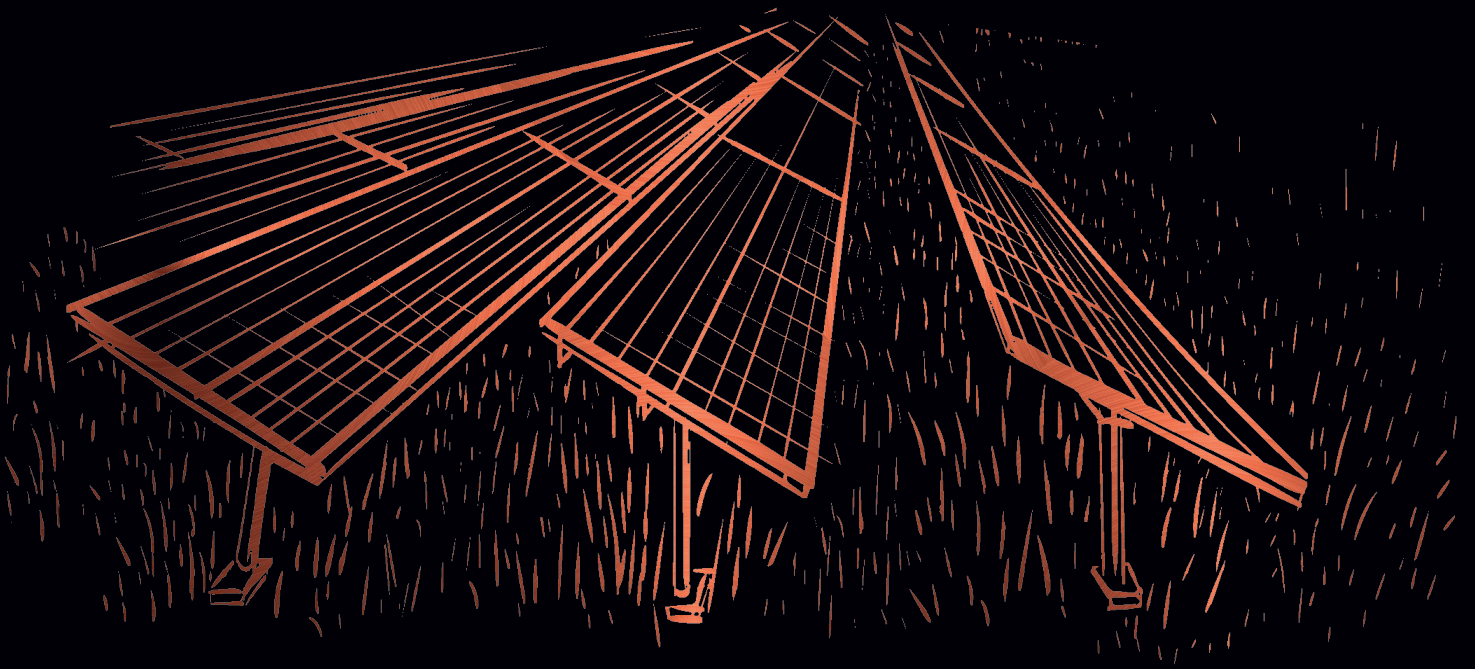


Cable Solutions for Solar & Energy Storage Systems

HELUKABEL® SOLAR POWER

Ed. 1 // EN

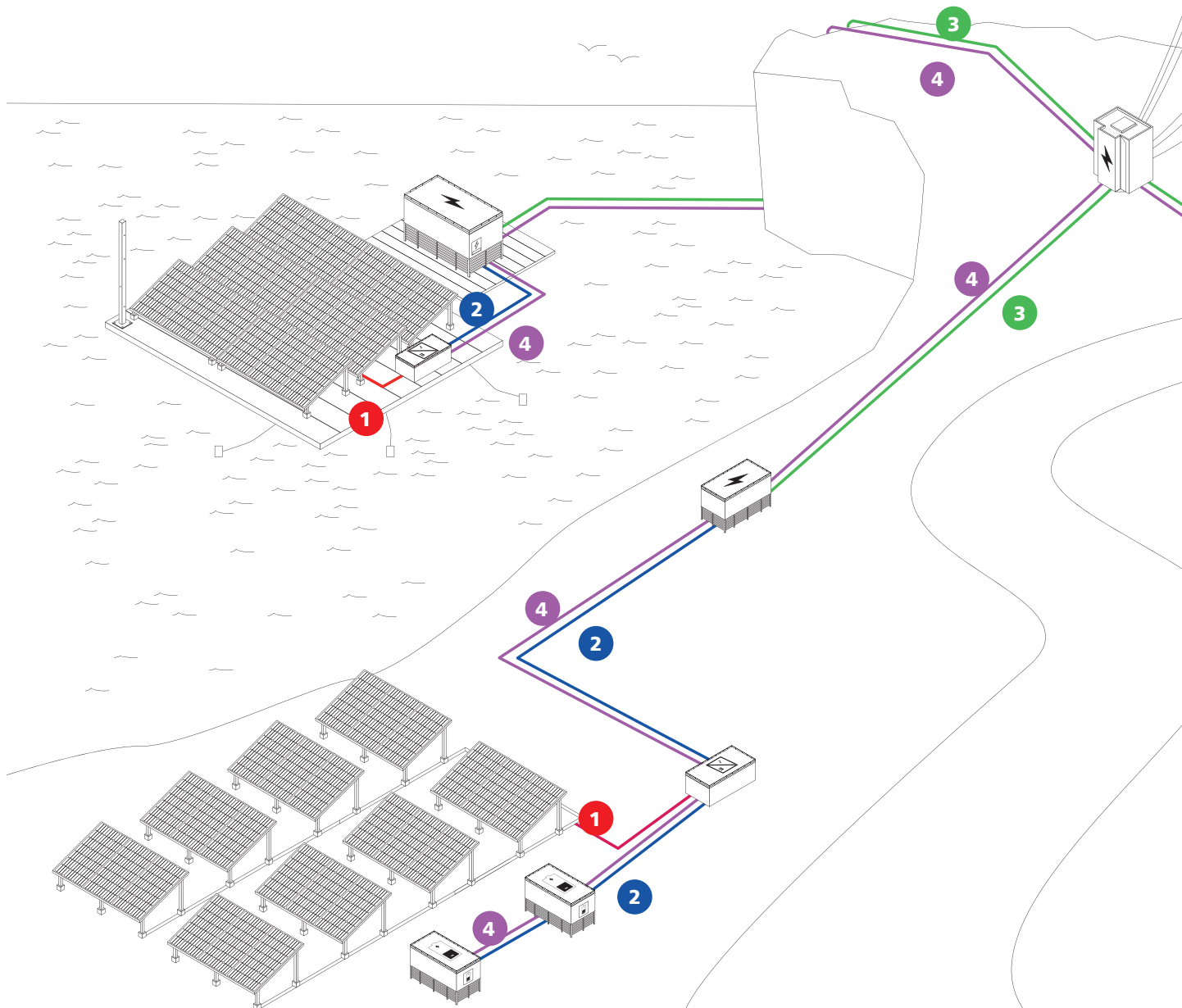


**(Channeling
POWER)** 

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 factories, 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.

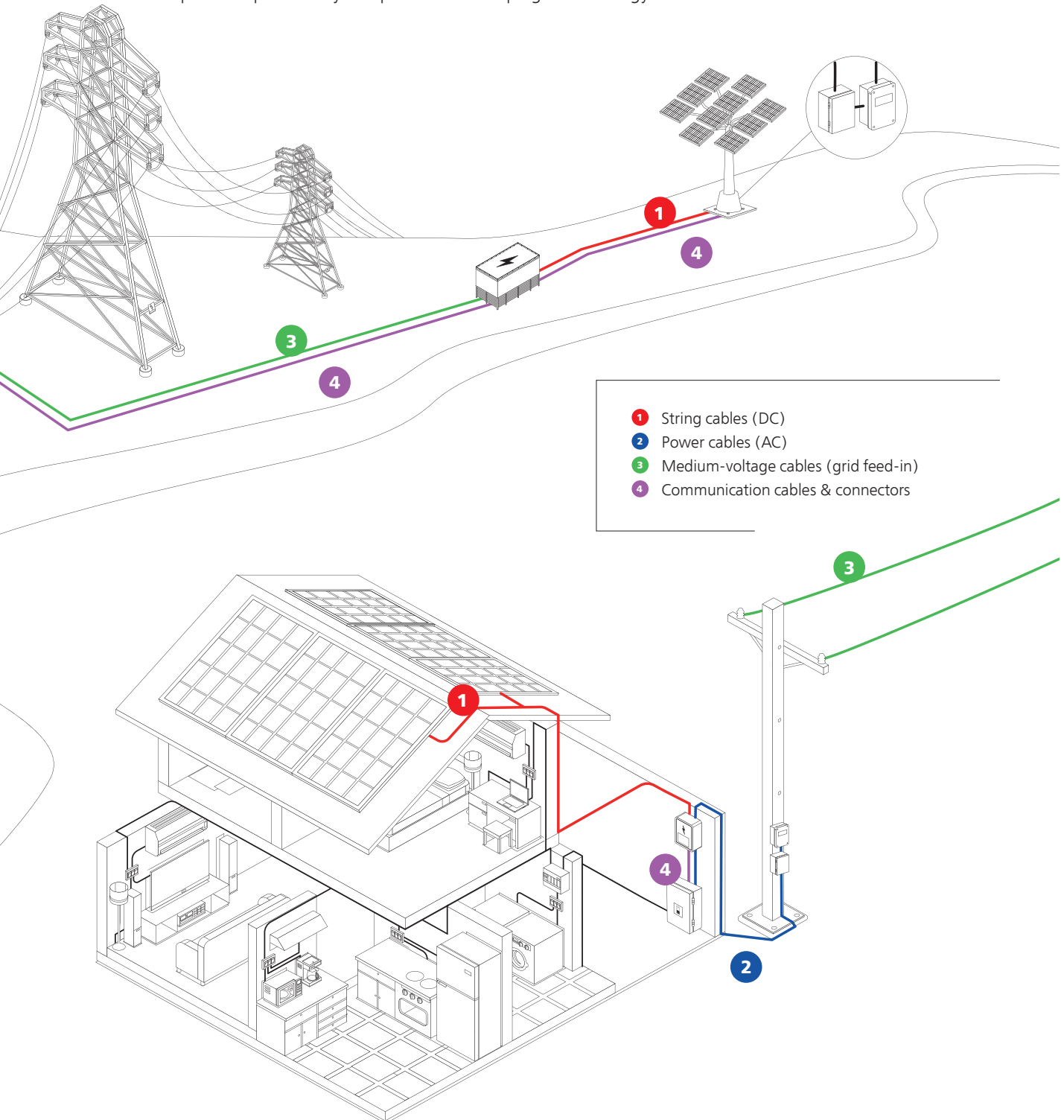
Reliable and durable cabling that connects the individual solar modules to each other as well as the cabling to the inverters and storage systems is crucial for efficient operation of the system. This is where cables are needed that reliably withstand all external influences - this is the only way to 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 ground and medium-voltage cables for connection and grid feed-in, to fiber 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

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



Solutions for Photovoltaic Systems

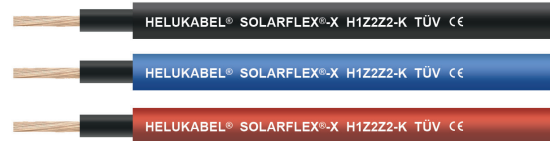
For further information, please refer to the corresponding data sheets at: www.helukabel.com/999999en
(replace the **red numbers** with the corresponding part no.)

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 colors, cross sections and reel sizes

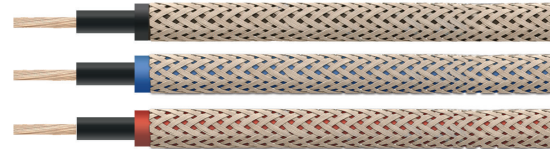
Part no. 713529



SOLARFLEX®-X H1Z2Z2-K NTS

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



6 mm² solar cable extension

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

Part no. 11023765 / 11023766 / 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 reels.

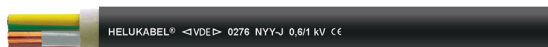
Available in various cross sections on request. No image available

2 POWER CABLES (AC)

NYY-J / NYY-O

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

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 jacket

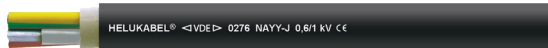
Part no. 32850



NAYY-J / NAYY-O

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

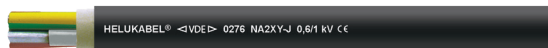
Part no. 32301



NA2XY-J / NA2XY-O

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

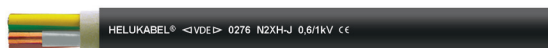
Part no. 33113



N2XH-J / N2XH-O

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

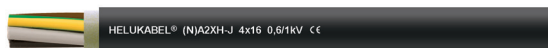
Part no. 53558



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

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

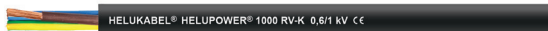
Part no. 50073



HELUPOWER® 1000 RV-K

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

Part no. 11003798



H07RN-F

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

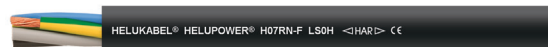
Part no. 37001



HELUPOWER® H07RN-F LS0H

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

Part no. 30737



NSGAFÖU 1,8/3 kV

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

Part no. 38501



HELUPOWER® THERMFLEX® 145

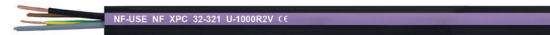
Tinned stranded copper wire, temperature resistant, improved behavior in case of fire, XLPE insulation and jacketing

Part no. 17001667

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

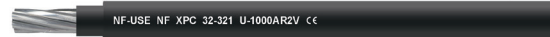
Rigid industrial power cable, bare copper conductor, low voltage, 0.6/1kV, XLPE insulation, PVC jacket

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 jacket

Part no. 19002046

**WK POWERLINE® ALU**

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

Part no. 707647



Local versions and standards available on request.

3 MEDIUM VOLTAGE CABLES (GRID FEED-IN)

N2XSY

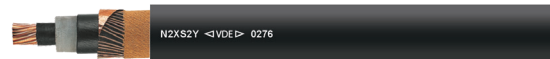
6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PVC jacket

Part no. 32400

**N2XS2Y**

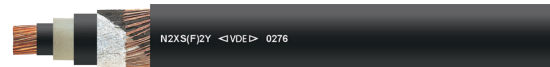
6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PE jacket

Part no. 32480

**N2XS(F)2Y**

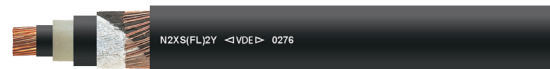
6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare copper conductor, XLPE insulation, PE jacket, longitudinally waterproof

Part no. 32560

**N2XS(FL)2Y**

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

Part no. 33054

**NA2XSY**

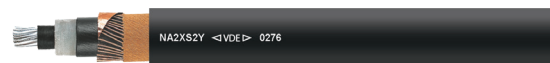
6/10 kV, 12/20 kV, 18/30 kV, VDE approved, aluminum conductor, XLPE insulation, PVC jacket

Part no. 32440

**NA2XS2Y**

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

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



Fiber 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



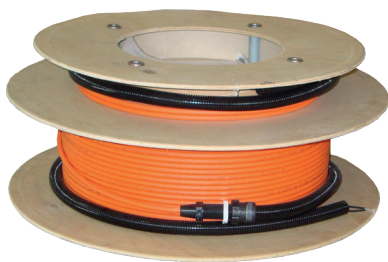
HELUCOM® A-DQ(ZN)(SR)2Y

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

Part no. 803928



Fiber optic equipment



Customized fiber optic harnesses



Loose tube cable with split body and retraction protection



Robust, molded split 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, armored

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, static installation

Part no. 81663 / 804042



E-BUS / KNX

PE, static installation, direct burial

Part no. 802800



CAN Bus

PVC, static 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	IP 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 conductor.

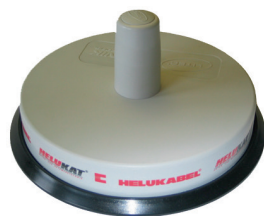
For connecting cables with differing cross sections,
conductor materials and cable designs with all single-
conductor plastic power cables with external conductor
layer up to 18/30(36)kV
Part no. 93107



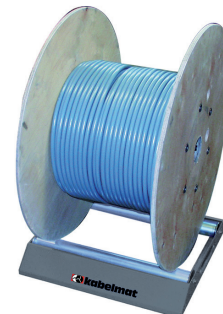
MSVM-S Medium-voltage straight joint Heat-shrinkable - Triple conductor.

For connecting cables with differing cross sections,
conductor materials and cable designs with all
3-conductor plastic power cables with external
conductor layer up to 18/30(36)kV
Part no. 93135

Reel unwinder / decoiler



HELUTOOL 250 pocket / 190 Reel unwinder
For simple winding of cable reels
Part no. 903716 / 93529



TROMBOI 500 Reel decoiler
Shaftless, for reels with different diameters and weights
Part no. 904760

Others



KMK-PA-MB / KM-EMV(EMC)
Counter nuts
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 mm²
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

