BETAsolar®
PV connection system

The Quality Connection

LEONI

LEONI – We create the best connection for your future.

BETAsolar® PV connection system

LEONI solar cable are used world-wide and are well-known for their high quality and long service life.

We have expanded and supplemented our product protfolio with a new solar connection systems, under the slogan "clean cables for clean energy".

In addition to standardized connection systems, we also design and manufacture customized boxes. These are specifically developed and produced in accordance with your specifications. Our world-wide presence allows us to react to your demands flexibly, quickly and professionally in the most important solar markets.

Issue: May 2016

We reserve the right to make technical modifications, typographical errors and mistakes.
The current version of the catalogue is downloadable under
www.leoni-wind-solar-power.com

Safety instructions
Cables are to be used for the designated applications only. In case of failure or damage to the cable or connector, switch off power immediately and replace all damaged parts. Maintenance, repair and replacement of the cables and connectors may only be carried out by authorised and trained personnel.

Waiver
While the information contained in this document has been carefully compiled to the best of our knowledge, it is not intended as a representation or warranty of any kind on our part regarding the suitability of the products concerned for any particular use or purpose and neither shall any statement contained herein be construed as a recommendation to infringe any industrial property rights or as a license to use any such rights. The suitability of each product for any particular purpose must be checked beforehand with our specialists. Our policy is one of continuous material and product development. We reserve the right to offer alternatives consistent with our manufacturing programme at the time of enquiry. All information concerning material properties, Fire performance, construction, electrical and technical data, prices etc. reflects our current level of knowledge and is provided without obligation. Dimensions and weights are only given as a guide. The specifications may change any time without prior notice.

General conditions of sale and delivery
We refer to the currently valid General conditions of sale and delivery which can be obtained from the respective companies.

Content

The LEONI Group

Cable expertise for the most various industrial markets

LEONI is a leading supplier of cable systems and related services for the automotive industry and various other industrial sectors.

Our group of companies employs more than 75,000 people in 31 countries. Corporate vision, highest quality and innovative power have made us one of the leading cable manufacturers in Europe. LEONI develops and produces technically sophisticated products ranging from wire and optical fibers to cables through to complete cable systems and also offers the related services. Moreover, the product portfolio comprises strands, standardised cables, hybrid cables, glass fiber as well as special cables, cable harnesses, wiring systems components and fully assembled systems for applications in various industrial markets.

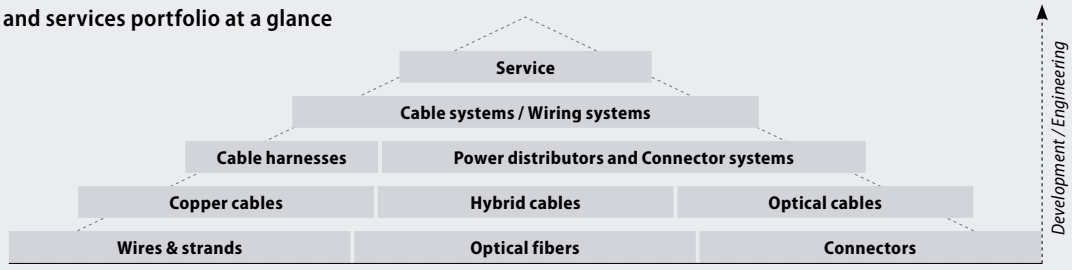
Your markets – our strength.

Our product and service range is as diverse as the markets and sectors that LEONI supplies. We focus our activities on customers in the fields of Automotive & Commercial Vehicles, Industry & Healthcare, Communication & Infrastructure, Electrical Appliances and Conductors & Copper Solutions.

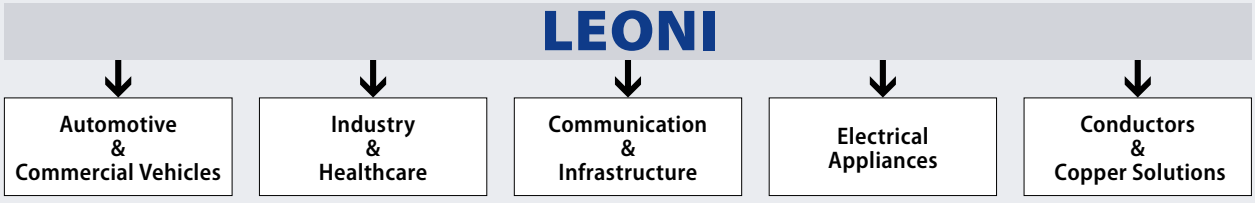
We are among the leading European suppliers in the Communication & Infrastructure market to which at LEONI as a cable manufacturer also belong activities in the fields of Infrastructure & Data Communications, Industrial Plant Projects, Solar & Windpower, Energy & Telecommunications, Irradiation Cross-Linking and Traffic Engineering. Our customers benefit worldwide from innovative as well as reliable and long-lasting products of high quality. LEONI – we create the best connection for your future.

For further information ***www.leoni.com***

Products and services portfolio at a glance



LEONI's core markets



Nature is brilliant. Cleanly efficient.

Business Unit
Solar- & Windpower

Trusting the only true constant – nature – makes sense and is the safest way in the long term.

Solar and wind energy are the energy sources of the future. The basic elements sun and air are natural forces that shape our climate. Using their limitless power sustainably and cleanly for the energy consumption of mankind is the great challenge facing the energy supply of the near future.

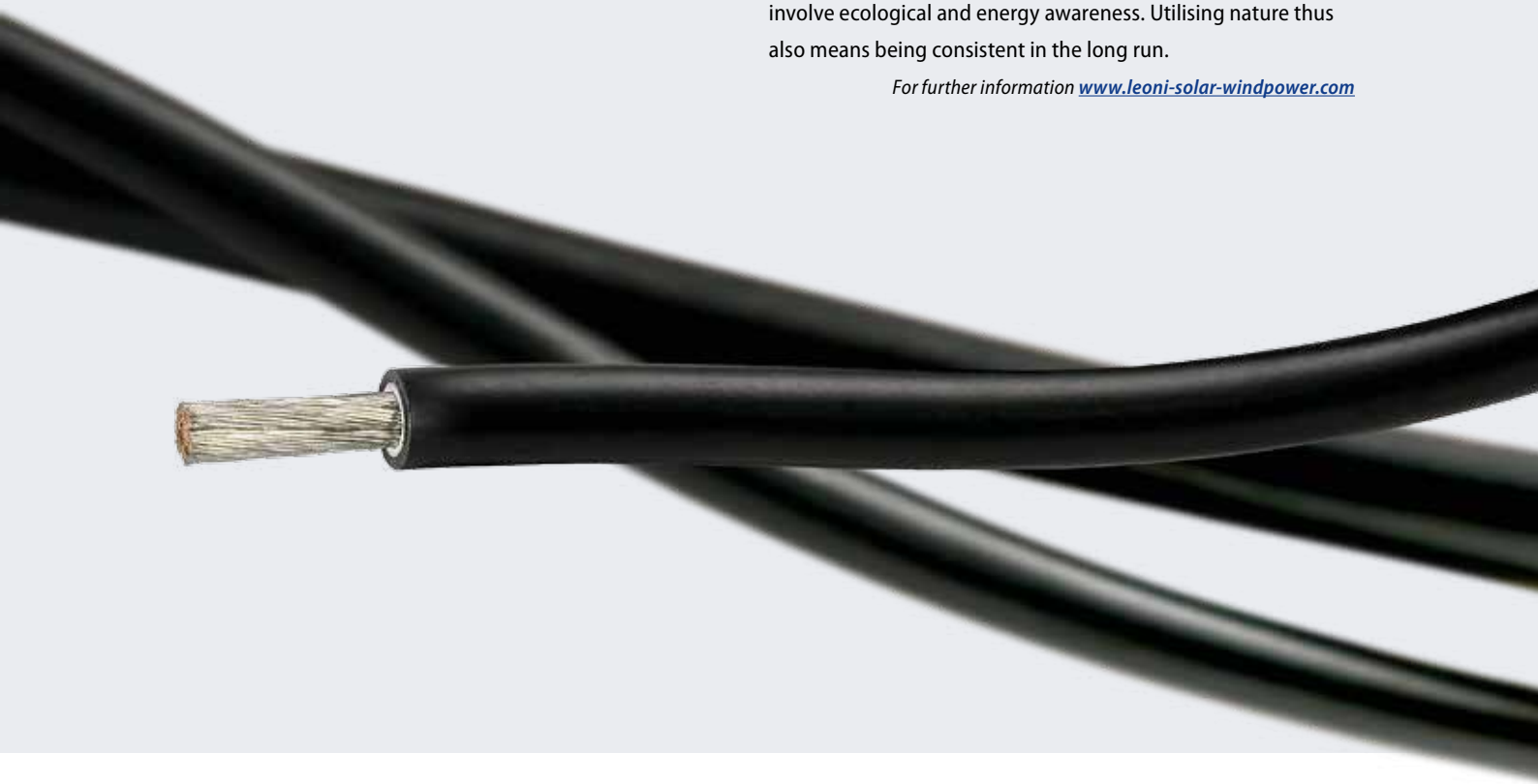
Achieving maximum efficiency is the responsibility of leading technology development companies. Innovative strength, creativity, inspiration and the courage to forge new paths are the requirements for tomorrow's clean energy world.

The business unit Solar & Windpower is aware of this task and already combines technology, innovation and ecological awareness today. Environmentally compatible manufacture for environmentally compatible energy production through renewable energy. That is our motto.

Whether it is for local production, manufacturer or grid operator, we offer our customers products, systems and project management support in line with the market.

Our worldwide presence allows us to react flexibly, quickly and competently to our customers' requirements in the most important solar and wind markets. Ambitious large projects like solar heat, solar parks and wind farms are based on more than just the development of renewable energy resources, they also involve ecological and energy awareness. Utilising nature thus also means being consistent in the long run.

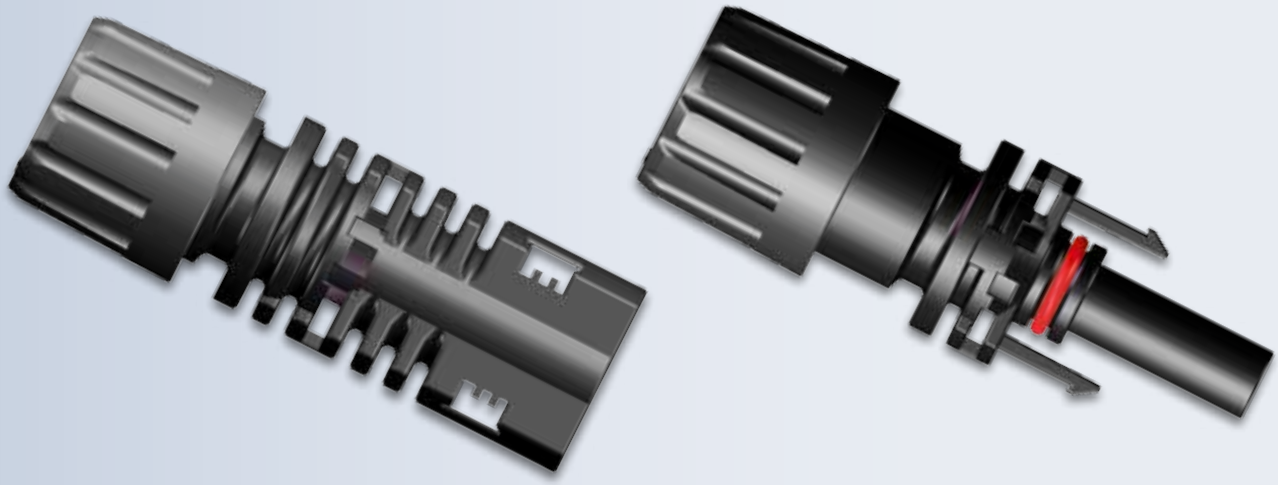
For further information ***www.leoni-solar-windpower.com***

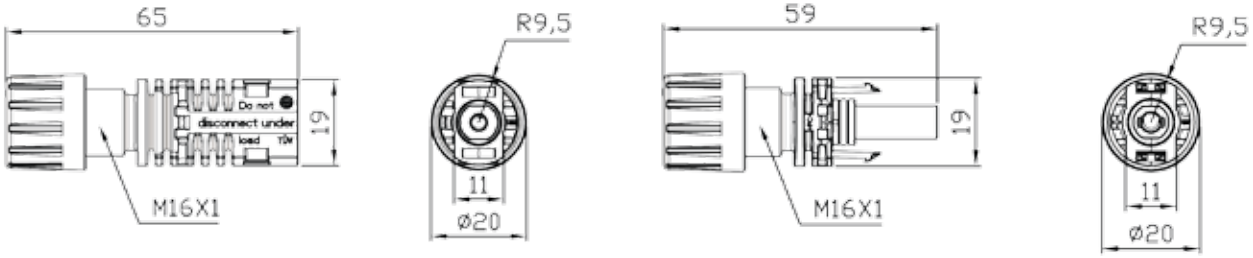


BETAsolar® PV connector

LSC-01

LISTED
PV wire





Technology data sheet

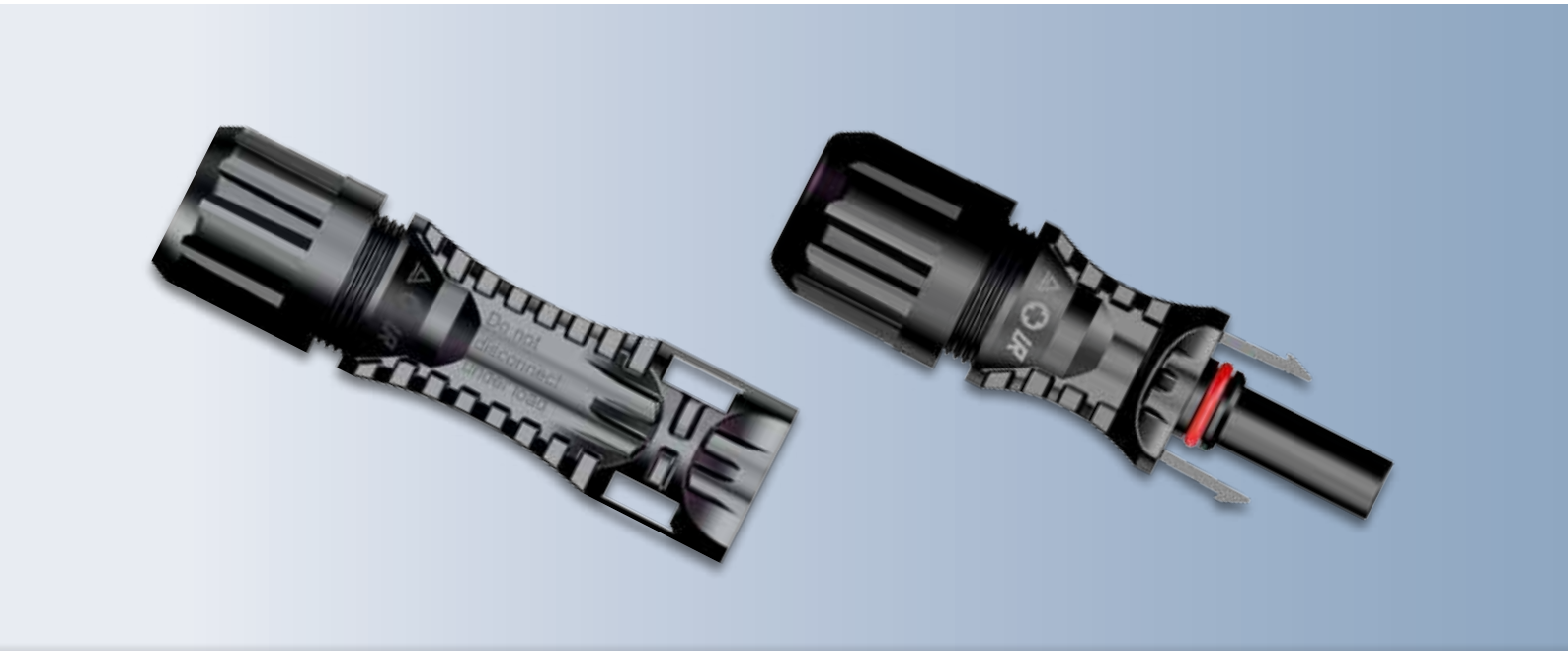
- Rated voltage: 1000 V (TÜV), 600 V / 1000 V (UL)
- Rated current: 30 A (4 / 6 mm²), 22 A (2.5 mm²)
- Contact resistance: ≤0.3 mΩ
- Insulation resistance: >3 GΩ
- Protection degree: IP68 (mated), IP2X (unmated)
- Pollution degree: 3
- Flame class: UL94-V0
- Rated impulse voltage: 6 KV
- Temperature range: –40 °C ~ +85 °C
- Wire size range: 2.5 / 4.0 / 6.0 mm² (TÜV), 14 / 12 / 10AWG (UL)
- Cable diameter: Ø 5.0 ~ 8.0 mm

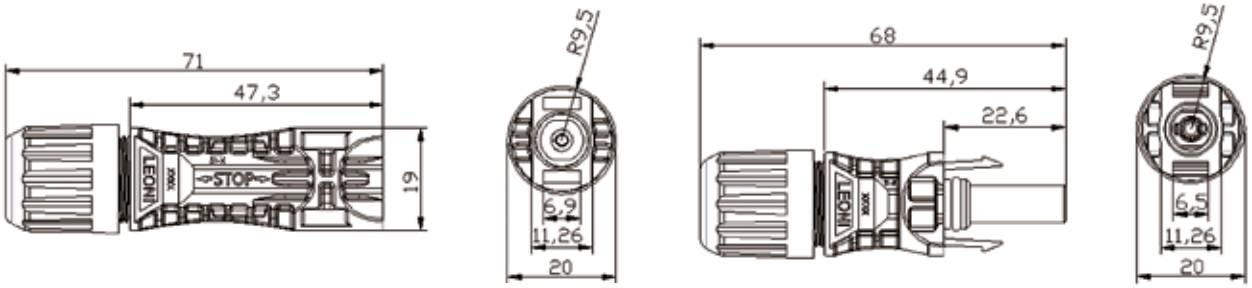
Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PV connector

LSC-R1





Technology data sheet

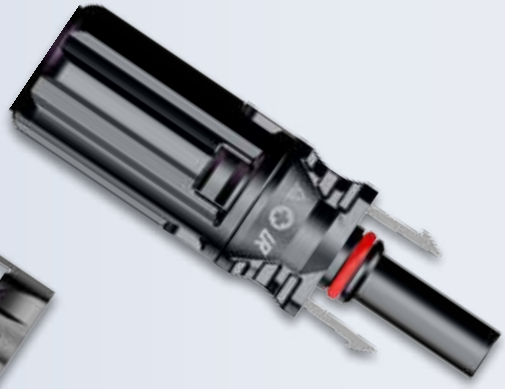
- Rated voltage: 1000 V / 1500 V (TÜV), 1000 V / 1500 V (UL)
- Rated current: 30 A (4 / 6 mm²), 22 A (2.5 mm²)
- Contact resistance: ≤0.3 mΩ
- Insulation resistance: >3 GΩ
- Protection degree: IP68 (mated), IP2X (unmated)
- Pollution degree: 3
- Flame class: UL94-V0
- Rated impulse voltage: 8 KV
- Temperature range: –40 °C ~ +85 °C
- Wire size range: 2.5 / 4.0 / 6.0 mm² (TÜV), 14 / 12 / 10AWG (UL)
- Cable diameter: Ø 5.0~8.0 mm

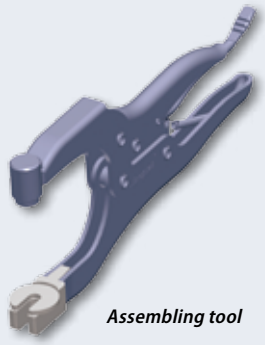
Certification

- TÜV Rheinland Certificate
- UL Certificate

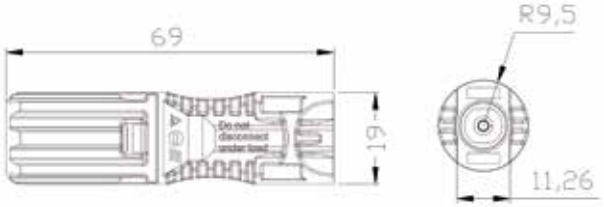
BETAsolar® PV connector

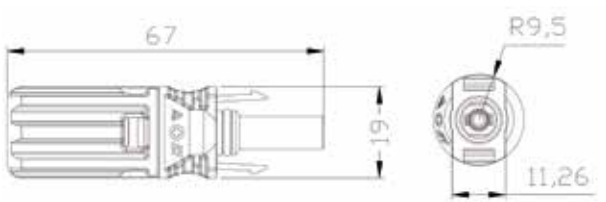
LSC-R2





Assembling tool





Technology data sheet

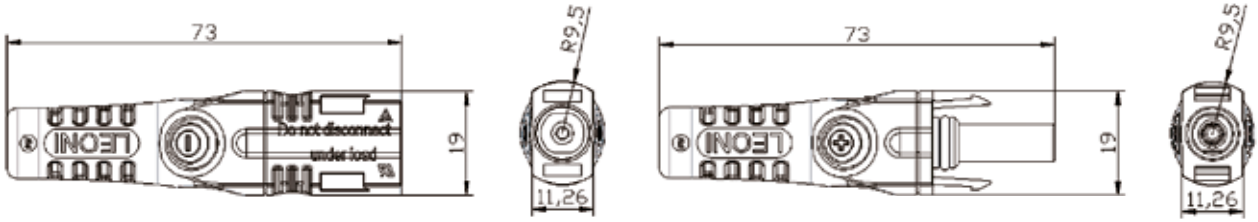
- Rated voltage: 1000 V / 1500 V (TÜV)
- Rated current: 30 A (4 / 6 mm²), 22 A (2.5 mm²)
- Contact resistance: ≤0.3 mΩ
- Insulation resistance: >3 GΩ
- Protection degree: IP68 (mated), IP2X (unmated)
- Pollution degree: 3
- Flame class: UL94-V0
- Rated impulse voltage: 8 KV
- Temperature range: –40 °C ~ +85 °C
- Wire size range: 4.0 mm² (TÜV), 12 AWG (UL)
- Cable diameter: Ø 5.0 ~ 8.0 mm
- Application range: EPC Field Installation

Certification

- TÜV Rheinland Certificate

BETAsolar® PV connector

LSC-R4



Technology data sheet

- Rated voltage: 1000 V / 1500 V (TÜV), 1000 V / 1500 V (UL)
- Rated current: 30 A (4 mm²)
- Contact resistance: ≤0.3 mΩ
- Insulation resistance: >3 GΩ
- Protection degree: IP68 (mated), IP2X (unmated)
- Pollution degree: 3
- Flame class: UL94-V0
- Rated impulse voltage: 8 KV
- Temperature range: –40 °C ~ +85 °C
- Wire size range: 4.0 mm² (TÜV), 12 AWG (UL)
- Cable diameter: Ø 5.7 mm, Ø 6.15 mm, Ø 7.05 mm

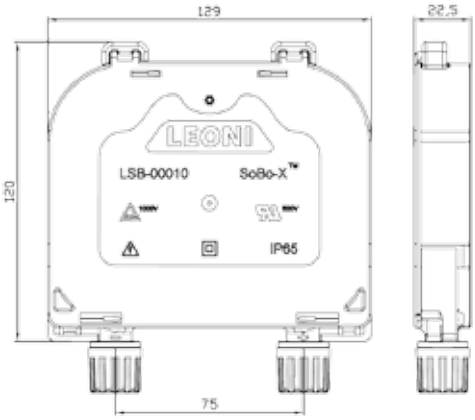
Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® SoBo-X Junction box

LSB-00010 / LSB-00011

LISTED
PV wire



Technology data sheet

- Rated voltage:
  LSB-00010: 1000 V (TÜV), 600 V (UL)
  LSB-00011: 1000 V (TÜV), 1000 V (UL)
- Max. working voltage: 100 V
- Rated current: 12 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Rail: 4
- Power: 180 ~ 400 W
- Application class: Class A
- Sealing type: Sealing ring, non-potting
- Dielectric strength:
  LSB-00010: 6.0 KV (AC) TÜV (50 Hz 1 min), 2.2 KV (DC) UL (1 min)
  LSB-00011: 6.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP65
- Pollution degree: 2
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C

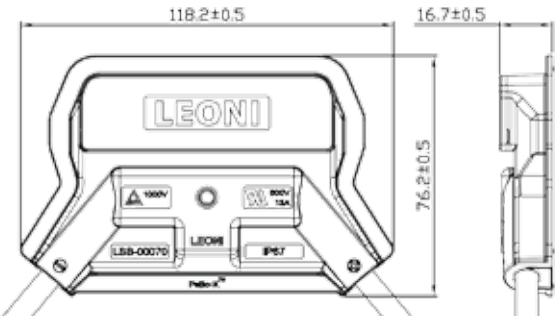
Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-00070 / LSB-00071

LISTED
PV wire



Technology data sheet

- Rated voltage:
  LSB-00070: 1000 V (TÜV), 600 V (UL)
  LSB-00071: 1000 V (TÜV), 1000 V (UL)
- Max. working voltage: 100 V
- Rated current: 13 A
- Reverse current: 25 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  LSB-00070: 6.0 KV (AC) TÜV (50 Hz 1 min), 2.2 KV (DC) UL (1 min)
  LSB-00071: 6.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
- Protection degree: IP67
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C

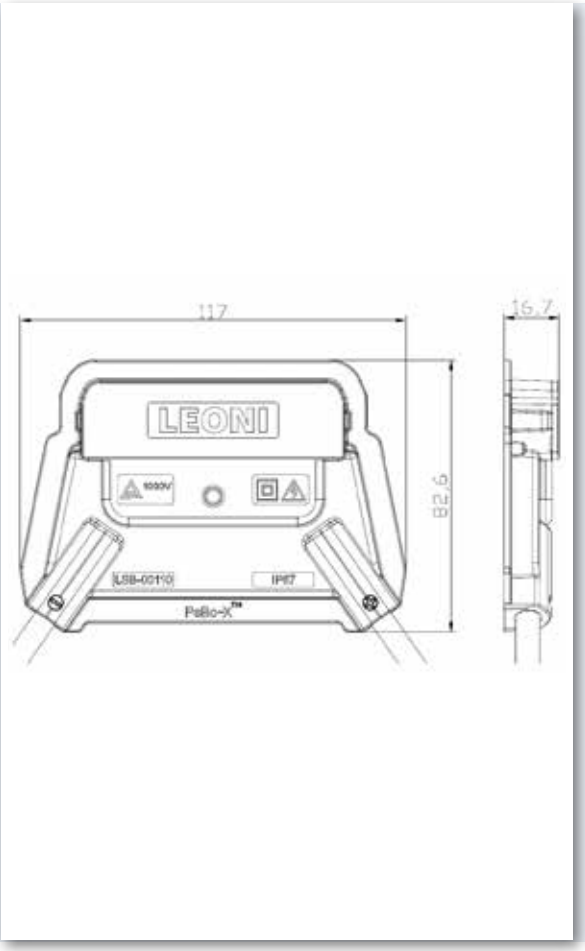
Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-00110 / LSB-00112

LISTED
PV wire



Technology data sheet

- Rated voltage:
  LSB-00110: 1000 V (TÜV)
  LSB-00112: 1500 V (TÜV), 1500 V (UL)
- Max. working voltage: 100 V
- Rated current: 12 A
- Reverse current: 25 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power): 180 ~ 400 W
- Dielectric strength:
  LSB-00110: 6.0 KV (AC) TÜV (50 Hz 1 min)
  LSB-00112: 8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP67
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C

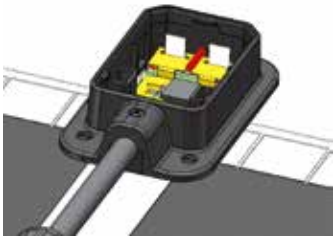
Certification

- TÜV Rheinland Certificate
- UL Certificate

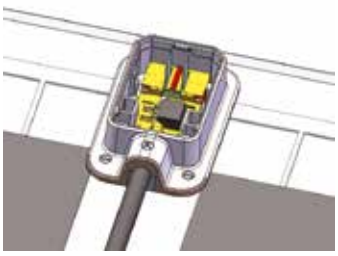
BETAsolar® PsBo-X Junction box

LSB-00130 / LSB-00131 / LSB-00132 / LSB-00133

Installation method:



LSB-00130 & LSB-00132



LSB-00131 & LSB-00133

Technology data sheet

- Rated voltage:
  LSB-00130 / LSB-00131: 1000 V (TÜV)
  LSB-00132 / LSB-00133: 1500 V (TÜV), 1000 V (UL)
- Max. working voltage: 100 V
- Rated current: 15 A
- Reverse current: 25 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  LSB-00130 / LSB-00131: 6.0 KV (AC) TÜV (50 Hz 1 min)
  LSB-00132 / LSB-00133:
  8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Split type

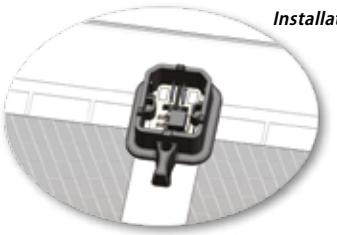
Certification

- TÜV Rheinland Certificate
- UL Certificate

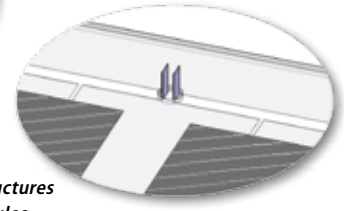
BETAsolar® PsBo-X Junction box

LSB-00130H / LSB-00130H2

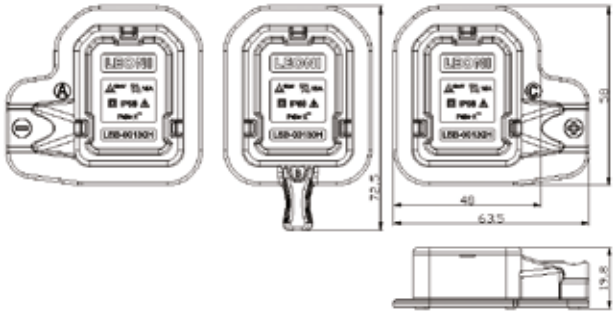
LISTED
PV wire



Installation method



Applied to opening structures in double glass PV modules



Technology data sheet

- Rated voltage:
  LSB-00130H: 1500 V (TÜV), 1000 V(UL)
  LSB-00130H2: 1500 V (TÜV), 1500 V(UL)
- Max. working voltage: 100 V
- Rated current: 15 A
- Reverse current: 25 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  LSB-00130H: 8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
  LSB-00130H2: 8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Split type

Certification

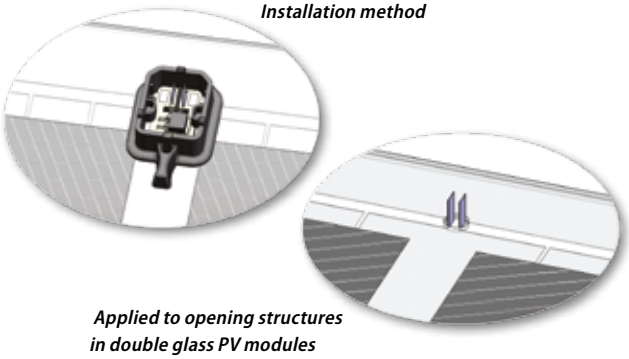
- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

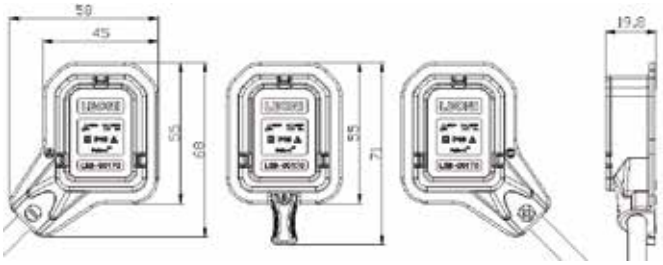
LSB-00170 / LSB-00172

LISTED
PV wire

Installation method



Applied to opening structures in double glass PV modules



Technology data sheet

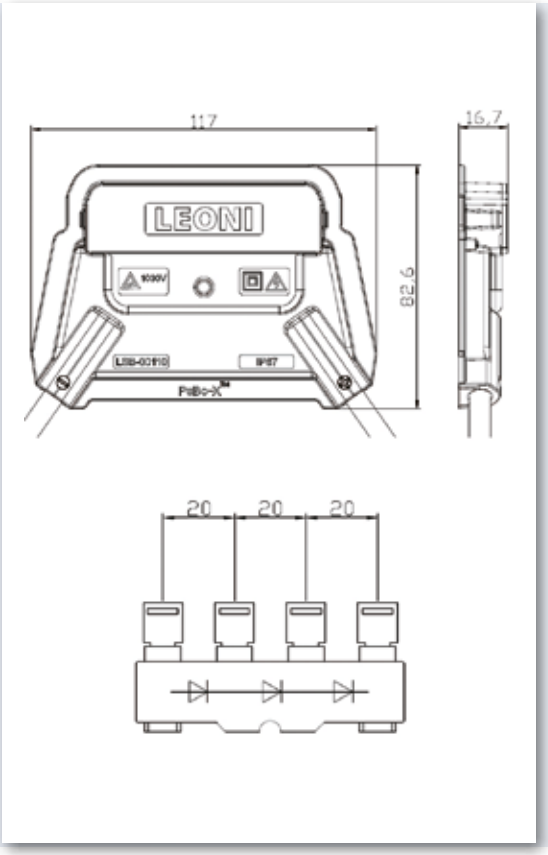
- Rated voltage:
  LSB-00170: 1500 V (TÜV), 1000 V(UL)
  LSB-00172: 1500 V (TÜV), 1500 V(UL)
- Max. working voltage: 100 V
- Rated current: 15 A
- Reverse current: 25 A
- Standard: EN50548: 2011+A1, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  LSB-00170: 8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
  LSB-00172: 8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Split type

Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-00110i / LSB-00112i



Technology data sheet

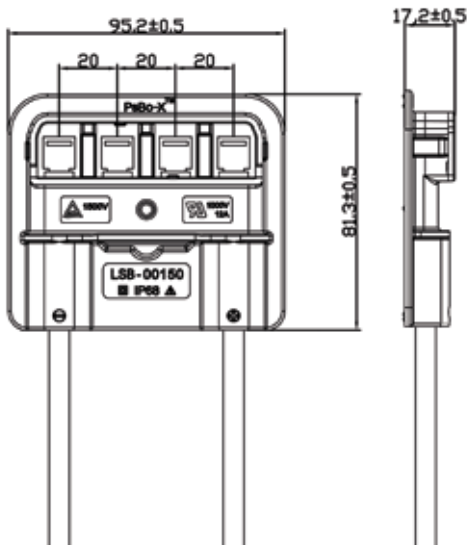
- Rated voltage:
  LSB-00110i: 1000 V (TÜV)
  LSB-00112i: 1500 V (TÜV), 1500 V (UL)
- Max. working voltage: 100 V
- Rated current: 12 A
- Reverse current: 25 A
- Standard: IEC62790, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power): 180 ~ 400 W
- Dielectric strength:
  LSB-00110i: 6.0 KV (AC) TÜV (50 Hz 1 min)
  LSB-00112i: 8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP67
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Integrated diode type

Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-00150



Technology data sheet

- Rated voltage: 1500 V (TÜV), 1000 V (UL)
- Max. working voltage: 100 V
- Rated current: 12 A
- Reverse current: 25 A
- Standard: IEC62790, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Integrated diode type

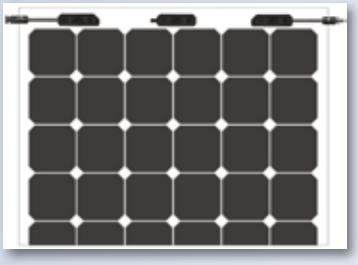
Certification

- TÜV Rheinland Certificate
- UL Certificate

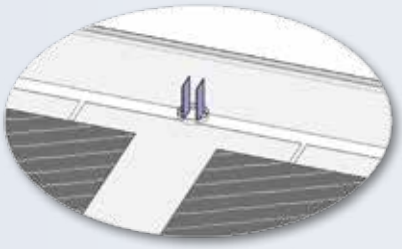
BETAsolar® PsBo-X Junction box

LSB-00190 / LSB-00192

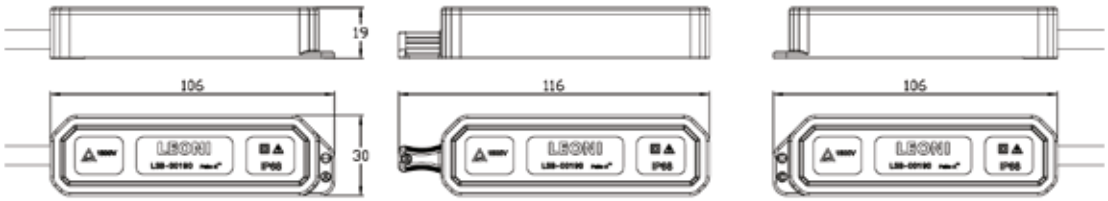
NEW



Applied to Bifacial PV modules



Applied to opening structures in double glass PV modules



Technology data sheet

- Rated voltage:
  LSB-00190: 1500 V (TüV)
  LSB-00192: 1500 V (TüV), 1500 V (UL)
- Max. working voltage: 100 V
- Rated current: 15 A, 18 A
- Reverse current: 25 A
- Standard: IEC62790, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  8.0 KV (AC) TüV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Split type
- Application range: Bifacial PV modules

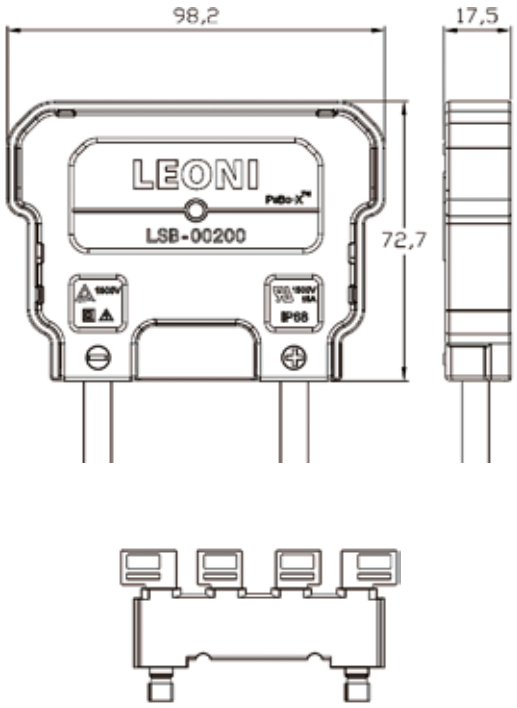
Certification

- TÜV Rheinland Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-00200

NEW



Technology data sheet

- Rated voltage: 1500 V (TüV), 1500 V (UL)
- Max. working voltage: 100 V
- Rated current: 15 A
- Reverse current: 25 A
- Standard: IEC62790, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Structural features: Integrated diode type

Certification

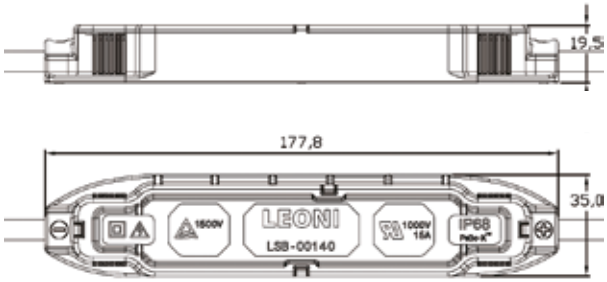
- TÜV Rheinland Certificate
- UL Certificate

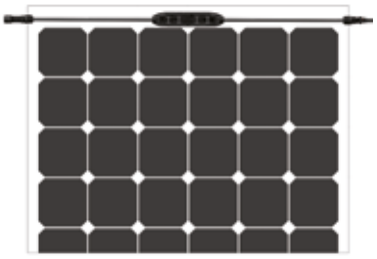
BETAsolar® PsBo-X Junction box

LSB-00140 / LSB-00142

NEW

LISTED
PV wire





Applied to Bifacial PV modules

Technology data sheet

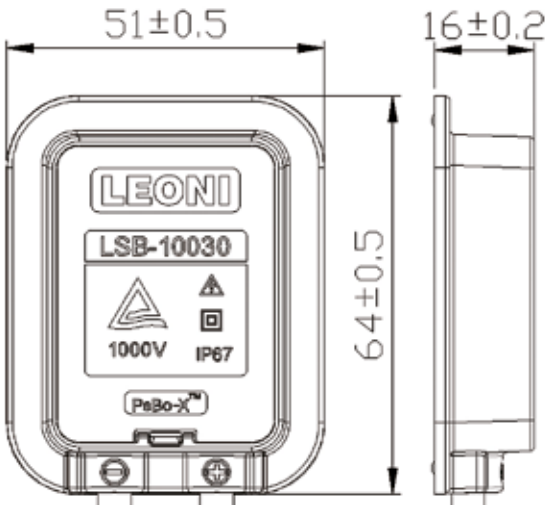
- Rated voltage:
  LSB-00140: 1500 V(TÜV), 1000 V(UL)
  LSB-00142: 1500 V(TÜV), 1500 V(UL)
- Max. working voltage: 100 V
- Rated current: 15 A
- Reverse current: 25 A
- Standard: IEC62790, UL3730
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Power: 180 ~ 400 W
- Dielectric strength:
  LSB-00140: 8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
  LSB-00142: 8.0 KV (AC) TÜV (50 Hz 1 min), 4.0 KV (DC) UL (1 min)
- Protection degree: IP68
- Pollution degree: 1
- Sealing type: Potting
- Application class: Class A
- Flame class: UL94-5VA
- Temperature range: –40 °C ~ +85 °C
- Application range: Bifacial PV modules

Certification

- TÜV Rheinland Certificate
- TÜV SÜD Certificate
- UL Certificate

BETAsolar® PsBo-X Junction box

LSB-10030



Technology data sheet

- Rated voltage: 1000 V (TÜV)
- Rated current: 4 A
- Standard: EN50548: 2011+A1
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Dielectric strength:
  6.0 KV (AC) TÜV (50 Hz 1 min)
- Protection degree: IP67
- Pollution degree: 1
- Application class: Class A
- Flame class: UL94-5VB
- Sealing type: Potting
- Temperature range: –40 °C ~ +85 °C
- Application range: Thin film solar modules

Certification

- TÜV Rheinland Certificate

BETAsolar® PsBo-X Smart Junction box

LSB-10060

Technology data sheet

- Rated voltage: 1500 V (TÜV), 1000 V (UL)
- Max. working voltage: 100 V
- Power: 180 ~ 400 W
- Rated current: 12 A
- Standard: 2Pfg2305, UL3730, UL1741
- Contact resistance: ≤3 mΩ
- Input resistance: 12 mΩ ±2 mΩ (2×1.0 m cable)
- Dielectric strength:
  8.0 KV (AC) TÜV (50 Hz 1 min), 3.0 KV (DC) UL (1 min)
- Protection degree: IP67
- Pollution degree: 1
- Application class: Class A
- Flame class: UL94-5VA
- Sealing type: Potting
- Temperature range: –40 °C ~ +85 °C
- Smart function: System monitoring

Certification

- TÜV Rheinland Certificate
- UL Certificate

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