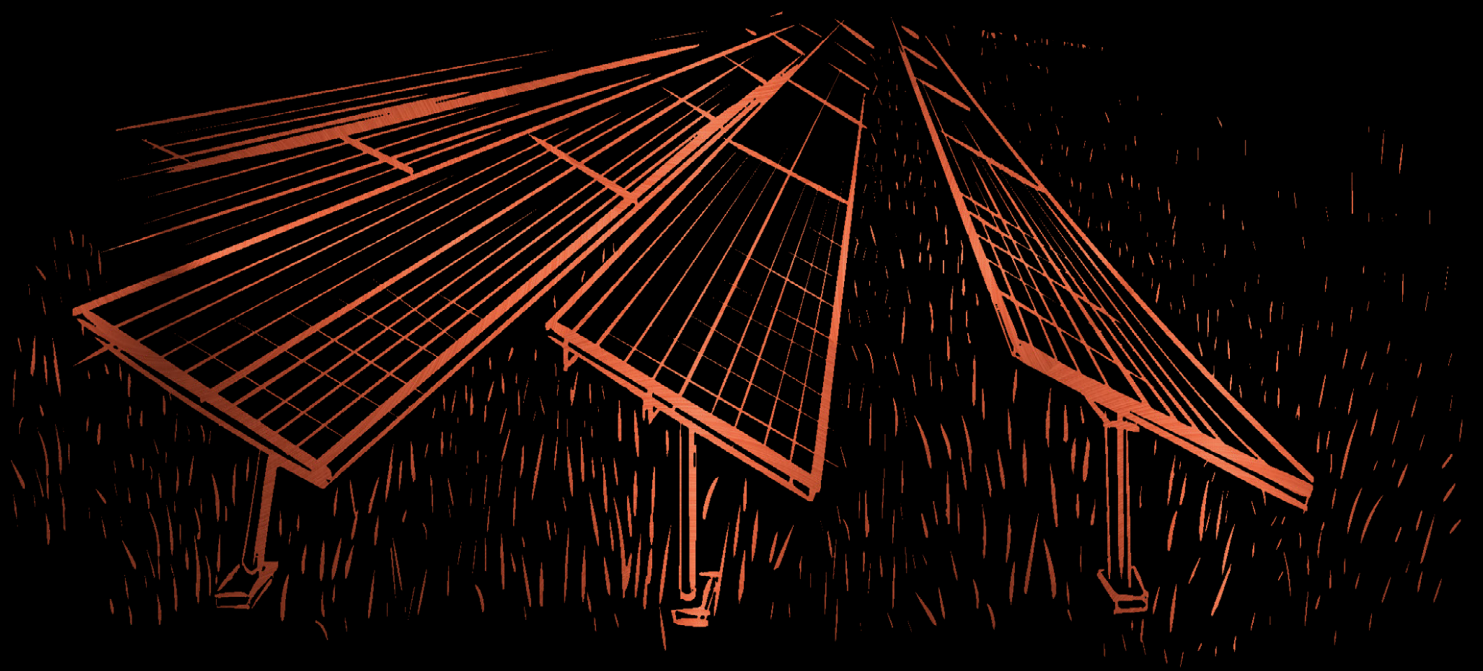


Solutions for Photovoltaic Systems & Energy Storage Systems

HELUKABEL® SOLAR POWER

Ed. 1.3 // EN



**(Channeling
POWER)** 

Solar Power

The need for renewable energies is rapidly rising around the globe, and solar energy, next to wind and hydropower, is one of the most important and cleanest sources. To make use of it, photovoltaic systems are used. These can be found on private homes, industrial and office buildings, agricultural buildings, and in waters as floating systems.

The environmental conditions vary greatly. However, photovoltaic systems are almost always exposed to weathering, humidity, UV radiation, and strong fluctuations in temperature.

The use of reliable and durable cables to connect individual solar modules plays a decisive role in the efficient operation of the system, as well as in the connections to inverters and storage systems. For this, cables are required that can reliably withstand external influences. After all, this is the only way to get the produced energy to its destination. As a leading manufacturer and supplier of electrical connection technology, HELUKABEL has decades of experience in the photovoltaics industry and supplies the ideal cables, wires, and accessories for every application.



We offer a wide range of products including DC string cables for connecting solar panels, earthing and medium-voltage cables for connection and feeding into grids, and fibreglass and data cables for networks and communication. Additionally, we offer integrated cable management systems consisting of connectors, plugs, hoses, glands, housings, and tools, as well as pre-assembled cables. Our experts are especially competent at developing customer-specific solutions for special applications, and,

thanks to our world-wide presence, we are able to easily fulfil all local and regional requirements, such as environmental factors and construction standards.

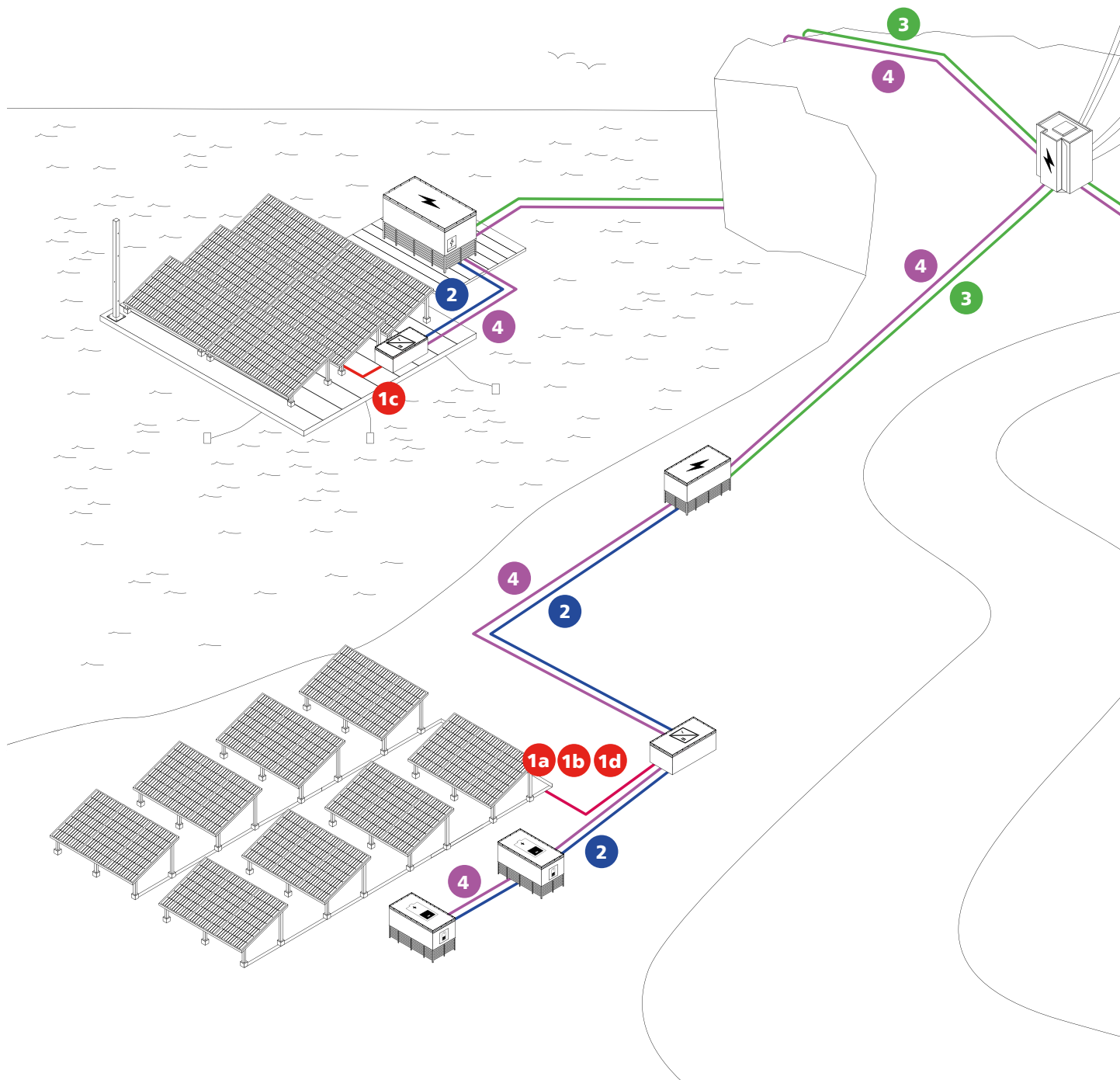
HELUKABEL thus supports the manufacturers, installers, and operators of photovoltaics systems all over the world in generating clean, sustainable, and renewable energy.

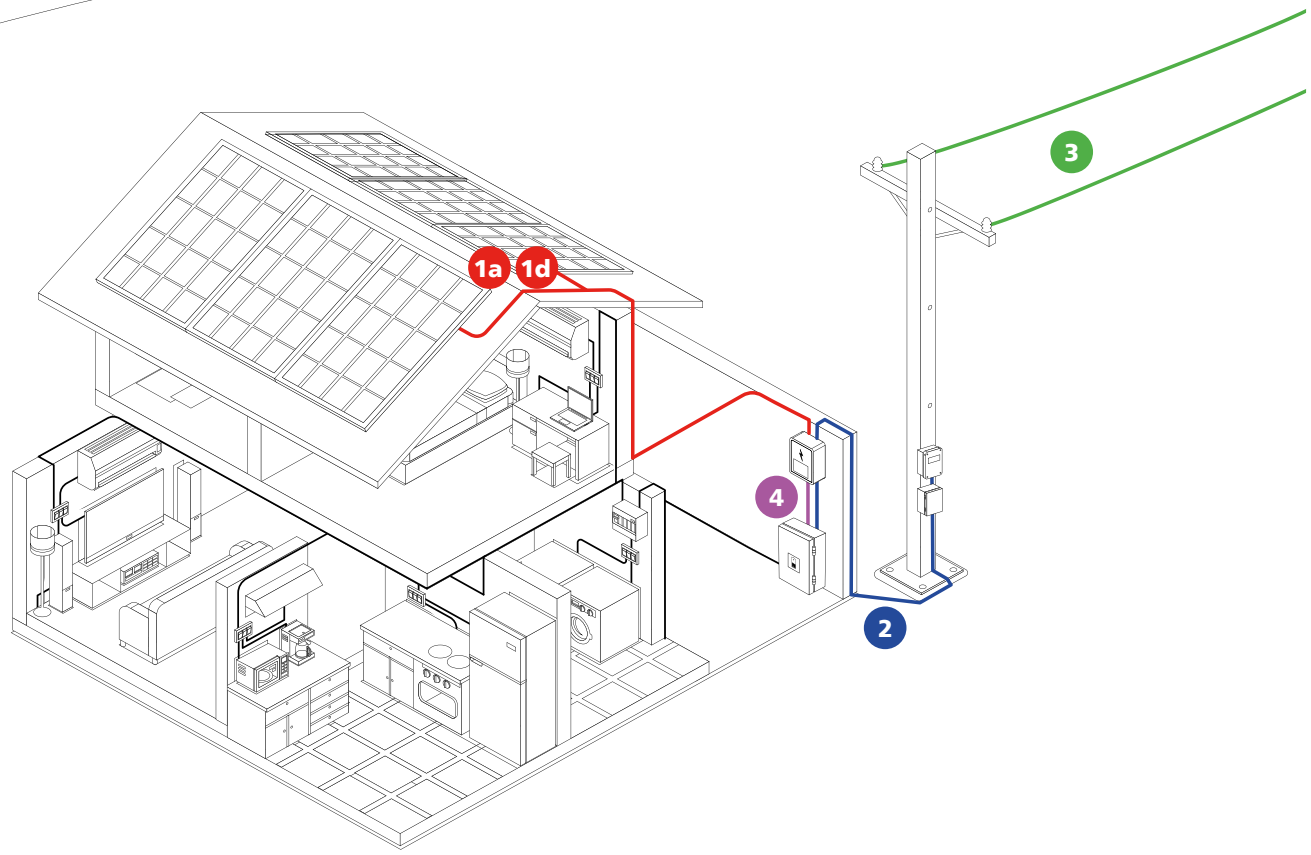
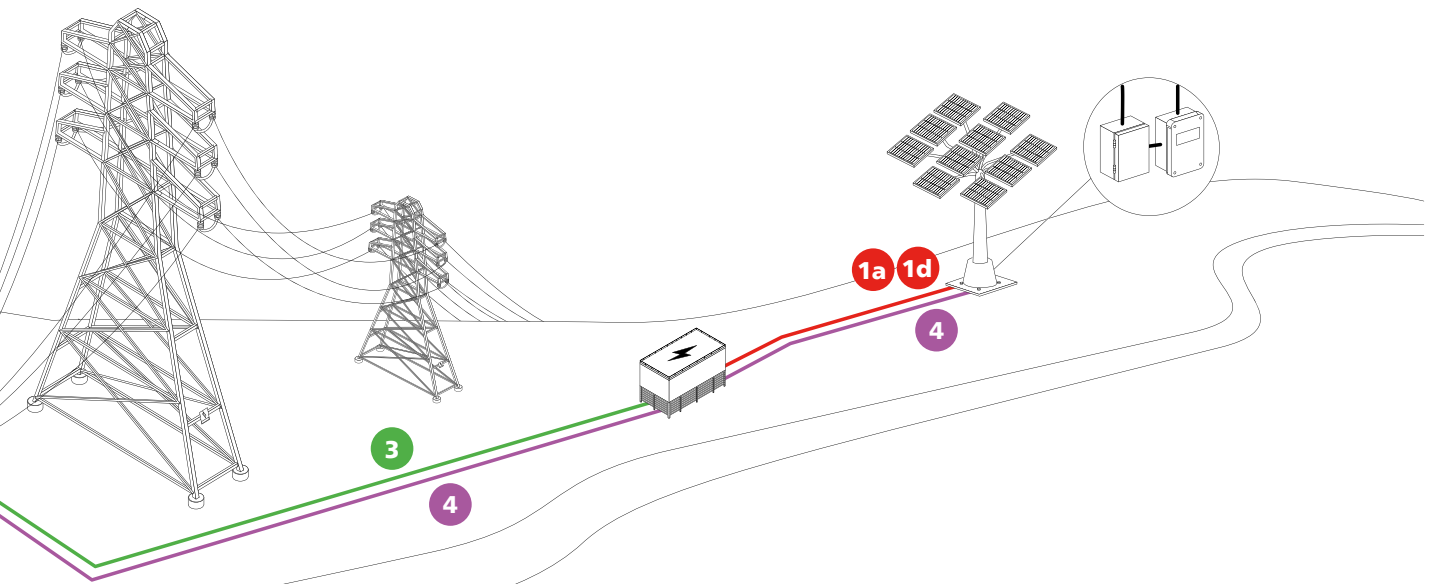


HELUKABEL® SOLAR POWER

Solutions for Photovoltaics Systems & Energy Storage Systems

- 1 String cables (DC)
 - 1a SOLARFLEX®-X H1Z2Z2-K
 - 1b SOLARFLEX®-X H1Z2Z2-K NTS
 - 1c HELUPOWER® SOLARFLEX®-X Premium
 - 1d HELUPOWER® SOLARFLEX®-X H1Z2Z2-K UL
- 2 Energy cables (AC)
- 3 Medium-voltage cables for feeding grids
- 4 Communication cables & plugs





Solutions for Photovoltaics Systems

For further information, variants, and dimensions, see data sheets at: www.helukabel.com/999999de
(replace the **red numbers** with the corresponding part no.)

1 STRING CABLES (DC)

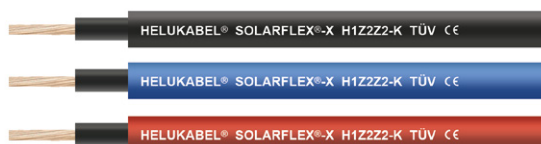
- Resistant to: UV radiation, ozone, weathering
- Halogen-free and flame-retardant
- 1500 V DC
- Tinned Cu conductors, finely stranded acc. to DIN VDE 0295 Kl. 5 / IEC 60228 cl. 5
- For wiring solar modules



This QR code leads directly to the string cables in our shop.

1a SOLARFLEX®-X H1Z2Z2-K

- Globally approved due to the European DIN EN 50618 and the international IEC 62930
- Improved resistance to water
- Suited for direct burial. Recommendation: Install within piping



Core count x Nominal cross section mm ²	blue Part no:	red Part no:	black Part no:
1 x 2.5	713544	713543	713529
1 x 4	713546	713545	713530
1 x 6	713570	713569	713531
1 x 10	713572	713571	713532
1 x 16	11022069	11022068	11022067
1 x 25	11022072	11022071	11022070
1 x 35	11022075	11022074	11022073

Core count x Nominal cross section mm ²	blue Part no:	red Part no:	black Part no:
1 x 50	11022078	11022077	11022076
1 x 70	11022081	11022080	11022079
1 x 95	11022084	11022083	11022082
1 x 120	11022087	11022086	11022085
1 x 150	11022090	11022089	11022088
1 x 185	11022093	11022092	11022091
1 x 240	11022096	11022095	11022094

1b SOLARFLEX®-X H1Z2Z2-K NTS

- Rodent protection made of stainless-steel mesh (80-85%)
- Deliberate avoidance of chemicals as defence against rodents, as this does not offer long-term protection
- Perfectly suited for agricultural operations and ground-mounted solar systems



Core count x Nominal cross section mm ²	blue Part no:	red Part no:	black Part no:
1 x 4	11022800	11022803	17000101
1 x 6	11022801	11022804	17000102
1 x 10	11022802	11022805	17000103

1c HELUPOWER® SOLARFLEX®-X PREMIUM

- Improved resistance to water acc. to TÜV Rheinland 2 PfG 2750
- For wiring solar modules in floating solar parks on the water
- Globally approved due to the European DIN EN 50618 and the international IEC 62930
- Exceptional durability
- Suited for direct burial. Recommendation: Install within piping



Core count x Nominal cross section mm ²	black Part no:	Core count x Nominal cross section mm ²	black Part no:
1 x 2.5	11024775	1 x 50	11024782
1 x 4	11024776	1 x 70	11024783
1 x 6	11024777	1 x 95	11024784
1 x 10	11024778	1 x 120	11024785
1 x 16	11024779	1 x 150	11024786
1 x 25	11024780	1 x 185	11024787
1 x 35	11024781	1 x 240	11024788

1d HELUPOWER® SOLARFLEX®-X H1Z2Z2-K UL

- Solar cable acc. to UL 4703 (PV Wire) for the American market
- UL (PV) DC 2000 V
- Globally approved due to the European DIN EN 50618 and the international IEC 62930
- Suited for direct burial. Recommendation: Install within piping



Core count x Nominal cross section mm ²	black Part no:
1 x 4	11025147
1 x 6	11025148
1 x 10	11025149

Solar connectors

MC 4 1000 V

PV plugs and sockets

Part no. **905206 / 905207**



MC 4-Evo 2 1500 V

PV plugs and sockets

Part no. **11020678 / 11020682**



Extension solar cable 6 mm²

MC4 plug to MC4 socket. 2, 8, 10m

Part no. **11023765 / 11023766 / 11023767**

Further assembly options available upon request



Battery connection cable set

Battery cable 2XNSGAFÖU. With and without cable lugs, available in different diameters

Part no. **11023261**



Assembled cable harnesses on drums available in different diameters upon request. Without diagram

2 ENERGY CABLES (AC)

NYJ / NY-O

Energy and control cables, 0.6/1 kV, VDE approved, bare Cu wire, PVC insulation, PVC sheath

Part no. 32001



N2XY-J / N2XY-O

Energy distribution cables, 0.6/1 kV, VDE approved, high current carrying capacity, bare Cu wire, XLPE insulation, PVC sheath

Part no. 32850 / *



NAYY-J / NAYY-O

Energy distribution cables, 0.6/1 kV, VDE approved, Al wire, PVC insulation, PVC sheath

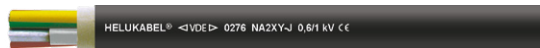
Part no. 32301



NA2XY-J / NA2XY-O

Energy distribution cables, 0.6/1 kV, VDE approved, current carrying capacity, Al wire, XLPE insulation, PVC sheath

Part no. 33113 / *



HELUPOWER® 1000 RV-K

Connection cable, 0.6/1 kV, direct burial, 90°C, bare Cu wire, XLPE insulation, PVC sheath

Part no. 11003798



H07RN-F

Connection cable, oil-resistant, weathering-resistant, bare Cu wire, rubber insulation and sheath

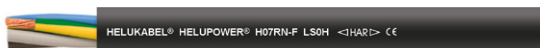
Part no. 37001



HELUPOWER® H07RN-F LSOH

Connection cable, oil-resistant, halogen-free, bare Cu wire, special rubber insulation and sheath

Part no. 30737



NSGAFÖU 1.8/3 kV

Short-circuit and earth-leakage-proof up to 1 kV, tinned Cu wire, high mechanical demands, oil-resistant

Part no. 38501



HELUPOWER® THERMFLEX® 145

Tinned Cu wire, temperature-resistant, improved performance in fires, XLPE insulation and sheath

Part no. 17001667



WK POWERLINE® ALU

Standard 1 kV, with 1.8/3 kV suitable for direct burial, robust, flexible, PUR sheath, UV and oil-resistant

Part no. 707647



Local versions and standards available upon request.

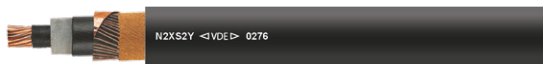
* Also available halogen-free

3 MEDIUM-VOLTAGE CABLES FOR FEEDING GRIDS (MS)

N2XS2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare Cu wire, XLPE insulation, PE sheath, cross sections from 800 mm²

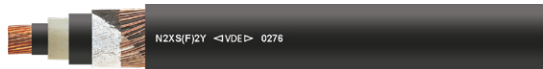
Part no. 32480



N2XS(F)2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, bare Cu wire, XLPE insulation, PE sheath, longitudinally watertight, cross sections up to 800 mm²

Part no. 32560 /*

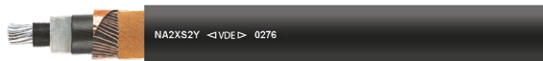


* Longitudinally and laterally-watertight models available

NA2XS2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, Al conductor, XLPE insulation, PE sheath, cross sections up to 1200 mm²

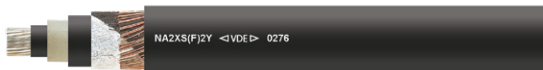
Part no. 32520



NA2XS(F)2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, Al conductor, XLPE insulation, PE sheath, longitudinally watertight, cross sections up to 1200 mm²

Part no. 32600 /*

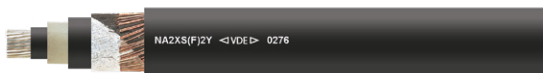


* Longitudinally and laterally-watertight models available

NA2XS(FL)2Y

6/10 kV, 12/20 kV, 18/30 kV, VDE approved, Al conductor, XLPE insulation, PE sheath, longitudinally and transversely watertight, cross sections up to 1200 mm²

Part no. 38062



Local versions and standards available upon request.

All cable types available with reinforced outer sheath, stranded, or as single cables upon request.

Medium voltage accessories up to 36 kV



Heat & cold shrink joints

For connecting all single or three-wire power cables. Cross sections from 35-1200 mm², up to 36 kV.

Heat shrink joint 24 kV 95-240²

Part no. 907913



Terminations and T-Connectors

Termination and T-connectors from 16-800 mm², up to 36 kV, for connecting to transformers and switchgears

T-connector 630A 24 kV 95-240²

Part no. 905287

4 COMMUNICATIONS CABLES & PLUGS

PAAR-TRONIC-Li-2YCYv

low capacity, preferred EMC types

Part no. 21129



Fibre optic cables (SM)

HELUCOM® pact A-DQ(ZN)B2Y

3,000 N, central, single-mode 12 E9/125µm

Part no. 11017392



HELUCOM® A-DQ(ZN)B2Y

2,700 N, stranded, single-mode E9/125µm

Part no. 80188



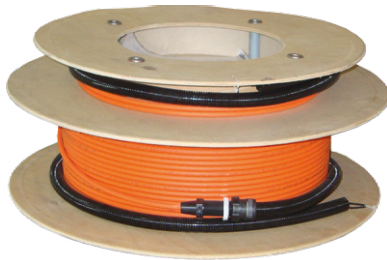
HELUCOM® A-DQ(ZN)(SR)2Y

1,500 N, steel armoured, central, single-mode 12 E9/125µm

Part no. 803928



Accessories for fibre optic cables



Customised fibre optic cables



Loose tube cable with splitter and retraction protection



Robust, cast distributor body



Mini conductor cable

Available upon request.

Copper Ethernet data cables

HELUKAT® 600A CAT.7e S/FTP PVC STATIC
LAN cable for outdoors
Part no. 801147



HELUKAT® 600E CAT.7e S/FTP PVC STATIC
LAN cable, for direct burial
Part no. 802167



HELUKAT® 600AE CAT.7e S/FTP PE STATIC
LAN-cable, for direct burial, armoured
Part no. 802168



HELUKAT® 600 CAT.7e S/FTP FRNC STATIC
LAN cable, narrow cable channels / Duplex version
Part no. 80810 / 81446



HELUKAT® CONNECTING SYSTEMS® - Pre-assembled Ethernet patch cables

**INDUSTRY HELUKAT 600S/FTP CAT.6A RJ45 180°
green 0.5 m**
normal, flexible application
Part no. 806618



Patch Cables CAT.6 S/FTP RJ45 grey 0.25 m
halogen-free
Part no. 806253



**INDUSTRY HELUKAT 500IND S/FTP CAT.6A
Extraflex RJ45-IP20 180° green 0.5 m**
extra-flexible application
Part no. 11007749



Bus Cables / RS485

E-BUS / KNX PVC + FRNC STATIC
fixed
Part no. 81663 / 804042



E-BUS / KNX PE DIRECT BURIAL
fixed, suitable for direct burial
Part no. 802800



CAN-BUS 0.50 mm² 2-PAIR PVC STATIC
fixed, for indoors
Part no. 803722



Copper connectors RJ45 metal



Part no. 11022946



Part no. 804544



Part no. 11017885



Part no. 1017766



Part no. 11017767

Part no:	Cat.	Type	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

Nickle-plated, brass EMC cable and earthing glands with integrated contact system

Part no. 905181



HELUTOP HT

Plastic cable gland PA6 with vibration protection

Part no. 93908



HSK-PVDF

Polyvinylidene fluoride for use in high temperatures and with long-term UV exposure

Part no. 97571



HELUTOP Easy

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

Part no. 908054

Cable mounting systems



Cable clamps K / KS

For mounting single and multi-core cables (K) or in a diagonal brace assembly (KS).
Available upon request

Heluclamp D1-M

For short-circuit-free mounting of single-core or multi-core, medium and high-voltage cables
Part no. 11022869

HELUCOND Corrugated tubes



PP

Polypropylene, for medium stress
Part no. 920170

CO-PA

Polyamide 6, UV-resistant, halogen-free, detachable
Part no. 90061

PA6-UL

Polyamide 6, for high stress
Part no. 920384

CO-PP

Polypropylene, halogen-free, detachable
Part no. 97496

PA12

Polyamide 12, extremely flexible, high bearing capacity for intense stress
Part no. 920156

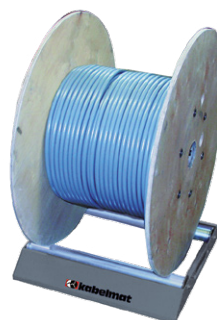
CO-PP-UV

Polypropylene, UV-resistant, halogen-free, detachable
Available upon request

Drum unwinder



HELUTOOL 250 pocket / 190 Drum unwinder
For easily unwinding cable drums
Part no. 903716 / 93529



TROMBOI 500 Shaftless Drum Winder
For drums with differing diameters/weights.
Part no. 904760

Other



KMK-PA-MB / KM-EMV(EMC)

Locking nuts

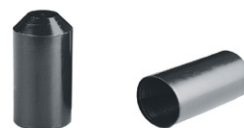
Part no. 97816



TY-MX

UV-resistant cable tie

Part no. 91052



EKI

End caps with internal adhesive

Part no. 97642

Cable lugs



HELUS-PK-AL-FG-VZN

Tinned aluminium, FG, extruded, straight ring shape

Part no. 909853



HELUS-PV-AL/CU

Press connector for aluminium conductors, strain relieving

Part no. 907836



HELUS-PK-AL/CU

Aluminium/Copper, non-insulated, straight compression lug

Part no. 907568

Tools



WK-APW 18 Hydraulic hand press

For installing cable lugs and connectors up to 1,000 mm²

Part no. 909871



HELUTOOL D20 Cable shear

Cuts single or multi-core Cu and Al cables cleanly without squeezing

Part no. 904933



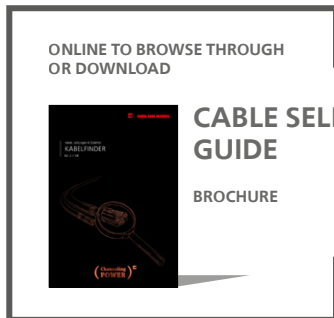
Photovoltaic toolbox

Fitted with: wire stripper 4-10 mm²
Crimping tool PEW12, cable shears

Part no. 1100902

Glossary

You can find further information in our Download Center:
www.helukabel.com/download-center



Contact

Our product experts are available to answer
any questions and develop customised solutions:



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POWER)** 