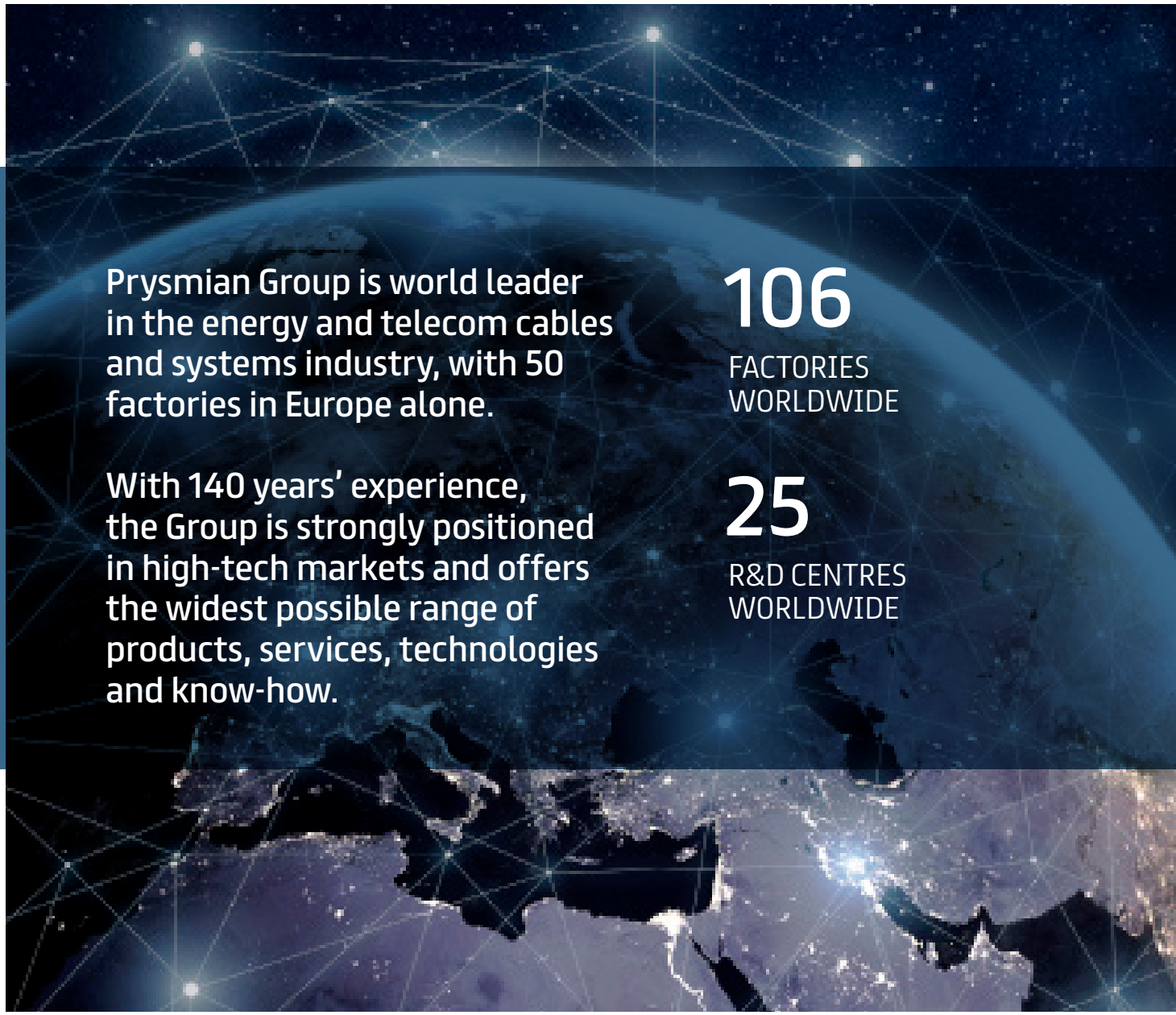
# Solar Park Cables

## Specialty, power and telecom

Prysmian Group

Linking the Future

# CONNECTING THE WORLD. TODAY AND IN THE FUTURE



Prysmian Group is world leader in the energy and telecom cables and systems industry, with 50 factories in Europe alone.

With 140 years' experience, the Group is strongly positioned in high-tech markets and offers the widest possible range of products, services, technologies and know-how.

**106**
FACTORIES WORLDWIDE

**25**
R&D CENTRES WORLDWIDE

We specialise in utility and OEM cables and systems for power transmission and distribution, specialty cables for applications in a variety of diffrent industrie segments as well as medium and low voltage cables for the construction and infrastructure sector.

For the telecommunications industry, the Group is the world's largest provider of cutting-edge cables and accessories for voice, video and data transmission, offering a comprehensive range of optical fibres, optical and copper cables and connectivity systems.

We are committed to environmental responsibility in our production processes, the protection of the global environment, and the responsible management of relations with the local communities in which we work.

For us, innovation means meeting the needs of our customers and communities by understanding their business drivers as quickly as they do. To do that, our team of over 900 Research & Development professionals is constantly looking to the future, predicting and identifying emerging trends in each of our industries and sectors. Acting on this intelligence from 25 R&D centres around the world, we're constantly close to our customers in their own local markets.

# Linking solar energy to support the energy transition.

**To meet an ever-growing need for power, the world is increasingly turning to renewable and sustainably sourced solar energy. In response to this demand, Prysmian cables are helping businesses in the solar industry to convert new business opportunities into reality.**

**Our cable technologies are used across the renewable sector, supporting the operations of contractors and developers, grid operators, system integrators and panel producers.**

**Always aware of our responsibility to the environment, we're constantly driving innovation in our industry, aiming to help the solar industry deliver projects, that benefitsthe future of our planet and their businesses.**

The choice of components is critical in any PV system. Good quality and properly sized cables provide optimized safety and longer-lasting systems.

Solar PV cables are often exposed to harsh environmental conditions such as UV-radiation, ozone, moisture, temperature fluctuations as well as wind, snow and rain. Inadequate or low-quality cables can deteriorate quickly, and reduce a system's power generation capacity and thus revenue. Every KW lost in generation due to poor quality cables is a loss in terms of return on investment.

Cables are one of the first components of a PV system to show failure. Partial or full replacement of the electrical system includes not only cables but also related installation costs and possible collateral damage to panels or other components.

## COMPLETE CABLE RANGE

Prysmian Group offer a complete cable portfolio to enable the production and supply of solar energy. In addition to solar photovoltaic cables, the range also includes low, medium and high voltage energy cables according to the local standard as well as specialty cables for communication and control.

## HV ACCESSORY RANGE

In addition to cables, Prysmian offers all necessary HV components such as joints, connectors, end terminations and link boxes for complete cable system connection.

## EXPERT TECHNICAL SUPPORT

In order to offer custom-made solutions, we recognize the need to understand local pre-conditions and special needs. That is why we prioritice a strong local presence supported by the production capacity and innovation that only a truely global company possesses.

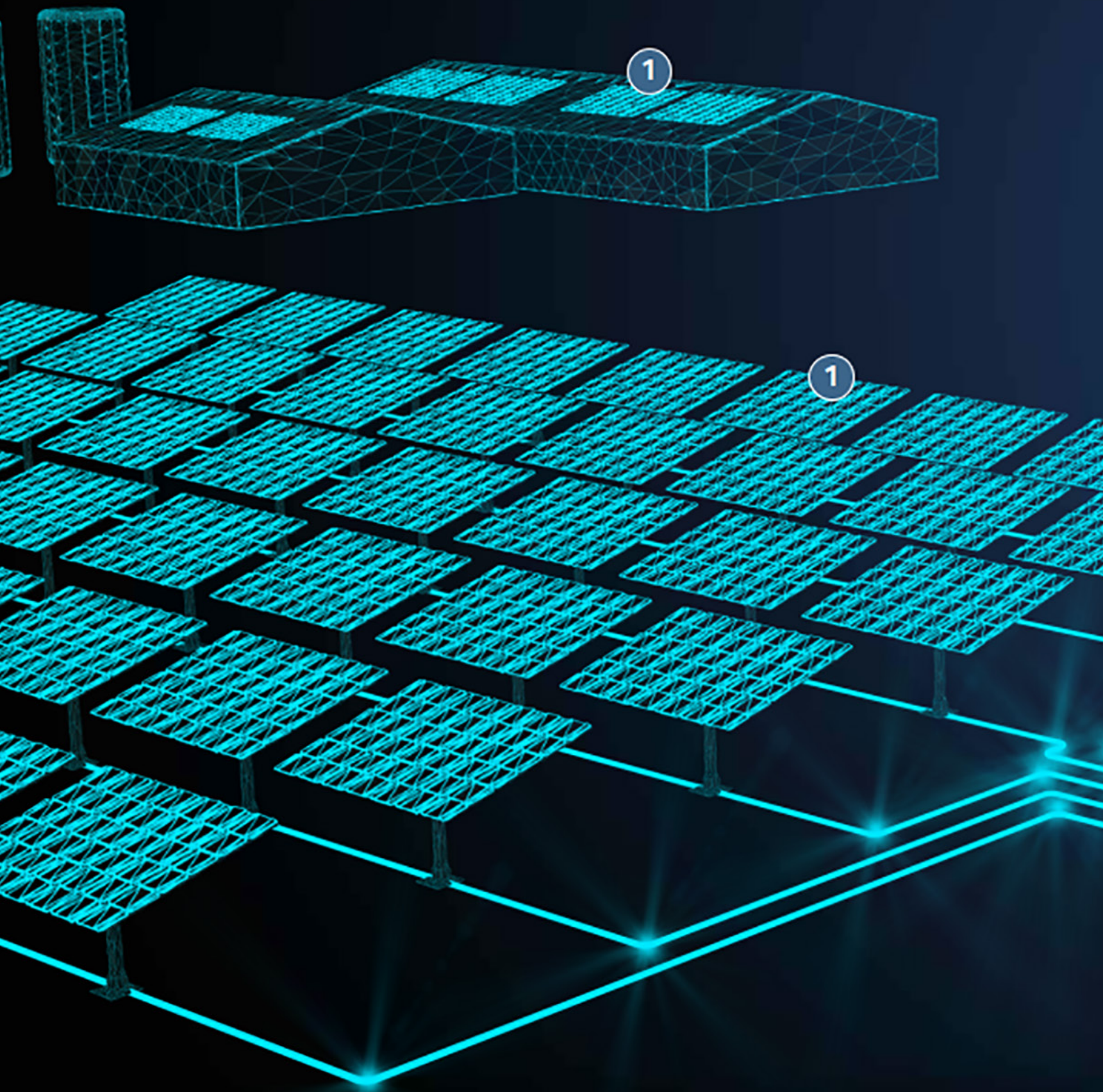
## TURNKEY PROJECT CAPABILITY

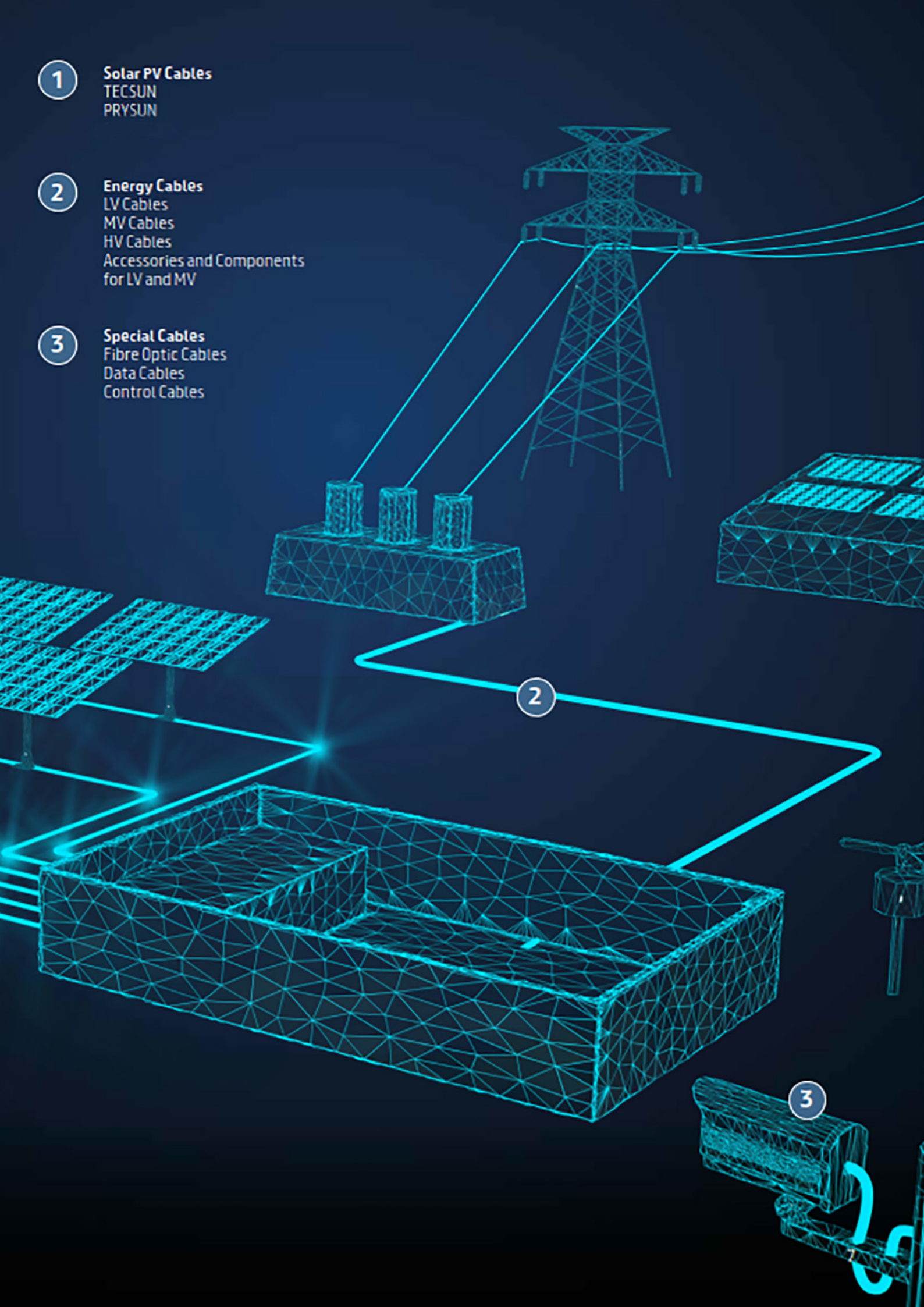
We also provide turnkey project services for underground HV connection directly to the grid. Our start-to-finish project execution includes all elements of a successful project from design, manufacture, installation, testing and project management.

## TESTING SERVICES

Prysmian provides a full spectrum of pre and post sales services for its customers, including diagnostic and testing services.

# Product Families at a glance

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Solar PV Cables
TECSUN
PRYSUN
2
Energy Cables
LV Cables
MV Cables
HV Cables
Accessories and Components
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3
Special Cables
Fibre Optic Cables
Data Cables
Control Cables
2
3


Drake

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## Photovoltaic cable



## Low voltage cable



## Medium voltage cable



## High voltage cable

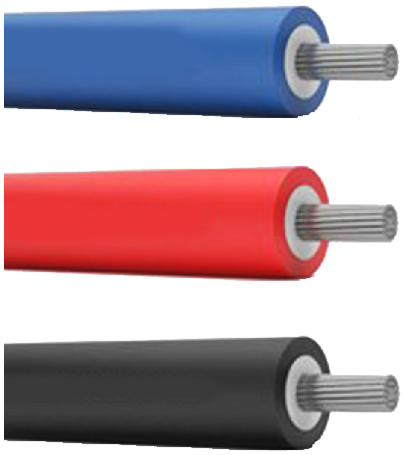


## Grounding cable



## Data & optical fibre cable

FIXED & FLEXIBLE INSTALLATION OUTDOORS



INSTALLATION CABLE HALOGEN-FREE

# TECSUN (PV) H1Z2Z2-K

### Application

PRYSMIAN Solar cables TECSUN (PV) – H1Z2Z2-K is intended for use in photovoltaic power supply systems indoors and outdoors, in industrial and agriculture fields. Suitable for application in equipment with protective insulation (Class II), in explosion hazard areas and may be installed as fixed or freely suspended or free movable.

Applicable for installation in cable trays, conduits, on and in walls as well as for direct burial. The cable is designed to operate at a normal maximum conductor temperature of 90°C, but for a maximum of 20 000 hours a max. conductor temperature of 120 °C at a max. ambient temperature of 90°C, is permitted.

The version TECSUN (PV)(C) H1Z2Z2-K has an additional metallic screen braid, made of tinned copper wires, as a protective element against rodens or impact.

### Installation note

TECSUN(PV) cables are suitable for direct burial in ground. Installation conditions per VDE 0800 Section 174 § 5.4.2 and VDE 0891 Section 6 § 4.2 should be taken in consideration.

### Standard & Direktive & Approval

- Standard: DIN EN 50618
- Direktive: CE, RoHS, REACH
- Approval: <VDE>
- Approval: TÜV-certificate no. 60103637
- CPR class Eca acc. to DIN EN 50575
- DoP number: 1007350 - PDF link
- dk.prysmiangroup.com/dop

### Construction

Conductor:

- Electrolytic tinned copper
- Finely stranded
- Class 5 acc. to IEC 60228

Insulation:

- Halogen-free
- Cross-linked HEPR 120°C, white

Outer sheath:

- Halogen-free cross-linked
- EVA rubber 120°C
- Insulation and sheath solidly bound
- Colour: Black, blue or red
- UV-resistant EN 50289-4-17, method A

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

# Electrical properties

Rated Voltage:

> DC: 1,5/1,5 kV or AC: 1,0/1,0 kV

Max. permissible operating voltage:

> AC 1.2/1.2 kV or DC 1,8/1,8 kV

Test voltage:

> AC: 6,5 kV or DC: 15 kV (5 Min.)

Current Carrying Capacity:

> According to EN 50618, Table A-3

Electrical Tests:

> Acc. to EN 50618, Table 2:
> Conductor Resistance;
> Voltage Test on completed cable (AC and DC);
> Spark Test on insulation
> Insulation Resistance (at 20°C and 90°C in water);
> Insulation Long-Term Resistance to DC (10 days, in 85°C water, 1,8 kV DC);
> Surface Resistance of Sheath
> Dieletric Strenght;
> Insulation Resistance at 120°C in air.

| Number of cores x nominal cross section | Single cable free in air | Single cable on surface | Two loaded cables touching, on a surface |
|---|---|---|---|
| 1 x 1,5 | 30 | 29 | 24 |
| 1 x 2,5 | 41 | 39 | 33 |
| 1 x 4 | 55 | 52 | 44 |
| 1 x 6 | 70 | 67 | 57 |
| 1 x 10 | 98 | 93 | 79 |
| 1 x 16 | 132 | 125 | 107 |
| 1 x 25 | 176 | 167 | 142 |
| 1 x 35 | 218 | 207 | 176 |
| 1 x 50 | 276 | 262 | 221 |
| 1 x 70 | 347 | 330 | 278 |
| 1 x 95 | 416 | 395 | 333 |
| 1 x 120 | 488 | 464 | 390 |
| 1 x 150 | 566 | 538 | 453 |
| 1 x 185 | 644 | 612 | 515 |
| 1 x 240 | 775 | 736 | 620 |

| Rated voltage DC | Rated voltage AC | Max. permissible operating voltage DC | Max. permissible operating voltage AC | Test voltage |
|---|---|---|---|---|
| $U_0/U$ | $U_0/U$ | $U_0/U$ | $U_0/U$ | |
| 1,5/1,5 kV | 1,0/1,0 kV | 1,8/1,8 kV | 1,2/1,2 kV | AC: 6,5 kV (5 min.)<br>DC: 15 kV (5 min.) |

**Current Carrying Capacity**

The current carrying capacity values (in ampere) for each installation method at an ambient temperature of 60°C are according to EN50618, Table A3.

| Ambient temperature (°C) | Reduction factor |
|---|---|
| up to 60 | 1,00 |
| 70 | 0,92 |
| 80 | 0,84 |
| 90 | 0,75 |

**De-rating Factors**

De-rating factors are used to properly calculate the current carrying capacity, taking into account the installation and operating conditions. In case of use at an ambient temperature greater than 60°C, please consider the de-rating factors indicated in EN50618, Table A4. For installation in groups, the de-rating factors from HD60364-5-52 apply.

# Mechanical properties

**Tensile Load**

The maximum tensile load according to HD 516, DIN VDE 0298-3 and DIN VDE 0298-300:

- 15 N/mm² in operation
- 50 N/mm² only during installation

**Bending Radius**

The minimum bending radius is indicated as the product of the overall diameter of the finished cable (D) and a factor (i.e. 3xD). For TECSUN (PV) the minimum bending radius according to EN 50565-1:

- 3xD (for D≤12mm)
- 4xD (for D>12mm)

Smaller bending radii than permitted can cause a reduced service lifetime.

**Mechanical Characteristics of Insulation and Sheathing Materials**

The properties of the materials (tensile strenght and elongation at break) are tested before and after ageing. Hot-Set test and thermal endurance test are performed in addition.

**Abrasion Resistance**

TECSUN (PV) cable is tested against several abrasive materials:

- sheath against abrasive paper acc. to DIN ISO 4649
- sheath against sheath
- sheath against metal
- sheath against plastics

**Shrinkage Test:**

- Acc. to EN 50618.See table
- Maximum Shrinkage <2% (test acc. to EN 60811-503)

**Pressure Test at High Temperature:**

- 50% acc. to EN 60811-508.

**Dynamic Penetration Test:**

- Acc. to EN 50618, Annex D:
- Meets requirements of EN 50618.

**Shore-Hardness:**

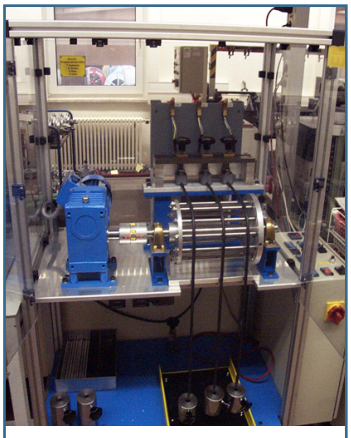
- Type A: 85 acc. to DIN EN ISO 868

**Durability of Print:**

- Acc. to EN 50618:
- Test acc. to EN 50396.

Tensile testing equipment

Test against abrasive paper



Test cage: sheath against metal/plastic

# Thermal properties

**Max. operating temperature of the conductor**

- Max. 90°C at conductor
- For a maximum of 20.000 hours at max. conductor temperature of 120°C at a max. ambient temperature of 90°C is permitted
- Lifetime acc. to EN 50618 = 25 years
- Lifetime acc. to Arrhenius-Diagram = 30 years

**Max. short circuit temperature of the conductor**

- 250°C (5 seconds)

**Ambient Temperature**

The temperature range on the surface of the cable during operation

- Installation and handling: -25°C up to 60°C
- In operation: -40°C up to +90°C

**Resistance to Cold**

The following tests are performed on TECSUN (PV) cable

- Acc. to EN 50618, Table 2:
- Cold Bending Test at -40°C acc. to DIN EN 60811-504;
- Cold Elongation Test at -40°C acc. to DIN EN 60811-505;
- Cold Impact Test at -40°C acc. to DIN EN 60811-506, EN 50618-C

**Damp Heat Test**

Mechanical properties of the materials are tested:

- Acc. to EN 50618, Table 2:
- 1.000 hours at 90°C and 85% humidity
- Acc to EN 60068-2-78

Test Chamber (temperature range from -70°C to +80°C)

Test equipment for cold impact test

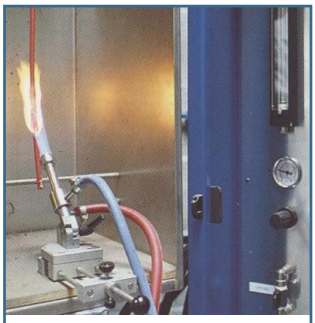
# Chemical properties

**Behaviour against Fire**

- Acc. to EN 50618, Table 2
- Single Cable Flame Test: EN 60332-1-2
- Low Smoke Emission: EN 61034-2
- Light Transmittance > 70%
- Halogen-free per EN 50525-1, Annex B.
- Multiple Cable Flame Test: EN 50305-9
- Low Toxicity per EN 50305 (ITC < 3)
- CPR fire class Eca approve
- DoP no. 1007350

**Oil Resistance**

- 24 hours at 100°C
- Acc. to VDE 0473-811-404
- Acc. to EN 60811-404



Propagation of vertical flame on complete single cable (acc. to EN 60332-1-2)

Test equipment for measuring corrosivity of gases (halogen free)

Equipment for measuring light conductivity and pH-value (halogen free)

# Weather properties

**UV resistance**
External agents related to weather conditions (such as UV radiations, ozone and water) can degrade the rubber materials, causing a reduction of the performances of the cables. Therefore TECSUN (PV) cable is tested in order to ensure:

- Acc. to EN 50618, Annex E and Table 2:
- UV resistance of outer sheath: tensile strength and elongation at break measured after 720 hours (360 cycles) exposure to UV-light
- Cable has no cracks

Test chamber for UV test

**UV resistance**

- Ozone resistance: per Test Type B (DIN EN 50396)
- 72 hours at 40°C with 55% relative humidity and 2ppm of ozone concentration
- Cable has no cracks

**Water resistance**

- For permanent installation in AD8 water acc. to DIN EN 50525-2-21 appendix E.
- Water Absorption (Gravimetric) per DIN EN 60811-402.


Test chamber for ozone test

**Acid and alkaline resistance**

- Acc. to EN 50618, Annex B
- Resistance of the sheating material
- 7 days at 23°C (N-Oxalic Acid, N-Sodium Hydroxide) acc. to EN 60811-404.

**Ammonia Resistance:**

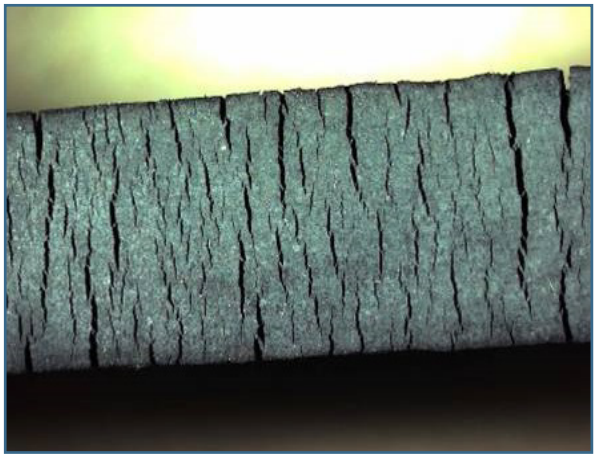
- 30 days in Saturated Ammonia Atmosphere.

**Long-Term Immersion in Water**

- TECSUN (PV) cable is tested for minimum 10 days completely immersion in waterat 85°C, with 1,8kV DC voltage applied.

# Ageing and misuse effects

Cable overheating effect



Ozone damage effect

Cable overheating effect

Ozone damage effect

Cable handling misuse - bending radius too small

Installation misuse - violent pressure

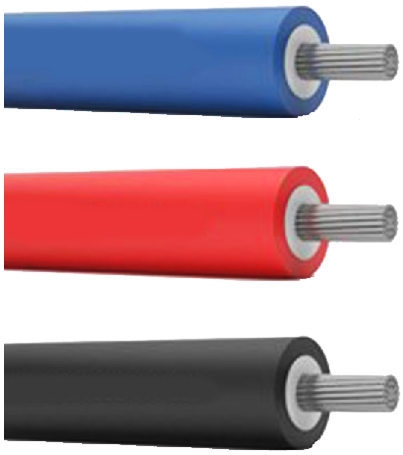
# Solar cable

| TECSUN (PV) H1Z2Z2-K | | | | | | |
|---|---|---|---|---|---|---|
| Conductor cross-section $mm^2$ | Sheath colour | Outer diamater min. mm | Outer diamater max.mm | Bending radius fixed mm | Weight Kg/km | Prysmian SAP no. |
| 1x1,5 | Black | 4.4 | 5.0 | 15 | 35 | 20154830 |
| 1x2,5 | Black | 4.8 | 5.4 | 17 | 46 | 20154650 |
| 1x2,5, | Red | 4,8 | 5,4 | 17 | 46 | 20167176 |
| 1x2,5 | Blue | 4,8 | 5,4 | 17 | 46 | 20167177 |
| 1x4 | Black | 5.3 | 5.9 | 18 | 61 | 20149014 |
| 1x4 | Red | 5,3 | 5.9 | 18 | 61 | 20165491 |
| 1x4 | Blue | 5,3 | 5.9 | 18 | 61 | 20165492 |
| 1x6 | Black | 5.9 | 6.5 | 20 | 80 | 20149015 |
| 1x6 | Red | 5,9 | 6,5 | 20 | 80 | 20165493 |
| 1x6 | Blue | 5,9 | 6.5 | 20 | 80 | 20165494 |
| 1x10 | Black | 7,0 | 7.6 | 23 | 122 | 20149016 |
| 1x10 | Red | 7,0 | 7.6 | 23 | 122 | 20165495 |
| 1x10 | Blue | 7,0 | 7.6 | 23 | 122 | 20165496 |
| 1x16 | Black | 9,0 | 9.8 | 30 | 200 | 20154857 |
| 1x16 | Red | 9,0 | 9,8 | 30 | 200 | 20167178 |
| 1x16 | Blue | 9,0 | 9,8 | 30 | 200 | 20167179 |
| | | | | | | |
| TECSUN (PV)(C) | | | | | | |
| 1x4 (C) | Black | 6 | 6,6 | 26,4 | 90 | |
| 1x6 (C) | Black | 6,5 | 7,1 | 28,4 | 110 | 20198657 |

| TECSUN (PV) - ELECTRICAL DATA | | | | | | |
|---|---|---|---|---|---|---|
| Conductor cross-section $mm^2$ | Conductor outer diameter max. mm | Max.conductor resistance at 20°C Ω /km | Permissable tensile strength max. N | Current carrying capacity A In air at 60°C | Current carrying capacity A On surface 60°C | Short Circuit current kA 1sec. 90-250°C |
| 1x1,5 | 1.6 | 13.7 | 23 | 30 | 29 | 0.21 |
| 1x2,5 | 1.9 | 8.21 | 38 | 41 | 39 | 0.36 |
| 1x4 | 2.4 | 5.09 | 60 | 55 | 52 | 0.57 |
| 1x6 | 2.9 | 3.39 | 90 | 70 | 67 | 0.86 |
| 1x10 | 4 | 1.95 | 150 | 98 | 93 | 1.43 |
| 1x16 | 5.6 | 1.24 | 240 | 132 | 125 | 2.29 |

| TECSUN (PV)(C) | | | | | | |
|---|---|---|---|---|---|---|
| 1x4 (C) | 2,4 | 5,09 | 60 | 55 | 52 | 0,57 |
| 1x6 (C) | 2,9 | 3,39 | 90 | 70 | 67 | 0,86 |

FIXED & FLEXIBLE INSTALLATION OUTDOORS



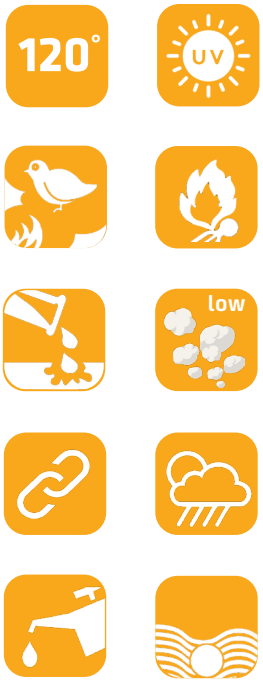
INSTALLATION CABLE HALOGEN-FREE

# PRYSUN (PV) H1Z2Z2-K

**Application**

PRYSMIAN Solar cables PRYSUN (PV) – H1Z2Z2-K is intended for use in photovoltaic power supply systems indoor and/or outdoor, in industrial and agriculture areas, in/at equipment with protective insulation (Protecting Class II). The cable may be installed fixed, freely suspended or free movable, in cable trays, conduits, on and in walls.

The cable is designed to operate at a normal maximum conductor temperature of 90°C, but for a maximum of 20 000 hours a max. conductor temperature of 120 °C at a max. ambient temperature of 90°C, is permitted.




**Standard & Direktive & Approval**

- Standard: DIN EN 50618
- Direktive: CE, RoHS, REACH
- TÜV-certificate no. R60144436

**Construction**

Conductor:

- Electrolytic tinned copper
- Finely stranded
- Class 5 acc. to IEC 60228

Insulation:

- Halogen-free
- Cross-linked Polyolefine 120°C, white

Outer sheath:

- Halogen-free
- Cross-linked Polyolefine 120°C
- Insulation and sheath solidly bound
- Colour: Black, blue or red
- UV-resistant EN 50289-4-17, method A

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

INSTALLATION CABLE HALOGEN-FREE

# Properties

**Electrical parameters**

Rated voltage:

> DC: 1,5/1,5 kV or AC: 1,0/1,0 kV

Max. permissible operating voltage:

> AC 1.2/1.2 kV or DC 1,8/1,8 kV

Test voltage:

> AC: 6,5 kV or DC: 15 kV (5 Min.)

Current Carrying Capacity:

> According to EN 50618, Table A-3

Electrical Tests:

> Acc. to EN 50618, Table 2:
> Conductor Resistance;
> Voltage Test on completed cable (AC and DC);
> Spark Test on insulation
> Insulation Resistance (at 20°C and 90°C in water);
> Insulation Long-Term Resistance to DC (10 days, in 85°C water, 1,8 kV DC);
> Surface Resistance of Sheath
> Dieletric Strenght;
> Insulation Resistance at 120°C in air.

**Weather resistance**

> Acc. to EN 50618, Annex E and Table 2:
> UV Resistance on sheath: tensile strength and elongation at break after 720h (360 Cycles) of exposure to UV lights acc. to EN 50289-4-17, Method A.
> Ozone resistance: per Test Type B (DIN EN 50396).
> Water Absorption (Gravimetric) per DIN EN 60811-402.

Acid and alkaline resistance

> Acc. to EN 50618, Annex B
> 7 days, 23°C (N-Oxalic Acid, N-Sodium Hydroxide) acc. to EN 60811-404.

Ammonia Resistance:

> 30 days in Saturated Ammonia Atmosphere.

**Chemical parameters**

Resistance to fire:

> Acc. to EN 50618, Table 2
> Single Cable Flame Test: EN 60332-1-2
> Low Smoke Emission: EN 61034-2 (Light Transmittance > 70%)
> Halogen-free per EN 50525-1, Annex B.
> Multiple Cable Flame Test: EN 50305-9
> Low Toxicity per EN 50305 (ITC < 3)

Resistance to oil:

> 24h, 100°C (meets VDE 0473-811-404 and EN 60811-404)

**Thermal properties**

Max. operating temperature of the conductor:

> Max. 90°C at conductor (lifetime acc. to EN 50618 = 25 years)
For a maximum of 20.000 hours a max. conductor temperature of 120 °C at a max. ambient temperature of 90 °C is permitted.

Max. short circuit temperature of the conductor:

> 250 °C (5 s.)

Ambient temperature:

> Installation and handling: -25°C up to 60°C
> In operation: -40°C up to +90°C

Resistance to cold:

> Acc. to EN 50618, Table 2:
> Cold Bending Test at -40°C acc. to DIN EN 60811-504;
> Cold Elongation Test at -40°C acc. to DIN EN 60811-505;
> Cold Impact Test at -40°C acc. to DIN EN 60811-506 and EN 50618-C.

Damp-Heat Test:

> Acc. to EN 50618, Table 2:
> 1.000h at 90°C and 85% humidity (test acc. to EN 60068-2-78).

**Mechanical properties**

Max. tensile load 15 N/mm² in operation:

> 50 N/mm² during installation per HD 516, DIN VDE 0298 section 3 § 7.1 and Section 300 § 5.4.1

Bending radius:

> Acc. to EN 50565-1.See table

Abrasion resistance:

> Acc. to DIN ISO 4649 against abrasive paper;
> Sheath against sheath;
> Sheath against metal;
> Sheath against plastics.

Shrinkage Test:

> Acc. to EN 50618.See table
> Maximum Shrinkage <2% (test acc. to EN 60811-503)

Pressure Test at High Temperature:

> 50% acc. to EN 60811-508.

Dynamic Penetration Test:

> Acc. to EN 50618, Annex D:
> Meets requirements of EN 50618.

Shore-Hardness:

> Type A: 85 acc. to DIN EN ISO 868

Durability of Print:

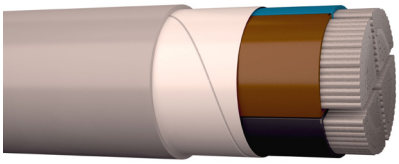
> Acc. to EN 50618:
> Test acc. to EN 50396.

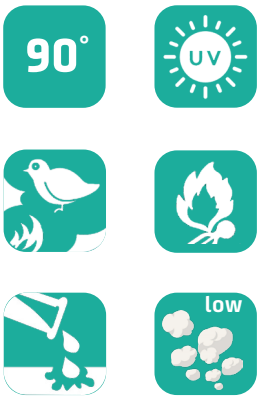
# Solar cable

| PRYSUN (PV) H1Z2Z2-K | | | | | | |
|---|---|---|---|---|---|---|
| Conductor cross-section $mm^2$ | Sheath colour | Outer diamater min. mm | Outer diamater max.mm | Bending radius fixed mm | Weight Kg/km | Prysmian SAP no. |
| 1x4 | Black | 5.3 | 5.9 | 18 | 61 | 20294019 |
| 1x4 | Red | 5,3 | 5.9 | 18 | 61 | 20352680 |
| 1x6 | Black | 5.9 | 6.5 | 20 | 80 | 20294412 |
| 1x6 | Red | 5,9 | 6.5 | 20 | 80 | 20352927 |
| 1x10 | Black | 7,0 | 7.6 | 23 | 122 | 20294415 |
| 1x10 | Red | 7,0 | 7.6 | 23 | 122 | 20352934 |
| 1x16 | Black | 9,0 | 9.8 | 30 | 200 | |

| PRYSUN (PV) - ELECTRICAL DATA | | | | | | |
|---|---|---|---|---|---|---|
| Conductor cross-section $mm^2$ | Conductor outer diameter max. mm | Permissable tensile force max. N | Max.conductor resistance at 20°C Ω /km | Current carrying capacity A In air at 60°C | Current carrying capacity A On surface 60°C | Short Circuit current kA 1sec. 90-250°C |
| 1x4 | 2.4 | 60 | 5.09 | 55 | 52 | 0.57 |
| 1x6 | 2.9 | 90 | 3.39 | 70 | 67 | 0.86 |
| 1x10 | 4 | 150 | 1.95 | 98 | 93 | 1.43 |
| 1x16 | 5.6 | 240 | 1.24 | 132 | 125 | 2.29 |

OUTDOOR INSTALLATION






INSTALLATION CABLE HALOGEN-FREE

# HIK AL-S 0,6/1 kV

**Application**

Halogen-free fire retardant cable with low smoke and corrosive gas emission during fire. Suitable for application outdoors in pipes, trays or for directly burial in soil. Can be plowed down with caution. The insulation must not be exposed to UV-light.

**Electrical data**

- Rated voltage: 0,6/1 kV
- Test voltage: 4000 V

Temperature area

- Max. conductor temperature: +90°C
- Short circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

**Standard & Direktive & Godkendelse**

Standard:

- Cenelec HD 604-5D, IEC 60502-1

Direktive:

- Fulfills LVD, RoHS & REACH

**Construction**

Conductor:

- Stranded annealed aluminium wire
- Acc. to EC 60228 class 2.
- Sector shaped

Insulation:

- XLPE

Core colouring:

- 4-core: brown, black, grey, blue

Seperator:

- Plastic tape

Outer sheath:

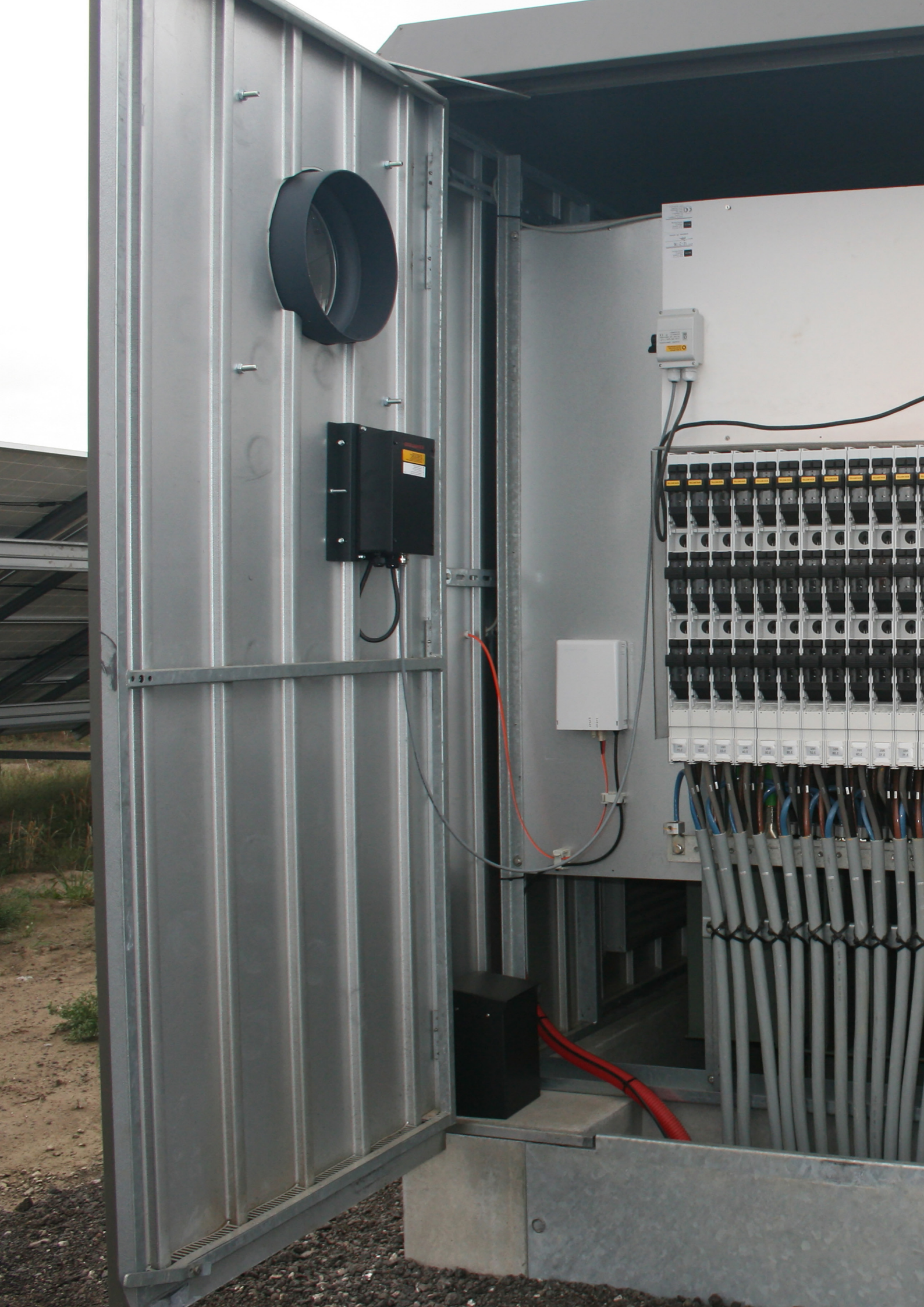
- PE compound
- UV-stabilized
- Gray and meter marked

**Material properties**

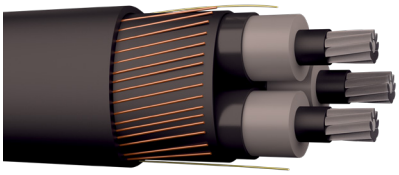
- Current load: Acc. to SB 2001:6
- Bending radius: 15 x D
- Current load: Acc. to SB 2001:6

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross section mm² | Outer. diameter mm | Weight kg/km | Max. current load A | Tensile strength N | Delivery m | Prysmian EAN-no. |
|---|---|---|---|---|---|---|
| 3 x 50 | 23 | 596 | 146 | 3500 | 500 | 4741532901071 |
| 3 x 70 | 26 | 815 | 187 | 3150 | 500 | 4741532901385 |
| 3 x 95 | 30 | 1059 | 227 | 4280 | 500 | 4741532901392 |
| 3 x 120 | 33 | 1327 | 263 | 5400 | 500 | 4741532901088 |
| 3 x 150 | 37 | 1622 | 304 | 6750 | 500 | 4741532901408 |



OUTDOOR INSTALLATION



POWER CABLE

# AXLJ-RMF 6/10 (12) kV

**Application**

Robust and triangular shaped 3-core distribution cable for outdoor application in ducts or directly in soil. Primary developed to be plowed. The conductor is longitudinal water blocked.

The cable is triangular in shape

**Technical data**

- Rated voltage: 6/10 (12) kV
- Test voltage: 75 kV

Bending radius:

- Fixed 8 x D
- During laying: 12 x D
- Plowed: 8 x D

**Temperature area**

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

**Standard & Direktive**

Standard:

- HD 620 part 10, section M
- IEC 60228

Direktive:

- Fulfills RoHS and REACH-direktives

**Constuction**

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compressed and round
- Longitudinal water blocked

Inner layer:

- Extruded polymer
- Semi-conductive r

Insulation:

- XLPE

Outer layer:

- Extruded polymerr
- Semi-conductive
- Bonded

Tape:

- Semi-conductive

Screen:

- Concentric
- Annealed copper wires

Rip cord:

- Aramid/Kevlar

Outer sheath:

- PE composite material
- UV-resistant
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Diameter over Isolation mm | Outer diameter mm | Weight Kg/km | Delivery m | Drum size | Prysmian SAP no. |
|---|---|---|---|---|---|---|
| 3x50/16 | 15,9 | 43,5 | 1300 | 500 | K18 | 20078179 |
| 3x95/25 | 18,6 | 49,9 | 1890 | 500 | K20 | 20095493 |
| 3x150/25 | 21,6 | 56,5 | 2550 | 500 | K24 | 20078182 |
| 3x240/35 | 25,4 | 65,1 | 3555 | 500 | K24 | 20087130 |
| 3x240/50 | 25,4 | 65,7 | 3720 | 500 | K24 | 20349988 |
| 3x300/35 | 27,9 | 71,0 | 4330 | 500 | K26 | 200118045 |

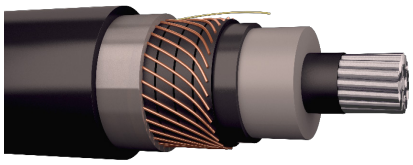
| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km | Earth fault current A/km |
|---|---|---|---|---|---|---|---|
| 3x50/16 | 0,641 | 1,2 | 0,33 | 0,10 | 0,25 | 0,5 | 1,4 |
| 3x95/25 | 0,320 | 0,8 | 0,30 | 0,09 | 0,32 | 0,6 | 1,8 |
| 3x150/25 | 0,206 | 0,8 | 0,28 | 0,09 | 0,37 | 0,7 | 2,1 |
| 3x240/35 | 0,125 | 0,6 | 0,26 | 0,08 | 0,45 | 0,9 | 2,6 |
| 3x240/50 | 0,125 | 0,387 | 0,26 | 0,08 | 0,45 | 0,9 | 2,6 |
| 3x300/35 | 0,100 | 0,6 | 0,26 | 0,80 | 0,51 | 1,0 | 2,9 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. temp. 65°C in air A | Current rating at core temp. temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA | Max. pulse current kA |
|---|---|---|---|---|---|---|
| 3x50/16 | 145 | 130 | 160 | 5,2 | 4,7 | 55 |
| 3x95/25 | 205 | 190 | 230 | 9,9 | 8,9 | 65 |
| 3x150/25 | 260 | 250 | 305 | 15,6 | 14,2 | 70 |
| 3x240/35 | 340 | 330 | 400 | 24,8 | 22,7 | 70 |
| 3x240/50 | 340 | 330 | 400 | 24,8 | 22,7 | 70 |
| 3x300/35 | 380 | 375 | 460 | 31,2 | 28,3 | 70 |

Nominal values unless otherwise specified.

**Conditions:**
- Maximum operating temperature 90°C
- Soil temperature 15 ° C
- Air temperature 20 ° C
- Soil heat resistivity 1.0 ° K * m / W
- Accommodation depth 0.65 m
- Frequency 50 Hz

OUTDOOR INSTALLATION



POWER CABLE WATER TIGHT

# AXLJ-TTCL 6/10 (12) kV

**Application**

One core distribution cable for outdoor installation in three phase formation in pipes or directly in soil or water. Can also be plowed under. The cable i both longitudinal and radial water blocked. The outer sheath is provided with a conductive layer which allows sheath testing after placement in duct.

**Electrical data**

- Rated voltage: 6/10 (12) kV
- Test voltage: 75 kV

**Bending radius:**

- Fixed 10 x D
- During laying: 15 x D
- Plowed down: 8 x D

**Temperature area**

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

**Standard & Direktive**

Standard:

- HD 620 part 10, section M
- HD 620 part 10, section K
- SS 424 14 16

Direktive:

- Fulfills RoHS and REACH-direktives

**Construction**

Conductor:

- Stranded aluminium wire
- Round and compressed
- Acc. to IEC 60228 class 2.
- Longitudinal watertight

Inner layer:

- Extruded polyer
- Semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded polymer r
- Semi-conductive
- Bonded

Longitudinal water blocking:

- Semi-conductive
- Water swellable tape

Screen:

- Concentric
- Aannealed copper wires
- Aluminum tape - 100% cover

Radial water blocking:

- Aluminium/PE laminate
- Fixed to sheath

Rip cord:

- Kevlar

Outer sheath:

- PE
- UV-resistant
- Natural color

Protective outer layer:

- Extruded, bonded to sheath
- Semi-conductive
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

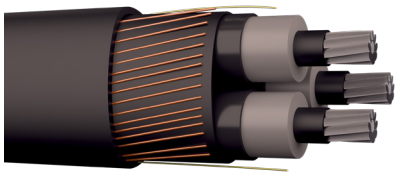
| Conductor cross-section mm² | Diameter over Isolation mm | Outer diameter mm | Weight Kg/km | Delivery m | Drum size | Prysmian SAP-no. |
|---|---|---|---|---|---|---|
| 1x50/16 | 15,9 | 24 | 560 | 500 | K11 | 20102173 |
| 1x70/16 | 16,9 | 25 | 625 | 500 | K11 | 20113259 |
| 1x95/25 | 18,6 | 27 | 805 | 500 | K12 | 20102174 |
| 1x120/25 | 20,2 | 28 | 895 | 500 | K12 | 20113260 |
| 1x150/25 | 21,5 | 30 | 1010 | 500 | K12 | 20040268 |
| 1x185/35 | 23,2 | 31,5 | 1220 | 500 | K14 | 20113271 |
| 1x240/35 | 25,4 | 34 | 1400 | 500 | K14 | 20078241 |
| 1x300/35 | 27,9 | 36,5 | 1660 | 500 | K16 | 20113272 |
| 1x400/35 | 31,1 | 40 | 1945 | 500 | K16 | 20102175 |
| 1x630/35 | 37,9 | 47 | 2790 | 500 | K20 | 20102176 |

| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km | Earth fault current A/km |
|---|---|---|---|---|---|---|---|
| 1x50/16 | 0,641 | 1,15 | 0,41/0,73 | 0,23 | 0,23 | 0,4 | 1,3 |
| 1X70/16 | 0,443 | 1,15 | 0,38/0,69 | 0,22 | 0,28 | 0,5 | 1,6 |
| 1x95/25 | 0,320 | 0,727 | 0,36/0,66 | 0,21 | 0,32 | 0,6 | 1,8 |
| 1X120/25 | 0,253 | 0,727 | 0,35/0,64 | 0,20 | 0,35 | 0,7 | 2,0 |
| 1x150/25 | 0,206 | 0,727 | 0,34/0,62 | 0,20 | 0,38 | 0,7 | 2,1 |
| 1X185/35 | 0,164 | 0,524 | 0,32/0,61 | 0,20 | 0,41 | 0,8 | 2,3 |
| 1x240/35 | 0,125 | 0,524 | 0,31/0,58 | 0,18 | 0,46 | 0,9 | 2,6 |
| 1x300/35 | 0,100 | 0,524 | 0,30/0,56 | 0,18 | 0,51 | 1,0 | 2,9 |
| 1x400/35 | 0,0778 | 0,524 | 0,29/0,54 | 0,17 | 0,58 | 1,1 | 3,3 |
| 1X630/35 | 0,0469 | 0,524 | 0,28/0,51 | 0,16 | 0,72 | 1,4 | 4,1 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. temp. 65°C in air A | Current rating at core temp. temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA |
|---|---|---|---|---|---|
| 1x50/16 | 155 | 160 | 195 | 5,2 | 4,7 |
| 1x70/16 | 200 | 190 | 235 | 7,2 | 6,6 |
| 1x95/25 | 235 | 230 | 280 | 9,9 | 8,9 |
| 1x120/25 | 265 | 265 | 325 | 12,4 | 11,3 |
| 1x150/25 | 300 | 300 | 370 | 15,6 | 14,2 |
| 1x185/35 | 330 | 345 | 425 | 19,2 | 17,5 |
| 1x240/35 | 385 | 400 | 490 | 25,0 | 22,7 |
| 1x300/35 | 435 | 460 | 565 | 31,0 | 28,3 |
| 1x400/35 | 510 | 555 | 680 | 41,6 | 37,8 |
| 1x630/35 | 635 | 720 | 880 | 65,6 | 59,5 |

Nominal values unless otherwise specified.

OUTDOOR INSTALLATION



POWER CABLE

# AXLJ-RMF 12/20 (24) kV

**Application**

Robust and triangular shaped 3-core distribution cable for outdoor application in ducts or directly in soil. Primary developed to be plowed down. The conductor is longitudinal water blocked.

The cable is triangular in shape.

**Electric data**

- Rated voltage: 12/20 (24) kV
- Test voltage: 125 kV

**Bending radius**

- Fixed 8 x D
- During laying: 12 x D
- Plowed: 8 x D

**Temperature area**

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

**Standard & Direktive**

Standard:

- HD 620 part 10, section M
- SS 424 14 16

Direktive:

- Fulfills RoHS and REACH-direktives

**Construction**

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compressed and round
- Longitudinal water blocked

Inner layer:

- Extruded polymer
- Semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded
- Semi-conductive
- Fixed / bonded

Tape:

- Semi-conductive

Screen:

- Concentric
- Annealed copper wires

Rip cord:

- Kevlar/Aramid

Outer sheath:

- PE composite material
- UV-resistant
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Diameter over Isolation mm | Outer diameter mm | Weight Kg/km | Delivery m | Drum size | Prysmian SAP no. |
|---|---|---|---|---|---|---|
| 3x50/16 | 19,5 | 52,4 | 1705 | 500 | K20 | 20078233 |
| 3x95/25 | 22,8 | 59,9 | 2425 | 500 | K22 | 20102136 |
| 3x150/25 | 25,7 | 66,5 | 3169 | 500 | K24 | 20078234 |
| 3x150/35 | 25,7 | 66,5 | 3225 | 500 | K24 | 20293184 |
| 3x240/25 | 29,6 | 75,0 | 4170 | 500 | K26 | 20102137 |
| 3x240/35 | 29,6 | 75,0 | 4235 | 500 | K26 | 20091033 |
| 3x300/35 | 32,1 | 80,5 | 5065 | 500 | K26 | 20118046 |

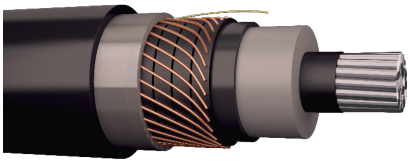
| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km | Earth fault current A/km |
|---|---|---|---|---|---|---|---|
| 3x50/16 | 0,641 | 1,2 | 0,37 | 0,12 | 0,17 | 0,6 | 1,9 |
| 3x95/25 | 0,320 | 0,8 | 0,34 | 0,11 | 0,21 | 0,8 | 2,4 |
| 3x150/25 | 0,206 | 0,8 | 0,31 | 0,10 | 0,25 | 0,9 | 2,8 |
| 3X150/35 | 0,206 | 0,6 | 0,31 | 0,10 | 0,25 | 0,9 | 2,8 |
| 3x240/35 | 0,125 | 0,6 | 0,29 | 0,09 | 0,30 | 1,1 | 3,4 |
| 3x300/35 | 0,100 | 0,6 | 0,28 | 0,09 | 0,33 | 1,2 | 3,7 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. 65°C in air A | Current rating at core temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA | Max. pulse current kA |
|---|---|---|---|---|---|---|
| 3x50/16 | 145 | 130 | 170 | 5,2 | 4,7 | 55 |
| 3x95/25 | 205 | 190 | 240 | 9,9 | 8,9 | 65 |
| 3x150/25 | 260 | 250 | 310 | 15,6 | 14,2 | 70 |
| 3 X 150/35 | 260 | 250 | 310 | 15,6 | 14,2 | 70 |
| 3x240/35 | 340 | 330 | 400 | 25,0 | 22,7 | 70 |
| 3x300/35 | 380 | 375 | 460 | 31,2 | 28,3 | 70 |

Nominal values unless otherwise specified.

Conditions:
- Maximum operating temperature 90 C
- Soil temperature 15°C
- Air temperature 20°C
- Soil heat resistivity 1.0° K*m/W
- Accommodation depth 0.65 m
- Frequency 50 Hz

OUTDOOR INSTALLATION



POWER CABLE WATER TIGHT

# AXLJ-TTCT 12/20 (24) kV

### Application

One core distribution cable for outdoor application in a 3-phase joint or laying in pipes, ducts or directly in soil or water. The cable is both radial and longitudinal water-tight. Suitable for plowing down using causion. The outer sheath is provided with a conductive layer which allows sheath testing after placement in duct.

### Electrical data

- Rated voltage: 10/12 (24) kV
- Test voltage: 125 kV

### Bending radius

- Fixed 10 x D
- During laying: 15 x D
- Plowed: 8 x D

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

### Standard & Direktive

Standard:

- HD 620 part 10, section M & K
- SS 424 14 16
- IEC 602281, IEC 50575

Direktive:

- Fulfills RoHS and REACH-direktives

### Construction

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compressed and round
- Longitudinal watertight

Inner layer:

- Extruded polymer
- Semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded polymer
- Semi-conductive layer
- Fixed/Bonded

Longitudinal water blocking:

- Semi-conductive
- Swellable tape

Screen:

- Concentric
- Annealed copper wires
- In contact with aluminium

Radial water blocking:

- Aluminium/PE laminater
- Fixed to sheath

Rip cord:

- Kevlar/Aramid

Outer sheath:

- PE compound
- Natural color
- UV-stabilized

Outer layer:

- Extruded
- Semi-conductive
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

Conditions:
- Maximum operating temperature 90°C
- Soil temperature 15°C
- Air temperature 20°C
- Soil heat resistivity 1.0° K*m/W
- Accommodation depth 0.65 m
- Frequency 50 Hz

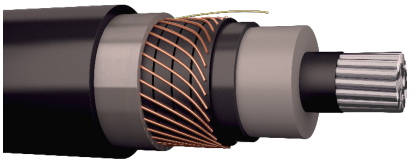
| Conductor cross-section mm² | Conductor type | Diameter over insolation mm | Outer diameter mm | Weight kg/km | Delivery m | Drum size |
|---|---|---|---|---|---|---|
| 1x50/16 | ARF | 19,5 | 27,9 | 700 | 500 | K12 |
| 1x95/25 | ARF | 22,8 | 31,3 | 970 | 500 | K12 |
| 1x120/25 | ARF | 24,6 | 33,0 | 1095 | 500 | K14 |
| 1x150/25 | ARF | 25,7 | 34,4 | 1200 | 500 | K14 |
| 1x240/35 | ARF | 29,5 | 38,7 | 1630 | 500 | K16 |
| 1x300/35 | ARF | 32,1 | 41,2 | 1900 | 500 | K16 |
| 1x400/35 | ARF | 35,3 | 44,5 | 2210 | 500 | K16 |
| 1x630/50 | ARF | 41,2 | 51,1 | 3240 | 500 | K26 |
| 1x800/50 | ARF | 46,6 | 56,5 | 3905 | 500 | K27 |

| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km |
|---|---|---|---|---|---|---|
| 1x50/16 | 0,641 | 1,15 | 0,43/0,73 | 0,23 | 0,17 | 0,6 |
| 1x95/25 | 0,320 | 0,727 | 0,39/0,67 | 0,21 | 0,21 | 0,8 |
| 1x120/25 | 0,253 | 0,727 | 0,38/0,65 | 0,12 | 0,23 | 0,9 |
| 1x150/25 | 0,206 | 0,727 | 0,36/0,63 | 0,20 | 0,25 | 0,9 |
| 1x240/35 | 0,125 | 0,524 | 0,34/0,59 | 0,19 | 0,30 | 1,1 |
| 1x300/35 | 0,100 | 0,524 | 0,33/0,57 | 0,18 | 0,33 | 1,2 |
| 1x400/35 | 0,0078 | 0,524 | 0,30/0,55 | 0,17 | 0,37 | 1,4 |
| 1x630/50 | 0,0469 | 0,387 | 0,29/0,51 | 0,16 | 0,45 | 1,7 |
| 1x800/50 | 0,0367 | 0,387 | 0,29/0,49 | 0,16 | 0,50 | 1,9 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. 65°C in air A | Current rating at core temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA | Earth fault current A/km |
|---|---|---|---|---|---|---|
| 1x50/16 | 155 | 160 | 195 | 5,2 | 4,7 | 1,9 |
| 1x95/25 | 235 | 230 | 280 | 9,9 | 8,9 | 2,4 |
| 1x120/25 | 265 | 265 | 325 | 12,4 | 11,3 | 2,6 |
| 1x150/25 | 300 | 300 | 370 | 15,6 | 14,2 | 2,8 |
| 1x240/35 | 385 | 400 | 490 | 25,0 | 22,7 | 3,4 |
| 1x300/35 | 435 | 460 | 565 | 31,2 | 28,3 | 3,7 |
| 1x400/35 | 510 | 555 | 680 | 41,6 | 37,8 | 4,2 |
| 1x630/50 | 635 | 720 | 880 | 65,5 | 59,5 | 5,1 |
| 1x800/50 | 695 | 822 | 1010 | 82,8 | 75,6 | 5,6 |

Nominal values unless otherwise specified.

OUTDOOR INSTALLATION



POWER CABLE WATER TIGHT

# AXLJ-TT 18/30 (36) kV

### Application

Single-core distribution cable suitable for laying outdoors in 3-phase formation in pipes, directly in soil or water. Both radial and longitudinal water blocked. Can also be ploughed down.

### Electrical data

- Rated voltage: 18/30 (36) kV
- Test voltage: 170 kV AC

### Bending radius

- Fixed installation: 10 x D
- During laying: 15 x D
- Plowed down: 8 x D

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

### Standard & Direktive

Standard:

- HD 620 part 10, section K
- HD 620 part 10, section M
- SS 424 14 16

Direktive:

- Fulfills RoHS and REACH-direktives

### Construction

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compacted and round
- Longitudinal water blocked

Innerlayer:

- Extruded polymer
- Semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded polymer
- Semi-conductive
- Fixed / bonded

Longitudinal water blocking tightness:

- Water blocking tape
- Semi-conductive

Screen:

- Concentric
- Annealed copper wires
- In contact with aluminium tape

Radial water blocking:

- Aluminium/PE laminate
- Bonded to outer sheath

Outer sheath:

- PE compound
- UV-stabilized
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

Conditions:
- Maximum operating temperature 90°C
- Soil temperature 15°C
- Air temperature 25°C
- Soil heat resistivity 1.0° K*m/W
- Accommodation depth 0.65 m
- Frequency 50 Hz

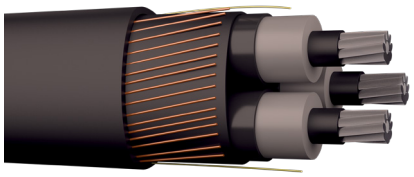
| Conductor cross-section mm² | Conductor type | Diameter over insulation mm | Outer diameter mm | Weight kg/km | Delivery m | Drum size |
|---|---|---|---|---|---|---|
| 1x50/16 | AFR | 24,3 | 32,5 | 965 | 500 | K14 |
| 1x70/25 | AFR | 25,9 | 34,0 | 1060 | 500 | K14 |
| 1x95/25 | AFR | 27,6 | 36,5 | 1210 | 500 | K16 |
| 1x120/35 | AFR | 29,2 | 37,5 | 1390 | 500 | K16 |
| 1x150/35 | AFR | 30,5 | 39,0 | 1525 | 500 | K16 |
| 1x240/35 | AFR | 34,4 | 43,5 | 1910 | 500 | K18 |
| 1x300/35 | AFR | 36,9 | 46,0 | 2185 | 500 | K20 |
| 1x400/25 | AFR | 40,3 | 49,4 | 2530 | 1000 | K24 |
| 1x500/35 | AFR | 43,0 | 52,5 | 2920 | 500 | K26 |
| 1x630/50 | AFR | 46,9 | 57,0 | 3630 | 500 | K26 |
| 1x800/50 | ARF | 51,2 | 61,0 | 4280 | 500 | K24 |

| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km |
|---|---|---|---|---|---|---|
| 1x50/16 | 0,641 | 1,15 | 0,47/0,75 | 0,15/0,25 | 0,13 | 0,7 |
| 1x70/25 | 0,443 | 1,15 | 0,44/0,71 | 0,14/0,22 | 0,14 | 0,8 |
| 1x95/25 | 0,320 | 0,727 | 0,42/0,68 | 0,13/0,21 | 0,16 | 0,9 |
| 1x120/35 | 0,253 | 0,524 | 0,41/0,66 | 0,13/0,21 | 0,17 | 1,0 |
| 1x150/35 | 0,206 | 0,524 | 0,39/0,64 | 0,12/0,20 | 0,19 | 1,1 |
| 1x240/35 | 0,125 | 0,524 | 0,36/0,60 | 0,11/0,19 | 0,22 | 1,2 |
| 1x300/35 | 0,100 | 0,524 | 0,35/0,58 | 0,11/0,18 | 0,24 | 1,4 |
| 1x400/25 | 0,0778 | 0,524 | 0,34/0,56 | 0,11/0,18 | 0,27 | 1,5 |
| 1x500/35 | 0,0605 | 0,524 | 0,32/0,54 | 0,11/0,18 | 0,29 | 1,6 |
| 1x630/50 | 0,0469 | 0,387 | 0,31/0,52 | 0,10/0,16 | 0,33 | 1,9 |
| 1x800/50 | 0,0367 | 0,387 | 0,30/0,50 | 0,09/0,16 | 0,36 | 2,0 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. 65°C in air A | Current rating at core temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA | Earth fault current A/km |
|---|---|---|---|---|---|---|
| 1x50/16 | 155 | 160 | 195 | 5,2 | 4,7 | 2,2 |
| 1x70/16 | 200 | 190 | 235 | 7,2 | 7,2 | 2,4 |
| 1x95/25 | 235 | 230 | 280 | 9,8 | 9,8 | 2,7 |
| 1x120/35 | 265 | 265 | 325 | 12,4 | 12,4 | 2,9 |
| 1x150/35 | 300 | 300 | 370 | 15,5 | 15,5 | 3,2 |
| 1x240/35 | 385 | 400 | 490 | 25,0 | 24,8 | 3,7 |
| 1x300/35 | 435 | 460 | 565 | 31,1 | 31,1 | 4,1 |
| 1x400/25 | 510 | 555 | 680 | 41,4 | 37,8 | 4,5 |
| 1x500/35 | 570 | 635 | 775 | 51,8 | 47,2 | 4,9 |
| 1x630/50 | 635 | 720 | 880 | 65,2 | 59,5 | 5,9 |
| 1x800/50 | 695 | 822 | 1010 | 82,8 | 82,8 | 6,1 |

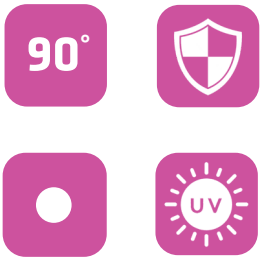
Nominal values unless otherwise specified.

OUTDOOR INSTALLATION



POWER CABLE

# AXLJ-RMF 18/30 (36) kV




### Application

Robust and triangular shaped 3-core distribution cable for outdoor application in ducts or directly in soil. Primary developed to be plowed down. The conductor is longitudinal water blocked.

The cable is triangular in shape.

### Electrical data

- Rated voltage: 18/30 (24) kV
- Test voltage: 170 kV

### Bending radius

- Fixed 8 x D
- During laying: 12 x D
- Plowed: 8 x D

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

### Standard & Direktive

Standard:

- HD 620 part 10, section M
- SS 424 14 16

Direktive:

- Fulfills RoHS and REACH-direktives

### Construction

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compressed and round
- Longitudinal watertight

Inner layer:

- Extruded
- Semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded
- Semi-conductive
- Fixed / bonded

Tape:

- Semi-conductive

Screen:

- Concentric
- Annealed copper wires

Rip cord:

- Kevlar

Outer sheath:

- PE composite material
- UV-resistant
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Diameter over Isolation mm | Outer diameter mm | Weight Kg/km | Delivery m | Drum size | Prysmian SAP-no. |
|---|---|---|---|---|---|---|
| 3x50/16 | 24,3 | 63,0 | 2365 | 500 | K24 | 20102138 |
| 3x95/25 | 27,6 | 70,5 | 3165 | 500 | K24 | 20102140 |
| 3x120/25 | 20,4 | 74,3 | 3535 | 500 | K26 | 20117996 |
| 3x150/25 | 30,7 | 77,2 | 3920 | 500 | K26 | 20102142 |
| 3x150/35 | 30,7 | 77,2 | 3990 | 350 | K24 | |
| 3x240/35 | 34,4 | 86,0 | 5150 | 500 | K28 | 20102143 |
| 3x300/35 | 36,9 | 92,0 | 6025 | 500 | K28 | 20114869 |
| 3x400/35 | 40,3 | 99,5 | 7075 | 500 | K30 | |

| Conductor cross section mm² | Conductor resistance Ω/km | Screen resistance Ω/km | Inductance mH/km | Reactance Ω/km | Capacitance µF/km | Changing current / phase A/km | Earth fault current A/km |
|---|---|---|---|---|---|---|---|
| 3x50/16 | 0,641 | 1,2 | 0,42 | 0,13 | 0,13 | 0,7 | 2,2 |
| 3x95/25 | 0,320 | 0,8 | 0,37 | 0,12 | 0,16 | 0,9 | 2,7 |
| 3x120/25 | 0,253 | 0,8 | 0,36 | 0,11 | 0,17 | 1,0 | 2,9 |
| 3x150/25 | 0,206 | 0,8 | 0,35 | 0,11 | 0,18 | 1,0 | 3,1 |
| 3x150/35 | 0,206 | 0,6 | 0,35 | 0,11 | 0,18 | 1,0 | 3,1 |
| 3x240/35 | 0,125 | 0,6 | 0,32 | 0,10 | 0,22 | 1,2 | 3,7 |
| 3x300/35 | 0,100 | 0,6 | 0,31 | 0,10 | 0,24 | 1,4 | 4,1 |
| 3x400/35 | 0,0778 | 0,6 | 0,30 | 0,09 | 0,26 | 1,5 | 4,5 |

| Conductor cross-section mm² | Current rating at core temp. 65°C in ground A | Current rating at core temp. 65°C in air A | Current rating at core temp. 90°C in air A | Max. short-circuit current at 65°C kA | Max. short-circuit current at 90°C kA | Max. pulse current kA |
|---|---|---|---|---|---|---|
| 3x50/16 | 145 | 130 | 160 | 5,2 | 4,7 | 55 |
| 3x95/25 | 205 | 190 | 230 | 9,9 | 8,9 | 65 |
| 3x120/25 | 230 | 220 | 265 | 12,4 | 11,3 | 70 |
| 3x150/25 | 260 | 250 | 305 | 15,5 | 14,2 | 70 |
| 3x150/35 | 260 | 250 | 305 | 15,5 | 14,2 | 70 |
| 3x240/35 | 340 | 330 | 400 | 25,0 | 22,7 | 70 |
| 3x300/35 | 380 | 375 | 460 | 31,2 | 28,3 | 70 |
| 3x400/35 | 450 | 450 | 545 | 41,4 | 37,8 | |

Nominal values unless otherwise specified.

Conditions:
- Maximum operating temperature 90°C
- Soil temperature 15°C
- Air temperature 20°C
- Soil heat resistivity 1.0°K*m/W
- Accommodation depth 0.65 m
- Frequency 50 Hz

OUTDOOR INSTALLATION

POWER CABLE WATER TIGHT

# AXLJ-TTCT (TSLF) 36/60 (72) kV

### Application

One core distribution cable for outdoor application in a 3-phase joint or laying in pipes, ducts or directly in soil or water. The cable is both radial and longitudinal water-tight. Suitable for plowing down using causion. The outer sheath is provided with a conductive layer which allows sheath testing after placement in duct.

### Electrical data

- Rated voltage: 36/60 (72) kV
- Test voltage: 325 kV

### Bending radius

- Fixed 15 x D
- During laying: 20 x D

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -20°C
- Below 0°C caution must be exercised

### Standard & Direktive

Standard:

- IEC 60840
- IEC 602281, IEC 50575

Direktive:

- Fulfills RoHS and REACH-direktives

### Construction

Conductor:

- Stranded aluminium wire
- Acc. to IEC 60228 class 2.
- Compressed and round
- Longitudinal watertight

Inner layer:

- Extruded, semi-conductive

Insulation:

- XLPE

Outer layer:

- Extruded polymer
- Semi-conductive layer
- Fixed/Bonded

Longitudinal water blocking:

- Semi-conductive
- Swellable tape

Screen:

- Concentric
- Annealed copper wires
- In contact with aluminium

Radial water blocking:

- Aluminium/PE laminater
- Fixed to sheath

Outer sheath:

- PE compound, natural color
- UV-stabilized

Outer layer:

- Extruded, fixed to sheath
- Semi-conductive
- Black and meter marked

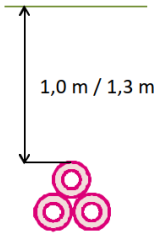
All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Conductor diameter mm | Insulation thickness mm | Diameter over insulation mm | Sheath thickness mm | Outer cable diameter mm |
|---|---|---|---|---|---|
| 1 x 240/95 | 18,1 | 11,0 | 41,6 | 2,6 | 55,3 |
| 1 x 300/95 | 20,5 | 11,0 | 43,9 | 2,6 | 57,8 |
| 1 x 400/95 | 23,7 | 10,0 | 45,3 | 2,7 | 59,2 |
| 1 x 500/95 | 26,6 | 10,0 | 48,1 | 2,8 | 62,3 |
| 1 x 630/95 | 30,3 | 10,0 | 51,7 | 2,9 | 66,2 |

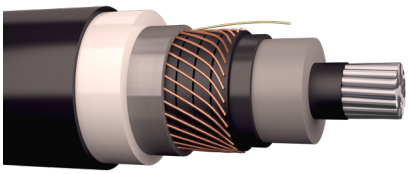
| Conductor cross-section mm² | DC conductor resistance at 20°C Ω/km | Capacitance per phase µF/km | Inductance Formation/flat mH/km | Reactance Ω/km | Short circuit current for conductor max. kA/1 sec. | Short circuit current for copper screen max. kA/1 sec. |
|---|---|---|---|---|---|---|
| 1 x 240/95 | 0,125 | 0,18 | 0,41 | 0,13 | 22,6 | 19,0 |
| 1 x 300/95 | 0,100 | 0,20 | 0,40 | 0,12 | 28,3 | 19,0 |
| 1 x 400/95 | 0,0778 | 0,23 | 0,37 | 0,12 | 37,8 | 19,0 |
| 1 x 500/95 | 0,0605 | 0,25 | 0,36 | 0,11 | 47,2 | 19,0 |
| 1 x 1630/95 | 0,0469 | 0,28 | 0,35 | 0,11 | 59,5 | 19,0 |

| Conductor cross-section mm² | 3-phase depth of 1,0 meter | | 3-phase depth of 1,3 meter | |
|---|---|---|---|---|
| | Open screen A | Closed screen A | Open screen A | Closen screen A |
| 1 x 240 RM | 437 | 423 | 427 | 413 |
| 1 x 300 RM | 495 | 476 | 485 | 465 |
| 1 x 400 RM | 570 | 540 | 550 | 526 |
| 1 x 500 RM | 650 | 610 | 634 | 594 |
| 1 x 630 RM | 744 | 687 | 725 | 669 |

Conditions:
- Maximum operating temperature 90°C
- Soil temperature 15°C
- Soil heat resistivity 1.0°K*m/W
- In 3-phase formaiton
- Depth in soil from 1 to 1,3 meters

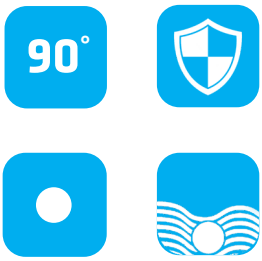


OUTDOOR INSTALLATION



POWER CABLE WATER TIGHT

# A2XS(FL)2Y 76/132 (145) kV




### Application

Triple extruded single core distribution cable via dry curing and cooling nitrogen gas. Radial and longitudinal watertight. Designed acc. to IEC 60840 and suitable for outdoor application in air, soil or water.

### Electrical data

Rated voltage:

- 76/132 (145) kV

### Mechanical data

Bending radius:

- During installation: 22 x D
- Final fixed: 15 x D

Pulling force:

- 10 kN/mm²

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Operating temp.: -60°C to +50°C
- Lowest temp. during laying: -5°C

### Standard

- IEC 60840 construction and test
- IEC 60228 conductor

### Construction

Conductor:

- Round aluminium wire
- ≤ 1200 mm² stranded and compacted
- Stranded acc. to IEC 60228 class 2.
- ≥ 1200 mm² sectorial
- Longitudinal watertight

Inner layer:

- Extruded polymer
- Semi-conductive

Insulation:

- XLPE superclean compound

Outer layer:

- Extruded polymer compound
- Semi-conductive

Wrapping:

- Water blocking tape
- Semi conductive

Screen:

- Concentric with counter helix
- Copper wires
- Copper tape

Radial moisture barrier:

- Aluminium foil laminate

Outer sheath:

- HDPE, extruded, natural color

Outer layer:

- Extruded, fixed to sheath
- Semi-conductive
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Outer diameter nom. mm | Conductor diameter mm | Weight kg/m | Pulling force kN | Bending radius During laying/ final mm |
|---|---|---|---|---|---|
| 1 x 1200 RMS | 95,0 | 42,2 | 9,44 | 36 | 1900/1330 |
| 1x 1400 RMS | 99,0 | 45,6 | 10,45 | 42 | 1980 / 1386 |
| 1 x 1600 RMS | 103,0 | 50,0 | 11,29 | 48 | 2060/1442 |

| Conductor cross-section mm² | DC resistance of conductor at 20°C Max. Ω/km | DC resistance of screen at 20°C Max. Ω/km | Short circuit current for phase conductor max. kA/1 sec. | Short circuit current for metallic screen max. kA/1 sec. | Operating capacitance µF/km |
|---|---|---|---|---|---|
| 1 x 1200 RMS | 0,0247 | 0,1200 | 161 | 40 | 0,28 |
| 1 x 1400 RMS | 0,0212 | 0,1200 | 188 | 40 | 0,28 |
| 1 x 1600 RMS | 0,0186 | 0,1200 | 215 | 40 | 0,29 |

OUTDOOR INSTALLATION

POWER CABLE WATER TIGHT

# A2XAS(FL)2Y 76/132 (145) kV

### Application

Single core distribution cable with dry core due to radial and longitudinal water tightness. Designed acc. to IEC 60840 with triple extrusion, complete dry curing and cooling by nitrogen gas. Suitable for outdoor application in air, soil or water.

The cable is halogen-free.

### Electrical data

Rated voltage:

- 76/132 (145) kV

### Mechanical data

Bending radius:

- During installation: 22 x D
- Final fixed: 15 x D

Pulling force:

- 10 kN/mm²

### Temperature area

- Max. conductor temperature: +90°C
- Short-circuit temperature: +250°C
- Lowest temp. at installation: -10°C
- Below 0°C caution must be exercised

### Standard

- IEC 60840 construction and test
- IEC 60228 conductor
- IEC 60754-1 halogen-free

### Construction

Conductor:

- Round aluminium wire
- ≤ 1200 mm² stranded and compacted
- Stranded acc. to IEC 60228 class 2.
- ≥ 1200 mm² miliken
- Longitudinal waterwight

Inner layer:

- Extruded polymer
- Semi-conductive

Insulation:

- XLPE compound

Outer layer:

- Extruded polymer compound
- Semi-conductive
- Bonded to insulation

Wrapping:

- Water swelling tape
- Semi conductive

Screen:

- Concentric with counter helix
- Aluminium wires
- Aluminium tape

Radial moisture barrier:

- Aluminium foil

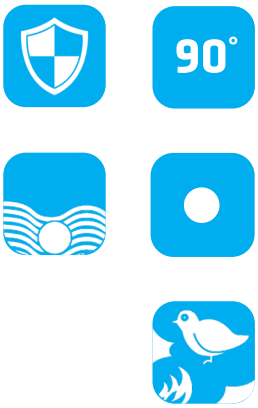
Outer sheath:

- HDPE, extruded, natural color

Outer layer:

- Extruded, fixed to sheath
- Semi-conductive
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.



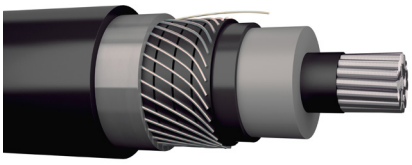

| Conductor cross-section mm² | Outer diameter nom. mm | Conductor diameter mm | Weight kg/m | Pulling force kN | Bending radius Duing installation Fixed mm |
|---|---|---|---|---|---|
| 1 X 1000 RM | 88 | 37,6 | 7,8 | 30 | 1,94 / 1,36 |
| 1 x 1200 RM | 92 | 40,8 | 8,6 | 36 | 2,02 / 1,42 |
| 1x 1600 RMS | 104 | 49,0 | 10,8 | 48 | 2,29 / 1,60 |
| 1 x 2000 RMS | 111 | 55,2 | 12,6 | 60 | 2,44 / 1,71 |

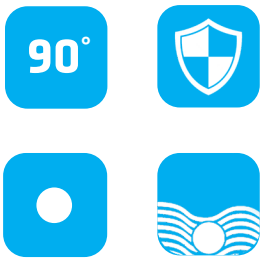
| Conductor cross-section mm² | DC resistance of conductor at 20°C Max. Ω/km | Capitance per phase µF/km | Short circuit current for phase conductor max. kA/1 sec. | Short circuit current for metallic screen max. kA/1 sec. | Current capacity in A conductor at 90°C flat / closed trifoil |
|---|---|---|---|---|---|
| 1 x1000 RM | 0,0291 | 0,25 | 134 | 40 | 1050 / 920 |
| 1 x 1200 RM | 0,0247 | 0,26 | 160 | 40 | 1135 / 995 |
| 1 x 1600 RMS | 0,0186 | 0,29 | 214 | 40 | 1380 / 1225 |
| 1 x 2000 RMS | 0,0149 | 0,32 | 267 | 40 | 1555 / 1380 |

OUTDOOR INSTALLATION

POWER CABLE WATER TIGHT

# A2XS(FL)2Y 96/167 (170) kV






### Application

Single core distribution cable with dry core due to radial and longitudinal water tightness. Designed acc. to IEC 60840 with triple extrusion, vertical continuous vulcanisation, on-line relaxation and complete dry curing and coolingby nitrogen gas. Suitable for outdoor application in air, soil or water.

### Technical data

Rated voltage:

- 96/167 (170) kV

Bending radius:

- During pulling: 2,44 m
- Final installation: 1,71 m

Pulling force with eye:

- 35. 42 or 48 kN/mm²

### Standard

- IEC 60840 construction and test
- IEC 60228 conductor construction

### Construction

Conductor:

- Aluminium wire
- Segmental
- Stranded and compacted
- Longitudinal waterwight

Inner layer:

- Extruded polymer compound
- Semi-conductive

Insulation:

- XLPE compound

Outer layer:

- Extruded polymer compound
- Semi-conductive

Wrapping:

- Semi-conductive
- Water blocking tape

Screen:

- Aluminium wires
- Aluminium contact tape

Seperation layer:

- Water blocking tape

Radial water barrier:

- Aluminium foil laminated

Outer sheath:

- HDPE compound, natural colour
- UV-resistant
- Extruded semi-conducting skin layer
- Black and meter marked

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Conductor cumulative diameter'mm | Wire screen cross-section nom. mm² | Pulling force kN | Weight kg per meter |
|---|---|---|---|---|
| 1 x 1200 | 42,2 | 220 + 63 | 35 | 10,3 |
| 1 x 1400 | 45,6 | 217 + 65 | 42 | 11,2 |
| 1 x 1600 | 49,0 | 217 + 67 | 48 | 12.0 |

| Conductor DC resistance at 20°C Max. Ω/km | Screen resistance DC at 20°C Max. Ω/km | Capacitance in operation nom. µF/km | Short circuit current phase conductor max. kA/5 sec. | Short circuit current Al wire and foil screen max. kA/5 sec. |
|---|---|---|---|---|
| 0,0247 | 0,12 | 0,23 | 161 | 40 |
| 0,0212 | 0,12 | 0,25 | 187 | 40 |
| 0,0186 | o,12 | 0,26 | 214 | 40 |

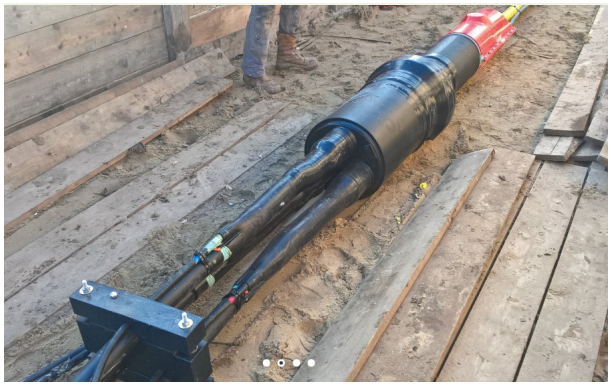
# Complete range of services

### HV Cable Accessories

Prysmian offers a full range of HV-cable accessories such as joints (asymmetrical, transition or branch), connectors (GIS or transformer), end terminations (dry or flex) and link boxes (earthing, voltage surge arrestor, cross bonding or all).

Our proprietary all-in-one Click-Fit concept is based on pre-manufactures, factory-tested and pre-molded accessories for 72-550 kV cable systems. Using these can reduce on-site jointing time with up to 15% per phase.

Visit our dedicated website to find all details about our Click-Fit accessories program at www.click-fit.org.



### Cable Jointing Service

Cable jointing of HV cable systems is a craft that equires solid experience. Prysmian Group jointing personnel are sourced from our central inhouse installation departments, which means they spend all of their time on jointing and termination work. We deliver complete on-site jointing services, including staff and all necessary jointing components from Prysmian's own premium line of accessories.

### Turnkey Project Management

Prysmian Group delivers custom-made underground MV, HV and EHV cable systems for power distribution. Our start-to-finish project execution includes all elements of a successful project from design, manufacture, installation, testing and commissioning. Prysmian Group possess the necessary skills and production facilities to manage an entire project, from start-to-finish, including:

- technical assessments
- design of cables and components
- manufacturing and factory testing
- on-site delivery
- accessory installation
- planning and documentation
- HV testing and commissioning

PRY-CAM

### HV Site Acceptance Test

Prysmian has a fleet of mobile test systems to provide site acceptance testing (SAT) of high-voltage (HV) and extra high voltage (EHV) cable systems, also referred to as a HiPot AC test.

A Hipot test is an abbreviation for „High Potential (High Voltage) Test“, which is performed by applying a high AC voltage to the conductor and measuring leakage current. It is a non-destructive test that determines the quality of the electrical insulation.

A Hipot test is useful for finding chipped or bumpy insulation, bristling metal wires or incorrectly braided screen, conductive or corrosive contamination around the conductors, terminal distance problems and tolerance faults in cables, as well as insufficient creep currents.



### Partial Discharge Measuring

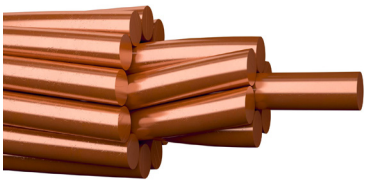
Prysmian Group offers partial discharge spot measuring service for instant information about the reliability of network components in order to optimize operations.

PRY-CAM Portable is our mobile device for wireless and real-time measurement, processing and classification of partial discharges (PD) on transformers, sockets, end terminations, switch-gears, generators and more.

It makes it possible to reduce the required time (up to 70%) and at the same time measure the highest sensitivity for a small PD (down to 0.5pC), the highest accuracy (100MHz bandwidth) and the strongest noise rejection.

Visit our dedicated website at www.pry-cam.com.

OUTDOOR GROUNDING



STRANDED ANNEALED COPPER CONDUCTOR

# HK - BARE COPPER

**Application**

Annealed copper wire for grounding of metal parts from transformer station to fotovotaic system.

**Mechanical data**

Bending radius:
- During installation: 15 x D
- Fixed: 10 x D

Pulling force:
- Using eye or grip: max. 50 N/mm²

**Standard & Directive**

Standard:
- IEC 60228

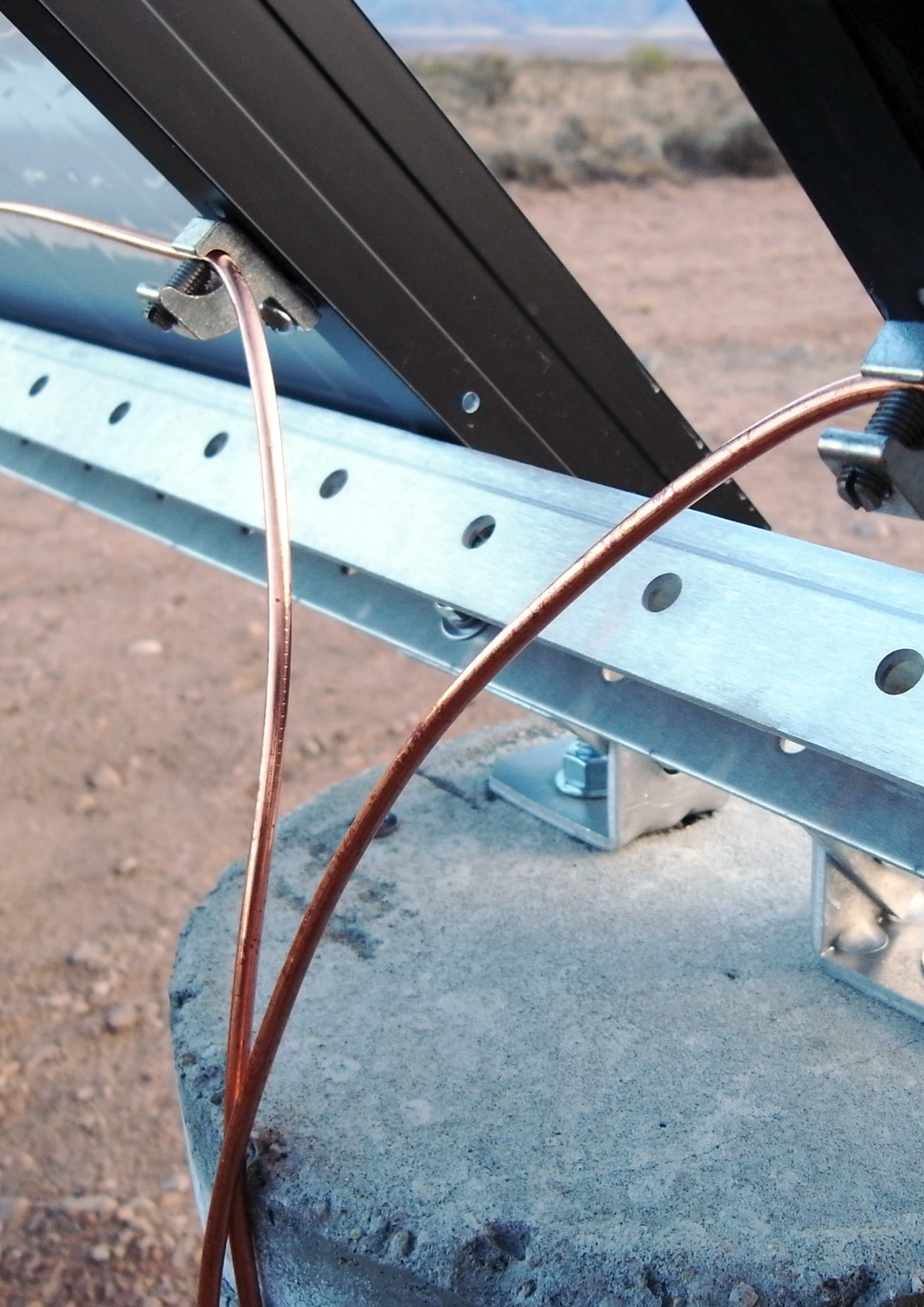
Directive:
- Fultills RoHS

**Construction**

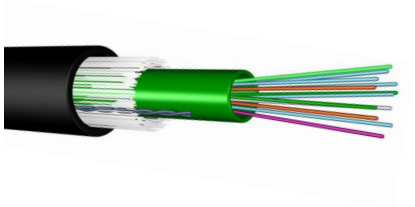
Conductor:
- Round
- Copper wires
- Annealed
- Stranded acc. to IEC 60228 class 2.

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Conductor cross-section mm² | Outer diameter mm | Weight kg/km | Standard length m | Prysmian EAN no. |
|---|---|---|---|---|
| 1 x 6 | 3,05 | 52 | 1000-K6 | 4741532250094 |
| 1 x 16 | 5.1 | 145 | 500 - K6 | 6410001053167 |
| 1 x 16 | 5.1 | 145 | 25 | 6410001052054 |
| 1 x 16 | 5.1 | 145 | 50 | 6410001052061 |
| 1 x 16 | 5.1 | 145 | 100 | 6410001052078 |
| 1 x 25 | 6.5 | 225 | 500 - K6 | 6410001053273 |
| 1 x 25 | 6.5 | 225 | 100 | 6410001053259 |
| 1 x 25 | 6.5 | 225 | 50 | 6410001053242 |
| 1 x 25 | 6.5 | 225 | 25 | 6410001053235 |
| 1 x 35 | 7.6 | 315 | 1000 - K7 | 6410001053358 |
| 1 x 50 | 9 | 430 | 1000 - K7 | 6410001053501 |
| 1 x 70 | 11 | 610 | 1000 - K9 | 6410001053709 |
| 1 x 95 | 13 | 850 | 1000 - K11 | 6410001053952 |
| 1 x 120 | 15 | 1,100 | 500 - K11 | 6410001053976 |
| 1 x 150 | 16 | 1,312 | 500 - K11 | 6410001050142 |



OUTDOOR INSTALLATION





UC FIBRE 2000 N - E16A

# UNI-TUBE 2-24 FIBRE LLDPE SHEATH

**Application**

Outdoor central tube cable with 2-24 fibre, glass elements and LLDP sheath. Applicable for LAN and WAN backbones, telecom
access lines, fibre to business and fibre to the building drop connections as well as fibre to the home drop and access connections. With its LLDPE sheathing this cable is ideal for outdoor installation where the installation conditions are not too harsh.

The cable features a high tensile strength and a degree of rodent protection, effective in many cases.It is equally suited for installation in ducts and on trays.

The cable is UV-resistant, metal-free and longitudinally watertight.

**Standard**

- IEC 60794-1
- ISO 11801-1
- EN 50173-1:2002

**Construction**

Loose tube:

- ø2.8 mm gel-filled tube with 2–24 fibre

Strength member:

- Waterblocker E-Glass fiber element

Fibre colour code ø2.8 mm:

- Red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink

Sheath:

- LLDPE 1.0 mm
- Acc. to IEC 60811 and IEC 60708
- Black

**Physical properties**

Nominal outer diameter:

- 2-24 fibre: 5,8 mm

Nominal weight:

- 2-24fibre: 40 kg/km

Tensile strength:

- Test E1 acc. to IEC 60794-1-21/22
- Installation: 2000 N
- Permanent: 750 N

Compressive strength (crush):

- E3 test method: 2000 N

Impact:

- E4 test method: 15 Nm

Torsion (E7 test method):

- 5 cycles ±1 turn

Kink (E10 test method):

- No kink for loop of diameter 100mm

Bending radius (E11 test method):

- Unloaded: min. R = 58 mm
- Loaded: min. R= 116 mm

Temperature range (F1 test method):

- Storage: -40°C to +70°C
- Installation: -20°C to +60°C
- Operations: -20°C to +70°C

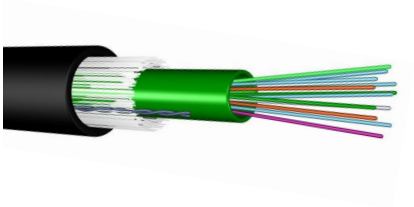
Water penetration (F5B test method):

- No water on free end

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Product name: E16a datasheet | Fibre count | Fibre type | Fibre datasheet | Material code |
|---|---|---|---|---|
| UCFIBRE O CT PE 2kN 4 OM2B | 4 | MaxCap-BB-OM2 | C34 | 60018822 |
| UCFIBRE O CT PE 2kN 6 OM2B | 6 | MaxCap-BB-OM2 | C34 | 60018807 |
| UCFIBRE O CT PE 2kN 8 OM2B | 8 | MaxCap-BB-OM2 | C34 | 60018823 |
| UCFIBRE O CT PE 2kN 12 OM2B | 12 | MaxCap-BB-OM2 | C34 | 60018778 |
| UCFIBRE O CT PE 2kN 24 OM2B | 24 | MaxCap-BB-OM2 | C34 | |
| | | | | |
| UCFIBRE O CT PE 2kN 6 OM3B | 6 | MaxCap-BendBright-OM3 | C31 | 60019674 |
| UCFIBRE O CT PE 2kN 12 OM3B | 12 | MaxCap-BendBright-OM3 | C31 | 60018967 |
| UCFIBRE O CT PE 2kN 24 OM3B | 24 | MaxCap-BendBright-OM3 | C31 | |
| | | | | |
| UCFIBRE O CT PE 2kN 4 OM4B | 4 | MaxCap-BendBright -OM4 | C32 | |
| UCFIBRE O CT PE 2kN 6 OM4B | 6 | MaxCap-BendBright -OM4 | C32 | |
| UCFIBRE O CT PE 2kN 8 OM4B | 8 | MaxCap-BendBright -OM4 | C32 | |
| UCFIBRE O CT PE 2kN 12 OM4B | 12 | MaxCap-BendBright -OM4 | C32 | |
| UCFIBRE O CT PE 2kN 24 OM4B | 24 | MaxCap-BendBright -OM4 | C32 | 60073262 |
| | | | | |
| UCFIBRE O CT PE 2kN 6 MM61 | 6 | OM1 62,5/125 | C02 | 60018774 |
| UCFIBRE O CT PE 2kN 8 MM61 | 8 | OM1 62,5/125 | C02 | 60018966 |
| UCFIBRE O CT PE 2kN 12 MM61 | 12 | OM1 62,5/125 | C02 | 60018777 |
| | | | | |
| UCFIBRE O CT PE 2kN 4 SM2D | 4 | OS2 G.652.D | C03 | 60018773 |
| UCFIBRE O CT PE 2kN 6 SM2D | 6 | OS2 G.652.D | C03 | 60018775 |
| UCFIBRE O CT PE 2kN 8 SM2D | 8 | OS2 G.652.D | C03 | 60045335 |
| UCFIBRE O CT PE 2kN 12 SM2D | 12 | OS2 G.652.D | C03 | 60011352 |
| UCFIBRE O CT PE 2kN 16 SM2D | 16 | OS2 G.652.D | C03 | |
| UCFIBRE O CT PE 2kN 24 SM2D | 24 | OS2 G.652.D | C03 | |
| | | | | |
| UCFIBRE O CT PE 2kN 4 SM7A1 | 4 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 2kN 6 SM7A1 | 6 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 2kN 8 SM7A1 | 8 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 2kN 12 SM7A1 | 12 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 2kN 16 SM7A1 | 16 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 2kN 24 SM7A1 | 24 | OS2 BendBright G.657.A1 | C17 | |

OUTDOOR INSTALLATION



UC FIBRE 3000 N - E08A

# UNI-TUBE 2-24 FIBRE LLDPE SHEATH

**Application**

Outdoor central tube cable with 2-24 fibre, glass elements and LLDP sheath. Applicable for LAN and WAN backbones, telecom access lines, fibre to business and fibre to the building drop connections as well as fibre to the home drop and access connections. With its LLDPE sheathing this cable is ideal for outdoor installation where the conditions are not too harsh.

The cable features a high tensile strength and a degree of rodent protection, effective in many cases.It is equally suited for installation in ducts, trays or for direct burial with proper sand back filling.

The cable is UV-resistant, metal-free and longitudinally watertight.

**Standard**

- IEC 60794-1
- ISO 11801-1
- EN 50173-1:2002

**Construction**

Loose tube:

- ø2.8 mm gel-filled tube with 2–24 fibre

Strength member:

- Waterblocker E-Glass fiber element

Fibre colour code ø2.8 mm:

- Red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink

Sheath:

- LLDPE nom. thickness 1.2 mm
- Acc. to IEC 60811 and IEC 60708
- Black

**Physical properties**

Nominal outer diameter:

- 2-24 fibre: 6,7 mm

Nominal weight:

- 2-24fibre: 40 kg/km

Tensile strength:

- Test E1 acc. to IEC 60794-1-21/22
- Installation: 3000 N
- Permanent: 1000 N

Compressive strength (crush):

- E3 test method: 2000 N

Impact:

- E4 test method: 20 Nm

Torsion (E7 test method):

- 5 cycles ±1 turn

Kink (E10 test method):

- No kink for loop of diameter 200mm

Bending radius (E11 test method):

- Unloaded: min. R = 67 mm
- Loaded: min. R= 134 mm

Temperature range (F1 test method):

- Storage: -40°C to +60°C
- Installation: -15°C to +70°C
- Operations: -30°C to +70°C

Water penetration (F5B test method):

- No water on free end

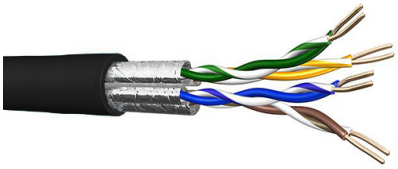
All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

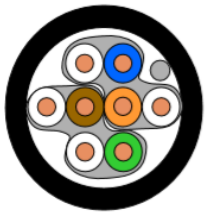
| Product name: E16a datasheet | Fibre count | Fibre type | Fibre datasheet | Material code |
|---|---|---|---|---|
| UCFIBRE O CT PE 3kN 2 OM2B | 2 | MaxCap-BB-OM2 | C34 | 60029226 |
| UCFIBRE O CT PE 3kN 4 OM2B | 4 | MaxCap-BB-OM2 | C34 | 60011397 |
| UCFIBRE O CT PE 3kN 6 OM2B | 6 | MaxCap-BB-OM2 | C34 | 60020278 |
| UCFIBRE O CT PE 3kN 8 OM2B | 8 | MaxCap-BB-OM2 | C34 | 60011378 |
| UCFIBRE O CT PE 3kN 12 OM2B | 12 | MaxCap-BB-OM2 | C34 | 60011380 |
| UCFIBRE O CT PE 3kN 16 OM2B | 16 | MaxCap-BB-OM2 | C34 | 60019409 |
| UCFIBRE O CT PE 3kN 24 OM2B | 24 | MaxCap-BB-OM2 | C34 | 60073047 |
| | | | | |
| UCFIBRE O CT PE 3kN 2 OM3B | 2 | MaxCap-BendBright-OM3 | C31 | 60020590 |
| UCFIBRE O CT PE 3kN 4 OM3B | 4 | MaxCap-BendBright-OM3 | C31 | 60020056 |
| UCFIBRE O CT PE 3kN 8 OM3B | 8 | MaxCap-BendBright-OM3 | C31 | 60047007 |
| UCFIBRE O CT PE 3kN 12 OM3B | 12 | MaxCap-BendBright-OM3 | C31 | 60019415 |
| UCFIBRE O CT PE 3kN 24 OM3B | 24 | MaxCap-BendBright-OM3 | C31 | 60073048 |
| | | | | |
| UCFIBRE O CT PE 3N 4 OM4B | 4 | MaxCap-BendBright -OM4 | C32 | 60019381 |
| UCFIBRE O CT PE 3kN 8 OM4B | 8 | MaxCap-BendBright -OM4 | C32 | 60019382 |
| UCFIBRE O CT PE 3kN 12 OM4B | 12 | MaxCap-BendBright -OM4 | C32 | 60047946 |
| UCFIBRE O CT PE 3kN 16 OM4B | 16 | MaxCap-BendBright -OM4 | C32 | |
| UCFIBRE O CT PE 3kN 24 OM4B | 24 | MaxCap-BendBright -OM4 | C32 | 60073125 |
| | | | | |
| UCFIBRE O CT PE 3kN 2 MM61 | 2 | OM1 62,5/125 | C02 | 60019593 |
| UCFIBRE O CT PE 3kN 4 MM61 | 4 | OM1 62,5/125 | C02 | 60011341 |
| UCFIBRE O CT PE 3kN 6 MM61 | 6 | OM1 62,5/125 | C02 | 60018761 |
| UCFIBRE O CT PE 3kN 8 MM61 | 8 | OM1 62,5/125 | C02 | 60018819 |
| UCFIBRE O CT PE 3kN 12 MM61 | 12 | OM1 62,5/125 | C02 | 60018766 |
| UCFIBRE O CT PE 3kN 16 MM61 | 16 | OM1 62,5/125 | C02 | 60040811 |
| UCFIBRE O CT PE 3kN 24 MM61 | 24 | OM1 62,5/125 | C02 | 60073106 |
| | | | | |
| UCFIBRE O CT PE 3kN 2 SM2D | 2 | OS2 G.652.D | C03 | 60018939 |
| UCFIBRE O CT PE 3kN 4 SM2D | 4 | OS2 G.652.D | C03 | 60018842 |
| UCFIBRE O CT PE 3kN 6 SM2D | 6 | OS2 G.652.D | C03 | 60018762 |
| UCFIBRE O CT PE 3kN 8 SM2D | 8 | OS2 G.652.D | C03 | 60018764 |
| UCFIBRE O CT PE 3kN 12 SM2D | 12 | OS2 G.652.D | C03 | 60018767 |
| UCFIBRE O CT PE 3kN 16 SM2D | 16 | OS2 G.652.D | C03 | 60018843 |
| UCFIBRE O CT PE 3kN 24 SM2D | 24 | OS2 G.652.D | C03 | 60073046 |
| | | | | |
| UCFIBRE O CT PE 3kN 4 SM7A1 | 4 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 3kN 6 SM7A1 | 6 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 3kN 8 SM7A1 | 8 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 3kN 12 SM7A1 | 12 | OS2 BendBright G.657.A1 | C17 | |
| UCFIBRE O CT PE 3kN 24 SM7A1 | 24 | OS2 BendBright G.657.A1 | C17 | 60073154 |

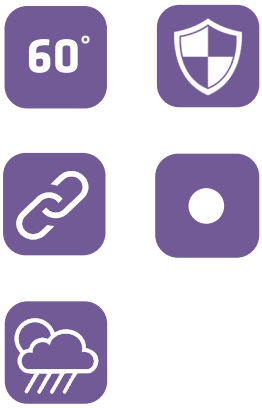
OUTDOOR INSTALLATION

COPPER DATA OUTDOOR

# UC400 S23 CAT 6 U/FTP 4P PE







### Application

Twisted pair copper cable for data transmission in primary, secondary and tertiary networks with up to 10Gbps and 100 MHz. The cable is unscreened with AL laminated plastic foil around the twisted pairs to protect against outside noise and interferrence. The outer sheath is of PE, making the cable suitable for outdoor installation fixed, flexible or buried directly in soil.

### Standard

- IEC 61156-5 (46C/783/CDV)
- EN 50288-10, EN 50173-1
- EN 50173-1
- EISO/IEC 11801- 2nd
- EIA/TIA 568-B.2-10

### Construction

Bare copper:
- ø 0,56 mm

Insulation:
- Foam skin polyethylene ø 1,35 mm

Twisting:
- 2 core to a pair

Pair screen:
- High performance STP
- AI-laminated plastic foil
- Patented wrapping
- Drain wire, tinned

Sheath:
- PE
- Black

### Physical properties

Loop resistance:
- ≤ 176 Ω/km

Resistance unbalance:
- ≤ 2 %

Insulation resistance:
- ≥ 2000 MΩ *km

Mutual capacitance:
- At 800 Hz: nom 43 nF/km

Capacitance unbalance:
- Pair/ground: ≤ 1500 pF/km

Impedance:
- At 100 MHz: 100 ± 5Ω

Velocity of propagation:
- Nominal ca. 79 %

Propagation delay:
- Nominal 450 ns/100 m

Delay skew:
- Nominal 15 ns/100 m

Test voltage:
- DC 1 min - 1000 V

Transfer impedance: Grade 2
- At 1 MHz: ≤ 50 mΩ/m
- At 10 MHz: ≤ 100 mΩ/m
- At 30 MHz: ≤ 200 mΩ/m

Coupling attenuation:
- 55 dB - type 2

Segregation classification:
- Acc. to EN 50174-2
- "c"

Bending radius:
- Installation: 8 x D
- Fixe: 4 x D

Temperature range:
- Installation: -0°C to +50°C
- Operations: -20°C to +60°C

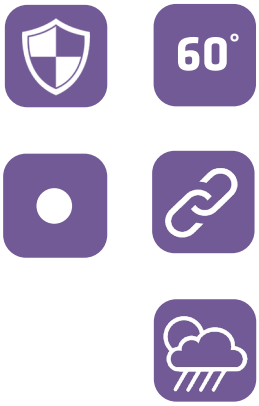
All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Product name: Datasheet E08a | Outer diamater mm | Weight kg/km | Copper content | Tensile strength N | Material code |
|---|---|---|---|---|---|
| UC400 S23 CAT 6. U/FTP 4P PE 1000 DW | 8,6 | 62 | 24 | 80 | 60011455 |
| UC400 S23 CAT 6. U/FTP 4P PE | 8,6 | 62 | 24 | 80 | 60011456 |

OUTDOOR INSTALLATION

COPPER DATA OUTDOOR

# UC400 23 CAT 6 U/UTP 4P PE



### Application

Halogen-free, unscreened twisted pair copper cable for data transmission in primary, secondary and tertiary networks with up to 10Gbps and 100 MHz.The outer sheath is of PE, making the cable suitable for outdoor installation fixed, flexible or buried directly in soil.

### Standard

- EIA/TIA 568-c
- ISO/IEC 11801 2nd
- IEC 61156-5
- EN 50173, EN 50288-6-1

### Construction

Bare copper:
- ø AWG23

Insulation:
- Solid polyethylene
- ø 1,04 mm nom.

Twisting:
- 2 core to a pair

Sheath:
- PE, halogen-free
- UV-stabilized
- Black

### Physical properties

Loop resistance:
- ≤ 165 Ω/km

Resistance unbalance:
- ≤ 2 %

Insulation resistance:
- ≥ 2000 MΩ *km

Mutual capacitance:
- At 800 Hz: nom 43 nF/km

Capacitance unbalance:
- Pair/ground: ≤ 1500 pF/km

Return loss:
- At 100 MHz: 20,1 dB
- At 250 MHz: 8,47 dB

Velocity of propagation:
- Nominal ca. 66 %

Propagation delay:
- ≤ 427 ns/100 m

Delay skew:
- Nominal 12 ns/100 m

Test voltage:
- DC 1 min - 1000 V

Bending radius:
- Without load: ≥ 40 mm
- Loaded: ≥ 80 mm

Temperature range:
- Installation: -0°C to +50°C
- Operations: -20°C to +60°C

All information is presumed accurate upon issuing. Prysmian Group reserves the right to change in specifications without prior warning. Product specifications are not contractually binding without prior permission from Prysmian Group.

| Product name: Datasheet E08a | Outer diamater mm | Weight kg/km | Fire load kWh/m | Tensile strength N | Material code |
|---|---|---|---|---|---|
| UC400 23 CAT 6. U/FTP 4P PE | 6,1 | 39 | 0,121 | 100 | 60011281 |

April 2021

**We are here for you**

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Prysmian Group

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