



SOLAR CABLES FOR PV SYSTEMS

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Who we are

Specialcavi is a manufacturing company founded in 1990, specialized in the production of electrical cables. We operate throughout Europe and offer a wide range of cables designed for various applications, including data transmission, power, control and signaling, solar systems, fire-resistant solutions, for both civil and industrial uses. Moreover, we design and manufacture custom cables based on specific customer requirements.

INNOVATION AND PRODUCT QUALITY CONTROL

We continuously upgrade our machinery, equipment, and instruments to keep pace with ongoing technological innovation.

All our cables undergo thorough internal quality checks in compliance with the latest Italian, European, and international standards.



QUALIFIED STAFF AND CUSTOMER-CENTRIC APPROACH

Our goal is not only to be reliable suppliers, but exceptional partners for our clients.

We strive to ensure complete customer satisfaction through the quality and reliability of our products, supported by attentive and competent pre- and post-sales service.

CERTIFICATIONS AND QUALITY

We have obtained major quality certifications and environmental sustainability ratings, demonstrating our commitment to excellence in cable manufacturing, sustainability, and corporate social responsibility.

OUR NEW WEBSITE: www.specialcavi.it

We have redesigned our website to offer a clearer, more functional experience tailored to your professional needs.

The new structure simplifies access to product information and technical documentation.

Each section is designed to guide you in selecting the most suitable cable for your applications, with regularly updated and easily accessible content.

About the cables

Electrical cables for photovoltaic systems are designed to withstand harsh environmental conditions and ensure safe and efficient transmission of the energy generated by solar panels.

The cables used in photovoltaic installations are specifically engineered to last throughout the entire lifecycle of the solar system, which is typically around 25 years.

These photovoltaic cables must be capable of resisting challenging environmental factors such as high temperatures, severe weather conditions, and UV radiation.

- **D.C. (direct current) cables** connect the photovoltaic modules to the inverter: they must be resistant to UV rays, high temperatures and humidity.
- **A.C. (alternating current) cables** carry energy from the inverter to the electrical panel and to the domestic or public grid.

Below is the list of solar cables for PV systems manufactured by Specialcavi.

For each product, you will find manufacturing characteristics, CPR classification, and application details, along with a dedicated QR code.

HOW DOES THE QR CODE WORK?

By scanning the QR code with a smartphone or tablet, you will be redirected directly to the product page on our website.

It's a simple and immediate way to always have access to the most up-to-date information, wherever you are.

From there, you can access in real time:

- Technical datasheet
- Declaration of Performance (DoP)
- CE declaration
- Technical, application, and regulatory specifications

H1Z2Z2-K



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MANUFACTURING CHARACTERISTICS

- **Conductor:** tinned copper class 5 flexible, according to CEI 20-29 EN IEC 60228
- **Insulation:** LSZH special crosslinked compound, according to EN 50618
- **Outer sheath:** LSZH special crosslinked compound, according to EN 50618, UV resistant
- **Outer sheath colour:** black, based on RAL 9005 or red, based on RAL 3000
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Dca-s2,d2,a1

APPLICATIONS

Single-core LSZH cable, compliant with CPR EU 305/11, designed for photovoltaic and solar DC systems. UV and weather resistant, suitable for buried laying (direct and with protection). The service life of the cable is estimated at approximately 25 years (EN 50618), and the expected period of use at a maximum conductor temperature of 120°C and a maximum ambient temperature of 90°C is limited to 20000 hours. AD8 water presence condition.

Z2Z2-K 1,8/3kV



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MANUFACTURING CHARACTERISTICS

- **Conductor:** tinned copper class 5 flexible, according to CEI 20-29 EN IEC 60228
- **Insulation:** LSZH special crosslinked compound, according to EN 50618
- **Outer sheath:** LSZH special crosslinked compound, according to EN 50618, UV resistant
- **Outer sheath colour:** black, based on RAL 9005 or red, based on RAL 3000
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Eca

APPLICATIONS

Single-core LSZH cable, compliant with CPR Regulation EU 305/11, to be used in photovoltaic and solar systems only, with UV-resistant outer sheath. The product meets the double insulation requirements under CEI 64-8/4 standard, art. 412.2.4.1 b) also, for D.C. side of photovoltaic systems with nominal voltage above $U = 1125V$. Suitable for buried laying (direct and with protection).

MANUFACTURING CHARACTERISTICS

- **Conductor:** tinned copper class 5 flexible, according to CEI 20-29 EN IEC 60228
- **Insulation:** LSZH special crosslinked compound, according to EN 50618
- **Armour:** galvanized steel braiding (braid wire nominal diameter $\geq 0,24\text{mm}$)
- **Outer sheath:** LSZH special crosslinked compound, according to EN 50618, UV resistant
- **Outer sheath colour:** black, based on RAL 9005 or red, based on RAL 3000
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Eca

APPLICATIONS

Single-core armoured LSZH conductor cable, compliant with CPR EU 305/11, designed for photovoltaic and DC solar systems. UV and weather resistant, suitable for buried laying (direct and with protection), with armouring providing rodent protection. Cable service life is estimated at approximately 25 years (EN 50618). The expected period of use at a maximum conductor temperature of 120°C and ambient temperature of 90°C is limited to 20,000 hours.

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MANUFACTURING CHARACTERISTICS

- **Conductor:** tinned copper class 5 flexible, according to CEI 20-29 EN IEC 60228
- **Insulation:** LSZH special crosslinked compound, according to EN 50618
- **Armour:** galvanized steel wire (nominal wire diameter $\geq 0,60\text{mm}$)
- **Outer sheath:** LSZH special crosslinked compound, according to EN 50618, UV resistant
- **Outer sheath colour:** black, based on RAL 9005 or red, based on RAL 3000
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Eca

APPLICATIONS

Single-core LSZH armoured cable (galvanized steel wires), compliant with CPR Regulation EU 305/11, for photovoltaic and solar systems with UV-resistant outer sheath, for DC use only. The product meets the double insulation requirements under CEI 64-8/4 standard, art. 412.2.4.1 a) also, for DC side circuits of photovoltaic systems with nominal voltage above $U = 1125\text{V}$. Suitable for buried laying (direct and with protection).

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Li2XY RV-K

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MANUFACTURING CHARACTERISTICS

- **Conductor:** bare copper class 5 flexible, according to CEI 20-29 EN IEC 60228
- **Insulation:** crosslinked polyethylene (XLPE) compound, according to CEI 20-11
- **Outer sheath:** polyvinyl chloride (PVC) compound, flame retardant and UV resistant
- **Outer sheath colour:** black, based on RAL 9005
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Dca-s3,d2,a3

APPLICATIONS

Energy and control cable for photovoltaic and solar systems, compliant with CPR EU Regulation 305/1, designed to limit the spread of fire and smoke. UV and weather resistant, ideal for outdoor laying. It guarantees high performances in harsh environmental conditions, making it perfect for solar system applications. Buried laying (direct and with protection) and outdoor laying are allowed. AD7 water presence condition.

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MANUFACTURING CHARACTERISTICS

- **Conductor:** tinned copper
- **Insulation:** LDPE compound, according to CEI 20-11
- **Wrapping and protection:** polyester tape
- **Screen:**
 - First screen: aluminium/polyester tape, with flexible tinned copper drain wire
 - Second screen: tinned copper braid
- **Outer sheath:** polyvinyl chloride (PVC) compound, flame retardant
- **Outer sheath colour:** grey, based on RAL 7035
- **Cable geometry:** round

CPR CLASS: EN 50575:2014+A1:2016 Dca-s3,d2,a3

APPLICATIONS

Multi-core cable with overall shielding and reinforced outer sheath (0.6/1KV), for electronics and data transmission (RS422 and RS485), ideal for indoor civil, industrial, and machine edge applications. Also suitable for installations alongside 0.6/1KV energy cables in industrial plants. Compliant with EU CPR Regulation 305/11, designed to limit the spread of fire and smoke. Buried laying with protection and outdoor perimeter laying are allowed.



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