HPL Solar
Green. Smart. Durable

Think Solar.
Think Technology.

Switch on HPL.

Supplied & Installed Capacity of 12 GW+

For more information scan the QR code.

Product Catalogue

• String Combiner Box • String Monitoring Box • LT Panel
• ACDB / DCDB • Net Meter • Solar Cable • Solar LED Street Light

About Us

HPL is India's leading electric equipment manufacturer with a formidable presence across six key verticals: Metering Solutions, Switchgears, LED Lighting, Wire & Cables, Modular Switches & Solar.

Our backward integrated facilities have capabilities across product design and development, component designing, tool manufacturing and commercial production. An established brand with a proven track record of over four decades.

HPL enjoys strong recall across various customer segments. Through our innovative offerings, certified to conform to Indian and International standards such as ISI, CE and KEMA, we are proud to partner emerging India's electrical requirements.

HPL is well-placed to seize emerging opportunities

60+ Years of Industry Experience

7 State-of-art Manufacturing Facilities with **2** R&D Centers

19 Logistic centres in India & Union Territories

90+ Branch & Representative Offices

Strong Dealer & Distribution Network

Exporting to over **45** Countries

Content

Our Certifications

ISO-9001:2000 · IS : 8828 CM/L-8515376 · CE · KEMA · ISO 14001 · RoHS · OHSAS 18001 · CPRI

STRING COMBINER BOX
1500V DC

For Ground Mount Solar
PV Application

Highlights

- String Combiner Boxes are first point of contact for Solar PV plant and are used to combine multiple string or arrays from PV modules to collate Single DC Output.
- Designed and manufactured with top quality components and workmanship to deliver best in class product to our clients.
- Designed and manufactured under strict engineering standards to face challenging environmental conditions to deliver undoubted performance on field.
- Offer a wide range of String Combiner Box solution to cater utility, commercial and residential segments.
- Customized product range from 500V DC to 1500V DC with reliable safety features.
- Our String Combiner Boxes are in-line with IEC & UL Standards.

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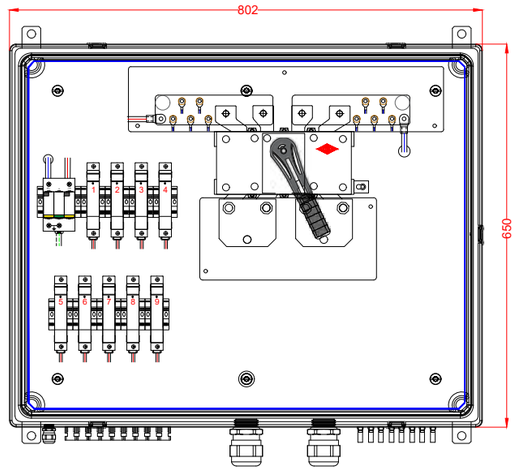
Highlights

- Touch Safe Fuse Holder
- Surge Protection Device
- DC Disconnector Switch
- FRP & Polycarbonate Enclosure
- NEMA 4X Enclosures
- IP-65/66/67 Enclosures
- Mechanical Strength (IK-08/10)
- UV Resistant
- Pressure Equalizers (Vent Plugs) / Vent Kit
- MC4 Connectors for Cable Entry
- Double Compression/ Polyamide Glands for Output
- Wall Mounted / Structure Mounted
- Operating Range (-25^{0}C) - (+80^{0}C)
- Locking Arrangement Hinge and Screw Type
- Tested & Certified as per IEC 61439-1&2 Standard
- Manufacturing Warranty of 5 years



Model	Description
SCB 1500V DC	8 IN - 1 OUT
SCB 1500V DC	12 IN - 1 OUT
SCB 1500V DC	14 IN -1 OUT
SCB 1500V DC	16 IN - 1 OUT
SCB 1500V DC	24 IN - 1 OUT
SCB 1500V DC	32 IN - 1 OUT

STRING MONITORING BOX
1500V DC

For Ground Mount Solar
PV Application

Highlights

- SMB are advanced version of SCB integrated with PCB to monitor different analog & digital parameters.
- SMB are designed and manufactured with top quality components and workmanship to deliver best in class product.
- Offer string monitoring solutions to Cater Utility, Commercial and Rooftop segments.
- SMB are manufactured with strict engineering standards to deliver high reliability product to face challenging environmental conditions on field.
- SMB are used to measure SPD Status, DC Disconnector Status, Temperature Measurement, Voltage & Current Measurement &other customized parameters.
- Our String Monitoring Boxes are in-line with IEC & UL Standards.

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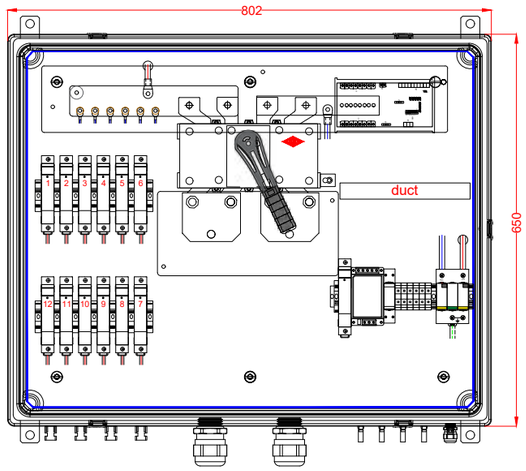
Highlights

- Touch safe fuse holder
- Monitoring PCB (Shunt & Hall Based)
- RS485/Fiber Optic/RF (Wireless)
- Power Supply
- Surge Protection Device
- DC Disconnector Switch
- NEMA 4X Enclosures
- IP-65/66/67 Enclosures
- Mechanical Strength (IK-08/10)
- UV Resistant
- Pressure Equilizers (Vent Plugs)
- MC4 Connectors for Cable Entry
- Double Compression / PG Glands for Output
- Wall Mounted / Structure Mounted
- Operating Range (-25^{0}C) - (+80^{0}C)
- Locking Arrangement Hinge and Screw Type
- Over Voltage Protection
- Current Measurement
- Voltage Measurement (1500V DC)
- Tested & Certified as per IEC 61439-1&2 Standard
- Manufacturing Warranty of 5 years



Model	Description
SCB 1500V DC	8 IN - 1 OUT
SCB 1500V DC	12 IN - 1 OUT
SCB 1500V DC	14 IN -1 OUT
SCB 1500V DC	16 IN - 1 OUT
SCB 1500V DC	24 IN - 1 OUT
SCB 1500V DC	32 IN - 1 OUT

LT PANEL / ACDB
upto 800V AC

For Solar PV Application

Highlights

- Designed and manufactured under strict engineering standards to deliver best in class product with reliable safety features.
- Manufactured with top quality and precise rating components to deliver product with unparalleled quality.
- Suitable for Indoor & Outdoor installation with weatherproof features.
- With team of technical competence, product can be tailor made as per project requirement.
- With competent compartmental design and maintaining clearance and creep age ratio our product stands to mark in terms of durability.
- Suitable for Ground Mounted/Rooftop applications.
- LT Panels tested as per IEC & IS Standards.

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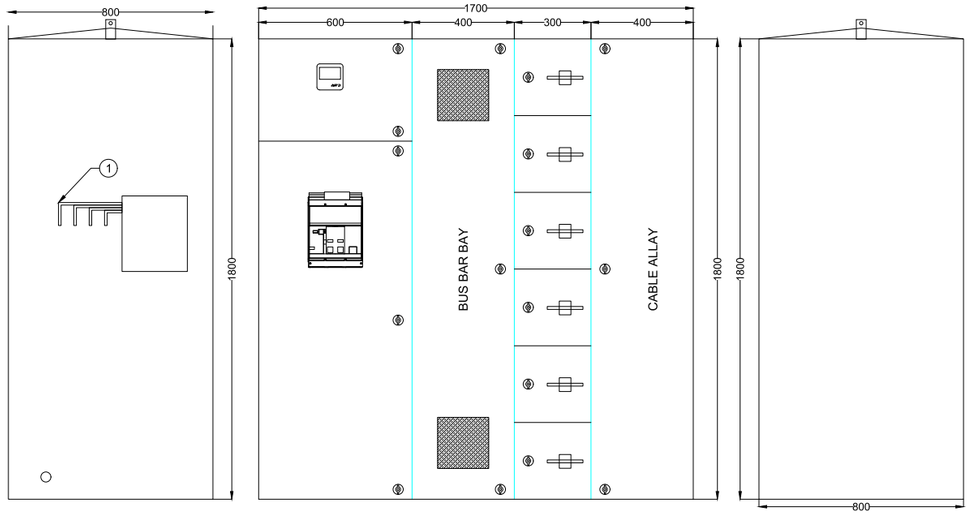
Key Features:-

- Enclosure Material : CRCA / Non Metallic
- Compartmental Double Door Enclosure with canopy and lifting hooks
- AC MCCB for input protection (Thermal Magnetic/Microprocessor)
- AC ACB for output protection (MF/EF/MDO/EDO)
- **Sheet Thickness :** 1.6 mm / 2 mm
- **Ingress Protection :** 54/55/65
- **Operational Voltage :** Up to 800VAC
- **Insulation voltage :** Up to 1000VAC
- Inbuilt SPD
- Air Circuit Breaker
- Multi-Function Meter
- Auxiliary Panel
- **Bus Bar :** Aluminium/Copper
- **Input Method :** Double Compression Nickel Plated / PG Cable Gland
- **Output Method :** Double Compression Nickel Plated / PG Cable Gland
- Tested & Certified as per IS & IEC 61439 standard



Model	Description
LT-0101	1 IN 1 OUT
LT-0201	2 IN 1 OUT
LT-0301	3 IN 1 OUT
LT-0401	4 IN 1 OUT
LT-0501	5 IN 1 OUT
LT-0601	6 IN 1 OUT
LT-0802	8 IN 2 OUT
LT-01002	10 IN 2 OUT
LT-01202	12 IN 2 OUT

ARRAY JUNCTION BOX / DC Distribution Box

For Rooftop
Solar PV Application

Highlights

- Array Junction Boxes (AJB), also referred to as PV combiner boxes, basically collect DC power from PV strings with blocking diodes on each string for protecting panels from reverse current flow. The collected power is then transferred to power inverter.
- We offer highly functional PV Array Junction Box. PV Array Junction Box that we offer is fabricated with the use of latest technology and is suitable for different Solar Power applications. Our PV Array Junction Box is tested by the experts under strict industry norms to guarantee flawless functioning and durability.
- Array Junction Box is meant for combining all the incoming lines from the solar panel strings/arrays and deriving one common string/array output for the multiple array inputs.
- Array Junction Boxes are dust, vermin and waterproof and made of Thermoplastic (ABS).
- Junction Boxes have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables.

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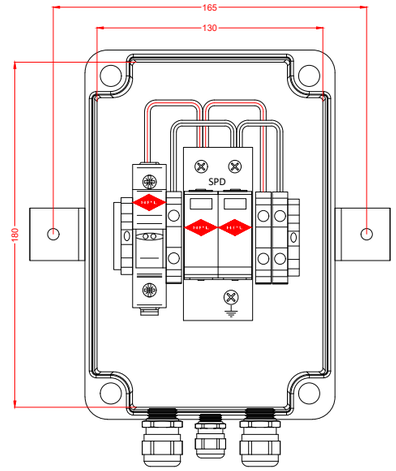
Key Features:-

- HPL Array Junction Boxes are tested and certified as per IEC 61439-1 standard up-to operating voltage of 1000 V DC.
- The enclosure is made of high quality polycarbonate material.
- Degree of protection IP-65/66
- The enclosure is accessible only via the use of tools in order to ensure the protection
- Tailor made product customised as per customer needs.
- Blocks the reverse flow of current from battery to solar panels.
- Reliable electric safety to avoid hazard.
- Obstructs sudden surges due to lightening strokes during cloudy and rainy conditions and ground the surges immediately.
- Fuses for overload protection on each string.
- Available in reverse blocking diodes (option).
- Easy cable termination with plug in and plug out feature.
- Time and money saver Solar String management.
- Space saving and orientation flexibility.
- Reliable electric safety to avoid hazard.



Model	Description	Output
AJB-0101	1 IN 1 OUT	For 1 Solar Array String
AJB-0201	2 IN 1 OUT	For 2 Solar Array String
AJB-0301	3 IN 1 OUT	For 3 Solar Array String
AJB-0401	4 IN 1 OUT	For 4 Solar Array String
AJB-0501	5 IN 1 OUT	For 5 Solar Array String
AJB-0601	6 IN 1 OUT	For 6 Solar Array String
AJB-0701	7 IN 1 OUT	For 7 Solar Array String
AJB-0801	8 IN 1 OUT	For 8 Solar Array String
AJB-1201	12 IN 1 OUT	For 12 Solar Array String
AJB-1801	18 IN 1 OUT	For 18 Solar Array String
AJB-2401	24 IN 1 OUT	For 24 Solar Array String

AC DISTRIBUTION BOX

For Solar PV Application

Highlights

- ACDB is capable to receive AC power from solar inverter and directs it to AC loads.
- ACDB is an important part of SPV system as it provides extra protection to the system in case of failures on load side.
- A provision can also be made in ACDB to monitor the consumption of power from SPV Power Plant.
- AC Distribution Box makes maintenance easier and enhances system reliability.
- Our ACDBs are designed to deliver high performance and added protection by isolating inverter from mains as and when required.

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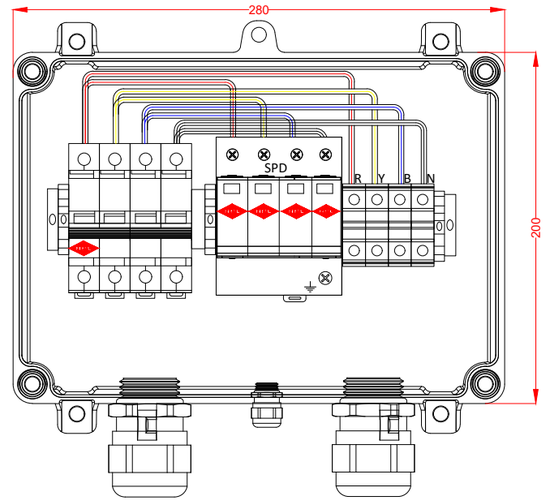
Key Features:-

- AC Distribution Boxes are tested and certified as per IEC/IS standard up-to operating voltage of 690V AC.
- The AC Distribution Box are available in CRCA / Polycarbonate / FRP enclosure with screw and latches opening provision to maintain to deliver better reliability towards tough weather conditions.
- Degree of protection IP-65/66
- AC Distribution Boxes PC/CRCA Enclosure are crafted with in house powder coating and phosphating facility
- In house testing facility:-
  - Current Test
  - High Voltage Test
  - Torque Test
  - Temperature Rise Test
  - Insulation resistance Test
  - Ingress Protection Test



Model	Description	Output
AJB-0101	1 IN 1 OUT	For 1 Solar Array String
AJB-0201	2 IN 1 OUT	For 2 Solar Array String
AJB-0301	3 IN 1 OUT	For 3 Solar Array String
AJB-0401	4 IN 1 OUT	For 4 Solar Array String
AJB-0501	5 IN 1 OUT	For 5 Solar Array String
AJB-0601	6 IN 1 OUT	For 6 Solar Array String
AJB-0701	7 IN 1 OUT	For 7 Solar Array String
AJB-0801	8 IN 1 OUT	For 8 Solar Array String
AJB-1201	12 IN 1 OUT	For 12 Solar Array String
AJB-1801	18 IN 1 OUT	For 18 Solar Array String
AJB-2401	24 IN 1 OUT	For 24 Solar Array String

Surface Protection Device (SPD)

Range

AC SPD - 1P - 2

AC SPD - 4P - 2

AC SPD - 4P - 1+2

DC SPD - 60S - 2

DC SPD - 100S - 2

DC SPD - 100S - 1+2

DC SPD - 150S - 2

DC SPD - 150S - 1+2

Data Signal / DC Surge Protective Device

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AC SPD - 1P - 2

Pluggable Single-Pole SPD

(Class II • Type 2)

Mode of Protection: L-N, N-PE

Surge Ratings: In = 20 kA (8/20 µs)

Category: Class II /Type 2

Protective Elements: High Energy MOV

Housing: Pluggable Design

AC SPD - 4P - 2

Pluggable Multi-Pole SPD

(Class II • Type 2) (Class I+II • Type 1+2)

Mode of Protection: L-N, N-PE

Surge Ratings: In = 20 kA (8/20 µs)

Category: Class II /Type 2 ; Class I+II /Type 1+2
Protective Elements: High Energy MOV

Housing: Pluggable Design

DC SPD - 60S - 2

Pluggable DC SPD

(Class II• Type 2)

Mode of Protection: (DC+)-PE; (DC-)-PE

Surge Ratings: In = 20 kA (8/20 µs)

Category: Class II / Type 2

Protective Elements: High Energy MOV

Housing: Pluggable Design

DC SPD - 100S / 150S / 150SS - 2, 1+2

Pluggable DC SPD

(Class II • Type 2) (Class I+II • Type 1+2)

Mode of Protection: (DC+) - PE, (DC-) - PE
Surge Ratings: In = 20 kA (8/20 µs)
Category: Class II / Type 1+2 ;
Protective Elements: High Energy MOV
Housing: Pluggable Design

Fuse Holder / Fuse Link (5A-80A)

Range

AC SPD - 1P - 2

AC SPD - 4P - 2

AC SPD - 4P - 1+2

DC SPD - 60S - 2

DC SPD - 100S - 2

DC SPD - 100S - 1+2

DC SPD - 150S - 2

DC SPD - 150S - 1+2

Data Signal / DC Surge Protective Device

Key Features:-

DC DISCONNECTOR
1000V DC

For Rooftop & Ground-Mount
Solar PV Application

Highlights

- High performance switching in a compact frame
- Safe and reliable operation
- Provide safe electrical isolation even at low voltages and up to 1000V DC
- Double positive break position indications
- Quick make and quick break mechanism ensures safe and independent manual operation
- Symmetric pole design for making connections independent of polarity
- Low power losses resulting in enhanced efficiency
- High temperature withstand capacity
- Reference standard IEC 60947-3

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Specification (100A to 630A, 2 Pole, 1000VDC)

Reference Standard									
Reference standard:	IEC 60947-3								
Technical Data									
Rated Operational current (In)	100A	125A	160A	200A	250A	315A	400A	500A	630A
Conventional free air Thermal current (Ith) @ 40°C	100A	125A	160A	200A	250A	315A	400A	500A	630A
Conventional Thermal current (Ithe) Enclosed	100A	125A	160A	200A	250A	315A	400A	500A	630A
Number of poles	2								
Rated impulse withstand voltage Uimp (kV)	12								
Rated Insulation voltage Ui (Vdc)	1500	1500	1500	1500	1500	1500	1500	1500	1500
Rated Operational voltage Ue (Vdc)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated short time withstand capacity 1 sec kA	5	5	5	5	5	10	10	10	10
Power Loss W	8	13	17	26	40	12	16	25	40
Utilization category	DC-21B								
Pollution degree	3								
Mechanical durability (operating cycles without load)	10000								
Electrical durability (operating cycles with load)	300	300	300	300	300	200	200	200	200
Handle type	Front operated								
Operating Torque (N-m)	12	12	12	12	12	15	15	15	15
Operating temperature	-25°C to 60°C								
Operating Mechanism	One hand operated with Quick make & quick break type mechanism								
Maximum Copper cable cross-section (mm²)	35	50	70	95	120	185	240	2x150	2x185
Terminal width (mm)	25	25	25	25	25	45	45	45	45
Terminal Bolt (mm)	M10x35	M10x35	M10x35	M10x35	M10x35	M12x40	M12x40	M14x40	M16x40
Terminal Bolt tightening torque (N-m max.)	50	50	50	50	50	85	85	140	140
Weight / unit (Kgs)	2.1	2.1	2.1	2.1	2.1	4.8	4.8	4.8	4.8

DC Disconnector
1500V DC

For Rooftop & Ground-Mount
Solar PV Application

Highlights

- High performance switching in a compact frame
- Safe and reliable operation
- Provide safe electrical isolation even at low voltages and up to 1500V DC
- Double positive break position indications
- Quick make and quick break mechanism ensures safe and independent manual operation
- Symmetric pole design for making connections independent of polarity
- Low power losses resulting in enhanced efficiency
- High temperature withstand capacity
- Reference standard IEC 60947-3

HPL Solar
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Specification (100A to 630A, 2 Pole & 3 Pole, 1500VDC)

Reference Standard										
Reference standard:		IEC 60947-3								
Technical Data										
Rated Operational current (In)		100A	125A	160A	200A	250A	315A	400A	500A	630A
Conventional free air Thermal current (Ith) @ 40°C		100A	125A	160A	200A	250A	315A	400A	500A	630A
Conventional Thermal current (Ithe) Enclosed		100A	125A	160A	200A	250A	315A	400A	500A	630A
Number of poles		2 & 3								
Rated impulse withstand voltage Uimp (kV)		12								
Rated Insulation voltage Ui (Vdc)		1500	1500	1500	1500	1500	1500	1500	1500	1500
Rated Operational voltage Ue (Vdc)		1500	1500	1500	1500	1500	1500	1500	1500	1500
Rated short time withstand capacity 1 sec kA	2P	10	10	10	10	10	15	15	15	15
	3P	5	5	5	5	5	10	10	10	10
Power Loss W	2P	5	6	8	12	16	15	24	28	40
	3P	8	13	17	26	40	12	16	25	40
Utilization category		DC-21B								
Pollution degree		3								
Mechanical durability (operating cycles without load)	2P	10000	10000	10000	10000	10000	8000	8000	5000	5000
	3P	10000	10000	10000	10000	10000	10000	10000	10000	10000
Electrical durability (operating cycles with load)	2P	1500	1500	1500	1500	1500	1200	1200	1000	1000
	3P	300	300	300	300	300	200	200	200	200
Handle type		Font operated								
Operating Torque (N-m)	2P	9.5	9.5	9.5	9.5	9.5	11	11	17	17
	3P	12	12	12	12	12	15	15	15	15
Operating temperature		-25°C to 60°C								
Operating Mechanism		One hand operated with Quick make & quick break type mechanism								
Maximum Copper cable cross-section (mm²)		35	50	70	95	120	185	240	2x150	2x185
Terminal width (mm)	2P	66	66	66	73	73	96	96	135	135
	3P	25	25	25	25	25	45	45	45	45
Terminal Bolt (mm)		M10x35	M10x35	M10x35	M10x35	M10x35	M12x40	M16x40	M16x40	M16x40
Terminal Bolt tightening torque (N-m max.)		50	50	50	50	50	85	85	140	140
Weight / unit (Kgs)	2P	2.4	2.4	2.4	2.6	2.6	4.1	4.1	8.8	8.8
	3P	2.2	2.2	2.2	2.2	2.2	5.2	5.2	5.2	5.2
Phase Barriers & Terminal shrouds		Available as standard								
Auxiliary contact (1NO+1NC)		Optional								

Load Break Switch
800V AC

For Rooftop & Ground-Mount
Solar PV Application

Highlights

- High performance switching in a compact frame
- Safe and reliable operation
- Provide safe electrical isolation even at low voltages and up to 800V AC
- Double positive break position indications
- Quick make and quick break mechanism ensures safe and independent manual operation
- Symmetric pole design for making connections independent of polarity
- Low power losses resulting in enhanced efficiency
- High temperature withstand capacity
- Products for 800V AC & 440V AC application
- Reference standard IEC 60947-3

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Specification (100A to 630A, 3 Pole & 4 Pole, 800VAC)

Reference standard								
Reference standard:	IEC 60947-3							
Technical Data	**FRAME-1**			**FRAME-2**		**FRAME-3**		**FRAME-4**
Rated Operational current (In)	100A	125A	160A	200A	250A	320A	400A	630A
Conventional Thermal current (Ith) @ 40°C	100A	125A	160A	200A	250A	320A	400A	630A
Conventional Enclosed Thermal current (Ithe) @ 40°C	100A	125A	160A	200A	250A	320A	400A	630A
Rated Impulse withstand voltage (Uimp)	6 kV	6 kV	6 kV	8 kV	8 kV	12 kV	12 kV	12 kV
Rated Insulation voltage (Ui)	1000 Vac	1000 Vac	1000 Vac	1000 Vac	1000 Vac	1000 Vac	1000 Vac	1000 Vac
Dielectric strength (50 Hz 1 minute)	5 kV	5 kV	5 kV	5 kV	5 kV	8 kV	8 kV	8 kV
Rated Operational voltage (Ue)	800 Vac	800 Vac	800 Vac	800 Vac	800 Vac	800 Vac	800 Vac	800 Vac
Rated Short circuit Making capacity (Icm) (peak RMS value)	7.65 kA	7.65 kA	7.65 kA	13.6 kA	13.6 kA	13.6 kA	17 kA	32 kA
Rated Short Time withstand current (Icw) for 1 sec.	5 kA	5 kA	5 kA	10 kA	10 kA	10 kA	12 kA	20 kA
Conditional short circuit current (RMS value)	80 kA	80 kA	80 kA	80 kA	80 kA	80 kA	80 kA	80 kA
Power Loss	5W	6W	8W	12W	17W	21W	42W	87W
Pollution degree	3	3	3	3	3	3	3	3
Utilization category	AC-22A	AC-22A	AC-22A	AC-22A	AC-22A	AC-22A	AC-22A	AC-22A
Rated Making capacity	300A	375A	480A	600A	750A	960A	1200A	1890A
Rated Breaking capacity	300A	375A	480A	600A	750A	960A	1200A	1890A
Mechanical Life (No. of operations w/o current)	8500	7000	7000	7000	7000	4000	4000	4000
Electrical Life (No. of operations with current)	1500	1000	1000	1000	1000	1000	1000	1000
Switch operating torque (N-m)	9.5	9.5	9.5	11	11	17	17	40
Terminal width (mm)	25	25	25	32	32	40	55	50
Terminal thickness (mm)	4	4	4	4.5	4.5	5	5	6
Min. Copper Cable/ Busbar size (sq.mm)	35	50	70	95	120	185	30x5x2	50x4x2
Min. Aluminum Cable / Busbar size (sq.mm)	50	70	95	150	185	240	32x8x2	50x 6.5x2
Switch operating mechanism	Quick Make & break	Quick Make & break	Quick Make & break	Quick Make & break	Quick Make & break	Quick Make & break	Quick Make & break	Quick Make & break
Operating mode	Front operated	Front operated	Front operated	Front operated	Front operated	Front operated	Front operated	Front operated
Handle type	Single handle	Single handle	Single handle	Single handle	Single handle	Single handle	Single handle	Single handle
Terminal type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type	Lug / Busbar type

NET Meter
ROOFTOP SOLAR BI-DIRECTIONAL SOLUTION

For Rooftop & Ground-Mount
Solar PV Application

Highlights

- Available in Single Phase & Three Phase as per BIS.
- AMR compatible unit for local and remote communication.
- Internal Battery Back up to Display Meter Data in power off event.
- kWH, kVAh measurement for import & export mode.
- History of energy consumption for Billing months.
- TOD wise, Daily & block load survey for profile Data availability.
- Self Diagnostic facility, Anti –Tamper/Event logging.
- Data download through optical Port & RS 232 port.
- Backlight LCD display.
- Minimum 200 Tamper event data.

* Features varies with respect to model selected

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Application

- Import - export Electricity Measurement at interconnection points.
- Suitable for both On-Grid & Off-grid interconnection points.
- Net Electricity Measurement for Roof Top Solar, Wind & Other Renewable Power generation sources.

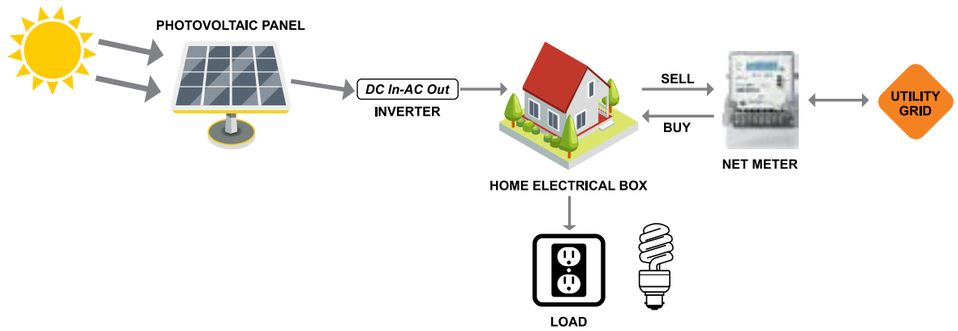
Benefits

- Single Metering unit for Bi-directional Energy Measurement.
- Separate Energy Registration for import & export.
- Net Energy calculation for Power credits.
- Designed & Developed, as per IS 13779, IS 14697.
- Accurate Energy Measurement CL-0.5, CL-1.0.
- Open Communication Protocol - DLMS as per IS 15959.

Technical Specification

Bi- directional ac Static Meter		
S.N.	**Items**	**Technical Specification**
Electrical		
01.	**System**	• Single phase (5-30A)
		• Single phase (10-60A)
		• Three phase (10-40A)
		• Three phase (10-60A)
		• Three phase LTCT -/5A
		• Three phase HTCT -/5A
02.	**Accuracy**	0.5 accuracy Class, as per IS 14697
		1.0 accuracy Class, as per IS 13779
03.	**Measuring Parameters**	• Active, Reactive & Apparent Energy in both import & export mode
		• Signed Active, Reactive and Apparent power
		• Net Energy Calculation
		• Maximum Demand With Date & Time snap shots
		• Power On-off event logging
		• Last 12 month Billing Data
		• Daily (midnight) & every 15/30 Min Load profile Data
		• Anti – tamper and Event logging
		• TOD wise Data upto 8 configurable Tariff Zones
		True (4 Quadrant) Energy measurement in Three Phase BI-Directional Meter
04.	**Communication**	Galvanically Isolated Optical Port and RS 232 port for remote communication

* Specification varies with respect to model selected



Solar Cable

For Rooftop & Ground-Mount
Solar PV Application

Highlights

In a PV system, SOLAR CABLE is one of the most crucial parts. They are connected on DC side of the system, proper cable sizing and its quality ultimately ecides the power delivered to the load and in turn efficiency of the entire system because undersized cable results into heating which may lead further up to hazardous incidents like fire. Also Even a small increase in cable resistance resulting into increased I2R losses which is considered as a higher loss of energy and such cable will lose its acceptance.

Further as solar cable has to function in open atmosphere over a long period, it has to withstand all environmental severities like UV radiation, rain, dust & dirt, temperature variations, humidity, insects and microbes etc. Frequent failure / replacement of solar cable will lead to decrease in the overall project efficiency resulting in high operational costs.

HPL Solar cables are made under stringent MNRE parameters to deliver lasting performance throughout the lifetime of the PV System.

HPL Solar
Green. Smart. Durable

Special Properties of HPL Solar Cables

- UV Resistance : Full protection against Ultraviolet Rays.
- Outdoor Durability : resists extreme temperatures (-40°C to 120°C) & ozone resistant.
- Halogen-Free : Low Smoke Emission & Low Toxicity/Corrosively during fire.
- Properties against fire : flame retardant, fire retardant.
- Flexibility and stripping ability : for fast and easy installation.
- Lifetime reliability : lasts up to 30 years even under tough external conditions.
- Fully Recyclable : In accordance with new environmental regulations.
- Suitable to any connector types.
- According to EN/IEC/IS.

Constituents :-

- HPL solar cables are manufactured with the following materials.
- Zero Halogen Polyolefin Compound
- Annealed Tinned Copper Conductor
- Cross Linked Polyolefin Compound

Mechanical Features

- Resistant to Impact, tear & abrasion
- Minimum bending radius - 4 times of overall diameter.
- Safe pulling force -50 N/sq mm

Thermal Features

- Maximum conductor temperature of operation-120°C.
- Minimum operating temperature: -40°C

Electrical Features

- Voltage Rating : 1.5 (1.8) KV DC
- High voltage test : 6.5 KV DC for 5 minutes.

Chemical Features

- Resistant to mineral oils
- Resistant to acids & alkaline

HPL ATC copper conductor XLPO insulated and XLPO sheathed Solar cable as per EN-50618

Nominal Cross sectional area of the conductor sq.mm	Nos./Max. Dia of Strand No./ (mm)	Nominal Thickness of Insulation (mm)	Nominal Thickness of Sheath (mm)	Mean Overall Diameter Upper Limit Informative Value	Current Rating under according to method of installation			Conductor Resistance at 20°C Max. ohm/Km
					Single Cable Free in air	Single Sable on a surface	Two loaded cable touching on a surface	
				mm	Amp.	Amp.	Amp.	
1.5	30 / 0.25	0.7	0.8	5.4	30	29	24	13.7
2.5	50 / 0.25	0.7	0.8	5.9	41	39	33	8.21
4	56 / 0.30	0.7	0.8	6.6	55	52	44	5.09
6	84 / 0.30	0.7	0.8	7.4	70	67	57	3.39
10	80 / 0.40	0.7	0.8	8.8	98	93	79	1.95
16	126 / 0.40	0.7	0.9	10.1	132	125	107	1.24
25	196 / 0.40	0.9	1.0	12.5	176	167	142	0.795
35	276 / 0.40	0.9	1.1	14.0	218	207	176	0.565
50	396 / 0.40	1.0	1.2	16.3	276	282	221	0.393
70	556 / 0.40	1.1	1.2	18.7	347	330	278	0.277
95	954 / 0.40	1.1	1.3	20.8	416	395	333	0.210

LT Power & Control Cable

Highlights

In a Solar system, Power Cable is one of the most crucial parts.

They are connected on AC side of the system, proper cable sizing and its quality ultimately decides the power delivered to the load and in turn efficiency of the entire system because undersized cable results into heating which may lead further up to hazardous incidents like fire. Also Even a small increase in cable resistance resulting into increased I2R losses which is considered as a higher loss of energy and such cable will lose its acceptance.

HPL Solar cables are made under stringent parameters to deliver lasting performance throughout the lifetime of the Solar System.

HPL Solar
Green. Smart. Durable

Single Core, Aluminium/Copper Conductor, XLPE Insulated, UN-Armoured Cables

Electrical Parameters

Size (Cross Sectional Area)	Max. Conductor D.C. Resistance at 20°C		Approx. Conductor A.C. Resistance at 90°C		Reac-tance of Cable at 50Hz (Approx.)	Capaci-tance of Cable (Approx.)	Normal Current Rating						Short Circuit Current Rating for 1s Duration	
							For Aluminium Conductor			For Copper Conductor				
	Alumin-ium	Copper	Alumin-ium	Copper			Ground	Duct	Air	Ground	Duct	Air	Alumin-ium	Copper
sq. mm	Ω/km	Ω/km	Ω/km	Ω/km	Ω/km	µF/km	A	A	A	A	A	A	kA	kA
4	7.41	4.61	9.48	5.90	0.136	0.29	43	36	38	54	46	48	0.376	0.572
6	4.61	3.08	5.90	3.94	0.128	0.34	55	47	50	67	57	61	0.564	0.858
10	3.08	1.83	3.94	2.34	0.118	0.42	69	58	64	90	76	83	0.940	1.43
16	1.91	1.15	2.44	1.47	0.108	0.50	89	75	84	115	97	108	1.50	2.28
25	1.20	0.727	1.54	0.931	0.102	0.52	115	96	112	148	124	144	2.35	3.57
35	0.868	0.524	1.11	0.671	0.097	0.60	137	115	137	177	148	176	3.29	5.00
50	0.641	0.387	0.820	0.495	0.092	0.63	161	135	165	208	174	212	4.70	7.15
70	0.443	0.268	0.567	0.343	0.088	0.68	198	165	209	255	213	269	6.58	10.01
95	0.320	0.193	0.411	0.248	0.085	0.79	243	199	264	312	256	340	8.93	13.59
120	0.253	0.153	0.325	0.197	0.082	0.79	276	226	308	355	291	396	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.082	0.79	308	252	350	396	324	450	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.082	0.79	349	285	406	447	365	519	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.079	0.84	404	329	480	515	420	613	22.56	34.32
300	0.100	0.0601	0.130	0.0778	0.078	0.86	454	369	551	576	469	700	28.20	42.90

Single Core, Aluminium/Copper Conductor, XLPE Insulated, Armoured Cables

Electrical Parameters

Size (Cross Sectional Area)	Max. Conductor D.C. Resistance at 20°C		Approx. Conductor A.C. Resistance at 90°C		Reac-tance of Cable at 50Hz (Approx.)	Capaci-tance of Cable (Approx.)	Normal Current Rating						Short Circuit Current Rating for 1s Duration	
							For Aluminium Conductor			For Copper Conductor				
	Alumin-ium	Copper	Alumin-ium	Copper			Ground	Duct	Air	Ground	Duct	Air	Alumin-ium	Copper
sq. mm	Ω/km	Ω/km	Ω/km	Ω/km	Ω/km	µF/km	A	A	A	A	A	A	kA	kA
4	7.41	4.61	9.48	5.90	0.152	0.22	43	36	38	54	46	48	0.376	0.572
6	4.61	3.08	5.90	3.94	0.144	0.26	55	47	50	67	57	61	0.56	0.858
10	3.08	1.83	3.94	2.34	0.133	0.31	69	58	64	90	76	83	0.94	1.43
16	1.91	1.15	2.44	1.47	0.122	0.40	89	75	84	115	97	108	1.50	2.29
25	1.20	0.727	1.54	0.931	0.116	0.40	115	96	112	148	124	144	2.35	3.58
35	0.868	0.524	1.11	0.671	0.110	0.47	137	115	137	177	148	176	3.29	5.01
50	0.641	0.387	0.820	0.495	0.103	0.50	161	135	165	208	174	212	4.70	7.15
70	0.443	0.268	0.567	0.343	0.099	0.55	198	165	209	255	213	269	6.58	10.01
95	0.320	0.193	0.411	0.248	0.097	0.64	243	199	264	312	256	340	8.93	13.59
120	0.253	0.153	0.325	0.197	0.093	0.67	276	226	308	355	291	396	11.28	17.16
150	0.206	0.1240	0.265	0.159	0.091	0.67	308	252	350	396	324	450	14.10	21.45
185	0.164	0.0991	0.211	0.127	0.090	0.67	349	285	406	447	365	519	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.086	0.72	404	329	480	515	420	613	22.56	34.32
300	0.100	0.0601	0.130	0.0778	0.085	0.75	454	369	551	576	469	700	28.20	42.90

Solar LED Street Light

long life | ECO light solution | maintenance free | compact & sleek design | energy saver | LOW HEAT generation

HPL Solar
Green. Smart. Durable

Specifications:

Housing : High grade Aluminium pressure Die-Cast,

Cover : Toughened Glass

LED Make : Osram / Cree / Nichia / Seoul / Samsung,

Luminous Efficacy : >95 lumen/watt

Special Features : With in-built charge controller with separate green and red Led lights for battery charging and discharging indications also protection against over voltage, under voltage, short circuit & surge upto 4 kv. Operating at Dust to Dawn mode, also suitable for standalone & Centralized Street Lighting system.

Conform to LM-79 & LM-80 respectively.

Technical Details

Rated Wattage	Operating Voltage	CCT	CRI	I/P(A)
7W	10.5V-14V	5500K-6500K	>80	600
9W	10.5V-14V	5500K-6500K	>80	750
12W	10.5V-14V	5500K-6500K	>80	980
15W	10.5V-14V	5500K-6500K	>80	1250
21W	10.5V-14V	5500K-6500K	>80	1750

Applications :

- Road Lighting
- Colony lighting
- Shopping center perimeter lighting
- Industrial Area

Specifications:

Housing : High grade Aluminium pressure Die-Cast.,

Cover : Toughened Glass.

LED Make : Osram / Cree / Nichia / Seoul / Samsung,

Luminous Efficacy : >95 lumen/watt

Special Features : Protection against over voltage, under voltage, short circuit & surge upto 4 kv. Operating at Dust to Dawn mode, also suitable for standalone & Centralized Street Lighting system.

Conform to LM-79 & LM-80 respectively.

Technical Details

Rated Wattage	Operating Voltage	CCT	CRI	I/P(A)
40W	10.5V-14V	5500K-6500K	>70	3300
50W	10.5V-14V	5500K-6500K	>70	4160
60W	22V-26V	5500K-6500K	>70	2500
100W	22V-26V	5500K-6500K	>70	4160

Applications :

- Road Lighting
- Colony Lighting
- Shopping Center Perimeter Lighting
- Industrial Area Lighting
- National Highway Lighting

Note

Note

Enquiry Contact Details

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