elmex®

since 1963

Solutions for Solar Photovoltaic

www.elmex.net

since 1963

'elmex' was established in 1963 and is a pioneer and leader in the field of Wire Termination Technology in India. *'elmex'* is having manufacturing facilities in Vadodara, Gujarat, certified as per ISO 9001:2015 and ISO 14001:2015. It has extended its domain knowledge in Termination Technology to develop product range suitable for Photovoltaic applications with indigenous design and development.

Converging Innovations Expanding Solutions

As an application *'elmex'* provides wide range of PV products such as PV Straight Connectors, Panel Connectors, Y- type Over Moulded Wire Harnesses, Inline Fuse Connectors, Y- type Wire Harnesses with Inline fuse Connectors , DC Fuse Terminal Blocks (for DC Distribution Box) and PV Solar Split Junction box which are used for termination and to transfer DC energy from PV module to final output.

'elmex' PV product range conforms to International standards like IEC 62852-2014 for Connectors, UL 4248 & IEC 60269-1-2 for Fuse Terminals, IEC 60269-6 for 1000V DC Fuse Links and UL 248-1, UL 248-19 extended up to UL 2579 for 1500V DC Fuse link.

'elmex' PV products have found application in various Solar power projects, totaling more than 60+GW of installation in ground mounted projects as well as roof top projects.

R60126561

MADE IN INDIA

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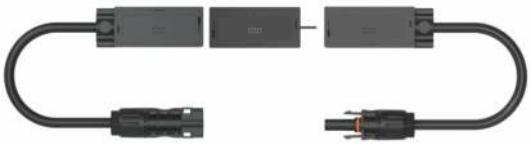
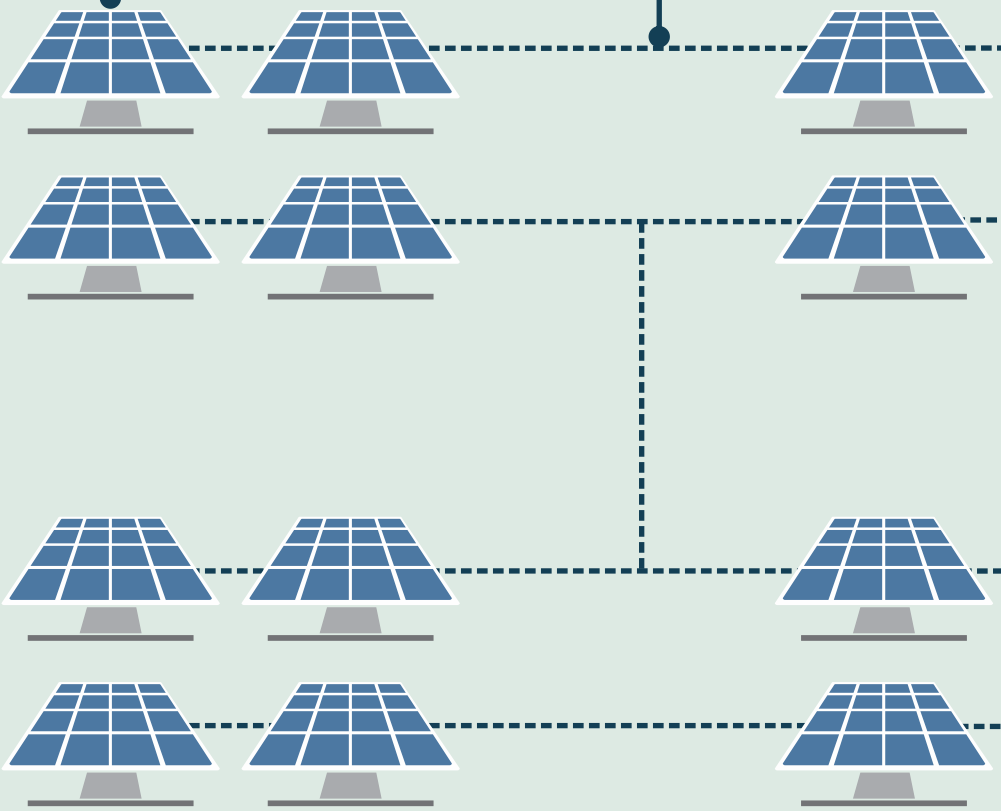
'elmex' Schematic Diagram



Split Type Junction Box

EMPV4N / EMPV10N

Straight Connector



Wire Harness with Fuse 1500V

'Y - Type' Male Harness

'Y - Type' Female Harness

Fuse Terminal Blocks

EPVFH1000NV

EPVFH1500-LGREY

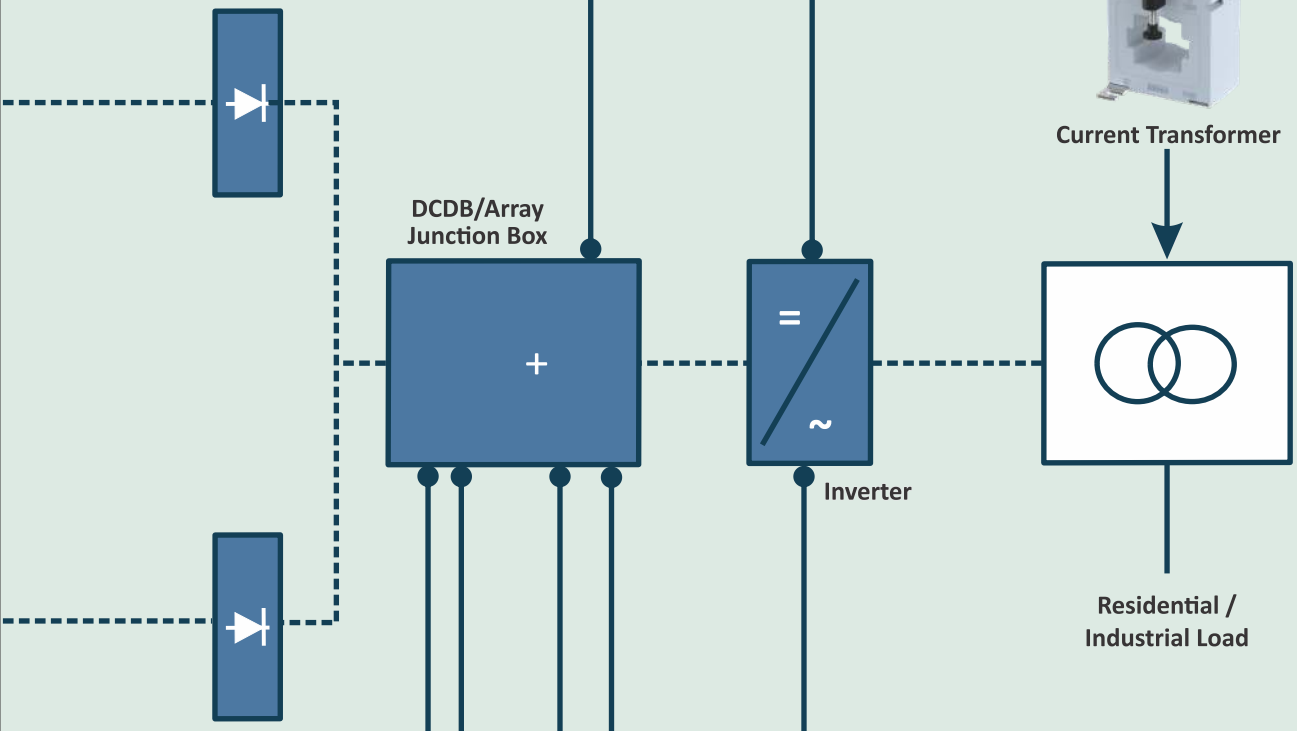
Wire Harness without Fuse 1500V

'Y-Type' Male Harness

'Y-Type' Female Harness

Terminal Block

Current Transformer



SPD

SPPV3+1T2 - 320N

SPPV3T2 - 1000N

Panel Connector

EMPVPCM4N

EMPVPCF4N

'elmex' PV Solar Product Solutions

Solutions For EPC / Rooftop/ Project Developers

- PV Straight Connectors (1500V) 54A & 70A
- PV Branch Connectors (1500V) 54A
- PV Straight Inline Fuse Connectors (1500V)
- Over Moulded Inline Fuse Connector (1500V)
- Over Moulded Wire Harnesses (1500V)
- Over Moulded wire Harnesses with Fuse (1500V)

Solutions For System Integrators / Inverters

- PV Panel Connectors (1500V)
- PV Solar Fuse Holders (1500V / 1000V)
- Terminal Blocks (1500V / 1000V)
- Surge Protection Devices

Solutions For PV Panels/ Module Manufacturers

- PV Solar - Split Junction Box

'elmex' PV Solar Straight Connector

'elmex' PV Solar Straight Connector EMPV4N features a plug and socket design made from flame-retardant engineering thermoplastic, 'elmex' PV connectors are built to withstand harsh environmental conditions, including prolonged exposure to UV rays, ensuring longevity and reliability in outdoor applications. EMPV4N Straight connector are IP 68 rated for water resistance which makes the connector ideal for use in various weather conditions to maintain their performance and durability. The connectors are designed as male (plug) and female (socket) types to prevent chance of wrong connections. For optimal performance, it is essential to use TUV certified DC solar cables compliant with EN 50618/IEC 62930 standards.

With NEC Interlock*

R60126561

EMPV4N

Features

- TUV Certified
- Snap Fit Locking Arrangement
- IP 68 Protection (when mated)
- Low Contact Resistance
- Provides UV Protection (Tested for 500 hrs as per ISO 4892-2)
- Tested as per International Standards IEC 62852

Description	Specifications
Rated Voltage	1500V DC (IEC)
Rated Current (TUV)	25 A (2.5 mm^2), 45 A (4 mm^2), 54 A (6 mm^2)
Rated Impulse Voltage	16 kV
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... + 85 °C (IEC)
Upper Limit Temperature	+ 110°C
Protection Class	Class II
Flammability Class	UL94-V0
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Suitable cable outer diameter	4.8 mm ... 6.8 mm
Contact material	Copper with Tin Plating
Insulation material	PPO
Type of Termination	Crimping
Contact Resistance of plug connectors	≤ 0.25 mΩ
Locking System	Snap In
TÜV Rheinland certified according to IEC 62852:2014	R 60126561

Note : Our Connectors are suitable for PV Solar Cables of 2.5 / 4.0 / 6.0 mm^2 (As per standard EN 50618 / IEC 62930).

*Connectors when mated, need a tool to open in accordance with NEC 2014.

'elmex' PV Solar Straight Connector

'elmex' PV Solar Straight Connector EMPV10N features a plug and socket design made from flame-retardant engineering thermoplastic. The EMPV10N connectors are built to withstand harsh environmental conditions, including prolonged exposure to UV rays, ensuring longevity and reliability in outdoor applications. EMPV10N connectors are IP 68 rated for water resistance which makes them ideal for use in various weather conditions to maintain their performance and durability. EMPV10N connectors are designed as male (plug) and female (socket) types to prevent chance of wrong connections. For optimal performance, it is essential to use TUV certified DC solar cables compliant with EN 50618/IEC 62930 standards.

With NEC Interlock*

EMPV10N

Features

- Snap Fit Locking Arrangement
- IP 68 Protection (when mated)
- Low Contact Resistance
- Provides UV Protection (Tested for 500 hrs as per ISO 4892-2)
- Tested as per International Standards IEC 62852

Description	Specifications
Rated Voltage	1500V DC (IEC)
Rated Current	70 A (10 mm^2)
Rated Impulse Voltage	16 kV
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... + 85 °C
Upper Limit Temperature	+ 110°C
Protection Class	Class II
Flammability Class	UL94-V0
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Suitable cable outer diameter	6.7 mm ...8.4 mm
Contact material	Copper with Tin Plating
Insulation material	PC
Type of Termination	Crimping
Contact Resistance of plug connectors	≤ 0.25 mΩ
Locking System	Snap In

Note : Our Connectors are suitable for PV Solar Cable 6.0/10.0 mm^2 (As per standard EN 50618 / IEC 62930).

*Connectors when mated, need a tool to open in accordance with NEC 2014.

'elmex' PV Solar Panel Connectors

'elmex' PV Solar Panel Connectors EMPVPCM4N and EMPVPCF4N are designed for panel mounting connections in photovoltaic (PV) systems and are constructed using flame-retardant engineering thermoplastic. 'elmex' make PV Solar Panel connectors are suitable for UV exposure and harsh environmental conditions, making the connectors ideal for PV power generation applications. 'elmex' make PV Solar panel connectors are specifically designed for use with photovoltaic devices such as DC Distribution Boxes, Inverters, and String Combiner Boxes. The connector feature a hexagonal nut for secure fixing and tightening onto mounting surfaces. A silicone rubber O-ring between the panel connector and the photovoltaic enclosure ensures protection against water and dust ingress, enhancing durability. Additionally, 'elmex' PV Solar Panel connectors are compatible not only with 'elmex' straight connectors but also with straight connectors from leading international manufacturers that have similar construction, providing flexibility and ease of integration into various PV systems.

With NEC Interlock*

EMPVPCM4N

EMPVPCF4N

R60126561

Features

- TUV Certified
- Snap Fit Locking Arrangement
- IP 68 Protection (when mated)
- Low Contact Resistance
- Provides UV Protection (Tested for 500 hrs as per ISO 4892-2)
- Tested as per International Standards IEC 62852

Description	Specifications
Rated Voltage	1500V DC (IEC)
Rated Current	25 A (2.5 mm^2), 45 A (4 mm^2), 54 A (6 mm^2)
Rated Impulse Voltage	16 kV
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... + 85 °C (IEC)
Upper Limit Temperature	+ 110°C
Protection Class	Class II
Flammability Class	UL94-V0
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Contact material	Copper with Tin Plating
Insulation material	PPO
Type of Termination	Crimping
Contact Resistance of plug connectors	≤ 0.25 mΩ
Locking System	Snap In
TÜV Rheinland certified according to IEC 62852:2014	R 60126561

Note: Our Connectors are suitable for PV Solar Cables of 2.5 / 4.0 / 6.0 mm^2 (As per standard EN 50618/ IEC 62930).

*Connectors when mated, need a tool to open in accordance with NEC 2014.

'elmex' PV Solar Branch Connectors

'elmex' PV Solar Branch connectors EBPV10M-N and EBPV10F-N are applicable for parallel (or series-parallel)connection with PV straight male or female connectors depending on the on-site application. Branch connectors have 3 connections provision, 2 for inputs, either male or female and 1 for output, either male or female. These connectors are constructed using flame retardant thermoplasc suitable for exposure to UV rays and for application in PV power generation system. When mated, they can be disconnected with the use of make open end spanner. 'elmex' branch connectors have mating compatibility not only with straight connectors but also with straight connectors of leading International makes having similar construction.

With NEC Interlock*

EBPV10F-N

EBPV10M-N

Features

- Snap Fit Locking Arrangement
- IP 68 Protection when mated
- Low Contact Resistance
- Provides UV Protection (Tested for 500 hrs as per ISO 4892-2)
- Tested as per International Standards IEC 62852

Description	Specifications
Rated Voltage	1500V DC (IEC)
Rated Current*	45A (4 mm^2), 54A (6 mm^2), 70A (10mm^2)
Rated Impulse Voltage	16 kV
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... +85 °C
Upper Limit Temperature	+130°C
Protection Class	Class II
Flame Class	UL94-V0
Pollution Degree	2
Degree of Protection	IP 68 (when mated)
Contact material	Copper with Tin Plating
Insulation material	PC
Contact Resistance of plug connectors	≤ 0.50 mΩ
Locking System	Snap In
Compatible with connector type	EMPV4N , EMPV10N

*The current and voltage ratings, as well as the upper limiting temperature, is limited to the corresponding mating connector from Elmex

*Connectors when mated, need a tool to open in accordance with NEC 2014.

'elmex' PV Solar Over Moulded Wire Harnesses

'elmex' PV Solar Over Moulded Y-Type Wire Harness solutions are designed for photovoltaic applications, offering a versatile and reliable connection system with multiple input and output configurations. 'elmex' Y-Type wire harnesses feature a plug-and-socket design and are compatible with cable sizes of 2.5, 4.0, and 6.0 mm². The over-moulded wire harnesses are constructed using flame-retardant engineering thermoplastic elastomer, they are UV-resistant and engineered for long-lasting performance in PV power generation systems. The over-moulded wire harnesses are customizable, allowing for configuration with either straight connectors or inline fuse connectors, tailored to different cable sizes of 2.5, 4.0 & 6.0 mm².

'Y - Type' Male Harness

'Y - Type' Female Harness

'Y - Type' 6 in 1 out Harness

Description	Specifications
Rated Voltage	1500V DC
Rated Output Current	25A (2.5 mm²), 45A (4 mm²), 54A (6 mm²)
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... +85 °C
Upper Limit Temperature	+110°C
Cable Cross Section	Available with 2.5 mm², 4.0 mm² and 6.0 mm²
Protection Class	Class II
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Contact material	Copper with Tin Plating
Locking System	Snap In

Note: (1) 'elmex' Wire Harness solutions are customized, based on cable size, length & type of connectors.
(2) Connectors when mated, need a tool to open in accordance with NEC 2014.
(3) Solar DC Cable with 2.5 mm² / 4.0 mm² / 6.0 mm² are as per standard EN 50618/IEC 62930.

'elmex' PV Solar Over Moulded Wire Harnesses with Fuse - 1500V

'elmex' PV Solar Over Moulded Y-Type Wire Harness solutions with Inline Fuse are designed for photovoltaic applications, featuring multiple input and output connections with a plug-and-socket design suitable for 4.0 and 6.0 mm² cables. 'elmex' Y-Type over moulded wire harnesses are constructed from flame-retardant engineering thermoplastic elastomer and offers UV resistance, making the wire harnesses ideal for long-term use in PV power generation systems. The customizable Y-Type wire harnesses can be configured with straight inline fuse connectors and are compatible with gPV (Cylindrical) fuses of Ø 10 x 85 mm. The Y-Type wire harnesses support various cable sizes, including 2.5, 4.0, and 6.0 mm², providing flexibility for different system requirements and ensuring reliable, durable connections in outdoor solar power setups.

'Y - Type' Male Harness

'Y - Type' Female Harness

Description	Specifications
Rated Voltage	1500V DC
Rated Output Current	54A (Output)
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... +85 °C
Upper Limit Temperature	+110°C
Cable Cross Section	Available with 4.0 mm² and 6.0 mm²
Protection Class	Class II
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Contact material	Copper with tin Plating
Locking System	Snap In

Note: (1) 'elmex' Wire Harness solutions are customized, based on cable size, length & type of connectors.
(2) Connectors when mated, need a tool to open in accordance with NEC 2014.
(3) Solar DC Cable with 4.0 mm^2 / 6.0 mm^2 are as per standard EN 50618/IEC 62930.

'elmex' gPV Fuse Link

'elmex' gPV Fuse Link suitable for 1500V DC photovoltaic applications.

EPVFL1500

Description	Specifications
Rated Voltage	1500V DC
Rated Current	upto 30 A
Type	gPV (Cylindrical)
Dimension	ø 10 X 85 mm
Testing Standard	UL 248-1, UL 248-19 Extended to UL 2579

LISTED
E510330

Manufactured in Vadodara, Gujarat, India

'elmex' PV Solar Straight Inline Fuse Connectors-1500V

'elmex' PV Solar Straight Inline Fuse Connectors models EMPV4IFC1500, EMPV4IFCM1500, EMPV4IFCF1500, and EMPV4IFC1500-CC are designed for photovoltaic string protection. 'elmex' Inline Fuse connectors provide flexible options, allowing users to select configurations with a male or female straight connector at one end and cable at the other, or with male/female straight connectors at both ends for string protection with an integrated fuse. Inline Fuse Connectors are constructed from flame-retardant engineering thermoplastic, these connectors are UV-resistant, ensuring long-term durability in outdoor PV power generation systems. They are compatible with 2.5, 4.0, and 6.0 mm² cables and are designed to work with gPV (Cylindrical) fuses of Ø 10 x 85 mm. These connectors offer reliable, safe and efficient protection for photovoltaic strings, making them ideal for use in solar power installations.

EMPV4IFC1500

EMPV4IFCM1500

EMPV4IFCF1500

Description	Specifications
Rated Voltage	1500V DC
Rated Current gPV*	Various ampacity ratings available: DC 1500 V: 1 – 30 A
RMS withstand Voltage	8 kV
Ambient temperature range	-40 °C ... +85 °C
Upper Limit Temperature	+110°C
Protection Class	Class II
Flammability Class	UL94-V0
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Contact material	Copper with Tin Plating
Insulation material	PPO
Locking System	Snap In

*Please refer to the information on the product or packaging for details regarding the variant/mode

Note: (1) 'elmex' Connectors are suitable for PV Solar Cables of 2.5 / 4.0 / 6.0 mm² (As per standard EN 50618/ IEC 62930).
(2) Connectors when mated, need a tool to open in accordance with NEC 2014.
(3) It is recommended to use gPV (cylindrical) fuse of ø 10 X 85 mm dimension.
(4) Do not connect Straight Inline fuse connectors directly to MPPT of String Invertor.

'elmex' gPV Fuse Link

'elmex' gPV Fuse Link suitable for 1500V DC photovoltaic applications.

EPVFL1500

Description	Specifications
Rated Voltage	1500V DC
Rated Current	upto 30 A
Type	gPV (Cylindrical)
Dimension	Ø 10 X 85 mm
Testing Standard	UL 248-1, UL 248-19 Extended to UL 2579

LISTED
E510330

'elmex' PV Solar Over Moulded Inline Fuse Connectors-1500V

'elmex' PV Solar Over Moulded Inline Fuse Connector is designed for use in photovoltaic applications, offering a reliable plug-and-socket design compatible with 4.0 and 6.0 mm² cables. The Over-moulded Inline Fuse Connector are constructed from flame-retardant engineering thermoplastic elastomer and the connectors are UV-resistant, ensuring long-lasting durability in outdoor PV power generation systems. The over-moulded Inline Fuse Connector is a customizable solution, available with various DC cable sizes and capable of supporting DC fuse link ratings of up to 30A. It can be configured with a Branch Connector to create a Branch with Fuse Connector setup, providing effective PV string protection.

Over Moulded Inline Fuse Connector

Description	Specifications
Rated Voltage	IEC 1500V
Rated Current gPV*	Various ampacity ratings available: DC 1500 V: 15 A , 20 A , 25 A , 30 A
RMS withstand Voltage	8 kV
Protection Class	Class II
Pollution Degree	2
Degree of Protection	IP68 (when mated)
Cable Cross Section	Available with 4.0 mm² and 6.0 mm²
Contact material	Copper with Tin Plating
Locking System	Snap In

*Please refer to the information on the product or packaging for details regarding the variant/mode

Note: (1) 'elmex' Over Moulded Inline Fuse connector is customized, based on cable size, length & type of DC fuse link up to 30A.

(2) Connectors when mated, need a tool to open in accordance with NEC 2014.

(3) Over Moulded Inline Fuse connector does not have fuse replacement provision.

(4) Solar DC Cable with 4.0 mm^2 / 6.0 mm^2 are as per standard EN 50618/ IEC 62930.

'elmex' gPV Fuse Link

'elmex' gPV Fuse Link suitable for 1500V DC photovoltaic applications.

EPVFL1500

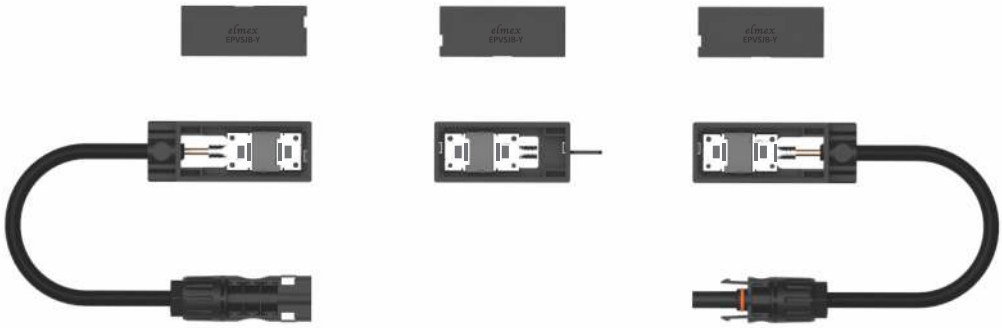
Description	Specifications
Rated Voltage	1500V DC
Rated Current	up to 30 A
Type	gPV (Cylindrical)
Dimension	Ø 10 X 85 mm
Testing Standard	UL 248-1, UL 248-19 Extended to UL 2579

LISTED
E510330

Manufactured in Vadodara, Gujarat, India

'elmex' PV Solar Split Junction box

'elmex' EPVSJB-Y is a cutting-edge PV solar split junction box designed to provide robust electrical connections for bifacial and half-cut cell solar PV modules. The EPVSJB-Y incorporates an integrated chip-type Schottky Diode, known for its excellent temperature stability and fast switching response, ensuring optimal performance. The PV solar split junction box is constructed with a UL94-V0, 5VA-rated flammability class, and offering an IP 68 protection class. This junction box facilitates the connection of PV ribbons from solar modules to the Split Junction Box rails through a soldering process, optimizing the electrical output of the modules.



EPVSJB-Y

EPVSJB-Y (Y= 20A or 25A or 30A)

E : Brand name
PV : Photovoltaic
SJB : Split Junction Box
Y : Rated Current

- EPVSJB-20A - Rated Current 20A & Solder type terminal for PV ribbon
- EPVSJB-25A - Rated Current 25A & Solder type terminal for PV ribbon
- EPVSJB-30A - Rated Current 30A & Solder type terminal for PV ribbon

Description	Specifications
Rated Voltage	1500V DC
Rated Current	20 A / 25 A / 30 A
Rated Impulse Voltage	16 kV
RMS withstand Voltage	8 kV
Reverse Current	45 A
Protection Class/ Over Voltage category	Class II/3
Application Class	A
Flammability Class/ Pollution Degree	UL94-V0, 5VA / 1
Diode Rating	If=30A/VRRM=45 V for EPVSJB-20A If=40A/VRRM=45 V for EPVSJB-25A If=50A/VRRM=45 V for EPVSJB-30A
No. of Schottky Diodes	3
Width of Busbar	Max. 8.5 mm
Bounding mode	Silicon Glue / Sealant
Cable size	4 mm^2
Standard Cable Length	1000 mm
Operating Temperature	-40˚C to +85˚C
PV Connectors (Male & Female)	1500V DC, 54A, IP 68 as per IEC 62852, Model No.: EMPV4N
Solar DC cable Standard	EN 50618 / IEC 62930

Note: 'elmex' EPVSJB-Y is customized, based on length & types of diode rating up to 30A.

'elmex' PV Solar Fuse Holder - 1000V

'elmex' PV Solar Fuse Terminal Block EPVFH1000NV is specifically designed for 1000 VDC photovoltaic applications, providing essential string protection. It is used for connecting photovoltaic devices such as DC and AC distribution boxes, inverters, and string combiner boxes in both rooftop and ground-mounted solar power systems. Solar Fuse Terminal Blocks are constructed in accordance with IEC 60269-1-2 and UL 4248-1 & UL 4248-19 standards, and are compatible with cylindrical gPV fuses of size Ø 10 x 38 mm. The design of the fuse terminal block allows for mounting with a spacer, which creates a gap between adjacent fuse holders. This gap facilitates air circulation, helping to reduce the operating temperature and enhance the overall reliability and efficiency of the system.

EPVFH1000NV

SPACER
For PV Fuse Terminal Block
EPVFH1000NV

TGS

Description	Specifications
Rated Voltage	1000V DC
Rated Current	32A
Degree of Protection	IP20
Rated Cross Section	1.0 - 25mm² /8 - 18 AWG
Rated Torque	24.2 Ib-in
Dimensions (W x H x P)	78 x 62 x 18 mm
Mounting Channel	7.5(h) X 35 mm(w)
Standard Box Packing	20 Nos.

UL LISTED E509305

Note: It is recommended to use gPV (cylindrical) fuse of ø 10 X 38 mm dimension.

'elmex' gPV Fuse Link

'elmex' gPV Fuse Link suitable for 1000V DC photovoltaic applications.

EPVFL

Description	Specifications
Rated Voltage	1000V DC
Rated Current	4, 10, 12, 15, 16, 20, 25, 30 A
Type	gPV (Cylindrical)
Dimension	ø 10 X 38 mm
Testing Standard	IEC 60269-6

Manufactured in Vadodara, Gujarat, India

'elmex' PV Solar Fuse Holder - 1500V

'elmex' PV Solar Fuse Terminal Block EPVFH1500-LGREY is designed for 1500 VDC photovoltaic applications, providing crucial string protection. The PV Solar Fuse terminal block is used to connect photovoltaic devices such as DC and AC distribution boxes, inverters, and string combiner boxes, making it ideal for both rooftop and ground-mounted solar power systems. The EPVFH1500-LGREY are constructed according to the IEC 60269-1-2 and UL 4248-1 & UL 4248-19 standard and are compatible with cylindrical gPV fuses of sizes Ø 10 x 85 mm and Ø 14 x 85 mm which ensures reliable and safe protection for the electrical components within photovoltaic systems.

LISTED
E529910

EPVFH1500-LGREY

Description	Specifications
Rated Voltage	1500V DC
Rated Current	50A
Degree of Protection	IP20
Rated Cross Section	4 - 25mm^2 / 3 - 12 AWG
Rated Torque	2 Nm
Dimensions (W x H x P)	135 x 64.50 x 22 mm
Mounting Channel	7.5(h) X 35 mm(w)
Standard Box Packing	6 Nos.

Note: It is recommended to use gPV (cylindrical) fuse of Ø 10 X 85 mm / Ø 14 X 85 mm dimension.

'elmex' gPV Fuse Link

'elmex' gPV Fuse Link suitable for 1500V DC photovoltaic applications.

ø 10 X 85 mm up to 32A ø 14 X 85 mm up to 50A

EPVFL1500

Description	Specifications
Rated Voltage	1500V DC
Rated Current	Ø 10 X 85 mm upto 32A, Ø 14 X 85 mm upto 50A
Type	gPV (Cylindrical)
Dimension	Ø10 X 85 mm, Ø 14 X 85 mm
Testing Standard	UL 248-1, UL 248-19 Extended to UL 2579 for ø 10X85 mm IEC 60269-6, EN 60269-6 for ø 14X85 mm

'elmex' Surge Protection Devices

'elmex' Type 2 DC & AC Surge Protection Device (SPD) suitable for Solar PV applications is designed to protect photovoltaic (PV) systems from transient voltage surges or spikes, typically caused by lightning strikes, electrical switching, or other disturbances in the electrical grid. The Type 2 SPD are specifically intended to be installed on the DC and AC side of a solar power system, between the solar panels and the inverter, to prevent damage to the system's components due to excess voltage. The Surge Protection Device (SPD) is equipped with a fault indication feature that alerts users to any faults or issues within the electrical or mechanical system. The SPDs are essential in ensuring the continuous and efficient operation of solar PV systems in areas prone to electrical surges or adverse weather conditions.

Type 2 AC SPD

TÜVRheinland

Type 2 DC SPD

TÜVRheinland

Features

- Type 2 Surge Protection Device
- Pluggable Design - Easy to Replace
- Quick Response Time ≤ 25 ns
- Visual Status - Fault Indication by Red Flag
- Maximum Discharge Current (8/20µs): 40kA
- Remote Signalling Contact (optional)
- IEC 61643 - 11 Compliance - for AC SPD
- IEC 61643 - 31 Compliance - for DC SPD

TYPE 2 AC SPD	
SPPV1 T2 - 320N	1 Pole 320V AC SPD
SPPV2 T2 - 320N	2 Pole 320V AC SPD
SPPV3 T2 - 320N	3 Pole 320V AC SPD
SPPV4 T2 - 320N	4 Pole 320V AC SPD
SPPV 1+1 T2 - 320N	1+1 Pole 320V AC SPD
SPPV 3+1 T2 - 320N	3+1 Pole 320V AC SPD
SPPV 1+1 T2 - 320NR	1+1 Pole 320V AC SPD with Remote Signal
SPPV 3+1 T2 - 320NR	3+1 Pole 320V AC SPD with Remote Signal

TYPE 2 DC SPD	
SPPV2 T2 - 600N	2 Pole 600V DC SPD
SPPV2 T2 - 600NR	2 Pole 600V DC SPD with Remote Signal
SPPV3 T2 - 1000N	3 Pole 1000V DC SPD
SPPV3 T2 - 1000NR	3 Pole 1000V DC SPD with Remote Signal
SPPV3 T2 - 1500N	3 Pole 1500V DC SPD
SPPV3 T2 - 1500NR	3 Pole 1500V DC SPD with Remote Signal

Manufactured in Vadodara, Gujarat, India

'elmex' PV Solar ToolKit - EMPVKIT

ESCCT: Crimping tool

Application: Crimping tool ESCCT to be used for crimping of different size of solar DC cable in contact pins with different jaws placing sizes of 2.5 mm^2,4.0 mm^2, 6.0 mm^2,10.0 mm^2.

EMPVCRT: Solar Cable Stripper

Application: Wire Stripper is used for stripping of solar DC cable sizes of 2.5mm^2, 4.0mm^2, 6.0mm^2.

EMPVCCUT: Solar Cable Cutter

Application: To cut the Solar DC Cable.

EPVOS-S: Spanner

Application: Tighten and open the pair of PV Connectors EMPV4 / EMPV4N.

EPVOS-BF: Spanner

Application: To open the PV Branch with Inline Fuse Connectors for fuse replacement EBWFPVM1500, EBWFPVF1500.

EPVOS-10N: Spanner

Application: Tighten and open the pair of PV Connector EMPV10N.

EPVOS-U: Spanner

Application: To open the pair of PV Connectors of different makes.

EMPVGNG: Go-NoGo Gauge

Application: To verify proper locking of Male and Female contact pins in PV Connector Insulation Housing.

EMPVPCx4N: Panel connector pair

Application: A pair of Panel connector used in Inverter and combiner box.

EMPV4N: Straight connector pair

Application: A pair of Straight connector used with Inverter, Combiner box and PV Module connector.

EPVOS-P: Spanner

Application: To Hold housing of the PV Connectors and to open a pair of connector from Inverter and combiner box.

Solar Crimping Tool (Suitable for 10 sq mm Solar DC cable) - ESCCT10

- Ergonomically designed heavy-duty parallel crimping tool with a crimping range of 10 sq. mm.
- Made from S45C carbon steel.
- Thermoplastic rubber handle gives comfortable crimping experience.

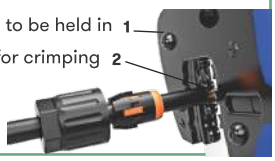
Solar Connector Assembly Instructions

Step 1 Prepare the cable by inserting following components in the sequence as mentioned below:

Sequence Components
1) Connector Cap
2) Grommet with Collet

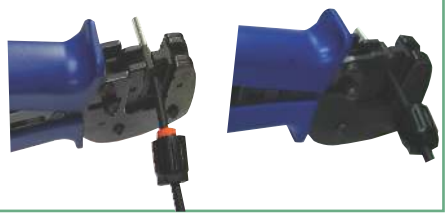
Step 2 Strip the cable as per specified stripping length i.e. 8 mm to 10 mm

Step 3
1) Select the jaw as per cable size
2) Place the cable in the appropriate jaw



Step 4
Hold the contact in a crimping tool

Step 5
Insert the cable into the contact



Step 6
Press the crimping tool until it release itself

Step 7
Insert the crimped contact into the straight connector until a locking sound (click) is heard

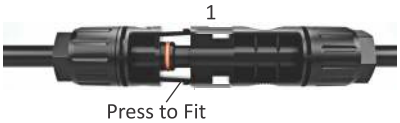
Step 8
Set the Grommet & Collet properly on connector

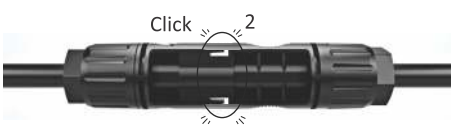
Step 9
Tighten the cap with Tightening tool

EPVOS-S

Step 10
The Male & Female connectors are ready for connection

Step 11
1) Press to fit for reliable connection
2) Ensure that it looks properly for reliable connection



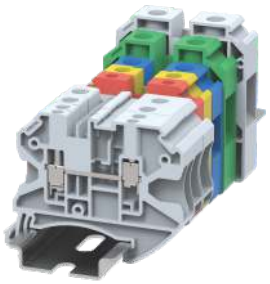


Note: Our Connectors are suitable for PV Solar cable of 2.5/4.0/6.0 mm^2 diameter as per EN 50618 / IEC 62930.

'elmex' Terminal Blocks for PV Applications

'elmex' range of Terminal Blocks for conductor size ranging from 2.5 to 95 mm^2 are tested and approved for 1000V DC / 1500V DC and are suitable for use in Solar Photovoltaic Systems. Electrical ratings of these terminal blocks are given below. These terminal blocks have conductor termination by screw-clamp technology or by screwless (spring clamp technology).

SCREW CLAMP TERMINAL BLOCKS



SCREWLESS TERMINAL BLOCKS

NEXT GENERATION TERMINAL BLOCKS		
ARA-Push In Type	AURIGA-Spring Clamp Type	AQUILA-Screw Clamp Type
PQ2.5	SQ2.5	TQ2.5
PQ4	SQ4	TQ4
PQ6	SQ6	TQ6
PQ10	SQ10	TQ10
	SQ16	TQC16

SCREW CLAMP TERMINAL BLOCKS	
KUT2.5N	KUT25
KUT4N	KUT35
KUT6N	KUT50
KUT10N	KUT95

SCREWLESS TERMINAL BLOCKS	
DST2.5	SCT2.5
DST2.5-1x2	SCT4
DST4	MCT2.5
DST6	MCT2.5P4
DST10	MCT4
DST16	

Note: Tested for 1500V DC suitable for Solar PV application

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