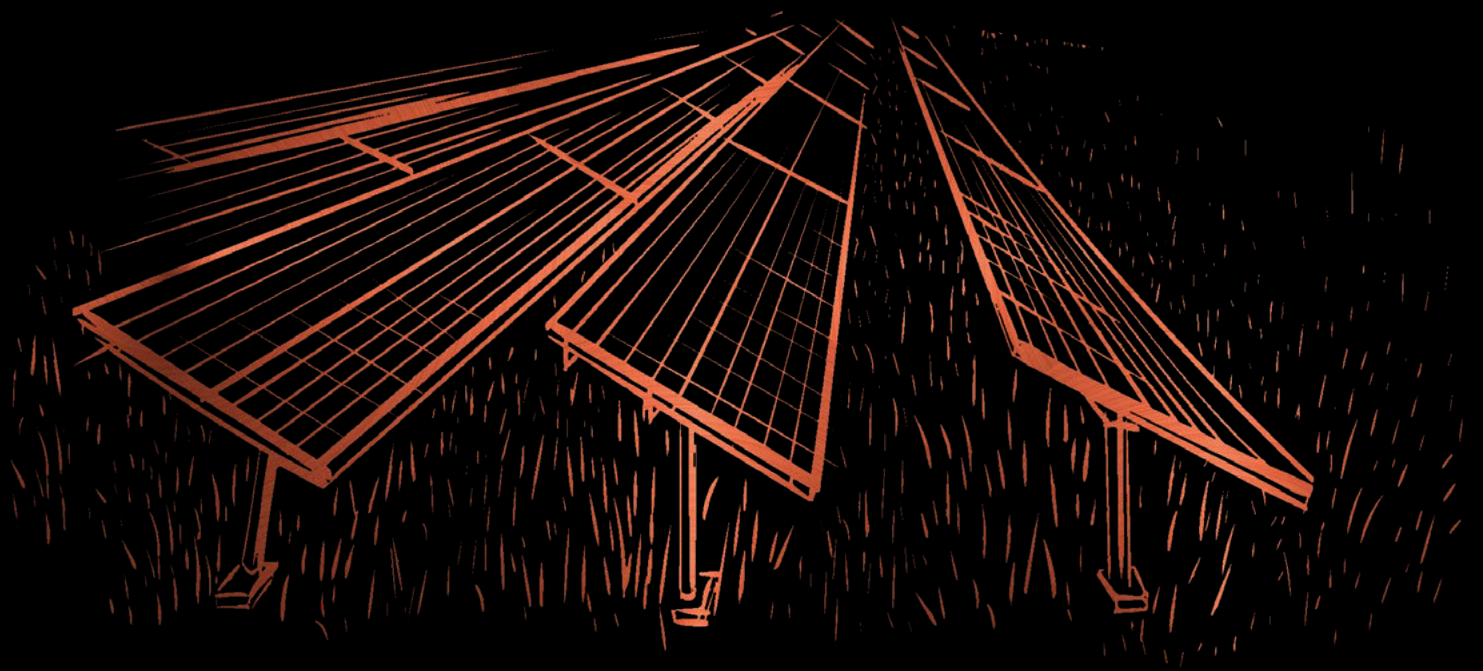


Cable Solutions for Solar & Energy Storage Systems

HELUKABEL® SOLAR POWER

Ed. 1 // EN

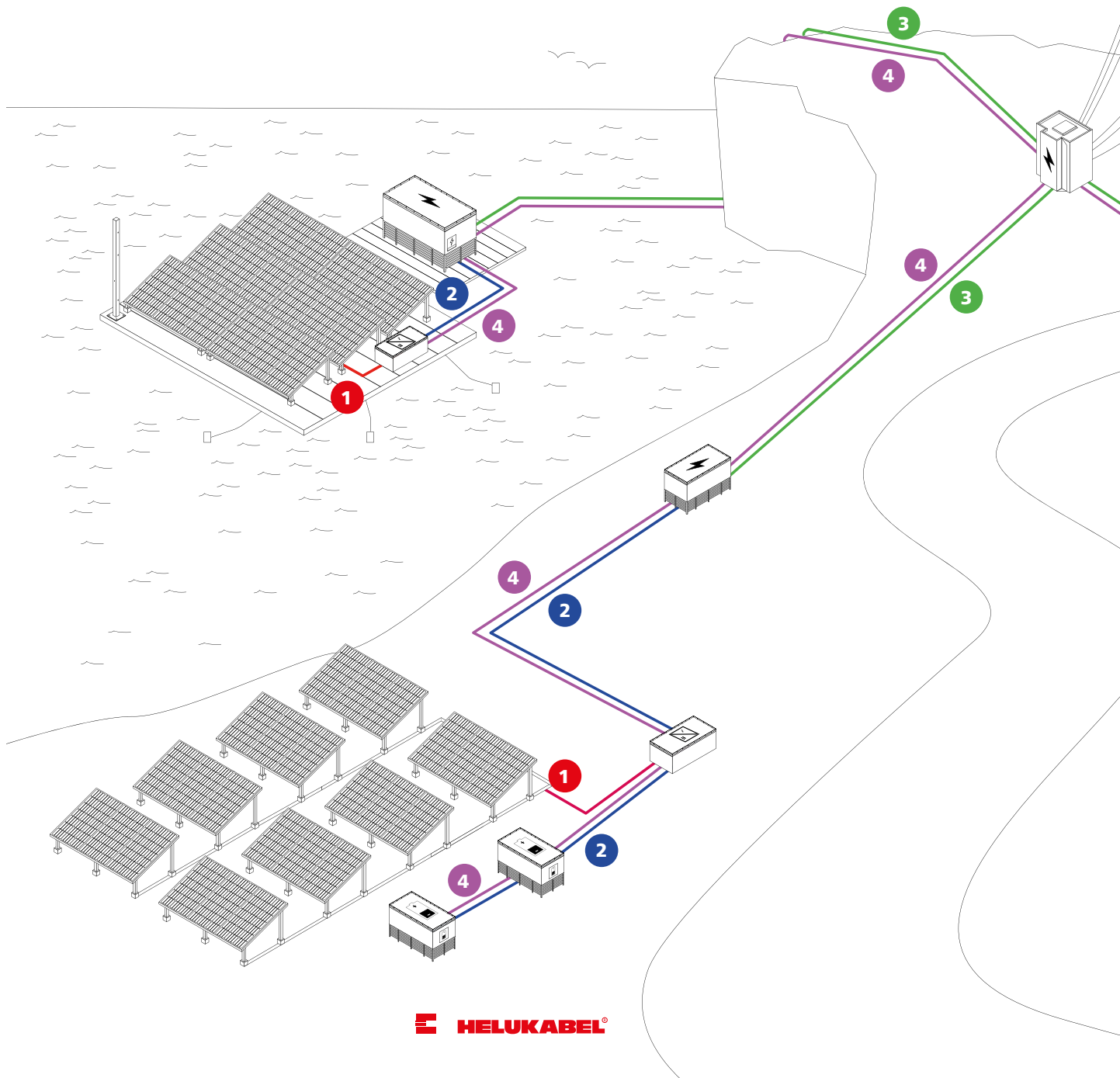


**(Channeling
POWER)** 

Solar Power

The demand for renewable energy is rapidly increasing worldwide and solar energy is one of the most important and cleanest energy sources for this, along with wind and water. In order to take advantage of them, photovoltaic systems are used - for homes, industrial halls, office buildings, farms and floating systems. The environmental conditions vary greatly; however, photovoltaic systems are almost always exposed to weather, humidity, UV radiation and strongly fluctuating temperatures.

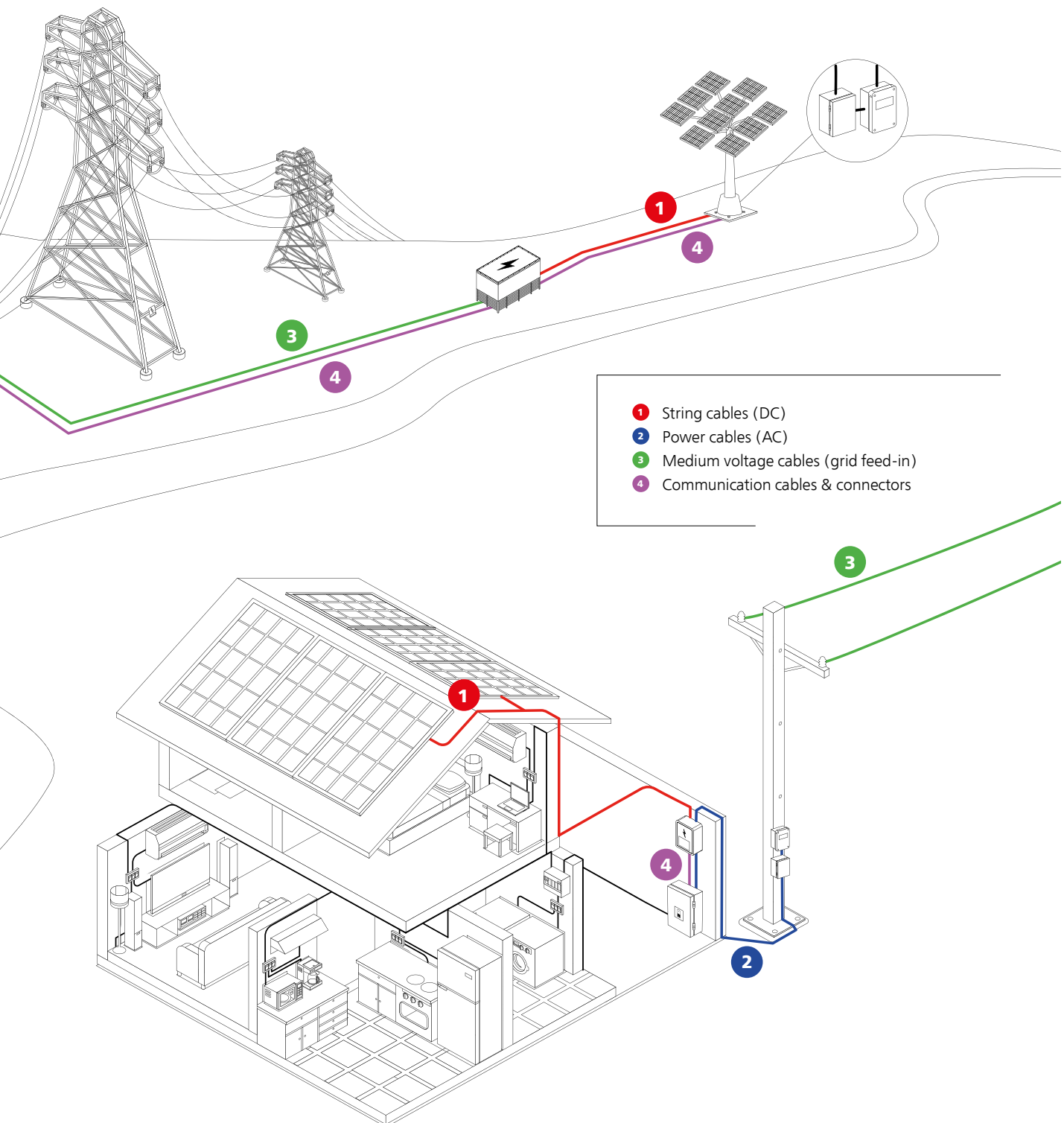
Reliable and durable cabling of the individual solar modules with each other and the cabling to the inverters and storage systems is crucial for efficient operation of the systems. This is where cables are needed that reliably withstand all external influences - this is the only way to get the energy generated to where it is needed. As a leading manufacturer and supplier of electrical connection technology, HELUKABEL has decades of experience in the photovoltaic industry - and supplies the ideal cables and wires as well as the right accessories for every application.



We offer a broad range of products, from DC string cables for connecting solar panels, to earth and medium-voltage cables for connection and grid feed-in, to fibre optic and data cables for networks and communication. In addition, we offer integrated cable management systems including connectors, plugs, hoses, glands, housings and tools, as well as pre-assembled cables. Our experts are particularly competent in developing customised

solutions for special applications - and thanks to our global presence, all local and regional requirements such as environmental conditions and design standards can be met.

HELUKABEL thus supports manufacturers, installers and operators of photovoltaic systems worldwide in generating clean, sustainable and renewable energy.



- 1 String cables (DC)
- 2 Power cables (AC)
- 3 Medium voltage cables (grid feed-in)
- 4 Communication cables & connectors

Solutions for Photovoltaic Systems

For further information, please refer to the corresponding data sheets at: www.helukabel.com/999999en
(replace the **red numbers** with the corresponding part no.)

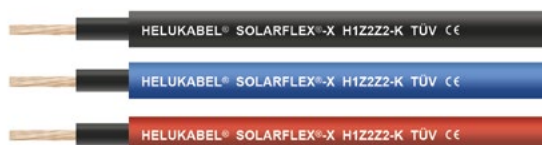
1 STRING CABLES (DC)

SOLARFLEX®-X H1Z2Z2-K

1500 V DC, EN 50618, copper wire, tinned, finely stranded acc. to DIN VDE 0295 Cl. 5 / IEC 60228 Cl. 5 resistant to: UV radiation, ozone, weathering effects, water. Halogen-free and flame retardant.

Used for cabling solar modules. Suitable for direct burial. Recommendation: Installation in pipes. Available in various colours, cross sections and drum sizes

Part no. 713529



SOLARFLEX®-X H1Z2Z2-K NTS

Version with rodent protection. Stainless steel braiding (V2A). Recommended for PV systems in the agricultural sector. Available in various colours, cross sections and drum sizes

Part no. 17000101



Solar connectors

MC 4 1000V

PV-male / female cable coupler

Part no. 905206 / 905207



MC 4-Evo 2 1500 V

PV-male / female cable coupler

Part no. 11020678 / 11020682



Extension solar cable 6 mm²

MC4 male to MC4 female 2, 8, 10 m.

Part no. 11023765 / 11023767 / 11023767

Additional fabrication options available upon request.



Battery connection cable set

Battery cable 2XNSGAFÖU. With and without cable lugs.

Available in various cross sections.

Part no. 11023261



Assembled cable harnesses on drums.

Available in various cross-sections on request. No image available

2 POWER CABLES (AC)

NYY-J / NYY-O

Power / control cable, 0.6/1 kV, VDE approved, bare copper conductor, PVC insulation, PVC sheath

Part no. 32001



N2XY-J / N2XY-O

Power distribution cable, 0.6/1 kV, VDE approved, higher current carrying capacity, bare copper conductor, XLPE insulation, PVC sheath

Part no. 32850



NAYY-J / NAYY-O

Power distribution cable, 0.6/1 kV, VDE approved, aluminum conductor, PVC insulation, PVC sheath

Part no. 32301



NA2XY-J / NA2XY-O

Power distribution cable, 0.6/1 kV, VDE approved, current carrying capacity, aluminum conductor, XLPE insulation, PVC sheath

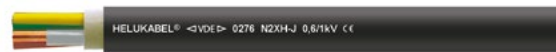
Part no. 33113



N2XH-J / N2XH-O

Power / control cable, 0.6/1 kV, halogen-free, bare copper conductor, XLPE insulation, TPO sheath

Part no. 53558



(N)A2XH-J / (N)A2XH-O

Power / control cable, 0.6/1 kV, halogen-free, aluminum conductor, XLPE insulation, TPO sheath

Part no. 50073



HELUPOWER® 1000 RV-K

Connection cable, direct burial, 90°C, bare copper conductor, XLPE insulation, PVC sheath

Part no. 11003798



H07RN-F

Connection cable, oil-resistant, weather-resistant, bare copper conductor, rubber insulation and sheath

Part no. 37001



HELUPOWER® H07RN-F LS0H

Connection cable, oil-resistant, halogen-free, bare copper conductor, special rubber insulation and sheath

Part no. 30737



NSGAFÖU 1,8/3 kV

short-circuit and earth-fault proof p to 1kV, copper wire tinned, high mechanical stress, flame-retardant and oil-resistant

Part no. 38501



HELUPOWER® THERMFLEX® 145

Tinned stranded copper wire, temperature resistant, improved behavior in case of fire, XLPE insulation and sheathing

Part no. 17001667



NF-USE NF XPC 32-321 U-1000R2V

Rigid industrial power cable, bare copper conductor, low voltage, 0.6/1kV, XLPE insulation, PVC sheath

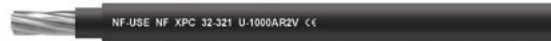
Part no. 19000700



NF-USE NF XPC 32-321 U-1000AR2V

rigid industrial power cable, aluminum conductor, low voltage, 0.6/1kV, XLPE insulation, PVC sheath

Part no. 19002046



WK POWERLINE® ALU

Standard 1 kV, 1.8/3kV suitable for underground installation, robust, flexible, PUR sheath, UV and oil resistant

Part no. 707647



Local versions and standards available on request.

3 MEDIUM VOLTAGE CABLES (GRID FEED-IN)

N2XSY

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PVC sheath

Part no. 32400



N2XS2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PE sheath

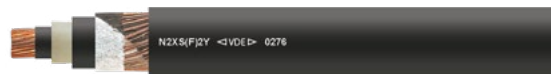
Part no. 32480



N2XS(F)2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PE sheath, longitudinally waterproof

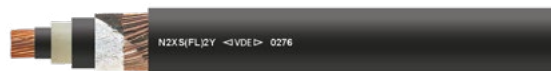
Part no. 32560



N2XS(FL)2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PE sheath, laterally waterproof

Part no. 33054



NA2XSY

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, aluminum conductor, XLPE insulation, PVC sheath

Part no. 32440



NA2XS2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, aluminum conductor, XLPE insulation, PE sheath

Part no. 32520



Local versions and standards available on request.

4 COMMUNICATION CABLES & CONNECTORS

PAAR-TRONIC-Li-2YCYv

Low capacitance, EMC-preferred type

Part no. 21129



Fibre optic cables (SM and MM)

HELUCOM® PACT A-DQ(ZN)B2Y

3000N, central, single mode E9/125µm

Part no. 11017392



HELUCOM® A-DQ(ZN)B2Y

2700N, stranded, single mode E9/125µm

Part no. 80188



HELUCOM® A-DQ(ZN)(SR)2Y

1500N, steel armoured, central, single mode E9/125µm

Part no. 803928



Fibre optic equipment



Customised fibre optic harnesses



Loose tube cable with splitting body and retraction protection



Robust, moulded splitting body



Mini-conductor cable

Available on request.

Ethernet copper data cables

HELUKAT® 600A S/FTP PVC/PVC

LAN cable, Cat.7e, outdoor

Part no. 801147



HELUKAT® 600E S/FTP PVC

LAN cable, Cat.7e, direct burial

Part no. 802167



HELUKAT® 600AE S/FTP FRNC/ PE

LAN cable, Cat.7e, direct burial, armoured

Part no. 802168



HELUKAT® 600 S/FTP FRNC

LAN cable, Cat.7e, tight cable channels / duplex version

Part no. 80810 / 81446



Ethernet patchcords

Industrial Ethernet Patchcords (IP protected)

RJ45-IP20 180°, Cat.6A, normal flexible application

Part no. 806618



Ethernet Patchcords RJ45

S/FTP halogen-free, Cat.6, class E

Part no. 806253



HELUKAT500IND ExtraFlex RJ45

S/FTP Cat.6A, RJ45-IP20 180°

Part no. 11007749



BUS system cables

E-BUS / KNX

PVC + FRNC, fixed installation

Part no. 81663 / 804042



E-BUS / KNX

PE, fixed installation, direct burial

Part no. 802800



CAN Bus

PVC, fixed installation, indoor

Part no. 803722



RJ45 copper connector



Part no. 11022946



Part no. 804544



Part no. 11017885



Part no. 11017766



Part no. 11017767

Part no.	Cat.	Connector	Pins	Core Ø in mm	Cable Ø in mm	AWG solid	AWG stranded	UL	Class	Standard
11022946	6 _A	straight	8	max. 1.6	5.5-10.0	22-24	22/7 – 27/7	yes	IP20	TIA 568 B
804544	6 _A	straight	8	max. 1.6	5.0-9.5	22-26	22-27/7		IP20	TIA 568 A
11017885	6 _A	straight	8	1.0-1.4	6.0-7.5	26-23	26-23		IP20	TIA 568 A/B
11017766	6 _A	straight	8	1.0-1.4	7.0-8.5	26-23	26-23		IP20	TIA 568 A/B
11017767	8	straight	8	1.4-1.65	7.0-8.5	24-22	24-22		IP20	TIA 568 A/B

ACCESSORIES

Glands



HELUTOP HT-MS-EP4

Brass, nickel plated, EMC-cable gland with integrated contact system for safe, quick assembly and contacting

Part no. 905181



HELUTOP HT

Plastic, polyamide PA6 cable gland with vibration protection

Part no. 93908



HSK-PVDF

Polyvinylidene fluoride for use at high temperatures, under long-term UV exposure

Part no. 97571



HELUTOP Easy

Threadless, for quick installation with patented spring/snap system without tools

Part no. 908054

Cable fastening systems



Cable clamps K / KS

For fastening single and multi-conductor cables (K) or in a triangular connection (KS). Available on request



Heluclamp D1-M

For the short-circuit-proof fastening of single-core or multi-core medium and high voltage cables

Part no. 11022869



ACCESSORIES

HELUCOND corrugated tubes



PP

Polypropylene, for medium stress applications

Part no. 920170

PA6-UL

Polyamide 6, for heavy duty applications

Part no. 920384

PA12

Polyamide 12, highly flexible, high load rating for heavy-duty applications

Part no. 920156



CO-PA

Polyamide 6, UV-resistant, halogen-free, dividable

Part no. 90061

CO-PP

Polypropylene, halogen-free, dividable

Part no. 97496

CO-PP-UV

Polypropylene, UV-resistant, halogen-free, dividable

Available upon request

Medium voltage straight joint



MSVM-S Medium voltage straight joint

Heat-shrinkable - Single core.

For connecting cables with differing cross-sections, conductor materials and cable designs with all single-core plastic power cables with external conductor layer up to 18/30(36)kV

Part no. 93107



MSVM-S Medium voltage straight joint

Heat-shrinkable - Triple core.

For connecting cables with differing cross-sections, conductor materials and cable designs with all 3-core plastic power cables with external conductor layer up to 18/30(36)kV

Part no. 93135

Drum unwinder / decoiler



HELUTOOL 250 pocket / 190 Drum unwinder

For simple reeling of cable drums

Part no. 903716 / 93529



TROMBOI 500 Drum decoiler

Shaftless, for drums with different diameters and weights

Part no. 904760

Others



KMK-PA-MB / KM-EMV(EMC)
Counternuts
Part no. 97816



TY-MX
UV-resistant cable tie
Part no. 91052



EKI
End caps with internal adhesive
Part no. 97642

Cable lugs



HELU-S-PK-AL-FG-VZN
Aluminum, tinned, FG, extruded,
straight ring design
Part no. 909853



HELU-S-PV-AL/CU
Press connector for aluminum
conductors, strain relieved
Part no. 907836



HELU-S-PK-AL/CU
Aluminum/Copper, non-insulated,
straight compression lug
Part no. 907568

Tools



WK-APW 18
Hydraulic hand press
For processing cable lugs and
connectors up to 1000 m²
Part no. 909871



HELUTOOL D20 cable shear
Cuts Cu and Al cables smoothly
and clean without crushing,
solid / stranded
Part no. 904933



Photovoltaic case
Equipped with: Stripping pliers 4-10 mm²
Crimping pliers PEW12, cable shear
Part no. 11009092

Contact



Our product expert is available to answer your questions and provide customised solutions.

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