

Cables developed for photovoltaic plants

# Maximum reliability for the photovoltaic industry

sumcab

sumcab  
PMC

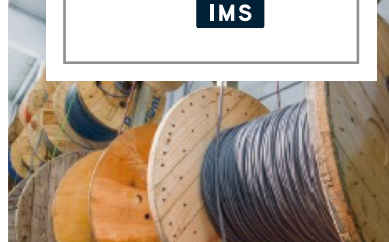
sumcab

## Expect High Performance

**Sumcab Specialcable Group**, is a global group that designs, manufactures and supplies the highest quality specialty cables. We offer solutions for the most diverse national and international markets. **We accompany our clients from project engineering to project execution.**

The company is recognized as a **world leader in cable manufacturing in a global environment that demands a quality product at a competitive price.**

sumcab  
IMS



### Iberian Market Solutions

Personalized attention with the main objective of finding **the most complete solution and the one that meets the most rigorous requirements.**

**175**  
Employees

**+7.000**  
Tailor-made Solutions

sumcab  
PMC



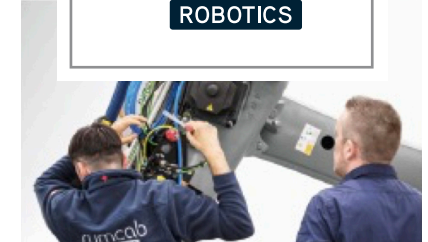
### Project & Export Management Center

Working together with client to develop the **complete solution for your project or export.**

**+20**  
Years of History

**+50**  
Countries with projects realized

sumcab  
ROBOTICS



### Robotics

Solutions oriented to satisfy the demand of the demanding Robotics Industry. **From the analysis and development of the product to its implementation.**

**75M€**  
Turnover

**+100**  
Product Certifications

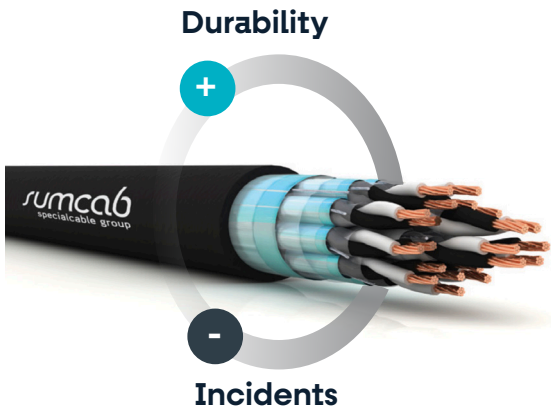


## Production centers

Sumcab cables reduce costs throughout the entire life cycle of the installation because they are tailored to customer requirements and application demands.

Research and development is one of the pillars of our growth. Our technological innovation guarantees the development of new materials, manufacturing processes and products, providing us with differential value in the market.

The result is a high increase in durability and a decrease in incidents.



## Reasons that support us

We always put our client at the center of our activity to offer the best service.



QUALITY

Experience in **international markets**

Great knowledge of **construction regulations**



EXPERIENCE

Technical team **specialized in projects**

Great flexibility and **adaptability** to your project



COMMITMENT

Global list of **references by markets**

High **quality standards**



WARRANTY

**Manufacturing adapted** to your needs

**Global project support**

Packaging, marking and personalized labeling

## PMC Center of excellence



**ENGINEERING**

Product and project engineering, technical advice and quality.



**DOCUMENTATION AND LOGISTICS**

Administrative support, planning and coordination.



**EXPORT**

Advice on trade and support to delegations.



**MANAGEMENT CONTROL**

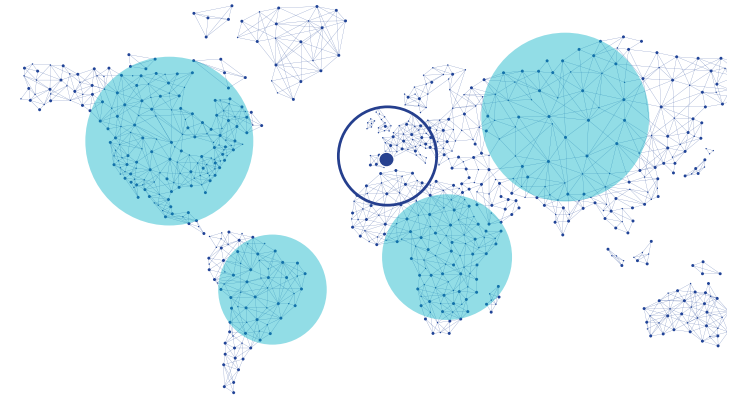
Information gathering, analysis and decision-making. Development and training.







Your reliable  
partner anywhere  
in the world.



**Areas**

Europa | Asia | America | Africa  
**+ than 50 countries**

# Markets in the World

During all these years of experience, at **SUMCAB Projects (PMC)** we have manufactured and supplied cables for a wide variety of projects in industrial markets, which has given us the recognition and trust of important international clients. Collaboration in situations of maximum demand has positioned us as a benchmark brand in guarantee and quality. At **PMC** we accompany you to find the right product, at the right time and in the right place

**Our goal:**  
**design, manufacture and supply the specific cable solutions for your project.**



## Industrial Plants

Petrochemicals, refineries, steel mills, cement plants etc.

**Refinery Ojsc Naftan**  
 Republic Belarus  
 (Oil & Gas)

**Desalation Plant**  
 "Al Zawrah" UAE

**Mineral Plant**  
 "Cerro Negro Norte" Chile



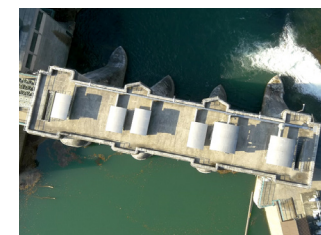
## Industrial Automation

Automation plants, Pharma, Packaging, Food & Beverage.

**Logistic center**  
**Automation Inditex**  
 Spain

**Daimler**  
 Sumoflex® & Mtpreel™  
 Systems Implementation  
 Germany

**Ford**  
 New Production Lines CMH  
 Kempster Ford Pretoria



## Energy Generation

Hydraulic Power Plants, Thermal industries, Combined Cycle, Substations, etc.

**Nuclear Fusion Project**  
 ITER France (Energy)

**Hydraulic Power Plant Tamega**  
 Portugal (Energy)

**Combined Cycle Power Gas**  
 Plant "Cctg Parnaiba"  
 Brasil



## Green Energy

Photovoltaic plants, Wind, Thermal Solar, Hybrid, Biomass, Hydrogen stations, etc.

**Mohammed Bin Rashid Al Maktoum Solar Park**  
 UAE (Solar)

**Biomasa Plant - Curtis**  
 Spain (Renewable)

**Thermosolar Plant Noor**  
 Morocco (Renewable)



# We have the cable that best suits your needs



Low Voltaje  
Cables



Instrumentation & Control  
Cables



Medium and High Voltage  
Cables



Communication Cables



Thermocouple  
Cables



Industrial Automation  
Cables



Flexible application  
Cables



Special applications  
Cables



Hybrid  
Cables



Custom designs  
Cables



# Icons

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Oil & hydrocarbon resistant



Ozone resistant



High durability



Flame retardant



Halogen free



Low smoke



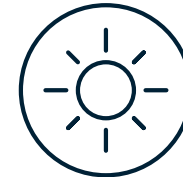
Chemical agents resistance



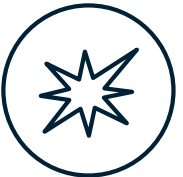
Water resistant



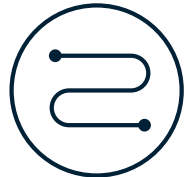
Low temperature resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite protection



Euroclass CPR



Euroclass CPR



Fire retardant



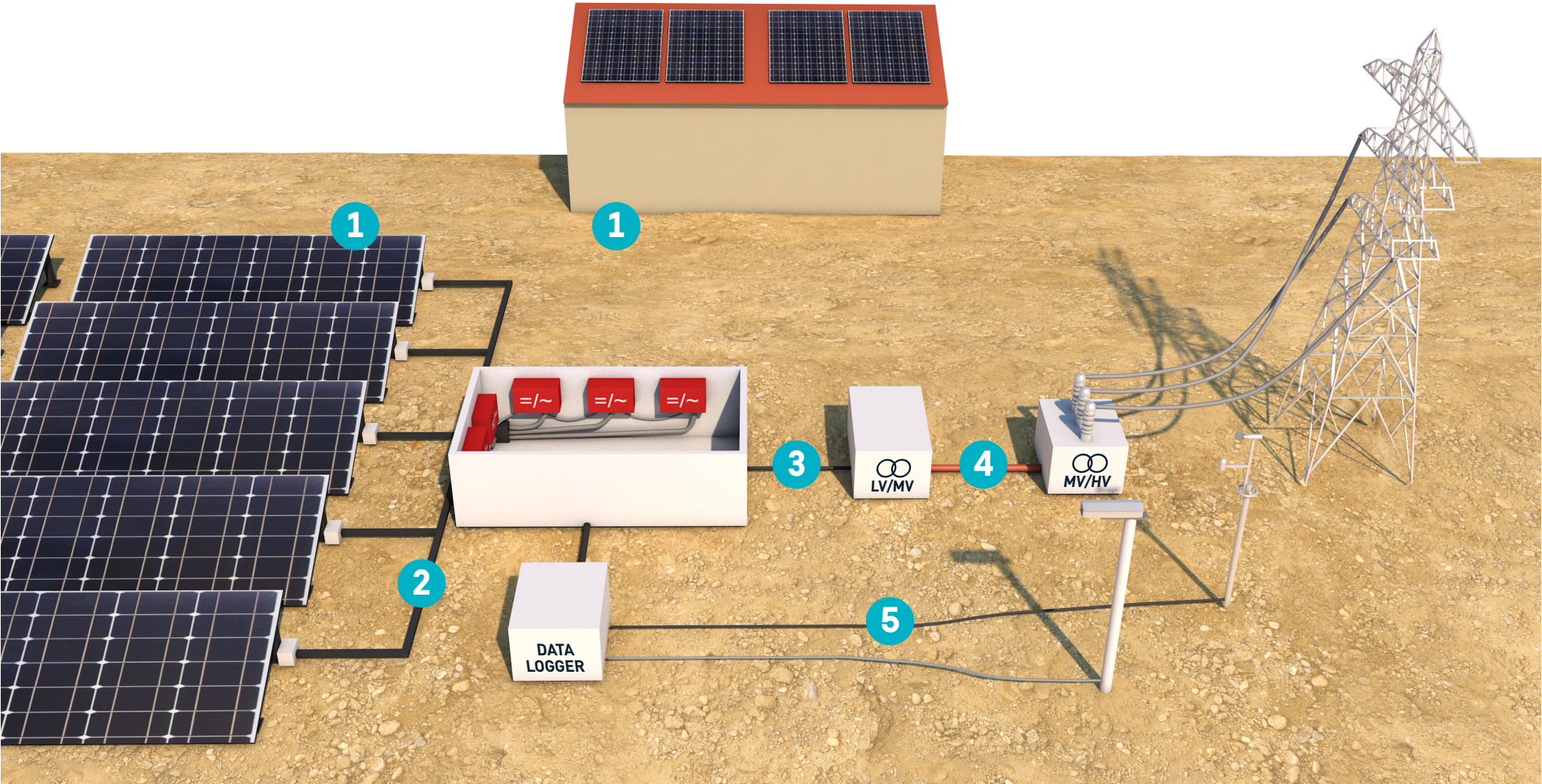
Communication



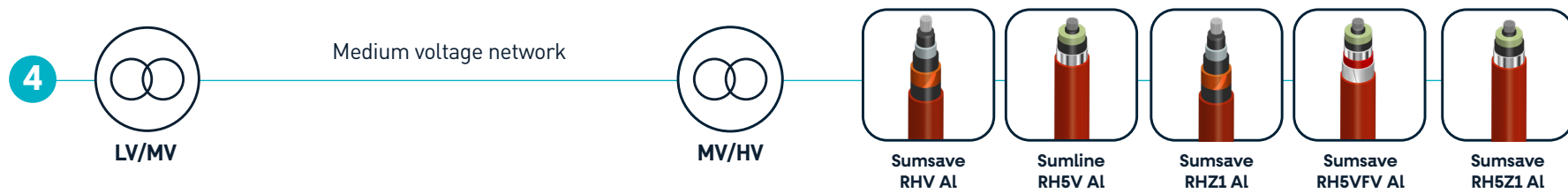
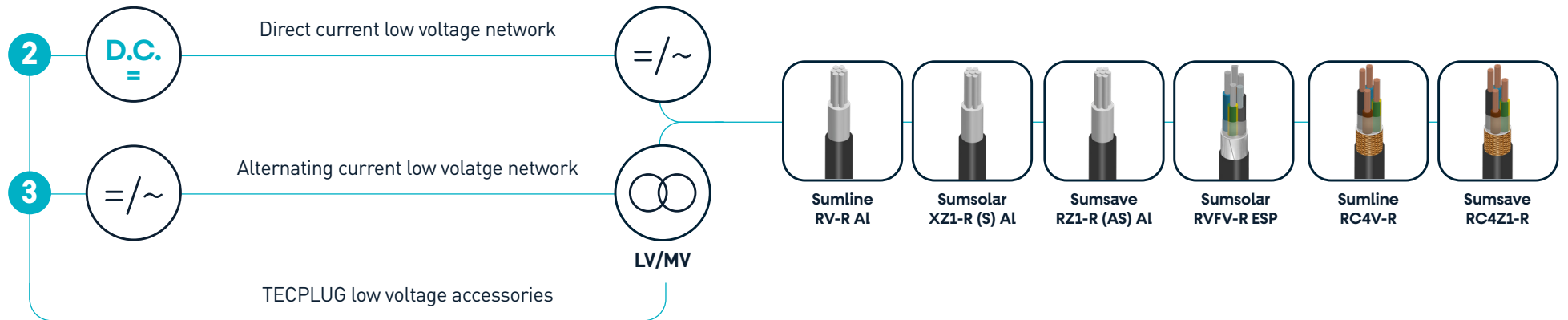
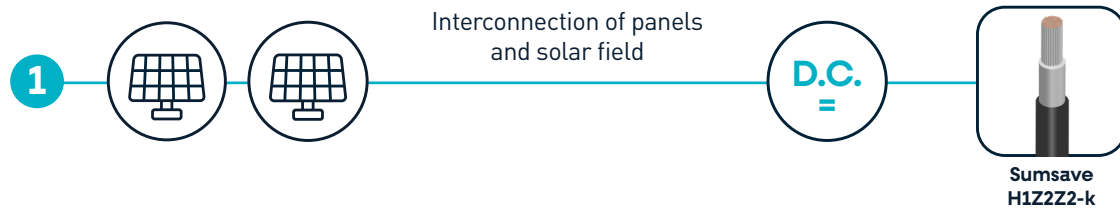


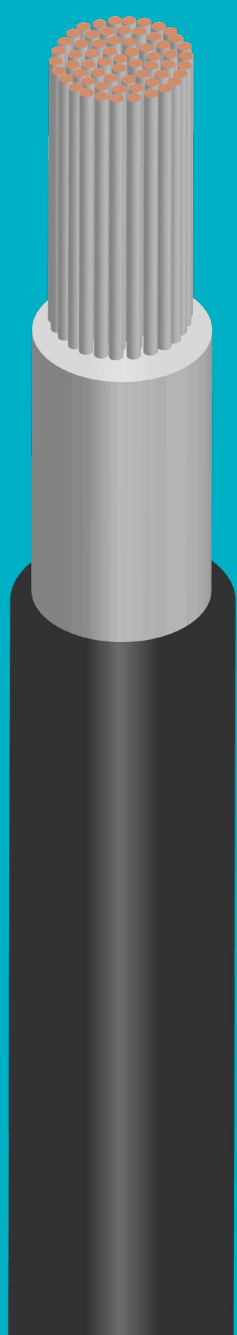
# Photovoltaic solar plants

SUMCAB cables for the photovoltaic market have been developed and manufactured, complying with the most rigorous quality standards, in order to withstand the most demanding environmental conditions.









# Sumsave<sup>®</sup> H1Z2Z2-K

(DC)1,5/1,5kV (1,8 kV)



## Special properties

Construction EN 50618 standard

TÜV approved and certified

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

1/1 kV (AC), 1,5/1,5 kV (DC)

1,2 kV (AC), 1,8 kV (DC)



Oil & hydrocarbon resistant



Ozone resistant



High durability



Flame retardant



Halogen free



Low smoke



Chemical agents resistance



Water resistant



Low temperature resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite protection



Euroclass CPR

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumline® RV-R AL

0,6/1 (1,2) kV A.C.

## Special properties

Construction IEC 60502-1



Fire retardant



Flame retardant



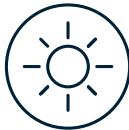
Low smoke



Water resistant



Low temperature resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{max})$ :

0,6/1 (1,2) kV (AC)

0.9/1,5 (1,8) kV (DC)

Easy to install with a very low weight.

Easy removal of the outer sheath.

Excellent for outdoor installation.

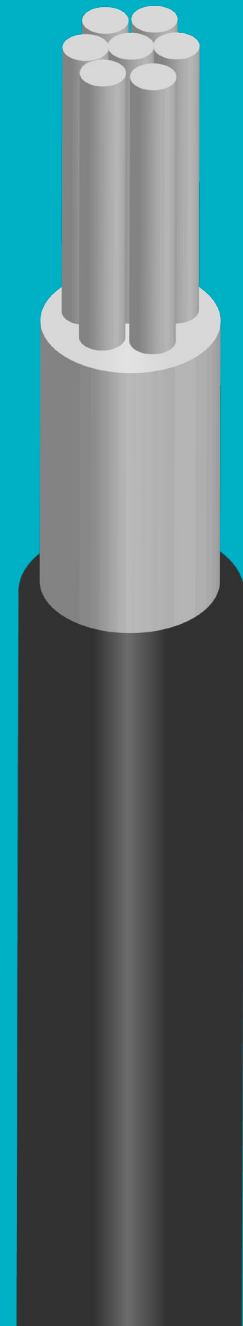
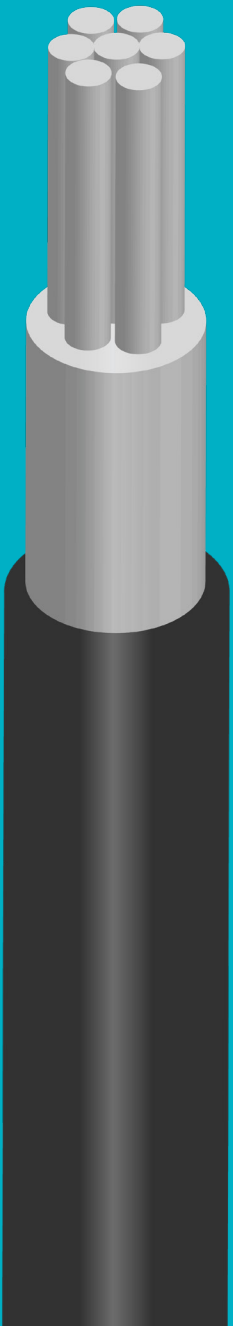


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.





# Sumline<sup>®</sup> RV-R AL

1,5/1,5 (1,8)kV D.C.

## Special properties

Construction IEC 60502-1



Fire retardant



Flame retardant



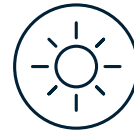
Low smoke



Water resistant



Low temperature resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

1,5/1,5 (1,8) kV (DC)

Easy to install with a very low weight.

Easy removal of the outer sheath.

Excellent for outdoor installation.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumline® RV-R AL

1,8/3 (3,6) kV A.C.

## Special properties

Construction IEC 60502-1



Fire retardant



Flame retardant



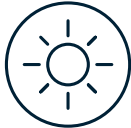
Low smoke



Water resistant



Low temperature resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

1,8/3 (3,6) kV (AC)

2,7/4,5 (5,4) kV (DC)

Easy to install with a very low weight.

Easy removal of the outer sheath.

Excellent for outdoor installation.

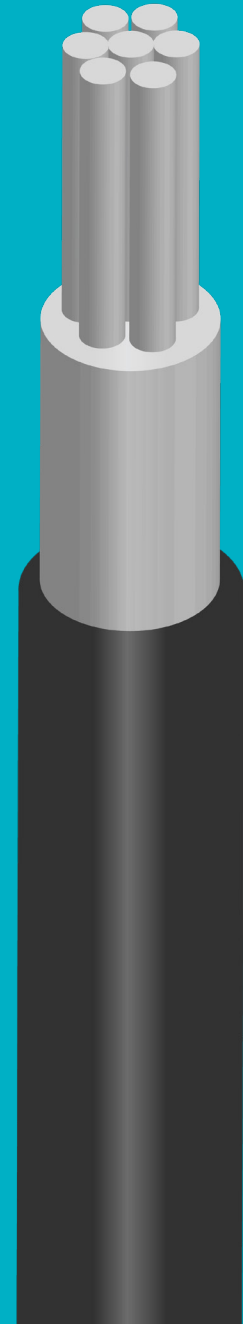
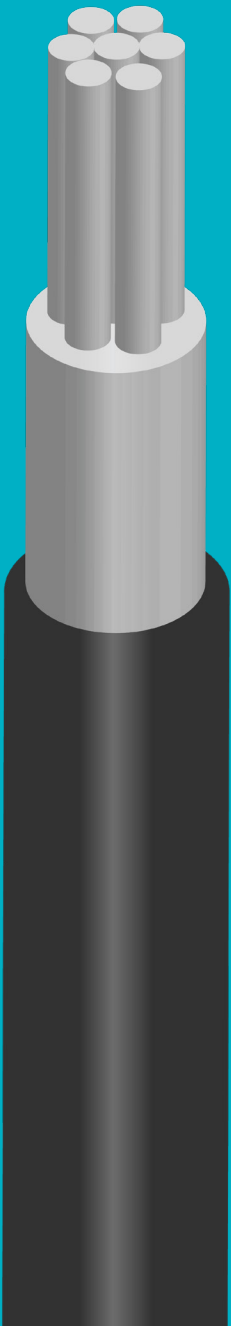


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumsolar<sup>®</sup> (S) AL XZ1-R

0,6/1 (1,2) kV A.C.

## Special properties

Construction IEC 60502-1  
HD 603-5x



Flame retardant



Halogen free



Low smoke



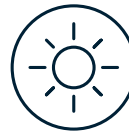
Chemical agents  
resistance



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

0,6/1 (1,2) kV (AC)

0.9/1,5 (1,8) kV (DC)

Easy to install with a very low weight.

Easy removal of the outer sheath.

Low smoke and halogen free for  
indoor installation.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumsave<sup>®</sup> (AS) AL RZ1-R



0,6/1 (1,2) kV A.C.

## Special properties

Construction IEC 60502-1



Flame retardant



Halogen free



Low smoke



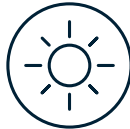
Chemical agents  
resistance



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite  
protection



Euroclass CPR

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

0,6/1 (1,2) kV (AC)

0.9/1,5 (1,8) kV (DC)

Easy to install with a very low weight.

Easy removal of the outer sheath.

Low smoke and halogen free for  
indoor installation.

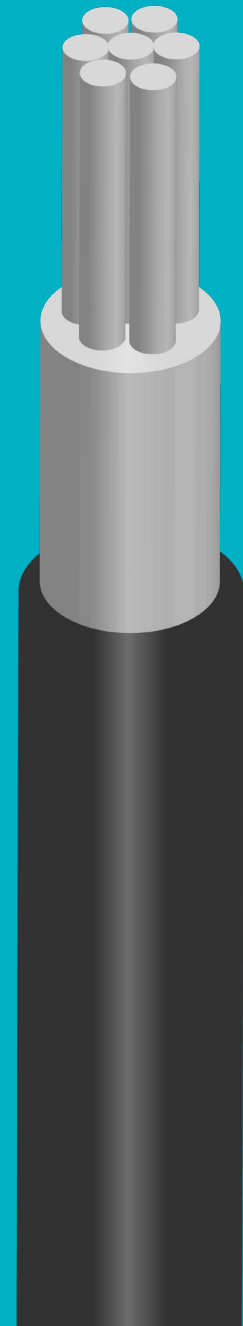
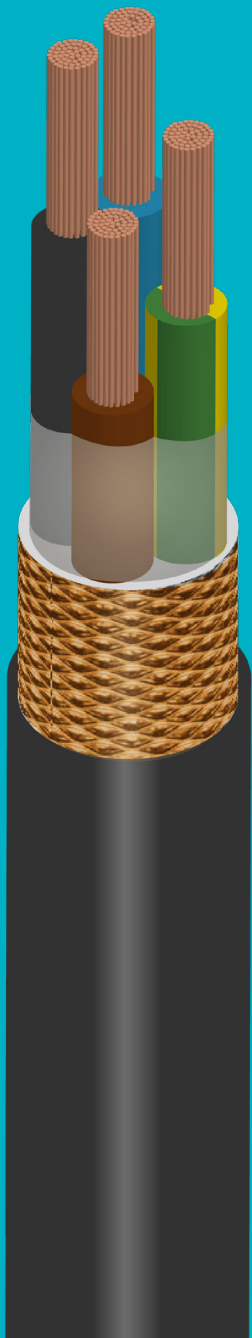


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumline<sup>®</sup> RC4V-R

0,6/1 (1,2) kV A.C.

## Special properties

Construction IEC 60502-1



Fire retardant



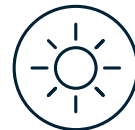
Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

0,6/1 (1,2) kV

Shielded cable recommended for signals that need to be protected from interference.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumsave<sup>®</sup> RC4Z1-R

0,6/1 (1,2) kV A.C.

## Special properties

Construction acc. IEC 60502-1



Flame retardant



Halogen free



Low smoke



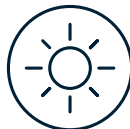
Chemical agents  
resistance



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

0,6/1 (1,2) kV

Shielded cable recommended for  
signals that need to be protected  
from interference.

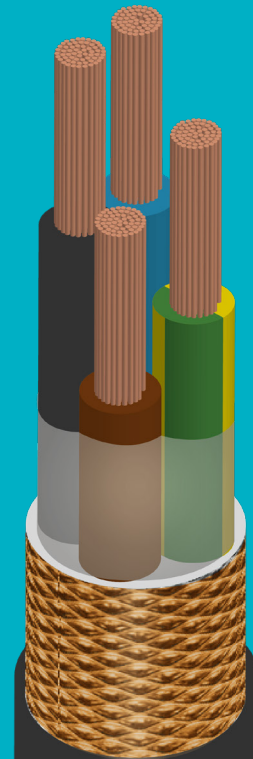
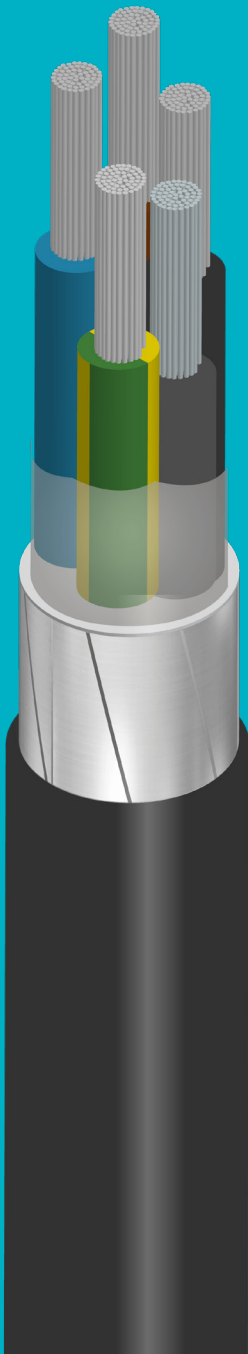


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.





# SumSolar® RVFV-R ESP



0,6/1 (1,2) kV A.C. **SPECIAL ARMOUR**

## Special properties

Construction based on IEC 60502-1



Fire retardant



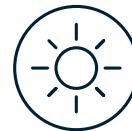
Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



High flexibility



Rodent & termite  
protection



Euroclass CPR

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

0,6/1 (1,2) kV (AC)

0,9/1,5 (1,8) kV (DC)

Protective armor , specially designed  
for photovoltaic installations.

Easy removal of the outer sheath.

Excellent for outdoor installation.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumsave<sup>®</sup> AL RHV

18/30 (36)kV

## Special properties

Construction acc. IEC 60502-2/ BS6622/HD 620



Fire retardant



Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

6/10 (12)kV, 8,7/15 (17,5)kV

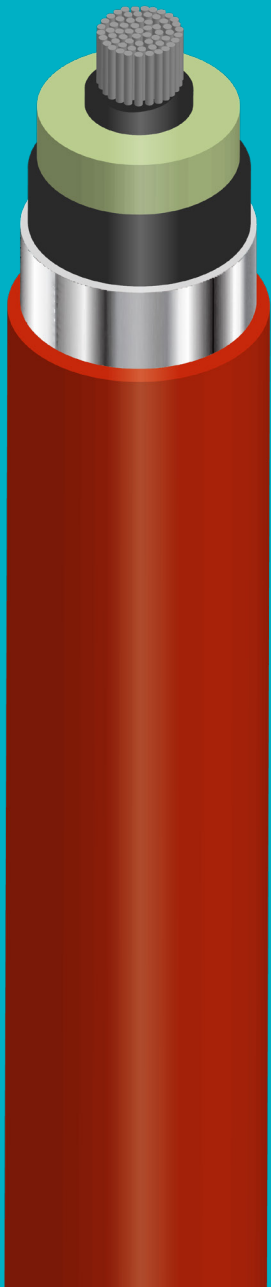
12/20 (24)kV, 18/30 (36)kV

19/33 (36)kV, 20,8/36 (42)kV

Cable for Medium Voltage outdoor  
installations.



Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumline® AL RH5V

18/30 (36)kV

## Special properties

Construction acc. IEC 60502-2/ BS6622/HD 620



Fire retardant



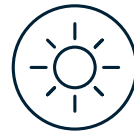
Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

6/10 (12)kV, 8,7/15 (17,5)kV

12/20 (24)kV, 18/30 (36)kV

19/33 (36)kV, 20,8/36 (42)kV

Cable for Medium Voltage outdoor  
installations.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumsave<sup>®</sup> AL RHZ1

18/30 (36)kV

## Special properties

Construction acc. IEC 60502-2/ BS6622/HD 620



Fire retardant



Flame retardant



Halogen free



Low smoke



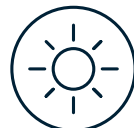
Chemical agents  
resistance



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

6/10 (12)kV, 8,7/15 (17,5)kV,

12/20 (24)kV, 18/30 (36)kV,

19/33 (36)kV, 20,8/36 (42)kV

Cable for Medium Voltage outdoor  
installations.

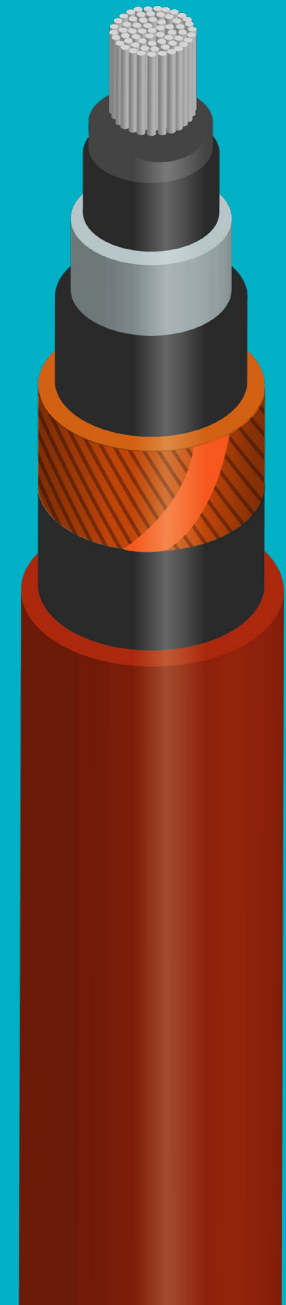
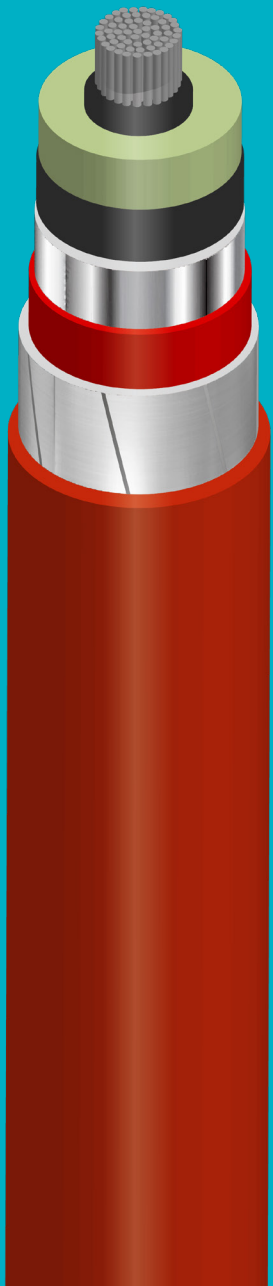


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumsave<sup>®</sup> AL RH5V FV

18/30 (36)kV

## Special properties

Construction acc. IEC 60502-2/ BS6622/HD 620



Fire retardant



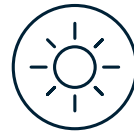
Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



Rodent & termite  
protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

6/10 (12)kV, 8,7/15 (17,5)kV

12/20 (24)kV, 18/30 (36)kV

19/33 (36)kV, 20,8/36 (42)kV

Armoured Cable for Medium  
Voltage outdoor installations.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumsave<sup>®</sup> AL RH5Z1

18/30 (36)kV

## Special properties

Construction acc. IEC 60502-2/ BS6622/HD 620



Fire retardant



Flame retardant



Halogen free



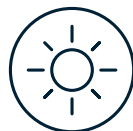
Low smoke



Water resistant



Low temperatures resistant



U.V. resistant



Impact resistant



Rodent & termite protection



Euroclass CPR



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

6/10 (12)kV, 8,7/15 (17,5)kV

12/20 (24)kV, 18/30 (36)kV

19/33 (36)kV, 20,8/36 (42)kV

Cable for Medium Voltage indoor installations



Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumline<sup>®</sup> Modbus RS-485 Li2Y(St)CY

PIMF 300V/500V

## Special properties

Construction EN 50288-7

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :  
300 V/500 V



Communication



Fire retardant



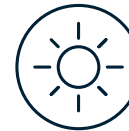
Flame retardant



Water resistant



Low temperatures  
resistant



U.V. resistant



Impact resistant



Rodent & termite  
protection



Euroclass CPR

Recommended cable for solar installations, in outdoor areas where you have to work with the RS-485 communication protocol, protecting the cable from electromagnetic interference.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumline® Modbus RS-485 Li2Y(St)CYSWAY



PIMF 300V/500V

## Special properties

Construction EN 50288-7



## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :  
300 V/500 V

Armoured cable recommended for solar installations, in outdoor areas where it is necessary to work with the RS-485 communication protocol, protecting the cable from electromagnetic interference and mechanical.

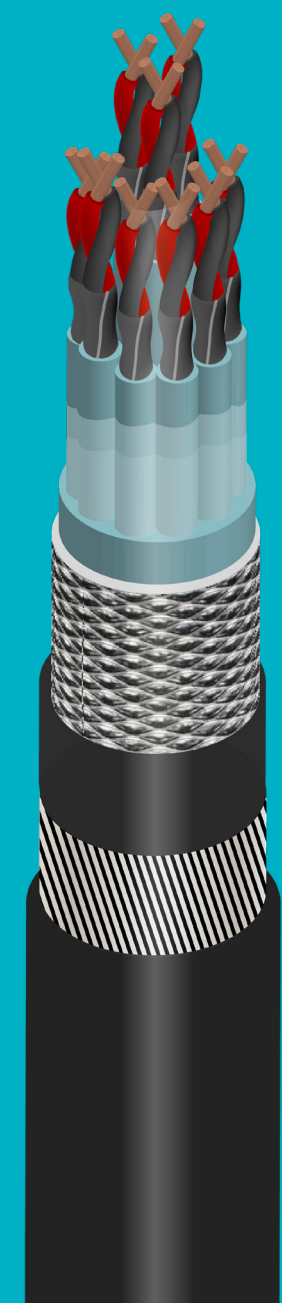


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.



# Sumline<sup>®</sup> Modbus RS-485 Li2Y(St)CY

300V/500V

## Special properties

Construction EN 50288-7



Communication



Fire retardant



Flame retardant



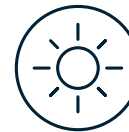
Low smoke



Water resistant



Low temperatures resistant



U.V. resistant



Impact resistant



Rodent & termite protection



Euroclass CPR

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

300 V/500 V

Recommended cable for solar installations, in outdoor areas where you have to work with the RS-485 communication protocol, protecting the cable from electromagnetic interference.

Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.

# Sumline® Modbus RS-485 Li2Y(St)CYSWAY



300V/500V

## Special properties

Construction EN 50288-7



Communication



Fire retardant



Flame retardant



Low smoke



Water resistant



Low temperatures resistant



U.V. resistant



Impact resistant



Rodent & termite protection



Euroclass CPR

## Technical data

Operating voltages  $U_0/U(U_{MAX})$ :

300 V/500 V

Armoured cable recommended for solar installations, in outdoor areas where it is necessary to work with the RS-485 communication protocol, protecting the cable from electromagnetic interference and mechanical.

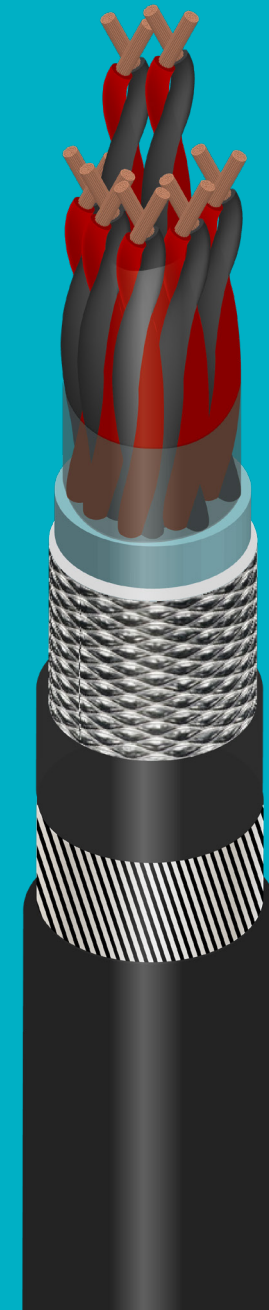


Image shown is not to scale and may not necessarily be an accurate reproduction of the cable design.





Expect High Performance

**HEADQUARTER**

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