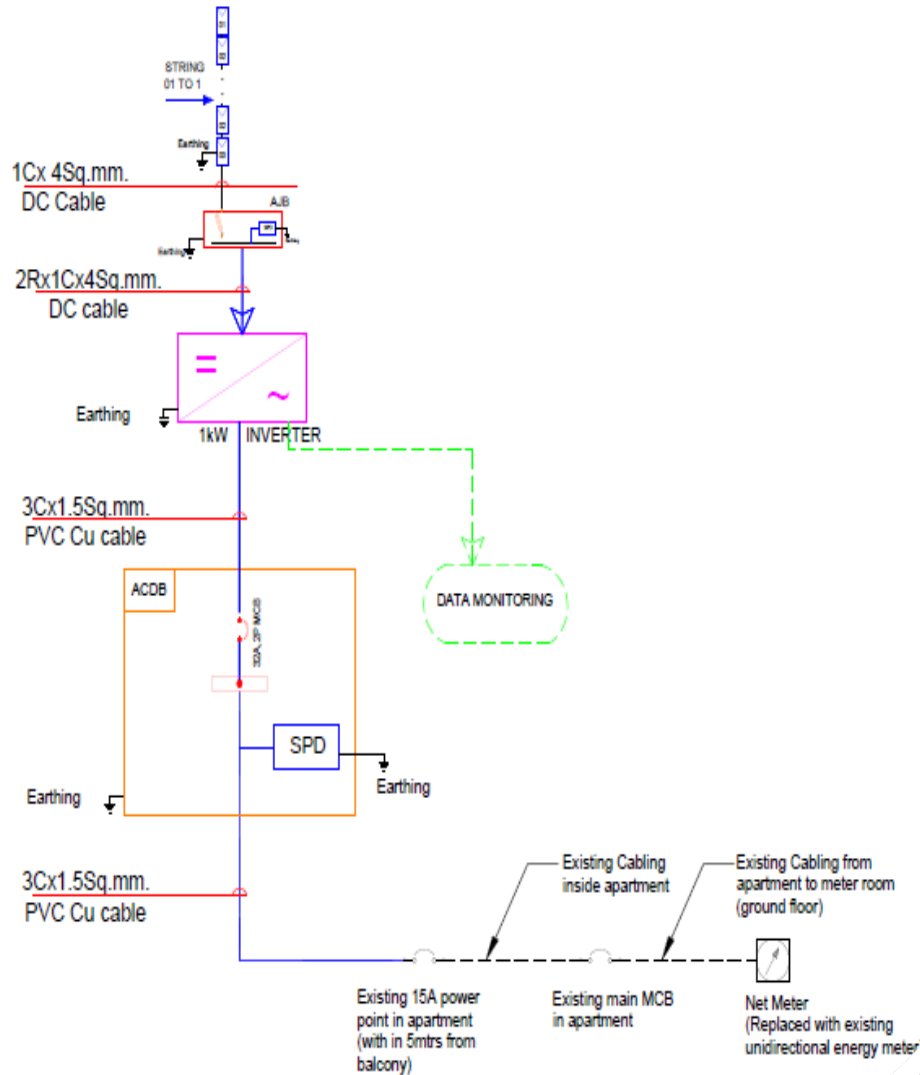


Inverter Mounted on the top of side wall of the Balcony

DC Cables from Panels to the Inverter

Upto 2 kWp Solar Panels mounted to the balcony

Single Line Drawing – On-Grid System (1.0 kWp System)



TOTAL 03 NUMBERS OF 335Wp MODULES

NUMBER OF SOLAR PANELS IN SERIES & PARALLEL				
SL.No	INVERTER TYPE	NO OF MODULES IN SERIES	NO OF STRINGS IN PARALLEL	NO OF MODULES
1.	1 kW INVERTER	03 MODULES	1 STRINGS	03 MODULES
TOTAL MODULES				03 MODULES

SYMBOLS AND LEGENDS

	MODULE
	INVERTER
	Miniature Circuit Breaker (MCB)
	KWH METER
	LIGHTNING ARRESTOR
	Earthing

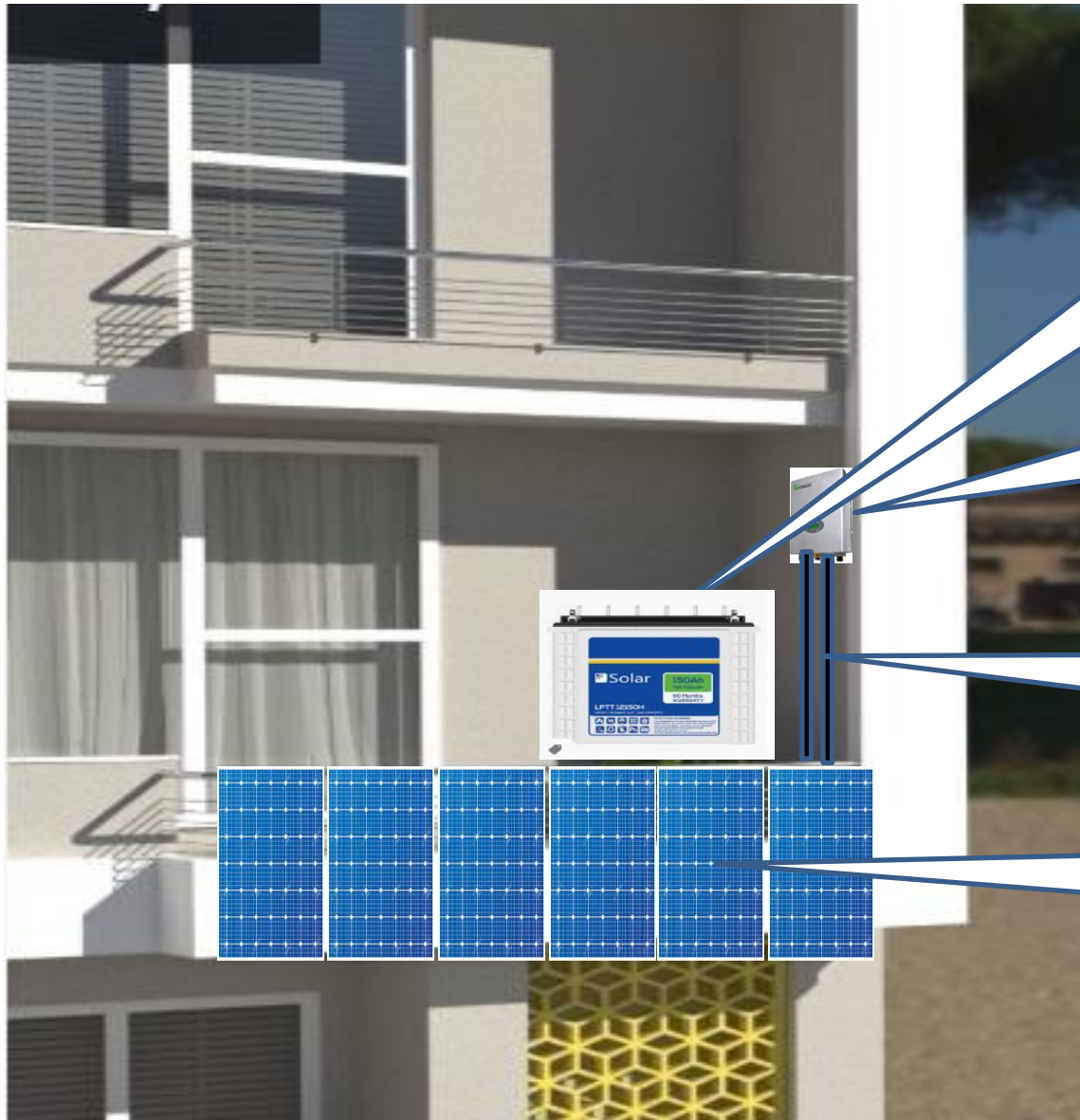
Description of Supply items – On Grid (1.0 kWp System)



S.No	Basic Components/Supply items	Qty	UOM
1	Solar PV module: 335Wp, multicrystalline Silicon	3	No
2	MMS for balcony	3	No
3	Array Combiner Box with Fuse	1	No
4	AC DB with SPD (AC Distribution Box)	1	No
5	Solar Grid Tied Inverter 1 kW	1	No
6	RMU dongle	1	No
7	Solar DC Cable	60	m
8	Solar AC cable	10	m
9	Earthing Cable	30	m
10	Earthing Kit	2	No
11	Lightning Arrestor 2M Conventional type	1	No
12	Installation Kit	1	No
13	Freight	1	No

- Special supply price from Tata Power for first few systems for pick-up from regional warehouse is Rs 75,000 for 1 kWp system and Rs 120,000 for 2 kWp system (without taxes)
- Please note:
 - Prices are only indicative, pending finalization
 - Secondary logistics cost from regional warehouse to shipping address would be extra

Typical Balcony Solar System integration – Off Grid



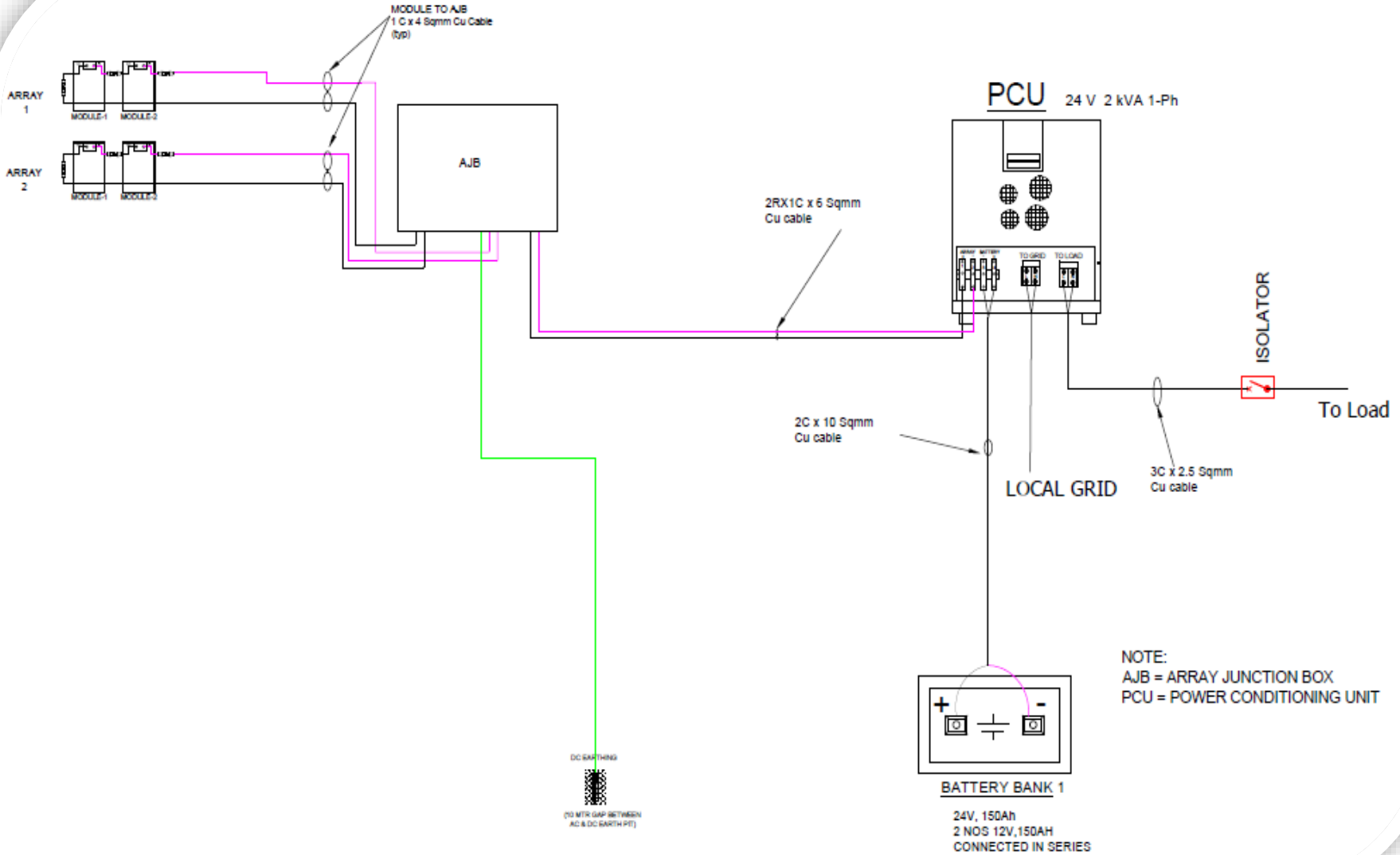
Battery will be installed in the balcony.

Inverter Mounted on the top of side wall of the Balcony

DC Cables from Panels to the Inverter

Upto 2 kWp Solar Panels mounted to the balcony

Single Line Drawing – Off-Grid (1.34 kWp System)



Description of Supply items – Off Grid (1.34 kWp System)



S.No	Basic Components/Supply items	Qty.	UOM
1	Solar PV module: 335 Wp, multicrystalline Silicon	4	No
2	MMS for balcony	4	No
3	Array Junction box with fuse	1	No
4	Power conditioning unit	1	No
5	Isolation switch	1	No
6	Solar DC Cable	60	m
7	Solar AC cable 2CX6 SQ.MM PVC Copper	10	m
8	Solar AC cable, 3Cx2.5 SQ.MM	10	m
9	Solar AC cable, 1CX16 SQ.MM	2	m
10	12V/150Ah battery LMLA	2	No
11	Battery Tray, Plastic	2	No
12	Metal Stand to House 4 Batteries	1	No
13	Earthing Kit	2	No
14	Lightning Arrestor 2M Conventional type	1	No
15	Earthing Cable	30	m
16	Installation kit	1	No
17	Freight	1	No

- Below prices only available for South region at present, will be circulated in due time for other regions
- Special supply price from Tata Power for first few systems for pick-up from regional warehouse is Rs 120,000 for 1.34 kWp system (without taxes)
- Please note:
 - Prices are only indicative, pending finalization
 - Secondary logistics cost from regional warehouse to shipping address would be extra

Thanks